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**For UPSC CSE**

**7-8 August 2024**

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### **Rajasthan Current Affairs**



## Geography

**Relevance:** Distribution of important natural resources around the world, including South Asia and the Indian subcontinent

### 1. Sone river in spate, 40 rescued in Jharkhand - Indian Express

#### **Context**

More than 40 people trapped in the flooded Sone River near Lohargada and Merauni village of Hariharpur in Garhwa districts of Jharkhand, were rescued by State Disaster Relief Force (SDRF) recently. Due to incessant rain at Sonbhadra in Uttar Pradesh, water was released from the Rihand Dam in Renukut leading to a sudden rise in the water level of Son River.

#### **Son River (Prelims Special)**

- **About:** A principal southern tributary of the Ganges (Ganga) River after the Yamuna River.
- **Origin:** In the Amarkantak highlands in Madhya Pradesh, in the east direction of the origin of the Narmada River.
- **Flow:** It then flows in the north-northwest direction through MP before turning in the east direction where it meets the Kaimur range.
- **Length:** 784 km
- **Nature:** A seasonal river, so it is unimportant for navigation.
- **Tributaries:** Rihand, Koel, Gopad and the Kanhar River.



**Relevance:** Distribution of important natural resources around the world, including South Asia and the Indian subcontinent

### 2. Krishna river - The Hindu

#### **Context**



With the floodwater level rising in the Krishna river, the police on Wednesday cautioned the people living in the upstream and downstream areas in NTR and Krishna districts of Andhra Pradesh.

### Krishna river (Prelims Special)

- **About:** The second biggest river in peninsular India after the Godavari River.
- **Origin:** Near Mahabaleshwar (Satara) in Maharashtra.
- **Drainage area:** 4 states Maharashtra (303 km), North Karnataka (480 km) and the rest of its 1300 km journey in Telangana and Andhra Pradesh.
- **Mouth:** Bay of Bengal.
- **Right Bank Tributaries:** Ghatprabha, Malprabha and Tungabhadra.
- **Left Bank Tributaries:** Bhima, Musi and Munneru
- **Major Hydro Power stations:** Koyna, Tungabhadara, SriSailam, Nagarjuna Sagar, Almatti, Naryanpur, Bhadra.



### Recently, linking of which of the following rivers was undertaken? (2015)

- A. Cauvery and Tungabhadra
- B. Godavari and Krishna
- C. Mahanadi and Sone
- D. Narmada and Tapi

**Relevance:** Major geophysical events such as earthquakes, tsunamis, volcanic activity, and cyclones

### 3. Earthquake 2,500 years ago abruptly changed Ganga river's course - The Hindu

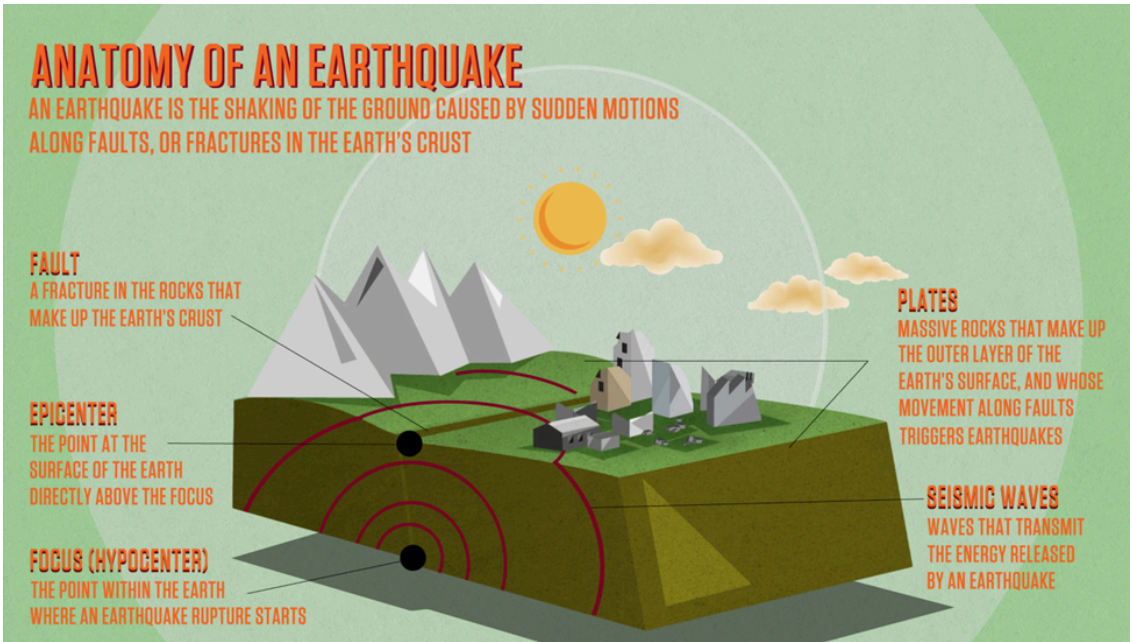
#### Context

In 2018, a group of researchers went to Bangladesh to study the movement of river channels in the Ganges delta. They were exploring an almost 2-km-wide "paleochannel" — a well-preserved mud and sand archive of the river's ancient course — about 45 km to the south of the modern Ganga river.

#### Mains Analysis

<p><b>Findings of the Study</b></p>	<ul style="list-style-type: none"> <li>● <b>Ganga abruptly changed its course/ avulsed:</b> About 2,500 years ago &amp; left behind the palaeochannel.</li> <li>● <b>2 large sand dikes a kilometre to the east of the palaeochannel discovered:</b> These dikes are formed when earthquakes disturb the river bed and cause sediments to flow as if they were liquid (liquefaction).</li> <li>● <b>Relevance of the dikes' discovery:</b> These sand dikes held the first proof that earthquakes can move rivers. An earthquake of magnitude 7-8 shifted the course of the Ganga.</li> <li>● <b>Technique used:</b> Optically stimulated luminescence (OSL) dating for estimating how long a mineral grain has been buried by measuring the amount of natural radiation stored in it.</li> </ul>
<p><b>Future Hazards</b></p>	<ul style="list-style-type: none"> <li>● <b>Increased Risk from Earthquakes:</b> Large earthquakes can trigger major river avulsions which have previously caused some of history's deadliest floods in heavily populated areas.</li> <li>● <b>Anthropological Factors:</b> Human activities and climate change.</li> <li>● <b>Rapid subsidence</b> near riverbanks</li> <li>● <b>Rising sea levels</b> coupled with extreme weather events</li> </ul>
<p><b>Way Forward</b></p>	<ul style="list-style-type: none"> <li>● <b>Need for Future Research:</b> Future research should investigate the frequency of quake-driven avulsions and develop forecasting methods for such major earthquakes.</li> <li>● <b>Implications for Future Preparedness:</b> The research highlights the need for better earthquake forecasting to prepare for potential river shifts.</li> <li>● <b>Increasing public awareness</b> and preparedness for such seismic events.</li> <li>● <b>Regional Cooperation:</b> Countries like India, Bangladesh, and Myanmar should come together for research, monitoring, and support.</li> </ul>

**Earthquakes (Prelims Special)**



**About:**

Sudden shaking of the earth's crust & highly destructive of all the natural disasters.

**Occurrence:**

They occur when there is a rupture in the Earth's surface, typically along a fault line, leading to seismic waves that propagate through the ground.

**Causes:**

Tectonic Activities:

Earthquakes result from a series of earth movements brought about by a sudden release of energy during the tectonic activities in the earth's crust.

Other causes:

It could also be triggered by volcanic eruption, rock falls, landslides, subsidence, particularly in the mining areas, impounding of dams and reservoirs, etc.

**Measurement:**

Seismographs:

Used to detect and record seismic waves produced by earthquakes.

Seismometer:

Detect the time, location and intensity of an earthquake.

**Q. Highlight the earthquake distribution in the world. Discuss the vulnerability of India to earthquake-related hazards. (250 Words) (UPSC Mains GS I - 2022)**

**Consider the following statements: (2023)**

1. In a seismograph, P waves are recorded earlier than S waves.
2. In P waves, the individual particles vibrate to and fro in the direction of wave propagation whereas in S waves, the particles vibrate up and down



at right angles to the direction of wave propagation.

**Which of the statements given above is/are correct?**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**Relevance:** Major geophysical events

## 4. PYROCUMULONIMBUS CLOUD: WHEN WILDFIRES SPIT STORMS, LIGHTNING - Indian Express

### Context

The wildfires currently raging in the United States and Canada are so intense that they have created 'pyrocumulonimbus' clouds, which have the potential to spit out thunder and spark more fires. Before 2023, 102 pyrocumulonimbus were recorded globally in a single year on average — 50 of them were seen in Canada.

### Pyrocumulonimbus clouds

#### (Prelims Special)

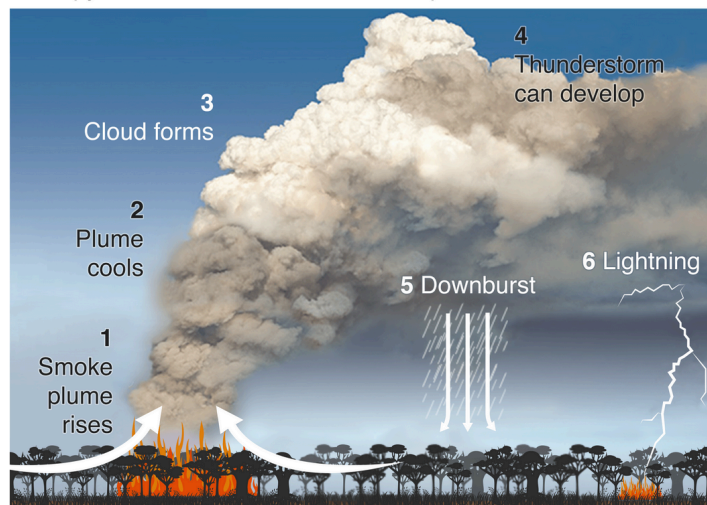
- **Occurrence:** Only when there is an extremely hot wildfire or volcanic eruptions.

- **Mechanism of formation:**

- The intense heat from the fire warms the surrounding air which moves upward into the atmosphere.
- As this hot and very buoyant air - carrying water vapour, smoke, and ash rises, it expands and cools down.
- Once it is cool enough, water vapour condenses on ash, forming a grey or brown cloud.
- At this stage, the cloud is known as a pyrocumululus cloud, also known as 'fire cloud'.
- But if there is sufficient water vapour available and the upward movement of hot air intensifies, pyrocumululus clouds can evolve into a pyrocumulonimbus cloud.
- These clouds can reach heights of 50,000 feet and generate their own systems of thunderstorms.

### Bushfires can create their own weather

How pyrocumulonimbus clouds develop



- **Rain amount:** Although pyrocumulonimbus clouds can produce lightning, they do not generate much rain.
- **Impact: (Mains)**
  - **They can spark new wildfires** many kilometres away from the main blaze.
  - **These clouds can also trigger strong winds** that can make the spread of the wildfire faster and unpredictable.
- **Reasons for increase in their frequency:**
  - Climate change
  - Increase in wildfires incidences



## Society

**Relevance:** Indian Society and Diversity – Salient Aspects

### 5. Women outnumbered men in living organ donations last year - The Hindu

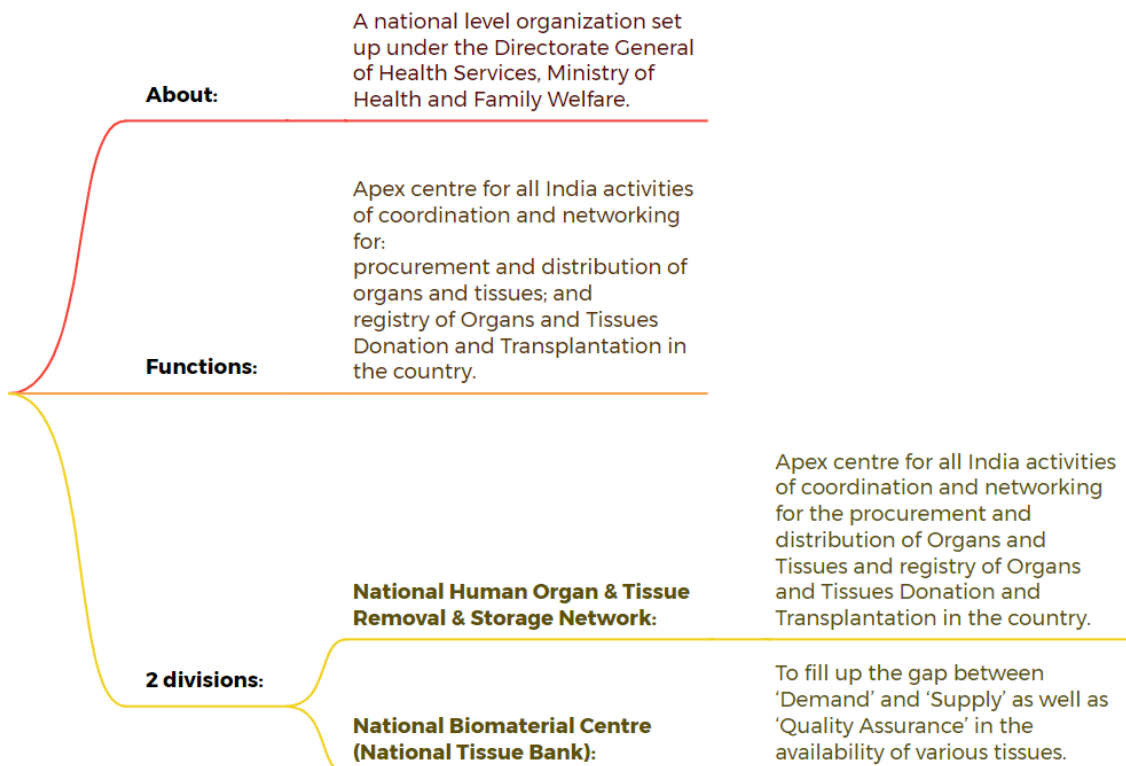
#### **Context**

Women led the way in living organ donation, offering patients suffering from end-stage organ failure a new lease of life.

#### **Data on organ donation (Mains Analysis)**

- **Donor numbers:** The number of women living donors was 9,784 last year compared to 5,651 men.
- **Total donors:** The total number of living donors in the country in 2023 was 15,436.
- **Total number of organ transplants:** Taking into account both living and deceased donors, it was 18,378, the highest ever.
- **Number of deceased donors:** Much higher among men, with 844 persons donating their organs, while women accounted for 255 such donations.
- **Total (living and deceased) number of kidney transplants:** 13,426, followed by liver and heart transplants at 4,491 and 221, respectively.
- **Top States:** Telangana topped the country in organ donation with 252 cadaver donors, followed by Tamil Nadu and Karnataka with 178 cases each.

#### **National Organ and Tissue Transplant Organisation (NOTTO) (Prelims Special)**





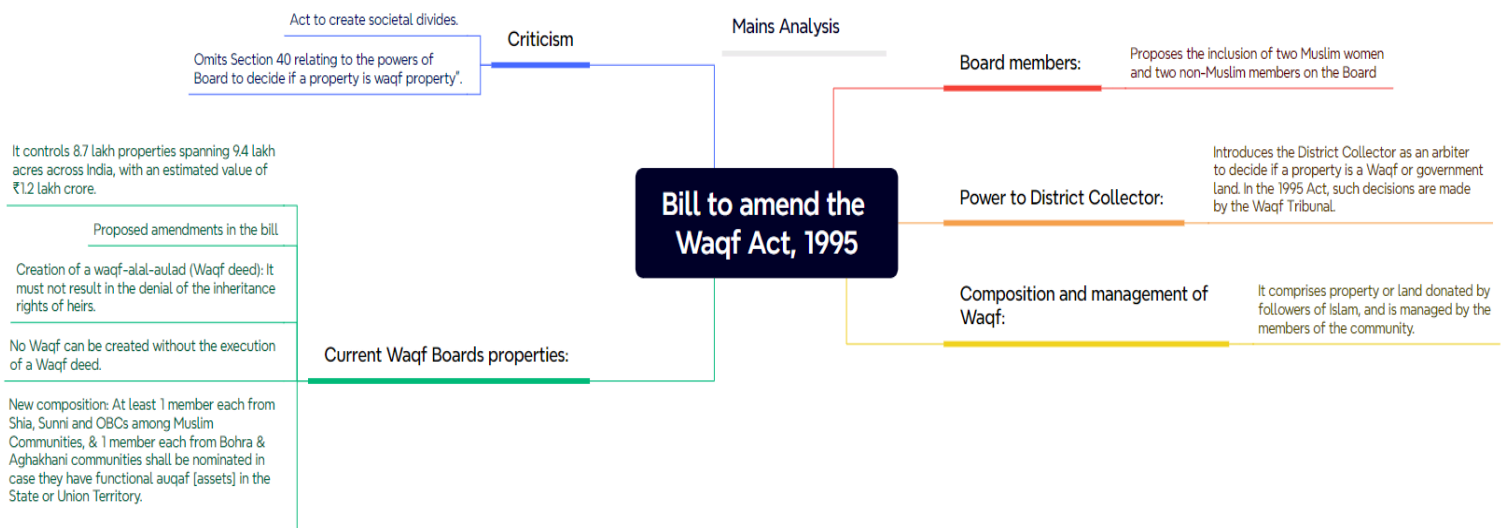
## Polity

**Relevance:** Parliament and state legislatures – structure, function, business conduct, power and privilege and problems that arise

### 6. Bill removes powers of Waqf Board; non-Muslims and women on board - The Hindu

**Context**

With the Bill to amend the Waqf Act, 1995, set to be tabled in Parliament this week, the Union government proposes to strip the Waqf Board of its powers to declare a property as its own.



**Waqf Board (Prelims)**

- **About:** A legal entity capable of acquiring, holding and transferring property. It can sue and be sued in court.
- **Functions:** It administers Waqf properties, recovers lost properties and sanctions the transfer of immovable Waqf properties through sale, gift, mortgage, exchange, or lease, with at least two-thirds of the board members voting in favour of the transaction.

**Relevance:** Parliament and state legislatures – structure, function, business conduct, power and privilege and problems that arise

### 7. On U.P.’s stringent anti-conversion law - The Hindu

**Context**

The UP Legislative Assembly recently passed the Uttar Pradesh Prohibition of Unlawful Conversion of Religion (Amendment) Bill, 2024, altering the original 2021 anti-conversion law by making its provisions more draconian and susceptible to misuse.

## Reason for amendment (Mains Analysis)

### AMENDMENT HAS INTRODUCED STRICTER PUNISHMENTS

#### BEFORE

**1-5 YEARS** imprisonment and a fine of at least Rs 15,000 for the base offence;

**2-10 YEARS** imprisonment and a fine of at least Rs 20,000 if the victim is a minor, woman, or a person belonging to an SC or ST community;

**3-10 YEARS** and a fine of at least Rs 50,000 in cases of mass conversion.

#### AFTER

**3-10 YEARS** imprisonment and a fine of at least Rs 50,000 for the base offence;

**5-14 YEARS** imprisonment and a fine of at least Rs 1,00,000 if the victim is a minor, a woman, from an SC or ST community, has a physical disability, or has a mental illness;

**7-14 YEARS** imprisonment and a fine of at least Rs 1,00,000 in cases of mass conversion.

- **Making the existing legislation “as stringent as possible”:** It was done due to the alleged involvement of “foreign and anti-national elements and organisations” in demographic change due to unlawful conversion.
- **Provision for conversion:** UP not only mandates a 60-day notice but also requires the Magistrate to conduct a police inquiry to ascertain the true intention behind the conversion.

#### Increase in penalties

- **Earlier penalty provisions:** A person convicted of unlawful conversion faced a minimum prison term of 1 year and a maximum of 5 years, along with a fine of ₹15,000.
- **New Penalty provisions:** The minimum term has been raised to five years, and maximum to 10 years. The fine has also been increased to ₹50,000.
- **Unlawful conversions involving a minor, a woman, or a SC/ ST person:** The penalty is increased from a prison term of 2-10 years to 5-14 years. The minimum fine has also been raised from ₹25,000 to ₹1 lakh.
- **2 new categories of offences introduced:**
  - **Newly added sub-section to Section 5:** A prison term of 7 years, extendable to 14 years, for anyone who secures “foreign” funds or funds from “illegal institutions for unlawful conversion”. They will also be required to pay a fine of ₹10 lakh.
  - **Threat by the accused:** If the accused causes any person to “fear of his life or property, assaults or uses force, promises or instigates marriage, conspires or induced any minor, woman or person to traffics or otherwise sells them”, they shall be punished with a minimum 20 years term extended to life imprisonment.

#### Who can register a complaint?

- **Original Act:** Under Section 4, only “any aggrieved person” or “his/her parents, brother, sister, or any other person who is related to him/her by blood, marriage or adoption” was authorised to file a criminal complaint.
- **New amendment:** It grants legitimacy to such third-party complaints. The revised provision stipulates that “any person” can file an FIR related to any violation of the Act.

#### **Provisions for bail**

- **Stringent “twin conditions of bail”:** They are identical to those under statutes such as the PMLA, 2002, and the UAPA, 1967.
- **Nature of the offences:** All offences related to unlawful conversion are now cognisable and non-bailable and can only be adjudicated upon by a sessions court or higher judicial forums.
- **Revised Section 7:**
  - An accused cannot be granted bail without first providing the public prosecutor an opportunity to contest the bail application.
  - Further, if the public prosecutor opposes such a plea, the sessions court may grant bail only if “there are reasonable grounds for believing that [the accused] is not guilty of such offence” and that he or she is unlikely to commit any crime if released on bail.
- **Reverse burden of proof on the accused:** It renders it virtually impossible for anyone to obtain bail until the completion of the trial.

#### **Anti- conversion laws in other States**

- **States having such laws:** Odisha, MP, and Arunachal Pradesh have had such laws for decades, while Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, and Uttarakhand have implemented such laws more recently.
- **Madhya Pradesh:** The law mandates a 60-day prior “declaration of the intention to convert” to the District Magistrate for the conversion to be valid.
- **Himachal Pradesh and Uttarakhand:** These states require a 30-day prior notice.

**Relevance:** Parliament and state legislatures – structure, function, business conduct, power and privilege and problems that arise

## 8. Bill seeks to expand NDMA role, fails to strengthen its status - Indian Express

### **Context**

Recently, the government introduced a Bill in Parliament seeking to amend the Disaster Management Act, 2005. It proposes to make important changes in the Act, aimed mainly at improving the operational efficiencies in responding to a natural disaster.

### **About the Bill (Mains Analysis)**



- **Provision:** It seeks to significantly expand the role and responsibilities of the National Disaster Management Authority (NDMA), especially in guiding state governments and organs of the Centre in dealing with disasters.
- **Issue:** It misses the opportunity to strengthen the institutional status of NDMA which would have empowered the body to coordinate better with state agencies, and provided it with more financial and human resources.

#### **DM Act, 2005**

- **Enactment:** Enacted in the aftermath of the devastating 2004 tsunami.
- **Institutional development:** Creation of the NDMA, SDMA at the state level, a National Disaster Response Force (NDRF), and a National Institute of Disaster Management (NIDM).
- **Legislative development:** It was followed by a National Disaster Management Policy in 2009 and a National Disaster Management Plan in 2016.
- **Achievements:**
  - Saved thousands of lives
  - Provided relief, rescue and rehabilitation services

#### **Proposed amendments**

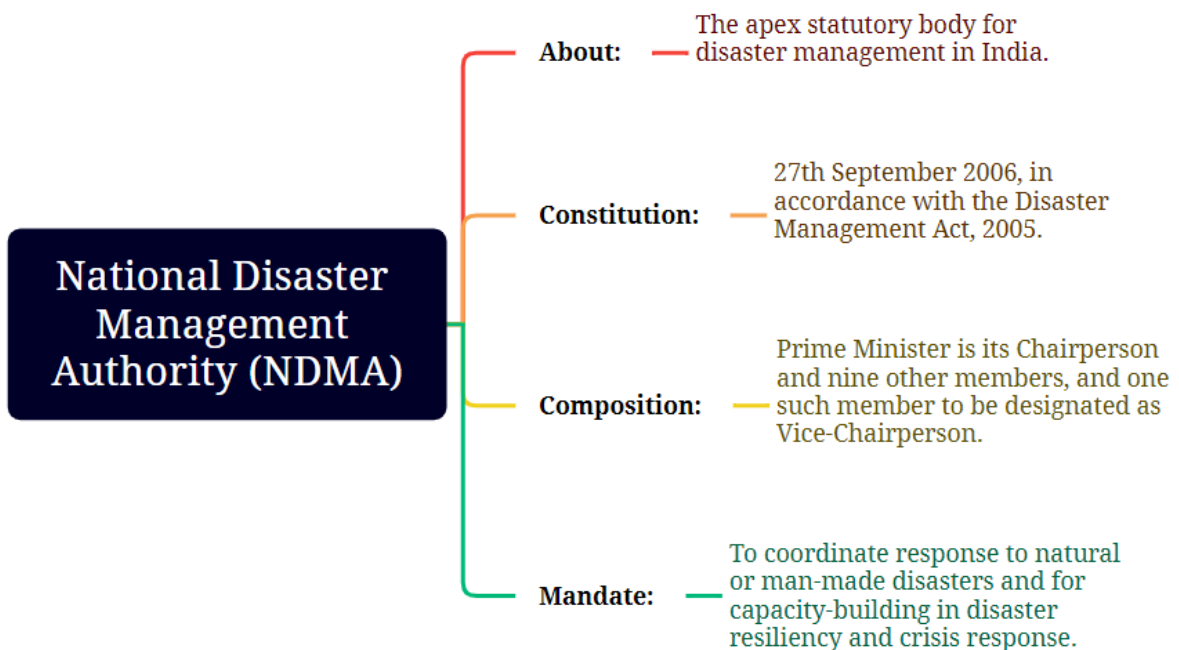
- **Urban DM Authorities:** In metropolitans, all state capitals and cities would have an Urban DMA, headed by a municipal commissioner which can help in having a unified and coordinated approach towards city-level disasters like urban flooding.
- **SDRF:** An SDRF is not mandated in the 2005 Act. Also, the size and capacity of the SDRFs in the states vary significantly. The Bill proposes to make it mandatory for every state to raise and maintain an SDRF.
- **National Crisis Management Committee:** The Bill gives legal status to the NCMC, making it the nodal body to deal with disasters with “serious or national ramifications”.
- **Enhanced role of NDMA:** NDMA has been asked to periodically take stock of the entire range of disaster risks to the country, including risks from emerging disasters.
- **Disaster Databases:** NDMA & SDMA is asked to create and maintain a national disaster database with information on the assessment of the disaster, fund allocation, expenditure, and preparedness and mitigation plans.
- **Compensations:** NDMA should recommend guidelines for minimum relief standards provided to people affected which includes a recommendation on compensation in case of loss of lives, damage to property etc.
- **Man-made disasters:** The original Act defined disasters as any “catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man made causes”. The Bill says the phrase “man-made causes” does not include any law-and- order-related situation.
- **Absence of vice-chairperson (VC):** The post of VC in NDMA has been vacant for long. The amendment Bill legitimises this position by allowing

for the day-to-day functioning to be carried out by any Member designated by the chairperson or the vice-chairperson.

### Unaddressed issues in Bill

- **NDMA not given more powers:** It should be elevated to the status of a government department, if not a full-fledged ministry in itself. Currently, this is done through Home Ministry, the nodal ministry for the NDMA.
- **No administrative financial powers:** Routing every small decision through the Home Ministry is an inefficient and time-consuming process.
- **Severely short-staffed NDMA at the top:** There are just 3 members functioning. It earlier used to once have six to seven members, each in charge of a specific type of disaster.

### National Disaster Management Authority (NDMA) (Prelims Special)



## World Affairs

**Relevance:** India and its Neighborhood- Relations

### 9. What led to the fall of Sheikh Hasina? - The Hindu/ What went wrong for Hasina, what her fall means for Bangladesh - Indian Express

#### Context

Sheikh Hasina survived the carnage of August 15, 1975 by sheer chance. In the late 1980s, she remobilised the Awami League (AL), Mujib's party, which played a crucial role in bringing down the military dictatorship of Muhammad Ershad in 1990. In the subsequent 15 years, Ms. Hasina oversaw economic progress in Bangladesh. The country of 170 million people saw millions being lifted out of poverty. Still everything she built came crashing like a sandcastle on August 5. The 'iron lady' of Bangladesh had to resign and leave the country.

China's dominance: Hasina's departure could strengthen China's influence in Bangladesh, complicating India's regional strategy.

Economic relations: Bangladesh is one of India's largest trading partners in South Asia which can be disrupted by the ongoing political unrest. Indian investments in Bangladesh may face uncertainty, especially in sectors such as infrastructure and manufacturing.

Security: The new government may be less friendly, raising border security issues for India. Hasina's departure could lead to a resurgence of Islamic extremism in Bangladesh, threatening India's security.

Increase in smuggling: Instability in Bangladesh may lead to increase in crime, illegal immigration and smuggling along the India-Bangladesh border.

Refugee crisis: Political instability may lead to an increase in the migration of Bangladeshi nationals seeking refuge in India. India may face humanitarian challenges in managing the influx of potential refugees.

Strike of COVID-19 & Russia-Ukraine war due to which GDP growth plunged to 3.4% in 2020, from 7.9% the previous year & there was a decrease in employment opportunities in the private sector.

#### Impact of Hasina's departure on India

#### Challenges to the economy:

#### Why the Govt fell in Bangladesh (Mains Analysis)

#### Quota system for government jobs introduced by Mujib after Bangladesh liberation:

Over 50% of government jobs in Bangladesh were reserved, of which 30% were for the descendants of freedom fighters/ Awami League workers.

#### Scrapping of quota:

Ms. Hasina did away with this system in 2018 after protests. In June 2024, the old system was reinstated by the Bangladesh high court. This triggered student protests, first on university campuses.

#### Lack of political legitimacy for govt:

Opposition leaders were harassed, and legal challenges were mounted against PM's rivals. This led to the BNP, the main opposition party, boycotting back-to-back elections.

#### Irregularities in the election process:

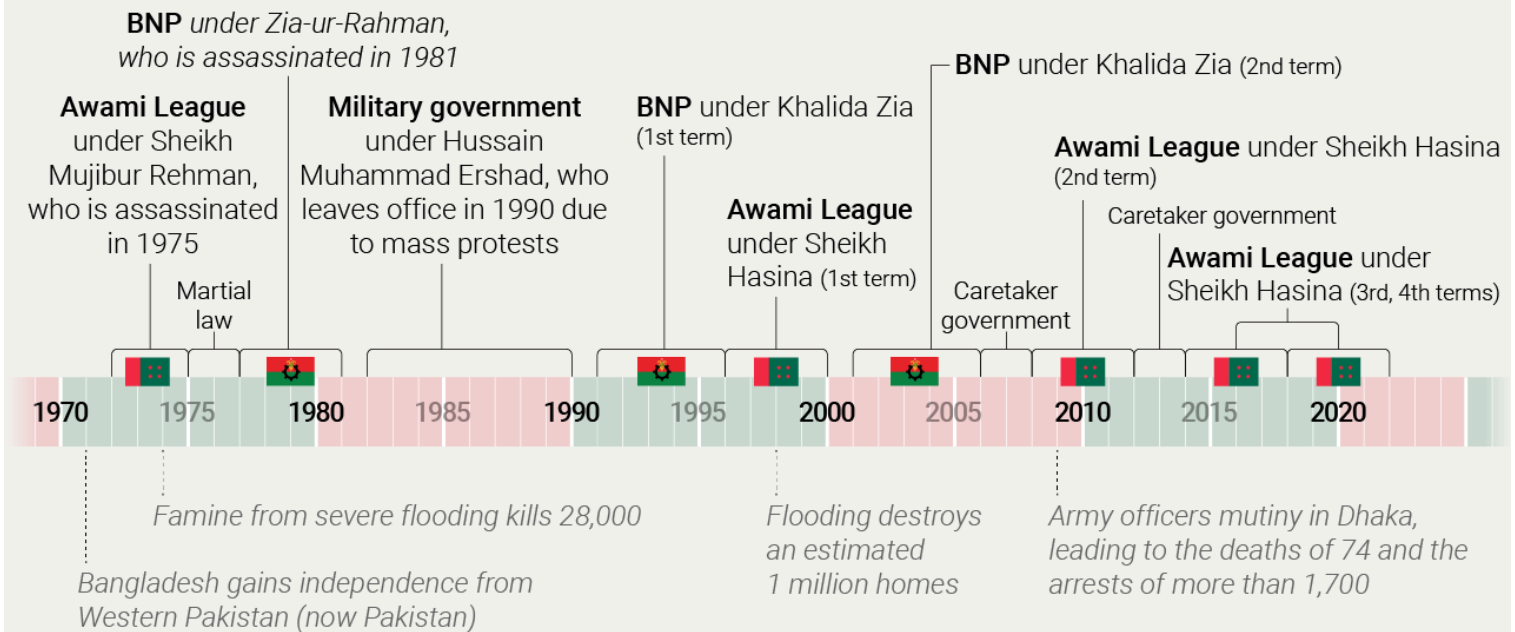
Due to this, the space for opposition politics shrank over the years.

#### Ousting of leaders in South Asia

- **Sheikh Hasina:** She is the second leader in South Asia who has now been forced out of power by mass protests.
- **Sri Lanka's elected President Gotabaya Rajapaksa:** He was forced to resign and leave the country amid massive protests triggered by an economic meltdown.



## Bangladesh Governments, 1971-2022



Source: BBC, Syed Mohammad Ali

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**Relevance:** Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora

### 10. China launches patrols near contested shoal as Philippines holds military drills - The Hindu

#### Context

China carried out a combat patrol to test "strike capabilities" near a flashpoint reef in the South China Sea recently, as the United States and its allies held joint military drills in the same waters. The Philippine military said those drills were taking place west of the Philippine island of Palawan, which is south of the disputed Scarborough Shoal.

#### South China Sea (SCS) (Prelims Special)

- **About:** An arm of western Pacific Ocean in Southeast Asia.
- **Location:** South of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.
- **Bordering states & territories:** People's Republic of China, Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- **Straits and water channels:** Connected by Taiwan Strait with East China Sea and by Luzon Strait with the Philippine Sea. It is a connecting link between Indian Ocean and Pacific Ocean, through Strait of Malacca.

- **Major islands:** The Paracel Islands, the Spratly Islands and the Scarborough Shoal.
- **Significance:**

- **Trade:** 1/3 rd of the global shipping passes through it, carrying trillions of trade.
- **Biodiversity:** It has one-third of the entire world's marine biodiversity and contains lucrative fisheries providing food security to the Southeast Asian nations.
- **Energy:** It is believed to have huge oil and gas reserves beneath its seabed.



#### **Scarborough Shoal (Prelims Special)**

- **About:** A series of small rocks and islands formed into a triangle shape in the South China Sea, located some 220 kilometers from the Philippines.
- **A productive fishing area:** It is rich in marine life, and contains many commercially valuable shellfish and sea cucumbers.
- **Control:** Effectively controlled by China, which has maintained a constant coast guard presence at the feature since 2012.

#### **South China Sea (SCS) Dispute (Mains Analysis)**

- **Disputes over Sovereignty:**
  - **Northern part:** China, Taiwan, and Vietnam contest sovereignty of the Paracel Islands; China has occupied them since 1974. The PRC and Taiwan also claim Pratas Island, which Taiwan controls.
  - **Southern part:** China, Taiwan, and Vietnam each claim all of the approximately 200 Spratly Islands, while Brunei, Malaysia, and the Philippines, claim some of them. Vietnam occupies the most land features in the island chain; Taiwan occupies the largest.
  - **Eastern part:** China, Taiwan, and the Philippines claim Scarborough Shoal; China has controlled it since 2012.
- **China's "nine-dash line" & Taiwan's similar "eleven-dash line" claim:** They overlap with the theoretical 200-nautical-mile (nm) Exclusive

Economic Zones (EEZs) that five Southeast Asian countries - Brunei, Indonesia, Malaysia, the Philippines, and Vietnam—could claim.

- **China's disapproval of UNCLOS:** China holds the minority view that UNCLOS allows them to regulate both economic activity and foreign militaries' navigation and overflight through their EEZs.
- **China's Artificial Islands:** In 2013 - 2015, China undertook extensive island-building operations in the Spratly Island chain. Although other claimants have carried out such works too, the scale of China's work and militarization has greatly exceeded that of other claimants.
- **Dismantled Regional Cooperation:** China and ASEAN have been negotiating a code of conduct for parties in the SCS since 2002. But it is alleged that China has prolonged the negotiations to buy time to carry out actions aimed at further strengthening its position in the SCS.

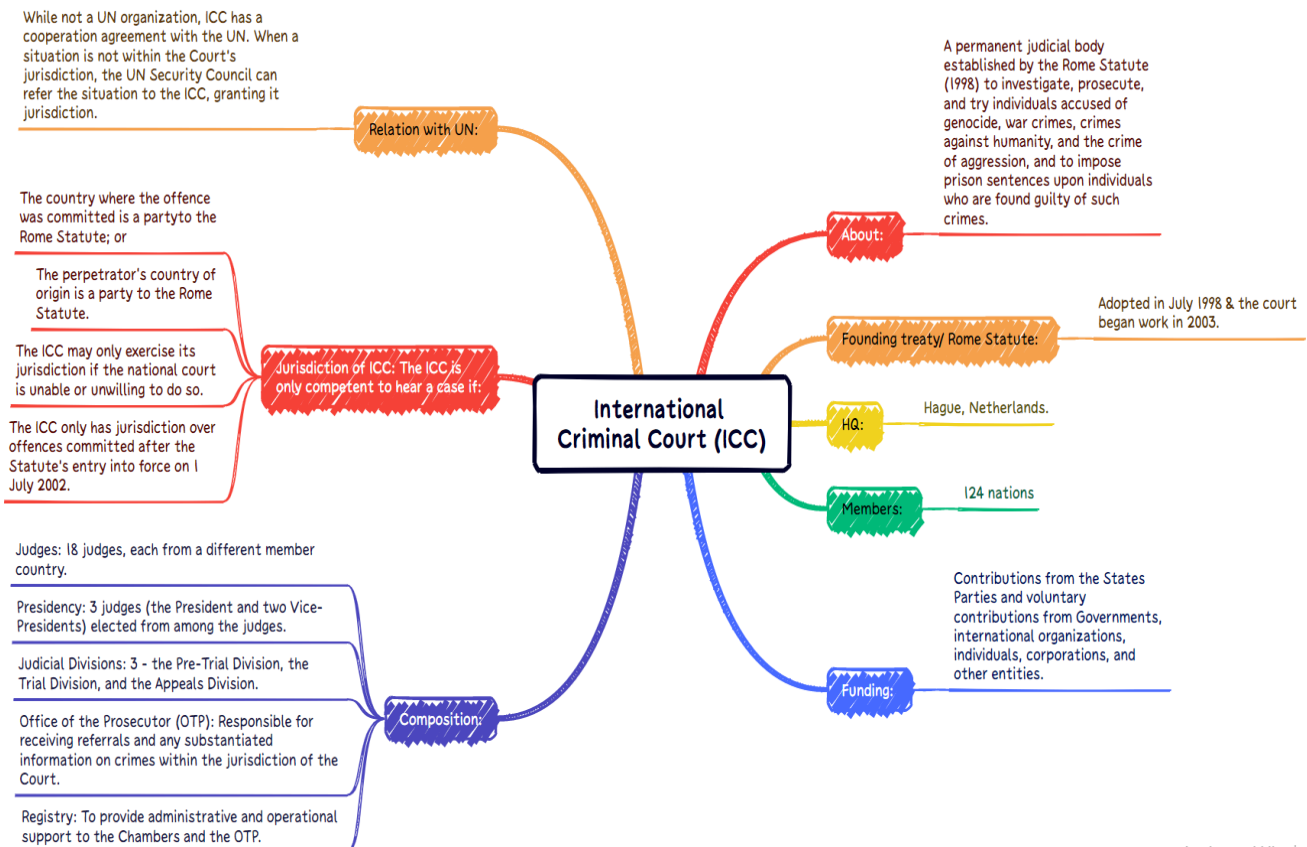
**Relevance:** Important International Institutions, agencies and fora - their Structure, Mandate

## 11. International Criminal Court (ICC) - The Hindu

### Context

Recently, Britain abandoned its intent to challenge the prosecutor's application for arrest warrants before the International Criminal Court (ICC) against Israel's Prime Minister and Defence Minister.

### International Criminal Court (ICC) (Prelims Special)





## ICJ vs. ICC



	International Court of Justice (ICJ) La Cour Internationale de Justice (CIJ)	International Criminal Court (ICC) La Cour pénale internationale (CPI)
<b>Year Court Established</b>	1946	2002
<b>UN-Relationship</b>	Official court of the U.N., commonly referred to as the "World Court."	Independent. May receive case referrals from the UN Security Council.
<b>Location</b>	The Hague, The Netherlands	The Hague, The Netherlands
<b>Types of Cases</b>	Contentious between parties & Advisory opinions	Criminal prosecution of individuals
<b>Subject Matter</b>	Sovereignty, boundary, & maritime disputes, trade, natural resources, human rights, treaty violations, treaty interpretation, and more.	Genocide, crimes against humanity, war crimes, crimes of aggression
<b>Funding</b>	UN-funded.	Assessed contribution from state parties to the Rome Statute; voluntary contributions from the U.N.; voluntary contributions from governments, international organizations, individuals, corporations and other entities.



## Economy

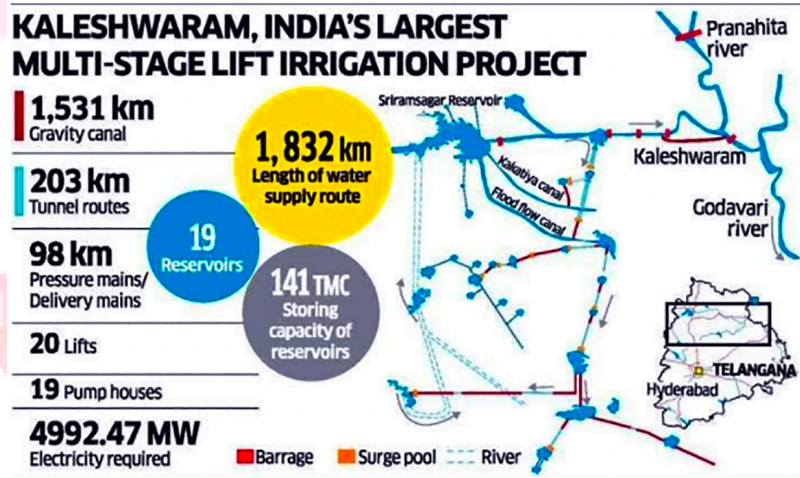
**Relevance:** Infrastructure

### 12. Kaleshwaram Lift Irrigation Project - The Hindu

- **About:** A multipurpose irrigation project on the Godavari River i.e, at Kaleshwaram village in Telangana.
- **Location:** Pranahita-Godavari river confluence.
- **Significance:** Claimed to be the world's largest multi-stage and multi-purpose lift irrigation project.

- **Earlier name:** Pranahita-Chevella Lift Irrigation Project.

- **Key feature:** A series of underground and surface water pumping stations, which are said to be the world's largest such structures.



- **Area:** Stretching over 300 km, it raises large volumes of water up from river or reservoir sources, to be redistributed in channels and/or further reservoirs before pumping to the next stations.
- **Purpose:** Supplying water to 45 lakh acres in Telangana & will utilise around 283 TMC water of river Godavari and provide irrigation and drinking water to 13 districts of Telangana.

**Relevance:** Investment models

### 13. What is the yen carry trade? Why is it unwinding right now? - The Hindu/ YEN CARRY TRADE - Indian Express

#### **Context**

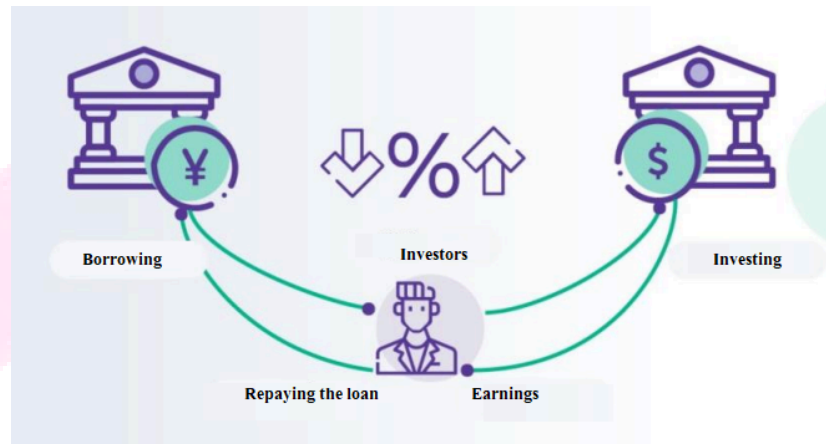
Global stock and bond markets, in particular Japan's, are being rocked by an unwinding of the hugely popular yen carry trade.

#### **Yen carry trade (Prelims Special)**

- **About:** It involves borrowing yen at a low cost to invest in other currencies and assets offering higher yields.

- **Components:** It involves borrowing the yen, or any other currency with similar super-low interest rates, then using it to buy currencies with better yields.

- **Significance of yen:** The yen has been the funding currency of choice for carry trades in U.S. dollars, Mexican pesos, New Zealand dollars and some others.



- **Beginning:** Its origins can be traced back to 1999 when Japan struck policy rates down to zero after its asset price bubble burst. The Japanese turned to international markets to get anything better than the zero yields at home, ploughing trillions of dollars into foreign markets and thus turning Japan into the world's biggest creditor nation.

### Challenges (Mains Analysis)

- **Increased volatility:** The closure of carry trades has increased volatility in global financial markets, which can affect investor confidence and economic stability.
- **Economic impact:** Rapid changes in capital flows can impede economic growth and development, especially in emerging markets dependent on foreign investment.
- **Policy dilemmas:** Central banks around the world must balance domestic economic conditions with the potential global implications of their monetary policies.

### Solutions

- **Coordinated monetary policies:** Global coordination among central banks can reduce the impact of such events. It can also help reduce the risk of financial instability.
- **Diversification of investments:** Investors can reduce risk by diversifying their investment portfolios, reducing dependence on carry trades and currency fluctuations.
- **Strengthen economic resilience:** Emerging markets can increase their economic resilience by focusing on domestic growth drivers and reducing dependence on foreign capital.

Recently, which one of the following currencies has been proposed to be added to the basket of IMF's SDR? (2016)

- A. Rouble
- B. Rand
- C. Indian Rupee
- D. Renminbi

**Relevance:** Infrastructure

14. In water-starved Punjab, plans for a new irrigation canal raise several concerns - Indian Express

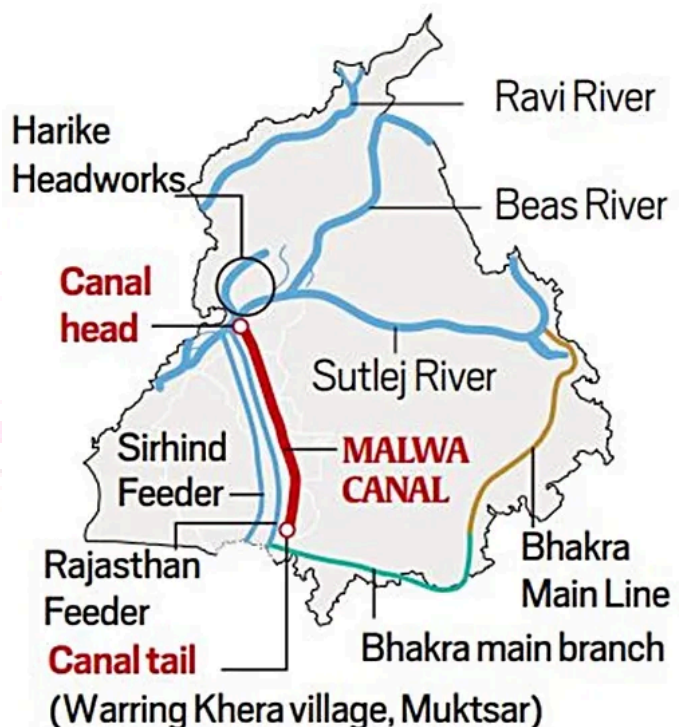
**Context**

Almost seven decades after the construction of the Bhakra Main Line (BML), Sirhind Feeder, and the Bist Doab canals in the mid-1950s, Punjab wants to spend Rs 2,300 crore on a new irrigation channel, running roughly 150 km in a north-south direction in the state's south-western corner. The Punjab government faces a serious funds crunch, and some experts have raised questions over the technical viability of the proposed project.

**Proposed Malwa canal (Prelims Special)**

- **Length:** 149.53-km
- **Naming:** Named after Malwa, the biggest and politically most important of the three geographical and cultural regions of Punjab, which sprawls across the entire southern part of the state.
- **Dimensions:** 50-foot wide and 12-foot deep canal
- **Origin:** Harike Headworks on the Sutlej river in Ferozepur district
- **Water capacity:** It will carry 2,000 cusecs of water.
- **End:** It will tail off at Warring Khara village in Muktsar district close to the border with Haryana, will flow parallel to the Sirhind Feeder and Rajasthan Feeder canals, to the latter's east.
- **Aim:**
  - To irrigate 2 lakh acres of land in seven districts.

**PROPOSED MALWA CANAL**



Source: Water Resource Department, Punjab

- To provide additional water to the left side of the Rajasthan Feeder canal, which the Sirhind Feeder cannot supply effectively.
- **Benefit:** Punjab gets only 68% of its allowance from the Bhakra dam, while Rajasthan gets about 125% and Haryana 110-115%. This new canal will help in removing this anomaly and creating a balance.

**Challenges before govt (Mains Analysis)**

- **Funding issues** for the Rs-2,300 crore project
- **Land acquisition issues**
- **Human displacement** and rehabilitation and compensation
- **Environmental clearance**, permission to fell trees, and clearance from the Central Water Commission

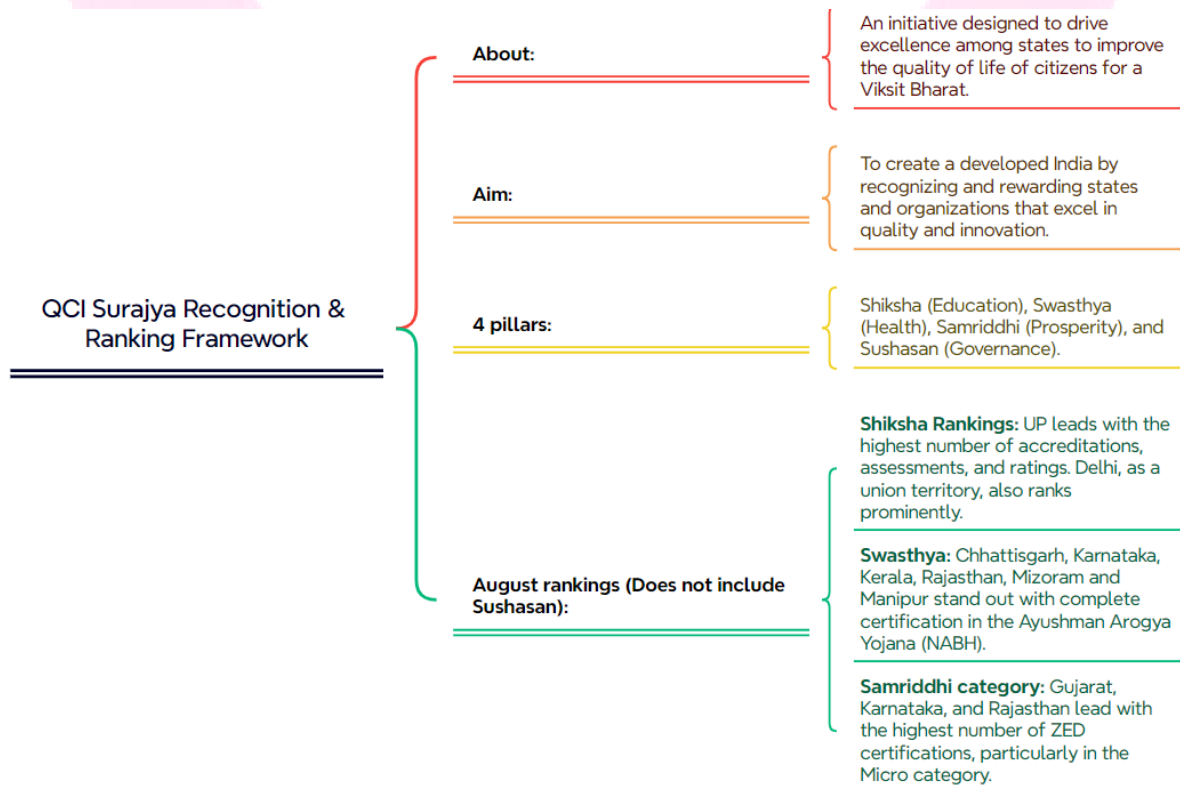
**Relevance:** Economy and Development

## 15. Quality Council of India introduces QCI Surajya Recognition & Ranking Framework to Drive Excellence in Key Sectors - PIB

**Context**

The Quality Council of India (QCI) is introducing the QCI Surajya Recognition & Ranking Framework, an empowering initiative designed to drive excellence among states to improve quality of life of citizens for a Viksit Bharat.

**QCI Surajya Recognition & Ranking Framework (Prelims Special)**





**Relevance:** Economy and Development

## 16. What is e-rupee and why do Google Pay, PhonePe want to join RBI's digital rupee project? - The Hindu

### Context

Fintech companies including Google, PhonePe, Amazon Pay, Cred, and Mobikwik are looking to join the Indian central bank's digital currency project by allowing their users to transact in e-rupee via Unified Payments Interface (UPI). Through this move, these payment platforms seek to widen their use case beyond enabling payment transactions between users linked to their registered banks in the country.

**e-rupee/ digital rupee (Prelims Special)**

## DIGITAL RUPEE

- A digital version of Indian rupee
- Also known as e-rupee, Central Bank Digital Currency (CBDC)
- A centrally owned digital currency, **unlike privately owned cryptos**
- **Offline functionality proposed** - one can transact without the internet

### Advantages

- **No or Minimal Disruption** to the financial system
- **Free of Risk:** Offers people the experience of dealing in currency in digital form, minus the risks seen with cryptos
- **Reasonable Anonymity:** Offers reasonable anonymity for small value transactions akin to physical cash

### Issues

- Cyber security
- Privacy and issue of Data use
- Digital Divide
- Uncompetitive step vis-a-vis other market players like Visa, Mastercard, etc.

### Roll Out Plan

- **Wholesale:** For restricted access to select financial bodies, also called **CBDC-W**.
  - Targets to make settlement systems more efficient and secure
  - It could be account-based
- **Retail:** It would be potentially available for use by all also called **CBDC-R**.
  - It could offer safer means of digital payment for citizens
  - This could likely be token-based, akin to cash

• **Ten countries have launched CBDC (July 2022)**  
First was Bahamian Sand Dollar in 2020 and the latest was Jamaica's JAM-DEX

## Sci and Tech

**Relevance:** Science and technology

### 17. Judicious use of sucralose as sugar substitute helps diabetics: study - The Hindu




#### **Context**

A recent study from India examining the effects of replacing sucrose or table sugar with an artificial sweetener, sucralose, in coffee and tea, found no adverse impact on glucose or HbA1c levels, and in fact indicated a slight improvement in body weight, waist circumference and body mass index (BMI).

#### **Sucralose (Prelims Special)**

- **About:** A no-calorie sweetener that can be used to lower one's intake of added sugars.
- **Sweetness:** Sucralose is intensely sweet; about 600 times sweeter than sugar.
- **Exceptionally stable:** So foods and beverages sweetened with sucralose stay sweet under a wide range of conditions.
- **Production:**
  - Sucralose is made from a process that begins with regular table sugar (sucrose); however, sucralose is not sugar.
  - Three select hydroxyl groups on the sucrose molecule are replaced with three chlorine atoms.
  - Sucralose's structure prevents enzymes in the digestive tract from

## What are the 3 types of diabetes?

 <b>Type 1</b> In type 1 diabetes, the body does not produce any insulin. Normally the body breaks down the carbohydrates you eat into blood sugar, which it uses for energy. Insulin is a hormone that the body needs to get sugar from the bloodstream into the cells of the body. In the absence of insulin, blood sugars can become very high, resulting in vomiting, dehydration and acidotic blood. The treatment for this type of diabetes is insulin.	 <b>Type 2</b> Type 2: In type 2 diabetes, the body makes insulin but is unable to use it properly due to insulin resistance in the cells. Type 2 is typically treated through lifestyle changes, medications and sometimes insulin as the disease progresses.	 <b>Gestational</b> Gestational diabetes starts when the body is not able to make and use all the insulin it needs for pregnancy. Without enough insulin, sugar cannot leave the blood and be used by cells as a source of energy. If not properly treated Gestational diabetes can cause complications in both the mother and the infant.
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breaking it down, which is an inherent part of its safety.

- **After Consumption:**

- ~ 85% of consumed sucralose is not absorbed by the body and is excreted unchanged.
- ~ 15% which is absorbed is not broken down for energy—therefore, sucralose does not provide any calories. All absorbed sucralose is excreted quickly in the urine.

**Relevance:** Science and technology

## 18. Cryoconite - The Hindu

- **About:** A dark-colored, powdery substance found on the surface of glaciers and ice sheets.

- **Composition:**

Fine sediment, organic matter, and sometimes cyanobacteria or algae.

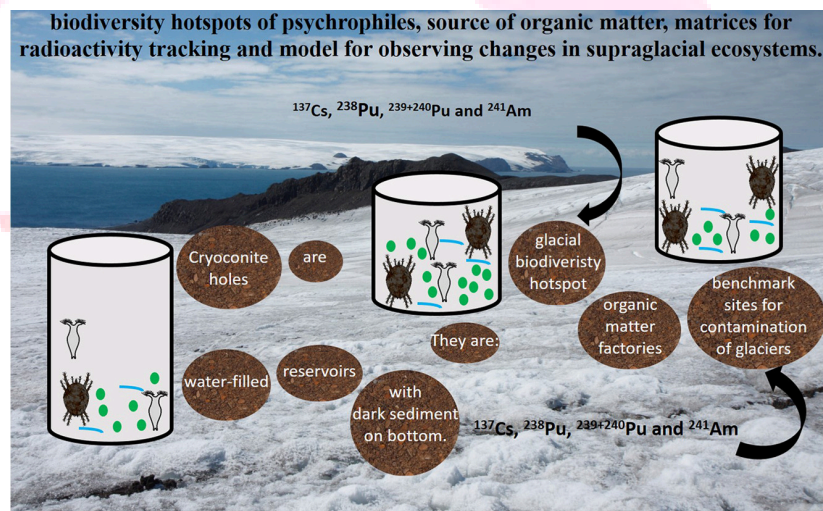
- **Formation:** In small, irregularly shaped holes/ cryoconite holes, which are essentially meltwater pools

on the ice surface that have accumulated sediment and organic material.

- **Significance:**

- Its dark color absorbs more solar radiation than the surrounding ice, creating a localized warming effect that increases melting.
- Cryoconite holes can act as small ecosystems harboring a variety of microorganisms.
- Of interest to scientists studying the impacts of climate change on polar and alpine environments.
- Relevant to the study of life in extreme environments

**Relevance:** Science and technology



## 19. Bluetongue Disease - Indian Express

**Context**

Bluetongue disease has been confirmed in all 12 Dutch provinces.

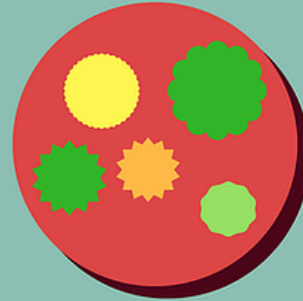
**Bluetongue Disease (Prelims Special)**



The Bluetongue virus which is a notifiable disease that affects ruminants and camelids. Bluetongue is part of the Orbivirus genus in the Reoviridae family and there have been 26 different serotypes of the bluetongue virus identified. Bluetongue is an insect-borne virus passed on by midges (*Culicoides imicola*) (*Culicoides variipennis*) and 48 other culicoides which are known vectors for the disease. Bluetongue first originated in South Africa and since 1999 there have been outbreaks of the disease in Europe. The last outbreak to occur in the UK was in 2007 in Suffolk.

## TRANSMISSION

BTv is spread by *Culicoides* midges which are the main vectors of the disease. The midges carry the virus in their saliva and they first get the disease from biting a viraemic animal that has BTv. The primary route of transmission is through the skin when a midge bites an animal to feed. Other routes of transmission can occur iatrogenically because of poor hygiene.



## SYMPTOMS

Ulcers in and around the mouth.  
Mucous discharge from the nose and mouth.  
Swelling of the head, neck, mouth and sometimes ears.  
Swelling of the skin where the legs meet the top of the hooves known as the Coronary band.  
Swelling and bluish discolouration of the gums, lips, and tongue.  
Crusting around the nose and mouth.

## MORTALITY

Bluetongue has the most severe effect on sheep, with cattle showing little to no symptoms at first but acting as reservoirs for the local midges to pick up the disease and infect more vulnerable animals like sheep. Sheep have higher infection rates and a mortality rate as high as 30%.



## TREATMENT & PREVENTION

There are vaccines available for serotypes 1, 2, 3, 4, 8 and 9 which can be used to prevent the spread of the disease depending on what serotype is most likely to infect the animal. What vaccine to use is determined by DEFRA as there will be examinations conducted to determine what serotype the virus is and what vaccine to use.



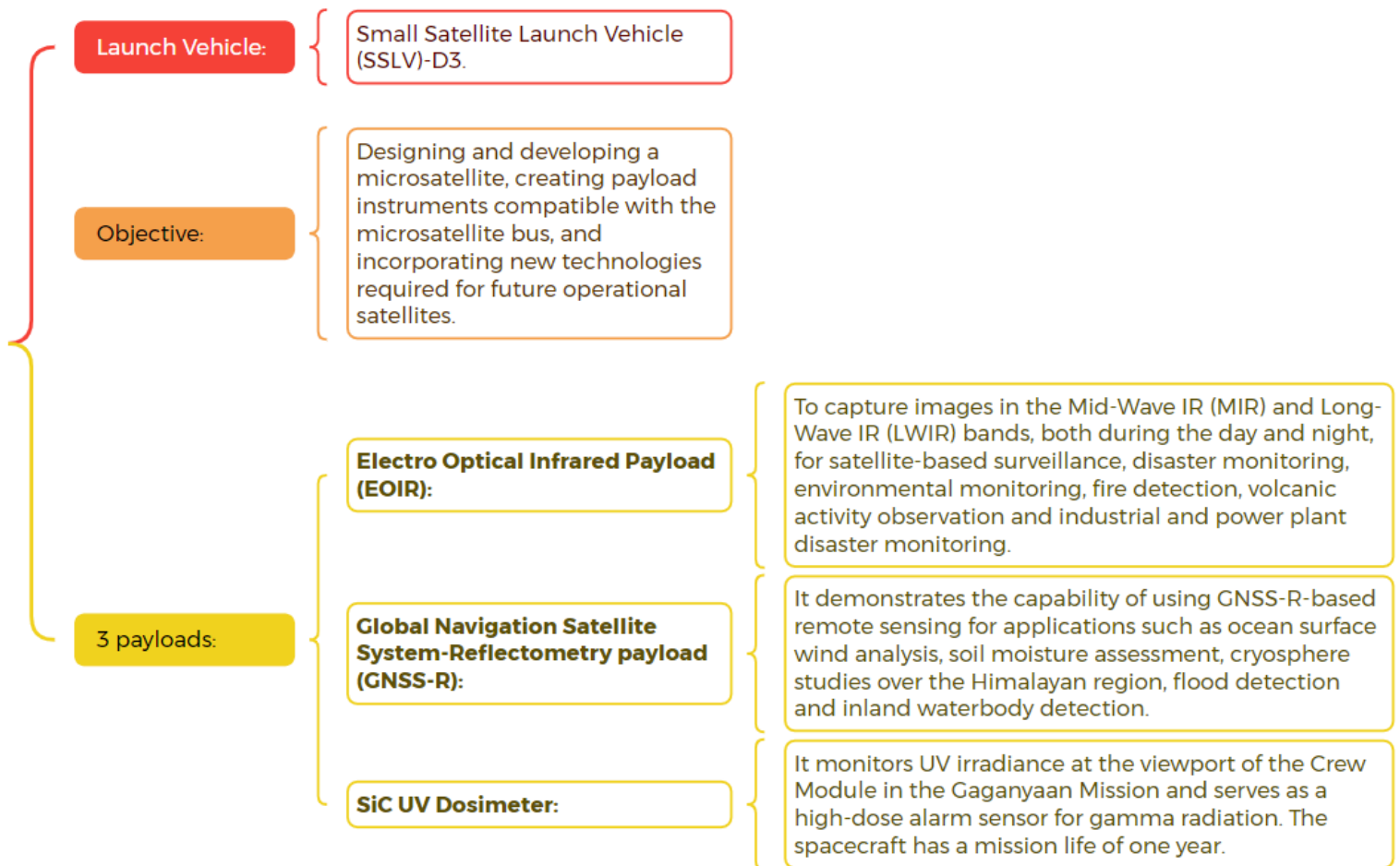
**Relevance:** Indian achievements in science and technology

## 20. ISRO likely to launch Earth Observation Satellite-8 on August 15 - Indian Express

### Context

As per ISRO, the Earth Observation Satellite-8 (EOS-8) is likely to be launched on August 15. The EOS-8 will be launched by the Small Satellite Launch Vehicle (SSLV)-D3.

### Earth Observation Satellite-8 (Prelims Special)



## Miscellaneous

### 21. Science award for ISRO team, IISc's ex-chief Padmanabhan - The Hindu

#### **Context**

The Union government has announced the first set of Rashtriya Vigyan Puraskar, or national awards for scientists. Thirty-three of these awards, slated to be given on August 23, National Space Day to mark Chandrayaan-3's moon landing, were announced. Former Director of the IISc, G. Padmanabhan, was announced as the winner of the Vigyan Ratna.

#### **Rashtriya Vigyan Puraskar (Prelims Special)**

- **About:** It recognizes outstanding and inspiring scientific, technological and innovation contributions of researchers, technologists and innovators.
- **4 categories:**
  - **Vigyan Ratna Awards:** To recognise lifetime achievements & contributions made in any field of science and technology.
  - **Vigyan Shri Awards:** To recognise distinguished contributions to any field of science and technology.
  - **Vigyan Team Awards:** Given to a team comprising three or more scientists/researchers/innovators who have made an exceptional contribution working in a team in any field of science and technology.
  - **Vigyan Yuva-Shanti Swarup Bhatnagar (VY-SSB):** Highest multidisciplinary science awards in India for the young scientists (maximum 45 years).
- **13 domains:** Physics, Chemistry, Biological Sciences, Mathematics & Computer Science, Earth Science, Medicine, Engineering Sciences, Agricultural Science, Environmental Science, Technology & Innovation, Atomic Energy, Space Science and Technology, and Others.

### 22. Auroville township - The Hindu

- **About:** The largest and oldest surviving international intentional community in the world founded by Mirra Alfassa/ the 'Mother', the spiritual collaborator of Sri Aurobindo on the 28th of February, 1968.
- **Location:** Outskirts of Puducherry, in the Villupuram District of Tamil Nadu.
- **Recognition:** UNESCO had endorsed the project of Auroville through four resolutions in 1966, 1968, 1970, and 1983.
- **Administrative control:** Ministry of Education since 1980
- **Statutory control:** Administered as per the provisions of the Auroville Foundation Act, 1988, passed by the Parliament of India.

## 23. International Air Transport Association - The Hindu

- **Establishment:** In 1945 in Havana, Cuba
- **Founding members:** 57
- **Mission:** To represent, lead, and serve the global airline industry.
- **Membership:** Currently represents around 330 airlines, accounting for over 80% of global air traffic.
- **Headquarters:** Montreal, Canada
- **Functions:**
  - Advocates for the interests of airlines on the world stage.
  - Creates industry standards to simplify processes, enhance safety, increase passenger convenience, reduce costs, improve efficiency, and achieve sustainability goals.

## 24. Yahya Sinwar - The Hindu

- Hamas recently named Yahya Sinwar, its top official in Gaza who masterminded the Oct. 7 attacks in Israel, as its new leader after his predecessor was killed in a presumed Israeli strike in Iran.



## 25. Why Vinesh failed weigh-in - Indian Express

### Context

Wrestler Vinesh Phogat was disqualified from the Paris Olympics after the official weigh-in recently, ahead of her scheduled gold medal bout in the evening. She will return from Paris without a medal.

### Weight cut

- **About:** Combat sports - wrestling, boxing, judo, mixed martial arts (MMA), etc. - are organised according to weight classes. Weight classes are meant to ensure a relatively level playing field.
- **Significance of weight cut:** This can provide a competitive edge by allowing them to participate in a lower weight class than that of their "natural weight", & to also quickly regain the lost weight and effectively fighting heavier than their weight during the weigh-in.

### Weigh-in






- **Meaning:** Wrestlers are weighed, in their singlet, on the morning of their competition. In Olympic wrestling, the weigh-in takes place on both days.

- **Stringent norm:** If an athlete does not attend or fails the weigh-in, he will be eliminated from the competition and ranked last, without rank". This means that athletes have to make the weight on both days.

### Weight-cutting measures

- **Extreme measures:** Skipping carbohydrates, not drinking water, and intense exercise.
- **Last-minute weight cuts:** Losing excess fluids accumulated in the body. Athletes use saunas and wear heavy clothing to lose excess fluids through sweating.

### The process of Olympic wrestling weigh-ins

 <p><b>Correct outfit</b></p> <p>The only uniform allowed for the weigh-in is the singlet. No rings or bracelets are allowed.</p>	 <p><b>Physical fitness</b></p> <p>Contestants must be in perfect physical condition, with their fingernails cut very short.</p>	 <p><b>Regular weigh-ins</b></p> <p>Athletes are weighed every morning of all competitions and the morning of repechages and finals (for those qualified)</p>
 <p><b>High stakes</b></p> <p>If the athlete fails the weigh-in, she loses her chance at a medal and is ranked last, without rank</p>	 <p><b>Medical test</b></p> <p>The athlete undergoes medical control on the first morning. No wrestler may be accepted at the weigh-in if he has not taken it.</p>	

26. Central Government appoints Shri Harish Dudani as Member in Central Electricity Regulatory Commission - PIB

**Context**



Shri. Harish Dudani has been administered Oath of Office and Secrecy by Hon'ble Minister for Power on 06.08.2024, as Member, CERC.

**Central Electricity Regulatory Commission (Prelims Special)**

- **About:** A statutory body established under the provisions of the Electricity Regulatory Commissions Act, 1998.
- **Legislative backing:** A Central Commission for the purposes of the Electricity Act, 2003, which has repealed the ERC Act, 1998.
- **Composition:** A Chairperson and 4 other members.
- **Aim:** To promote competition, efficiency and economy in bulk power markets, improve the quality of supply, promote investments, and advise the government on the removal of institutional barriers to bridge the demand-supply gap and thus foster the interests of consumers.

27. Indian Siris tree/ Albizia lebbeck - The Hindu

- **About:** A tropical tree native to India and Southeast Asia belonging to the Fabaceae family
- **Nature:** A deciduous tree requiring a warm and humid climate and can be grown in a variety of soil types, including clay, loam, and sandy soil.
- **Maximum height:** 15-20 meters
- **Ecological Role:**
  - Can fix nitrogen from the atmosphere, which helps to enrich the soil and support other plant species.
  - Has extensive, shallow root system which makes it a good soil binder and suited to soil conservation and erosion control.

## Rajasthan Current Affairs

### 1. MAA Voucher Scheme

- **Full name:** Mukhyamantri Ayushman Arogya Voucher Scheme.
- **Launch:** It was launched at the state level from Jaipur on 8 August 2024.
- **Started as a pilot project on March 8, 2024:** Started in three districts – Baran, Bharatpur and Phalodi.
- **Objective:** To ensure safe delivery and reduce maternal mortality rate.
- **Benefit:**
  - It will provide free sonography facility to pregnant women of remote areas and rural areas.
  - This facility will be available free of cost at private centers authorized at the state level.

### 2. State Remote Application Sub Center to start in Jaipur

- **Year of starting:** January 2025.
- **Operation:** From the Setcom office in the Indira Gandhi Panchayati Raj Institute campus.
- **Significance:** With the opening of the center in Jaipur, maps of water, land and satellite related areas will be available immediately to make plans related to the departments.
- **Note:** Currently the State Remote Application Center is located in Jodhpur.

### 3. Amrita Devi Bishnoi Memorial Award to ASP Pawan Kumar Jain

- **75th State Level Van Mahotsav:** Celebrated by the Forest Department on 7 August 2024 organized at Gadota in Dudu.
- **Hariyali Teej:** More than 1 crore trees were planted across the state in a single day.
- **Geo tagging of plants:** For conservation purposes.
- **Forest Development and Wildlife Protection category:** Sati Ki Chori Forest Protection and Management Committee of Udaipur was felicitated for the year 2020.
- **Forest Development, Conservation and Forest Protection category:**
  - Mr. Narayan Lal Kumawat (year 2019),
  - Mr. Shyam Sundar Paliwal of Rajsamand (year 2020),
  - Ms. Abhilasha of Sikar and Mr. Bachchu Singh Verma of Bharatpur (year 2021)
  - Mr. Pawan Kumar Jain of Kota (year 2022)
- **Wildlife Conservation and Protection category:**
  - Mr. Gajendra Singh Manjhi of Nagaur (year 2020)
  - Mr. Padma Singh Rathore of Udaipur (year 2021)
  - Mr. Mohit Sharma and Ms. Divya Sharma of Jaipur (year 2022) (joint)
- **Award:** An amount of Rs 50 thousand, memento and citation were given.

### 4. Rajya Sabha by-election in Rajasthan

- Elections for one Rajya Sabha seat in Rajasthan will be held on Sept 3.
- At present, the Chief Election Officer of Rajasthan is Naveen Mahajan.
- In Rajasthan, Congress has 5 Rajya Sabha seats and BJP has 4 seats.