

# BELIEVERS MANTRA

MAGAZINE

DECEMBER 2022



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## Wildlife Trust of India

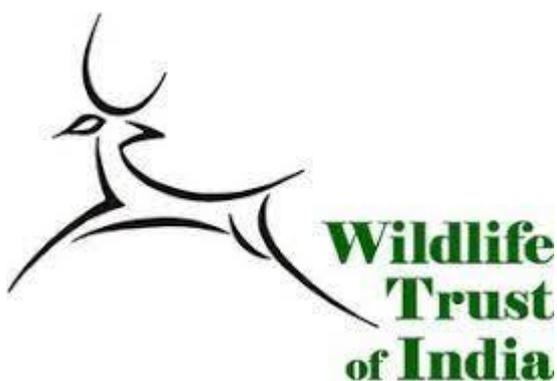
For Prelims:

Wildlife Trust of India:

- The Wildlife Trust of India (WTI) is a **non-profit conservation organisation** dedicated to safeguarding India's natural heritage.
- WTI is a registered **charity** in India (under Section **12A** of the **Income Tax Act, 1961**).
- WTI was founded in **November 1998** in **New Delhi, India**, in response to the rapidly deteriorating state of wildlife in India.
- A team of **3 members** set out on a mission to save the environment which has now increased to **150** full time professionals.
- They work on a variety of projects ranging from **species rehabilitation** to the **prevention of illegal wildlife trade**.
- WTI uses more than **80%** of the **funds** raised directly for **Conservation Action**.

WTI programmes are supported, among others, by:

- Ministry of Environment & Forest, Government of India
- Ministry of Social Justice & Empowerment, Government of India.
- State Forest & Wildlife Departments.



Mission of WTI:

Its mission is to:

- **conserve** wildlife and its habitat and
- work for the **welfare** of **individual wild animals**, in partnership with **communities** and **governments**.

Work of WTI:

WTI has been working:

- to help endangered species recover;
- addressing wildlife emergencies and wild animal rescue and rehabilitation;
- empowering and assisting law enforcement in the fight against wildlife crime;
- preserving natural habitats;

- raising conservation awareness;
- promoting green livelihoods;
- assisting with grassroots conservation initiatives.
- WTI currently runs 40 conservation projects across 23 states from the **Pir Panjal** mountains in **Kashmir** to the **mangrove** forests of **Kannur, Kerala**; from **Himalayan black bear forests** in **Arunachal** to whale **shark pupping** areas off the **Gujarat coast**.

## Ransomware

For Prelims

What is Ransomware:

- Ransomware is **malware** that employs **encryption** to hold a victim's **information** at **ransom**.
- It is used to **encrypt** important **documents** or files **within** a **system (Crypto ransomware)** or simply **lock** the **original** user **out of** the **system (Locker ransomware)**.
- **Unlike** other cyber-attacks, in this form of attack, the **user is notified** of the attack.
- The first ever recorded use of **ransomware** occurred as early as **1989** in the form of the **AIDS Trojan**.
- However, this method gained prominence after the unleashing of the **WannaCry Ransomware** in **2017**.



Ransomware-as-a-Service (RaaS):

- Ransomware-as-a-service is a **cybercrime economic** model that allows malware developers to earn money for their creations without the need to distribute their threats.
- **Non-technical criminals** buy their wares and launch the infections, while paying the developers a **percentage of their take**.
- The developers run relatively **few risks**, and their customers do most of the work.

For Mains

The Threat of Ransomware:

- Typically, **cutting-edge** malware like ransomware is **polymorphic** by design, which allows cybercriminals to easily **bypass traditional signature-based security based on file hash**.
- Use of anonymous **cryptocurrency** for **payment**, such as bitcoin, makes it **difficult to follow the money trail and track down criminals**.

Measures taken by the government:

- **Indian Computer Emergency Response Team (CERT-In)** is an organisation of the **Ministry of Electronics and Information Technology** with the objective of **securing Indian cyberspace**.

- It is the **nodal agency** which deals with cybersecurity threats like **hacking** and **phishing**.
- The "**Cyber Swachhta Kendra**" (Botnet Cleaning and Malware Analysis Centre) is being operated by **Indian Computer Emergency Response Team (CERT-In)** for analyzing **BOTs/malware** characteristics and providing information and enabling citizens for removal of BOTs/malware.
- The **National Cyber Security Coordinator**, under **the National Security Council Secretariat**, coordinates with different agencies at the national level on **cybersecurity issues**.
- **National Critical Information Infrastructure Protection Centre** has been set up for the protection of national **critical information infrastructure**.

## Great Indian Bustard

For Prelims:

Great Indian Bustards:

- The Great Indian Bustard is easily recognisable by its **black cap over a pale head and neck**.
- The Great Indian Bustard (GIB) is the **State bird of Rajasthan**.
- It is considered India's most **critically endangered** bird.
- It is considered the **flagship grassland species**, representing the **health** of the **grassland** ecology.
- The Great Indian Bustard is the **largest flying bird** in its **native region**, standing at about 3.3 ft tall.
- Both the male and female are roughly the **same size** and re distinguished by the **colour of their feathers**.
- It is **endemic** to the **Indian subcontinent** and found in parts of **India** and **Pakistan**.

Earlier present in **11 states** of India, they are now restricted to the following **6 states** today.

1. Andhra Pradesh
2. Gujarat
3. Karnataka
4. Maharashtra
5. Madhya Pradesh
6. Rajasthan

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## Major Threats:

- Death by collision with infrastructure, particularly power lines and wind turbines
- Depletion of grasslands
- Hunting, (still prevalent in Pakistan)
- Development of mines and human habitation in and around their habitats among others.

## Conservation measures taken:

### Project Great Indian Bustard:

- It has been launched by the **Rajasthan government** with an aim of constructing **breeding enclosures** for the species and developing infrastructure to **reduce human pressure** on its habitats.

### Species Recovery Programme:

- GIB is kept under the species recovery programme under the **Integrated development of Wildlife Habitats** of the Ministry of Environment, Forests and Climate Change (MoEFCC).

### Conservation Breeding Facility:

- **MoEF&CC, Rajasthan government and Wildlife Institute of India (WII)** have also established a **conservation breeding facility** in **Desert National Park** at **Jaisalmer** in **June 2019**.

## Herat Security Dialogue

### For Prelims:

### Herat Security Dialogue:

- The **10th Herat security dialogue** with the “Inclusive Political System, Patterns and Roadmaps” started on 27<sup>th</sup> November 2022, **Dushanbe**, the **capital of Tajikistan**.
- Since **2012**, this meeting has been held **every year** by the **Afghan Institute for Strategic Studies (AISS)** in **Herat**.
- This will be the **first** time the Herat Security Dialogue has taken place **outside of Afghanistan**.
- It is expected that **120 representatives** from **regional** and **international** bodies, including **Afghanistan**, will attend the conference.
- Herat Security Dialogue is considered as one of the most important conferences about the **security** of **Afghanistan** and the region.
- According to The **Afghan Institute for Strategic Studies (AISS)**, the **two-day conference** will discuss ways to establish an **inclusive government** in **Afghanistan**.

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### Criticism:

- The security dialogues in Herat are criticised as a meeting of high-level experts from the region and Afghanistan, who mostly involve **theoretical plans**.
- It **doesn't** have a **practical aspect** as it is mostly about getting **privileges** from the **international community**.



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## Concerns raised:

- During the two-day meeting's opening statements, speakers from the host country expressed alarm over the **growth of terrorist organizations** particularly **ISIS** and **Al-Qaeda** in Afghanistan.
- Another major concern is that **drug production** and **trafficking** have also increased significantly over the past year in Afghanistan.
- Some have also raised the issue of Taliban's growing **restrictions on women and girls**, including the latest decrees banning women from **exercising at gyms and parks**.

## Freshwater Turtles

For Prelims

### Turtle vs Tortoise:

- **All tortoises are turtles**—that is, they belong to the order **Testudines** or **Chelonia**, **reptiles** having **bodies encased** in a bony shell—but **not all turtles are tortoises**.
- The most important thing to remember about **tortoises** is that they are **exclusively land creatures**.
- **Tortoises** are **generally vegetarians**, while other **turtles** are **omnivorous**.

### Fresh water Turtles in India:

- India has **29 species** of freshwater **turtles (24)** and **tortoises (5)**.

#### Red-Crowned Roofed Turtle:

Scientific Name: **Batagur kachuga**

Also known as **Bengal roof turtle**.

Found in: **Nepal**, northeastern **India**, **Bangladesh** parts of **Myanmar**.

IUCN Status: **Critically Endangered**

CITES: **Appendix I**



and

#### Leith's Softshell Turtle:

Scientific Name: **Nilssonina leithii**

Found in: **Peninsular Indian rivers** such as the **Bhavani**, **Godavari**, and **Moyariii** Rivers.

IUCN Status: **Critically Endangered**

CITES: **Appendix I**



## Tortoises and Freshwater Turtles Under Siege

- It is a **2019** study by **TRAFFIC** India to help non-experts comprehend the magnitude of the illegal trade in a decade.
- According to the study, at least **1,11,310 tortoises** and **freshwater turtles** were trafficked from **September 2009** to **September 2019**.

### Jallikattu

For Prelims

Jallikattu:



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- Jallikattu is typically practised in the state of **Nadu** as a part of **Pongal celebrations** on **Pongal** day, which occurs annually in **January**.
- The sport is played in an **open ground** where a **bull** is **let loose** amid hordes of people who try to **control** the **bull** by piling on its **hump** or **horns**.
- Jallikattu is considered a **traditional way** for the **peasant community** to **preserve** their **pure-breed native bulls**.
- **Kangayam, Pulikulam, Umbalachery, Bargur** and **Malai Maadu** are among the popular native cattle breeds used for Jallikattu.

Historical Evidences of the Sport:

- This traditional sport emerged in **400 BC -100 BC**, and was enjoyed by the people who lived in the **Mullai division** of prehistoric Tamilnadu.
- A **seal** from the **Indus Valley civilization** depicting the practice is preserved in the **National Museum, New Delhi**.
- A **cave painting** in **white kaolin** discovered near **Madurai** depicting a lone man trying to control a bull is estimated to be about **1,500 years old**.

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Legal Concerns:

- Jallikattu first came under legal scrutiny in **2007** when the **Animal Welfare Board of India** and the animal rights group **PETA** moved petitions in the **Supreme Court** against Jallikattu as well as bullock cart races.
- In **2011**, the Centre added **bulls** to the list of **animals** whose **training** and **exhibition** is **prohibited**.
- In **2014**, the **Supreme Court** **banned** Jallikattu, citing the 2011 notification.
- Tamil Nadu government used **Prevention of Cruelty to Animals (Tamil Nadu Amendment) Act of 2017** and **Prevention of Cruelty to Animals (Conduct of Jallikattu) Rules of 2017** to overcome the ban.

- In 2018, the Supreme Court referred the Jallikattu case to a Constitution Bench, where it is pending now.

## Exercise Agni Warrior

- The 12th Edition of Exercise Agni Warrior, a bilateral exercise between the Singapore & Indian Army, which had commenced on 13 November 2022 concluded at Field Firing Ranges, Devlali (Maharashtra) on 30 November 2022.
- Exercise Agni Warrior, involved showcasing joint firepower planning, execution and use of New Generation Equipment by the Artillery arm of both armies.
- Exercise also included participation by both sides in a joint computer war-game as part of joint planning process.
- Both sides utilised niche technology and Artillery Observation Simulators as part of joint training phase.
- Indigenously manufactured Artillery guns and howitzers also participated during the final of the exercise.



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## Advanced Light Helicopter Mk-III

- The ALH Mk-III helicopters were indigenously manufactured by Hindustan Aeronautics Limited (HAL).
- It features state-of-the-art equipment including advanced RADAR as well as Electro optical sensors, Shakti engines, full glass cockpit, high-intensity search light, advanced communication systems, automatic identification system as well as search-and-rescue homer.
- This feature enables the helicopter to undertake maritime reconnaissance as well as carry out search and rescue at extended ranges while operating from ships, both by day and night.
- The aircraft has the ability to switch roles from an offensive platform with heavy machine gun to that of a benign one carrying a Medical Intensive Care Unit to facilitate transfer of critically ill patients.
- A total of 16 ALH Mk-III aircraft have been inducted in the Indian Coast Guard in a phased manner and four of these aircraft are positioned in Chennai.

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## Electoral Bonds

For Prelims

Electoral Bonds:

- Electoral Bonds are **debt instruments** which are purchased **anonymously** by **donors** to political parties.
- Introduced with the Finance Bill, 2017, the Electoral Bond Scheme was notified **on January 29, 2018**.
- They are valid for **15 days** and the political parties can **encash** them.
- **State Bank of India** is authorised to **issue** and **encash** these bonds.
- The bonds are issued by SBI in denominations of **Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore**.
- One can purchase these bonds only **digitally** or through **cheques**.
- The bonds can be purchased by any **citizen** of India for a period of **ten days** each in the months of **January, April, July and October** as may be **specified** by the Union Government.
- The bonds are only redeemable in the **designated account** of a **registered political party**.
- The Electoral Bond deposited by an eligible Political Party in its account is **credited** on the **same day**.

Eligibility Criteria:

- To be eligible to receive electoral bonds, a political party:
- Must be a registered political party under **Section 29A of the Representation of the People Act, 1951**.
- Must have secured **not less than 1%** of the votes polled in the last general election to the **Lok Sabha** or the State **Legislative Assembly**.

For Mains

The Concerns:

- The Bank of choice being a **solely government owned bank** makes it possible for the **party in power** to **know the identity** of the buyer of the bond.
- While the bond scheme was **brought** in to bring **transparency** in to the electoral funding process, it has only in many ways made the process **opaquer**.
- By **hiding** the **identity** of the donor, it makes it possible for **vested interests** to play a **larger role** in the country's **elections**.
- The new rules **exempt** the political **parties** from **disclosing donations** received through **electoral bonds**.
- This has made it impossible for the citizenry to know from where and whom does these parties get their money supply.
- This also means that they infringe upon the **fundamental right to know** under **Article 19**.

## Meetei Mayek

For Prelims:

- **Meetei Mayek** is the **alphabet** used to write the **Meitei** language, the official language of **Manipur** state of India.
- The earliest evidence of the script was seen in **coins** which dates back to **6<sup>th</sup> Century CE**.
- It was used until the **18<sup>th</sup> century**, when it was **replaced** by the **Bengali** alphabet.
- In 1709, a Hindu missionary named **Shantidas Gosai** came to **Kangleipak**, the **ancient** name for the independent **kingdom of Manipur**, to spread **Vaishnavism**.
- He mesmerised the kings and the high officials of the palace, and on royal orders, all **religious** and other precious **books** in Meitei Mayek were **incinerated**, and **new** ones written in the **Bengali** script.
- From **2021**, the Government of Manipur started using the Meitei Mayek along with Bengali script as per "**The Manipur Official Language (Amendment) Act, 2021**".
- The earliest **stone** inscription in Meitei script found from the **Khoibu** village in Manipur is widely believed to of the time of King **Ura Konthouba**.
- The earliest **copper plate** Meitei inscription dates back to the **8<sup>th</sup> century AD**. It was inscribed during the reign of Meitei King **Khongtekcha**.
- The Meitei script is a Brahmic **abugida** which a segmental writing system in which consonant-vowel sequences are written as units; each unit is based on a consonant letter, and vowel notation is secondary.
- The Manipuri language was included in the **Eighth Schedule** of the Constitution in **1992**, but in **Bengali** script.

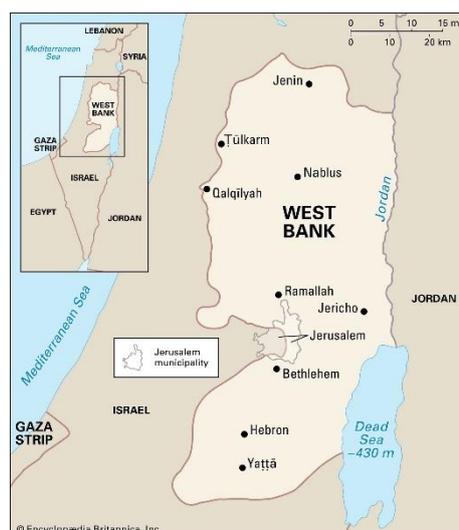


## West Bank

For Prelims

West Bank

- The West Bank is a **landlocked** territory near the coast the Mediterranean in Western Asia that **forms** the main of the **Palestinian** territories.
- It is bordered by **Jordan** and the **Dead Sea** to the **east** by **Israel** to the **south, west, and north**.
- It was **captured** by **Jordan** after the **Arab-Israeli War (1948)** but **Israel** **snatched** it back during the **Six-Day of 1967** and has occupied it ever since.
- **Ramallah**, the de facto **administrative capital** of **Palestine** is situated in West Bank.
- At present, there are around **130 formal Israeli settlements** along with **26 lakh Palestinians** at West Bank.



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- Under the **Oslo Accords** of the 1990s, both **Israel** and the **Palestinians** agreed that the status of **settlements** would be **decided** by **negotiations**.

Legality of the settlements:

- The United Nations General Assembly, the UN Security Council, and the International Court of Justice have said that the West Bank settlements are **violative** of the **Fourth Geneva Convention**.
- Under the Fourth Geneva Convention (1949), an occupying power “**shall not deport or transfer parts of its own civilian population into the territory it occupies**”.

Oslo Accords:

- The Oslo Accords is a **pair** of agreements between **Israel** and the **Palestine Liberation Organization (PLO)**.
- The **Oslo I Accord** was signed in **Washington, D.C.**, in **1993**.
- The **Oslo II Accord**, was signed in **Taba, Egypt**, in **1995**.
- Among the notable outcomes of the Oslo Accords was the **creation** of the **Palestinian National Authority**, which was tasked with the responsibility of conducted limited **Palestinian self-governance** over **parts** of the **West Bank** and the **Gaza Strip**.
- The Oslo Accords **did not create** a definite **Palestinian state**.

## China-Indian Ocean Region Forum

For Prelims:

China-Indian Ocean Region Forum:

- On **November 21**, China’s top development aid agency convened the **first** “China-Indian Ocean Region Forum” in the southwestern Chinese city of **Kunming**.
- The forum was hosted by **China International Development Cooperation Agency (CIDCA)** which according to its website **formulates policies** and **coordinates** major **foreign aid** issues.
- The forum was termed as “the **first high-level official development cooperation** forum jointly held by **China** and **countries** in the **Indian Ocean Region**.”
- As per CIDCA high-level representatives of 19 countries, including **Indonesia, Pakistan, Myanmar, Sri Lanka, Bangladesh, Maldives, Nepal, Afghanistan, Iran, Oman, South Africa, Kenya, Mozambique, Tanzania, Seychelles, Madagascar, Mauritius, Djibouti, Australia** and representatives of **three international organizations** were present at the hybrid forum.
- **India** was **not a part** of the meeting.
- **Australia** and **Maldives**, subsequently released statements rebutting the claim, emphasizing that they **did not participate** officially.

## Indian Ocean Rim Association (IORA)

- The Indian Ocean Rim Association (IORA) is an **international** body comprising the coastal countries that border the Indian Ocean.

- It was formed in **1997** and its **secretariat** is in **Mauritius**.

Currently, it has 23 member states:

- **Australia, Bangladesh, the Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the United Arab Emirates and Yemen.**

IORA has 10 dialogue partners:

- **China, Egypt, Germany, Italy, Japan, Russia, Turkey, the Republic of Korea, United Kingdom and the United States America.**
- IORA **became** an observer to the **UN General Assembly** and the **African Union** in **2015**.



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## e-Rupee

For Prelims

RBI and Digital Currency:

- The Reserve Bank of India this week launched the **digital rupee** on a **pilot** basis.
- The digital currency will be offered by a select group of **public** and **private banks** in a few major **cities** initially, which can be used for both **person-to-person** and **person-to-merchant** transactions.
- The pilot will initially cover the **four cities** of **Mumbai, New Delhi, Bengaluru, and Bhubaneswar**, where customers and merchants will be able to use the digital rupee (e₹-R).
- **Four banks** will be involved in the controlled launch of the digital currency in these four cities: **State Bank of India, ICICI Bank, Yes Bank, and IDFC First Bank.**
- The service will be subsequently extended to the cities of **Ahmedabad, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna, and Shimla.**
- Four more banks — **Bank of Baroda, Union Bank of India, HDFC Bank, and Kotak Mahindra Bank** — will join the pilot.

## Digital Rupee:

- The **digital rupee**, or the **e-rupee**, is a central bank **digital currency** issued by the **RBI**.
- It is **similar** to the physical **cash** that you hold in your wallet except that the e-rupee is **held electronically** in a **digital wallet** **overseen** by the **RBI**.
- The digital rupee is recognised as **legal tender** by the RBI, and thus has to be **accepted** by **everyone** in the country as a medium of exchange.
- Unlike deposits which are paid interest, the **digital rupees** in your wallet are **not paid any interest** by the central bank.
- **Deposits** held in **banks** can be **converted** into **digital rupees** and **vice-versa**.

## Akash Weapon System

- Akash is the first state-of-the-art **indigenous surface-to-air missile** system which has been Armed Forces for nearly a decade defending Indian skies and providing national security.
- It is inducted by Indian Army and Indian Air Force with order value worth Rs 30,000 crore, which is one of the **largest single system orders** for **indigenous missile system**.
- Apart from DRDL, a number of other DRDO labs are involved in the development of the system.
- These include **Research Centre Imarat; Electronics & Radar Development Establishment; Research & Development Establishment (Engineers); Integrated Test Range; Armament Research & Development Establishment; High Energy Materials Research Laboratory and Vehicles Research Development Establishment**.
- The systems are produced by **Bharat Dynamics Limited, Bharat Electronics Limited, Larsen & Toubro, Tata Advanced Systems Limited, Electronics Corporation of India Limited, BEML Limited** along with Micro, Small and Medium Enterprises and other industries partners.



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## Poor Soil Management will Erode Food Security

For Prelims

World Soil Day:

- World Soil Day (WSD) is annually observed on **December 5**.
- Theme: **'Soils: Where food begins'**

For Mains

The importance of soil quality:

- Healthy soils **support** healthy **plant growth** to **enhance** both our **nutrition** and **water percolation** to maintain **groundwater levels**.

- Soils help to **regulate** the planet's **climate** by **storing carbon** and are the **second largest carbon sink** after the oceans.
- They help **maintain** a **landscape** that is more **resilient** to the impacts of **droughts** and **floods**.
- Soil **degradation** in some form or another affects around **29%** of India's **total land area**.
- This in turn threatens **agricultural productivity**, **in-situ biodiversity conservation**, **water quality** and the **socio-economic well-being** of **land dependent communities**.

The threats to soil quality:

- The main drivers contributing to soil degradation are **industrial activities**, **mining**, **waste treatment**, **agriculture**, **fossil fuel extraction** and **processing** and **transport emissions**.
- The reasons behind soil nutrient loss range from **soil erosion**, **runoff**, **leaching** and the **burning of crop residues**.
- Further, excessive use of **fertilizers** and **pesticides**, and **irrigation** with **contaminated wastewater** are also **polluting soils**.

## Foreign Contribution (Regulation) Act (FCRA)

For Prelims:

Foreign Contribution (Regulation) Act (FCRA) 1976:

- The FCRA was enacted during the **Emergency** in **1976** amid rising concerns about foreign powers interfering in India's affairs by pumping money into the country through independent organisations.
- The law sought to **regulate foreign donations** to **individuals** and **associations** so that they functioned in a manner **consistent** with the **values** of a **sovereign democratic republic**.
- The act was amended in **1984** which made it **mandatory** for all the **Non Governmental Organisations** to register themselves with the **Home Ministry**.
- The act was **replaced** with a stricter act in **2010**.

Foreign Contribution (Regulation) Act (FCRA) 2010:

New Provisions:

- The new act makes it **mandatory** for all **NGOs** to receive foreign funds in a **designated bank account** at the **State Bank of India's New Delhi branch** was inserted.
- All NGOs seeking foreign donations have to open a **designated FCRA account** at the SBI branch.
- **No funds other** than the **foreign contribution** should be **received** or **deposited** in this account.
- The NGOs can **retain** their **existing FCRA** account in any **other bank** but it will have to be mandatorily **linked** to the **SBI branch** in **New Delhi**.
- Foreign contribution has to be received only through **banking channels** and it has to be **accounted for** in the manner prescribed.
- Under the Act, organisations are required to **register** themselves every **five years**.
- It bars **public servants** from **receiving foreign contributions**.

- **Aadhaar** number is **mandatory** for all **office bearers, directors** or **key functionaries** of a person receiving foreign contribution, as an identification document.
- While NGOs **earlier** could use up to **50%** funds for **administrative** use, the **new amendment restricted** this use to **20%**.

## National Bamboo Mission

- National Bamboo Mission (NBM) was launched during 2018-19 as a Centrally Sponsored Scheme.
- NBM mainly focuses on the development of complete value chain of Bamboo sector to link growers with consumers starting from planting material, plantation, creation of facilities for collection, aggregation, processing, marketing, micro, small & medium enterprises, skilled manpower and brand building initiative in a cluster approach mode.
- Ecofriendly mouldable granules from bamboo can replace the use of plastic.
- Bamboo is a reliable source for the ethanol and bio-energy production due to its fast rate of growth and abundance.
- The market of Bamboo based lifestyle products, cutleries, home decors, handicrafts and cosmetics also is in a growth path.

## Calling Name Presentation (CNAP)

Context:

- On **November 29**, the **Telecom Regulatory Authority of India (TRAI)** floated a consultation paper seeking comments about potential introduction of a **Calling Name Presentation (CNAP)** feature.



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For Prelims

Calling Name Presentation (CNAP):

- Calling Name Presentation would provide an individual with **information** about the **calling party** similar to **'Truecaller'** and **'Bharat Caller ID & Anti-Spam'**.
- This feature is aimed at **helping** telephone **subscribers** are able to make an **informed choice** about **incoming calls** and **curb harassment** by unknown or **spam** callers.
- Caller Name Presentation (CNAP) is already **being used** in **United States of America**.
- The information could be the **person's name** or a **company name**.
- The caller's name can also be **blocked** and display **"restricted"**, or if **technical failures** occur **"not available"**.

Concerns:

- While the utility of the scheme is undeniable, the CNAP will have to be aware of the **caller's right to remain anonymous**, an essential component of the **right to privacy**.
- The **need to anonymity** might be because of them being **whistle-blowers** or **employees** being **harassed**.

## Yuan Wang 5

For Prelims

Yuan Wang 5:

- Yuan Wang 5 is a **third-generation** vessel of the **Wang series** that entered service in **2007**.
- This series of ships were aimed at creating "**space tracking ships** involved in **supporting the manned space programme**".
- It has the ability to track satellites and **intercontinental missiles**.
- In August 2020, the docking of Yuan Wang 5 at **Hambantota** in **Sri Lanka** had created a major diplomatic situation between India and Sri Lanka.



Yuan

For Mains

Chinese Presence in Indian Ocean:

- It has been reported that, the Chinese presence in IOR includes **four to six Navy ships, research vessels and fishing vessels** apart from **60-odd** ships of extra-regional forces.
- The Chinese presence in the Indian Ocean began in **2008** under the garb of **anti-piracy** operations in the **Gulf of Aden**.
- They have since maintained continuous presence in the region, even deploying **nuclear attack submarines (SSN)** on occasions.
- China had since set up a **military base** in **Djibouti** and developed several **dual-use ports** in the IOR in **Sri Lanka, Myanmar, Pakistan** and other **countries**.
- India's Concerns:
- There had been a **steady rise** in the deployment of Chinese research vessels in the IOR.
- The research or survey vessels have powerful **equipment** for **snooping** and **gathering** a range of **data**.
- In a similar incident in November, another research vessel, **Yuan Wang 6**, entered the Indian Ocean Region (IOR) **coinciding** with a **planned** Indian **missile launch**.
- The movement of Yuan Wang-6 came barely 20 days after India **conducted** the test firing of a **Submarine Launched Ballistic Missile (SLBM)** from **INS Arihant**.
- In **2019**, Indian Navy warships had chased away a suspected **Chinese spy vessel, Shi Yan 1**, purportedly doing research activity close to the **Andaman and Nicobar Islands**.

## National Ayush Institutes

- Three National Ayush Institutes - All India Institute of Ayurveda (AIIA), Goa, National Institute of Unani Medicine (NIUM), Ghaziabad and National Institute of Homoeopathy (NIH), Delhi will be dedicated to the nation by Prime Minister on 11th December 2022.
- These satellite institutes will further strengthen the research, international collaborations and facilitate affordable Ayush services for larger community.

- Establishment of these three National Ayush institutes in Ayurveda, Homeopathy and Unani will create 400 additional seats for 400 students, who want to pursue UG, PG and Doctoral courses and also add 550 additional beds in these three streams.
- All India Institute of Ayurveda (AIIA), Goa will work to provide the highest quality facilities for UG, PG and post-doctoral streams in the aspects of education, research and patient care services through Ayurveda system of medicine.
- The National Institute of Homoeopathy (NIH), Delhi is first of its kind to be established in Northern India for developing the Homoeopathic system of medicine and to provide health care facilities.
- National institute of Unani Medicine (NIUM), Ghaziabad, Uttar Pradesh will be a satellite Centre of the existing National Institute of Unani Medicine, Bangalore.
- It will first such institute in Northern India and cater to the patients around Delhi, Haryana, Uttar Pradesh, and other states of India as well as foreign nationals under MVT.

## Delhi Choking, but do not blame stubble burning alone

For Prelims:

Commission for Air Quality Management:

- The Commission for Air Quality Management (CAQM) is a **statutory** body formed under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas, Act 2021**.
- The Commission was first formed by an **ordinance** in **October 2020**.
- **Environment Pollution (Prevention and Control) Authority**, or EPCA had been **dissolved** to make way for the Commission.

For Mains:

Delhi and Air Pollution (Concerns):

- Commission for Air Quality Management has issued any **new solutions** for reducing air pollution and has given similar orders as the erstwhile EPCA.
- Every year **schools** are **closed**, people are advised to to **stay indoors**, or **carpool** and **from home**, **bans** on **firecrackers** are reinforced, **construction stopped**, **trucks** and **cars not** allowed to **enter** the **city**, and **industries** running on fuel **shut**.
- **Stopping** people from **going** about **their** regular **work cannot** be considered as **good governance**.
- **Vehicles** are another **source** of **pollution** in the city and we need to introspect why, despite an expanding fleet of **public transport**, **citizens** who primarily **use two-wheelers** have **not** moved to **using** the **public transport** system.
- Many have cited lack of **last-mile connectivity**, the problem of **crowding** in **buses** and **metros**, and the **inability** to reach and **navigate narrow lanes** that **two-wheelers** can, as the cause of this lack of enthusiasm towards public transport.



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## Stubble Burning and Air pollution in Delhi:

- Even though stubble burning is often blamed for causing or exacerbating pollution in Delhi, it remains but one of the reasons.
- The **burning of biomass** in and around **Delhi**, if audited properly, would be the **same as stubble burning** in other States.
- Unfortunately, none of the bodies, be it the **municipal body** or the **government's Public Works Department**, is willing to take **responsibility** for this or address and find a **solution** to the problem.
- While stubble burning is a major part of creating pollution, the measures to address it have had little success.
- What is required is a **fundamental shift in agricultural patterns**, which needs someone to make a bold political call.
- Unless **farmers are adequately compensated**, the problem is unlikely to go away.
- The '**Happy Seeder**'-based solution has sadly not been a happy experience.

## What needs to be done:

- We have to be creative and look beyond the measures that have already been tried and proved they are at best a short-term solution to a recurring, long-term problem.
- Even then a core issue that needs to be addressed is the governance system.
- There needs to be a single entity that takes responsibility for air quality management.

## Repo Rate

### For Prelims

- Repo rate is the **rate** at which the Reserve Bank of India (**RBI**) **lends to other banks**.
- It is a **part of the Liquidity Adjustment Facility (LAF)** of the RBI.
- The **increased repo rate** will **discourage banks** to borrow from the **RBI** and lending to the customers.
- This in turn will **reduce the liquidity and demand** in the market.
- It is part of the **contractionary monetary policy**.
- On the other hand, **decreased repo rate** will **encourage banks** to borrow and lend to customers **increasing the liquidity and demand** in the market.
- This is a part of the **Expansionary Monetary Policy**.
- The Monetary Policy Committee (MPC) announced **December 2022** that the repo rate has been increased by 35 basis points and the rate is now **6.25%**.



in

## Reverse Repo Rate:

- The reverse repo rate is the rate of interest that is **provided by the Reserve Bank of India** while **borrowing money** from the **commercial banks**.
- In other words, we can say that the reverse repo is the rate **charged by the commercial banks** in India to **park their excess money with RBI for a short-term period**.

## Koundinya Wildlife Sanctuary

For Prelims

Koundinya Wildlife Sanctuary:

- Koundinya Wildlife Sanctuary is the **only** sanctuary in **Andhra Pradesh** with a **population of Asian elephants**.
- The sanctuary is covered by southern **tropical dry deciduous** and **thorn forests**.
- Some of the important flora consists of **Albizia amara, Acacia, Lagerstroemia, Ficus, bamboo**, and a species which is a regeneration of **Santalum album**.
- Apart from Elephant, some of the animals found in the sanctuary are: **sloth bear, panther, cheetal, chowsingha, sambar, porcupine, wild boar, jungle cat, jackal, jungle fowl, starred tortoise and slender loris**.
- The sanctuary is situated in region where the **Kolar Plateau** ends and slopes down into the **plains of Tamil Nadu** creating many **valleys** and **ghats**.

Asian Elephant:

- **IUCN Status:** Endangered
- **Wildlife (Protection) Act, 1972:** Schedule I
- **Threat:** Habitat loss, degradation and fragmentation.
- **African** elephants are listed as “**vulnerable**” and **Asian** elephants as “**endangered**” in IUCN Red List of threatened species.

## SpaceTech Innovation Network (SpIN)

For Prelims



Social Alpha:

- Social Alpha is a **multistage innovation curation** and **venture development platform** for **science** and **technology start-ups**.
- Social Alpha believes that **science** and **technology innovations** and **entrepreneurship** has the **potential** to bring about a **positive change** in the life of **masses**.
- They search for **entrepreneurs** and **innovators** who are on a ‘**mission to create social, economic and environmental impact**’ and support them through their ‘**lab to market**’ journey, as they **create** compelling **solutions** to **fight poverty** and **address** India’s intractable **developmental challenges**.
- Since its inception in **2016**, Social Alpha has supported more than **200 start-ups** including **60+ seed investments**.

SpaceTech Innovation Network (SpIN):

- The Indian Space Research Organisation (ISRO) has signed an **MoU** with **Social Alpha** to launch **SpaceTech Innovation Network (SpIN)**.
- SpIN is India's **first** dedicated **platform** for **innovation, curation, and venture development** for the burgeoning **space entrepreneurial ecosystem**.
- SpIN will primarily **focus** on facilitating space tech entrepreneurs in three distinct innovation categories: **Geospatial Technologies** and **Downstream Applications; Enabling Technologies for Space & Mobility**; and **Aerospace Materials, Sensors, and Avionics**.

## State Ranking Index for the NFSA

- To evaluate the implementation of the National Food Security Act, 2013 (NFSA) and Targeted Public Distribution System (TPDS) operations across the states and Union Territories, the Government has released first ever State Ranking Index for the NFSA on 5th of July, 2022.
- The Index rests upon three pillars that consider various facets of food security and nutrition. Each pillar has parameters and sub-parameters that support this evaluation.
- The first pillar measures coverage of NFSA, rightful targeting, and implementation of all provisions under NFSA.
- The second pillar analyses the delivery platform while considering the allocation of food grains, their movement, and last-mile delivery to Fair Price Shops.
- The third pillar focuses on nutrition initiatives of the department.
- Rajasthan has got 18th Rank in the Index with score of 0.694.
- Odisha has got the first rank in the State Ranking Index with the score of 0.836.
- The State Ranking Index aims to create an environment of competition, cooperation, and learning among states, promote transparency, and publish verified data in the public domain for research and analysis.

## BIMSTEC as key to a new South Asian regional order

For Prelims

BIMSTEC:

- The **Bay of Bengal Initiative for Multi-Sectoral Technical Economic Cooperation (BIMSTEC)** is a **regional multilateral organisation**.
- There are **five South Asian** nations: Bangladesh, Bhutan, Nepal, Sri Lanka
- There are **two southeast Asian** nations: Myanmar,
- **Initially**, the economic bloc was formed with four countries with the acronym '**BIST-EC**' (**B**angladesh, **S**ri Lanka and **T**hailand **E**conomic Cooperation).



and

India,

Thailand

India,

- With the entrance of **Myanmar** in **1997**, the grouping was renamed '**BIMST-EC**' (**Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation**).
- Finally, with the entrance of Nepal and Bhutan at the **6th Ministerial Meeting** in **2004**, the grouping was named Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (**BIMSTEC**).
- **Pakistan** is **not** a BIMSTEC member.

### South Asian Association for Regional Cooperation (SAARC):

- The South Asian Association for Regional Cooperation (SAARC) was established with the signing of the **SAARC Charter** in **Dhaka** on **8 December 1985**.
- SAARC was established by **Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka** to promote economic growth in South Asia.
- **Afghanistan** became the latest member of SAARC at the 13th annual summit in **2005**.

For Mains:

### The failure of SAARC:

- South Asia continues to be an extremely poor and **least integrated** region in the world.
- The **intraregional trade and investment** in South Asia are very **low** when **compared** to other regions such as the **Association of South East Asian Nations (ASEAN)** and **Sub-Saharan Africa**.
- **Pakistan** has adopted an **obstructionist** attitude within SAARC by repeatedly **blocking** several vital **initiatives** such as the **motor vehicles agreement**, aimed at bolstering regional connectivity.
- Deepening **hostility** between **India** and Pakistan has made matters worse.
- Since **2014**, **no SAARC summit** has taken place leaving the organisation rudderless, and **practically dead**.

### The Need of Regional Integration:

- A greater regional integration helps in promoting other promising regional institutions such as the **South Asian University (SAU)**, which is critical to buttressing **India's soft power** in the region.
- Regionalism has brought **immense success** in other parts such as **East Asia** and **Africa** as seen by the spectacular success of **ASEAN**.
- Regionalism can deliver **prosperity** in the **South Asian** region too, especially because **multilateralism** is **weakening**.

### Remittances

For Prelims

Remittances:

- Remittance **denotes** a **sum** of money **sent** by **party** to **another**.



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- These days, the term typically describes the **money sent** by someone **working abroad** to their **family back home**.

### Remittance and India:

- In the case of **India**, the largest **sources** of **remittances** have been from Indians working in the **Gulf Cooperation Council (GCC)** countries (**UAE, Bahrain, Saudi Arabia, Oman, Qatar, Kuwait**), and the **U.S./U.K.**
- A report by the **World Bank** predicts that growth in **remittances** will **fall** to **2%** in **2023** as the **GDP** growth in high-income countries **continues** to **slow**, eroding migrants' wage gains.
- For **South Asia** as a whole, the **growth** in **remittances** is expected to **fall** from **3.5%** in **2022** to **0.7%** in **2023**.
- Remittances to India are set to touch a record **\$100 billion** in **2022**, according to the **World Bank's** latest Migration and Development Brief titled, '**Remittances Brave Global Headwinds**'.
- India received **\$89.4 billion** in **2021** — this is the **first time** a country will reach the **\$100 billion** mark.

### Remittance in World:

- World remittances are expected to touch **\$794 billion** in **2022**, up from **\$781 billion** in **2021**.
- This represents a growth of **4.9%**, compared to **10.2%** in **2021**, which was the highest since **2010**.
- Of the **\$794 billion**, **\$626 billion** went to low- and middle-income countries (**LMICs**).
- The top five recipient countries this year are expected to be **India (\$100 billion)**, followed by **Mexico (\$60 billion)**, **China (\$50 billion)**, the **Philippines (\$38 billion)** and **Egypt (\$32 billion)**.

## Wildlife (Protection) Act, 1972

For Prelims

Wildlife (Protection) Act, 1972:

- This Act provides for the protection of the country's **wild animals, birds, and plant species**, in order to ensure **environmental** and **ecological** security.
- The Wildlife Protection Act also provides details about **restrictions** on **hunting** to safeguard animal species.
- **Earlier**, Wild Life Protection Act 1972 **did not include** the state of **Jammu and Kashmir**.
- However, after the **reorganization act**, **J&K is covered** under the Indian Wildlife Protection Act.

Features of the Act:

- The Wild Life Protection Act mandates the **prohibition** of **hunting** of wild animals **in general** while the hunting of wild animals would be **permitted** in **certain cases** for the purpose of **education** and **scientific research**.
- A wild animal listed under these schedules **can be hunted/ killed** only after getting **permission** from the **Chief Wildlife Warden (CWLW)** of the state if:

1. It becomes **dangerous** to **human life** or to **property** (including **standing crops** on any land).

2. It is **disabled** or suffering from a **disease** that is **beyond recovery**.

- The Act also **prohibits picking, uprooting**, etc. of a **specified plant** species.
- The **CWLW**, however, **may grant permission** for uprooting or collecting a specific plant for the purpose of **education, scientific research, preservation** in a **herbarium** or if a **person/institution** is **approved** to do so by the **central government**.
- The Wildlife Act 1972 provided for the **declaration** and **protection** of **protected areas** such as **Sanctuaries and National Parks**.
- The Act prohibits the trade in **trophies, animals, and animal articles** from **certain animals**.
- The Wildlife Conservation Act says that if an animal is **hunted** in a **sanctuary** or **National Park**, such animal or any animal article shall be the **property** of the **Government**.

## Energy Conservation Act, 2001

For Prelims

### Energy Conservation Act, 2001

- The act empowers the **Centre** to specify norms and standards of energy efficiency for **appliances, industrial equipment and buildings** with a connected **load** over **100 kiloWatts (kW)** or a **contractual** demand of more than **15 kilovolt-amperes (kVA)**.
- The Act established the **Bureau of Energy Efficiency (BEE)**.
- The **Government** can issue **energy savings certificates** to those industries which consume **less** than their **maximum allotted energy**.
- Consumers who **utilise excess energy** will be **penalized** according to their excess consumption.

For Mains:

### The Energy Conservation (Amendment) Bill:

- The bill seeks to **mandate** the use of **non-fossil sources**, including **Green hydrogen, green ammonia, biomass, and Ethanol** for energy and feedstock.

The other provisions:

- Establish **Carbon Markets**.
- Bring large **residential buildings** within the fold of the **Energy Conservation** regime.
- **Enhance** the **scope** of the Energy Conservation Building Code.
- **Amend penalty** provisions.
- **Increase members** in the governing council of the **Bureau of Energy Efficiency (BEE)**.
- **Empower** the **State Electricity Regulatory Commissions** to make regulations for smooth discharge of its functions
- To put in place **enabling provisions** to make the use of **clean energy**, including **green hydrogen**, mandatory and to **establish carbon markets**.
- Defining the **minimum share** of **renewable energy** to be consumed by industrial units or any establishment.
- This consumption may be done **directly** from a renewable energy source or **indirectly** via the power grid.

## World Ayurveda Congress

- 9th World Ayurveda Congress (WAC) was inaugurated on 8<sup>th</sup> December 2022, at Panaji, Goa.
- The worldwide expansion of Ayurveda has been facilitated by the setting up of a separate Ministry AYUSH, by Government of India in 2014.
- In 2015, the United Nations decided to celebrate International Day of Yoga.
- The Ayurveda Congress' activities go a long way in propagating such traditional systems of healing and being all over the world.
- A MoU was signed between All India Institute of Ayurveda (AIIA) and Rosenberg's European Academy of Ayurveda, Germany to facilitate advanced studies in traditional Indian medicine systems.
- 9th World Ayurveda Congress & Arogya Expo 2022 is being organized in Goa from 8 to 11 December with an objective of providing a global platform for all the stakeholders, including industry leaders, practitioners, traditional healers, educationists, students, medicine manufacturers, growers of medicinal plants and marketing strategists, for networking and engaging in intellectual exchange to strengthen the Ayurveda sector, envision its future, and facilitate interaction between professionals and consumers to boost Ayurveda commerce.
- The market size of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy) sector in the country has grown from USD 3 billion in 2014 to over USD 18 billion now, clocking a phenomenal growth of six times.
- During 2014-2020, the AYUSH industry grew 17 per cent year-on-year while the Ayurveda market is predicted to grow at 15 per cent CAGR from 2021-2026.
- Over 4500 participants from all over the world including 400 foreign delegates from 53 countries are participating in the 9th World Ayurveda Congress & Arogya Expo.



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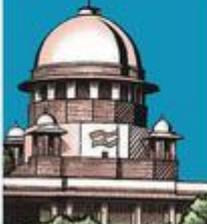
## Collegium and RTI

For Prelims

### Evolution of Collegium:

- **Article 124** of constitution says “**Every Judge of the Supreme Court** shall be appointed by the **President** by warrant under **his hand and seal** after **consultation** with such of the **Judges** of the **Supreme Court** and of the **High Courts** in the States as the **President** may deem **necessary** for the purpose.”

### First Judges Case, 1982:



**Lens on Collegium**

The events which led to the RTI on confidential communication between the SC and the Centre

- Activist Subhash Chandra Agarwal files an RTI seeking the correspondence between the SC Collegium and the Centre on the appointment of Justices H.L. Dattu, A.K. Ganguly and R.M. Lodha superseding Justices A.P. Shah, A.K. Patnaik and V.K. Gupta. Justices Dattu and Lodha later became Chief Justices
- SC refuses. The case comes to the Central Information Commission (CIC), which rules in favour of Agarwal in 2009 and dismisses SC's argument that judiciary should be free from "intrusions by strangers..."
- SC appeals in the Delhi HC against the CIC verdict. The HC dismisses the appeal
- In January 2010, a three-judge HC Bench of Justice A.P. Shah (now retired) upholds HC decision
- In November 2010, SC appeals to itself.

An SC Bench led by Justice B. Sudarshan Reddy (now retired) refers the appeal to a three-judge Bench

■ In August 2016, a three-judge Bench refers the appeal to a Constitution Bench

■ If the Constitution Bench upholds the CIC order of 2009, the ordinary citizen would be empowered to seek confidential details of all judicial appointments and transfers, thus opening a "Judicial Pandora's Box"

that

- In this judgement the Supreme Court held that the “**primacy**” of the **CJI’s** (Chief Justice of India) recommendation on judicial appointments and transfers can be **refused** for “**cogent reasons.**”

### **Second Judges Case (1993):**

- Supreme Court held that under article 124 “**consultation**” really meant “**concurrence**”.
- Supreme court also stipulated that **CJI’s opinion alone is not enough** and a collegium consisting of **CJI** and **two senior most judges** of the Supreme Court must give the recommendation.

### **Third Judges Case (1998):**

- Supreme Court **expanded** the collegium to **CJI** along with **four senior most** Judges of Supreme Court.

### **National Judicial Appointments Commission**

- National Judicial Appointments Commission was created by the **Ninety-Ninth Constitutional Amendment Act of 2014.**

### **Composition of NJAC**

- The Chief Justice of India
- 2 senior-most judges of the Supreme Court
- The Law Minister of India
- 2 eminent members that are chosen by the Selection Committee

### **Fourth Judges Case (2015):**

- Also known as **National Judicial Appointments Commission Act (NJAC)** case.
- Supreme Court declared **NJAC** as **unconstitutional** and **independence of Judiciary** as a **basic structure** of the Constitution.

### **RTI and Collegium:**

- The Supreme Court on **09<sup>th</sup> December 2022** held that only the **final decisions** of the top court Collegium need to be **published** in the **public domain.**
- A “**final decision**” of the Collegium would mean a **resolution drawn** and **signed by all the Collegium members** after due **deliberations** among them, and post **consultations** among the other Supreme Court judges.
- “**Tentative**” **decisions** of the Collegium, before the required deliberative and consultative processes are concluded, **need not be put in the public domain** via publication on the Supreme Court **website** nor do they come under the ambit of the **Right to Information (RTI)** Act.

## **Cyclone Mandous**

For Prelims

### **Tropical Cyclone:**

- Cyclones are **rapid inward** air circulation around a **low-pressure** area.
- The air circulates in an **anticlockwise** direction in the **Northern** hemisphere and **clockwise** in the **Southern** hemisphere.

- Tropical cyclones are **strong storms** that **form** over tropical waters and then **travel inland**, wreaking havoc with violent **winds**, **heavy rainfall**, and **storm surges**.
- Tropical cyclones are one of the **world's most destructive** natural disasters.
- Tropical cyclones form over **warm tropical oceans** and **intensify**.
- The **World Meteorological Organisation** uses the term '**Tropical Cyclone**' to cover weather systems in which winds **exceed 'Gale Force'** (minimum of 63 km per hour).

### Factors promoting formation of Cyclones:

- A sea with **large surface area** with a **temperature** above **27° C**.
- Presence of the **Coriolis force**.
- Small **variations** in the **vertical wind** speed.
- A **pre-existing weak low- pressure** area or low-level-cyclonic circulation.
- **Upper divergence** above the sea level system.

### Who names the Cyclones:

- Cyclones that form in every ocean basin across the world are named by the regional specialised meteorological centres (**RSMCs**) and Tropical Cyclone Warning Centres (**TCWCs**).
- There are **six RSMCs** in the world, including the **India Meteorological Department (IMD)**, and five TCWCs.

### Cyclone Mandous:

- Cyclone Mandous (meaning treasure box) is a **slow-moving** cyclone that often absorbs a lot of moisture.
- It carries a large amount of **rainfall** and **gains strength** in the form of wind speeds.
- The name has been suggested by the **United Arab Emirates**.
- It is **moving** towards **Northwest** direction so areas in northwest districts will witness **strong winds of 55-65 kmph** which will further decrease by evening to 30-40 kmph.
- Several parts of **Chennai** are facing **heavy rainfall** and strong winds amid cyclone Mandous.
- The cyclonic storm Mandous weakened into a deep depression over north Tamil Nadu coast.
- To move nearly west-northwestwards and gradually weaken into a depression by noon of 10th December.

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# University Grants Commission

For Prelims

## University Grants Commission (UGC):

- University Grants Commission was established in **1953** by an **Act of Parliament**.
- It is under the **Ministry of Human Resource Development (HRD)** with its head office located in **New Delhi**.
- It is charged with **coordination, determination, and maintenance** of standards of **higher education** in India.

## Evolution of UGC

- The present system of higher education can be traced back to **Mountstuart Elphinstone**'s minutes of **1823**'.
- They stressed on the need for establishing **schools** for teaching **English** and the **European sciences**.
- This was followed by, **Lord Macaulay**, in his minutes of **1835**, advocated "efforts to make natives of the country thoroughly good English scholars".
- **Sir Charles Wood**'s Dispatch of **1854**, which is commonly known as the '**Magna Carta of English Education in India**', recommended creating a properly articulated scheme of education from the primary school to the university.
- The origin of **UGC** can be traced back to the **Inter-University Board** which later came to be known as the **Association of Indian Universities**.
- The **Inter-University Board** established in **1925** to promote university activities, by sharing information and cooperation in the field of education, culture, sports and allied areas.
- The first attempt to formulate a national system of education in India came in **1944**, with the **Report of the Central Advisory Board of Education on Post War Educational Development in India**, also known as the **Sargeant Report**.
- It **recommended** the formation of a **University Grants Committee**, which was formed in **1945** to oversee the work of the three **Central Universities** of **Aligarh, Banaras and Delhi**.
- Post-independence the University Education Commission was set up in **1948** under the Chairmanship of **Dr. S Radhakrishnan** "to report on Indian university education and suggest improvements and extensions that might be desirable to suit the present and future needs and aspirations of the country".
- This committee recommended the setting up of **University Grants Commission** which was set up in **1953**.

## Grey-bellied Wren-Babbler

For Prelims

### Grey-bellied Wren-Babbler:

- The Grey-Bellied Wren-Babbler is a bird species in family **Timaliidae**.
- Scientific Name: **Spelaeornis reptatus**
- It was until recently considered a **subspecies** of the **tailed wren-babbler**.
- The IUCN, started recognizing it as distinct species in **2008**.



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- It is found in **China**, India (**Arunachal Pradesh**), **Myanmar**, and **Thailand**.
- The team, comprising of birdwatchers from **Bengaluru**, **Chennai**, and **Thiruvananthapuram** had sighted the new species in **March** this year at **Mugaphi peak** in **Changlang district**.
- Their finding was published by **Indian BIRDS**, a peer-reviewed journal of south Asian ornithology.
- The name indicates the **ground colour** of the **belly** of the **grey-bellied wren babbler**.
- The birds sighted had a sweet **song** that was similar to the **songs** of the Naga **wren babbler** and quite unlike the trilling **song** of the **grey-bellied wren babbler**.
- There has been only one previous report of this bird from India when two specimens were collected from **Mugaphi** close to the **Myanmar** border in **1988**.
- One of these specimens is kept at the **Smithsonian Museum** in the **United States**.
- **Mugaphi** is 40 km from **Vijoyanagar**, the remotest circle headquarters in **Arunachal Pradesh**.
- A 157 km **road** from nearest town **Miao**, much of it through the **Namdapha Tiger Reserve**, is yet to be completed.
- The team named the bird **Lisu wren babbler**.
- IUCN Status: **Least Concern**

### Features of Grey-bellied Wren-Babbler

- **Dark** edges to its **back** and **crown** feathers give it a scaly-looking quality.
- **Forages** on **ground** and in **undergrowth**, almost always under heavy cover and rarely emerging into the open.
- Extremely **similar** in appearance to **Pale-throated**, **Chin Hills**, and **Long-tailed wren-babblers**, but **no range overlap**.

## Multi-State Cooperative Societies (MSCS) Amendment Bill, 2022

For Prelims

### MSCS Act, 2002:

### MSCS Act, 2002:

- The Act was passed to govern **Multi State Cooperative Societies**.
- **Administrative** and **financial** control of these societies is with the **central registrar**.
- No **state government** official can wield any **control** on them.
- So far **1,479** such societies have been registered.
- **Maharashtra** has the **highest number** (567) followed by Uttar Pradesh (147) and New Delhi (133).
- **Credit societies** constitute the **bulk** of **registered societies** followed by **agro-based** ones. (96 multistate cooperative dairies and 66 multistate cooperative banks),

### Multi State Cooperative Societies:

- Although **Cooperatives** is a **state subject**, there are **many societies** such as those for **sugar and milk, banks, milk unions** etc whose members and **areas of operation** are spread across **more than one state**.
- For example, **sugar mills** along the districts on the **Karnataka-Maharashtra** border.
- They are thus **registered** under the **MSCS Act**.
- Their **board of directors** has **representation** from all states they **operate** in.

### Area of Operation:

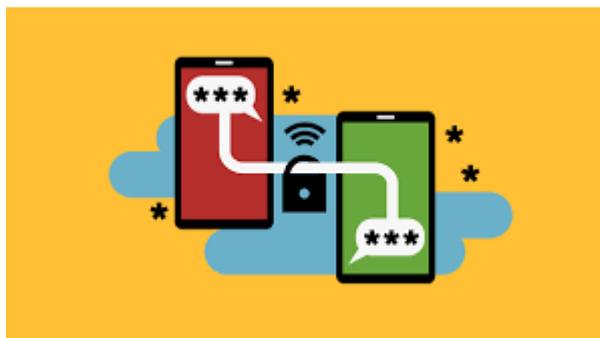
- Area of Operation means the **area** from which the persons are **admitted** as **members**.

## End-to-end encryption

For Prelims

### End-to-end encryption:

- End-to-end encryption is a **communication process** that **encrypts** data being **shared** between two devices.
- It prevents **third parties** like cloud service providers, internet service providers (ISPs) and cybercriminals **from accessing data** while it is being **transferred**.
- The process of end-to-end encryption **uses an algorithm** that **transforms** standard **text** into an **unreadable** format.
- This format can only be **unscrambled** and read by those with the **decryption keys**, which are only **stored** on **endpoints** and not with any third parties including companies providing the service.
- End-to-end encryption has long been used when **transferring business documents, financial details, legal proceedings, and personal conversations**.



### Uses:

- End-to-end encryption is used to **secure communications**.
- Some of the popular instant-messaging apps that use it are **Signal, WhatsApp, iMessage, and Google messages**.
- It is also used to **secure passwords, protect stored data and safeguard data** on cloud storage.

## India-Indonesia Coordinated Patrol

- The 39th edition of India-Indonesia Coordinated Patrol (IND-INDO CORPAT) between the Indian Navy and the Indonesian Navy is being conducted from 08 – 19 December 2022.
- Indian Naval Ship (INS) Karmuk, an indigenously built Missile Corvette participated in the pre-deployment briefing at Belawan, Indonesia.

- The CORPAT will be executed along the International Maritime Boundary Line (IMBL) from 15 to 16 December 2022 and will conclude with a debrief at Port Blair.
- Along with INS Karmuk, L-58 (indigenously built Landing Craft Utility vessel) and Dornier Maritime Patrol Aircraft will be participating in the CORPAT.
- KRI Cut Nyak Dien, a Kapitan Pattimura Class Corvette, would represent the Indonesian side.
- As part of Government of India's vision SAGAR (Security And Growth for All in the Region), Indian Navy has been proactively engaging with countries in the Indian Ocean Region (IOR) to enhance maritime security in the region.
- India and Indonesia have been carrying out CORPATs twice a year since 2002, with an aim of keeping this vital part of the IOR safe and secure for commercial shipping, international trade and conduct of legitimate maritime activities.
- CORPATs help build understanding and interoperability between navies, and facilitate institution of measures to prevent and suppress Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy.

## The role of the 'China Test' in India's grand strategy

For Mains

### What is the concept of a principal contradiction:

- The concept of a principal contradiction means the one that poses the most **intense challenge** to an **individual/organisation**, and has the **power** to **shape** its **future choices** and **consequent outcomes**.
- It is a useful method of **optimising** and **prioritising** strategic **decision-making**.
- **China** is contemporary India's **principal strategic contradiction**.
- Every other challenge, be it **Pakistan**, **internal insurgencies**, and **difficulties** in relations with its **neighbours**, fall in the category of **secondary contradictions**.

### China Test of Indian foreign policy:

- A perspicacious '**China test**' can help **prioritise strategic decision making** in the longer run, at least as an analytical tool with potential policy utility.
- From an operational point of view, the 'China test' consists of **three distinct elements**.
- **First**, an assessment of how a certain **Indian decision** or a **specific regional development squares** with Chinese regional strategy or interests.
- **Second**, an assessment of whether **India's decision** or a certain **regional development** would require **India** to make **modifications** at the level of secondary contradictions.
- And **third**, an assessment of whether this would require any **major policy changes** internally.

### China Test in India US Relations:

- India's standoff with China along the **Line of Actual Control** in **2020** was perhaps a consequence of **India's growing proximity** to the **U.S.**
- Given that Beijing seeks to dominate the region, it is **clearly not in its interest** to see an **American reengagement** of the region or **growing India-U.S.** proximity.

- A **China test** would suggest that New Delhi **should not** give into the **short-term** temptation of not being on the **wrong side** of **China** given its long-term implications.
- What **India** should actively seek is **not a balance** of power in **South Asia** with **Pakistan** but **balancing Chinese** power in **Southern Asia**.
- Hence, India's objective in **South Asia** should be to seek a **pacification** of conflicts with **Pakistan**, so that it can focus on **China**.
- Similarly, **India** need not oppose the **American engagement** of Pakistan for the same reason it helps **prevent Pakistan** from going into the **China camp** completely.

## China Test in India Russia Relations:

- **India-Russia** relations in the wake of the **Ukraine war** are among the most debated bilateral relationships in the world today.
- China Test on India Russia relations can help examine the logic behind India-Russia relations in the face of **western pressure** on **India** to **decouple** from **Moscow**.
- The U.S. and its allies would like India to **stop engaging with Moscow** and condemn its aggression against Ukraine.
- In return, there is on offer **greater accommodation** of **Indian interests** including perhaps **diplomatic** and **political support** against **Chinese** aggression.
- There is also the growing **proximity** between **Moscow** and **Beijing** which reduces the robustness of India-Russia relations.
- In the **absence** of an **India-Russia** relationship, the extent of **Sino-Russian** cooperation is likely to **strengthen**, and **India** will be **cut out** of the continental space to its **north** and **west**.
- New Delhi continues to get **discounted energy**, **cheaper defence equipment**, **support** at the **United Nations Security Council**, and Moscow has been understanding of New Delhi's '**political sensitivities**' more than its western partners.

## Sabarimala Temple

For Prelims:

### Sabarimala Temple:

- Sabarimala temple is an **ancient Ayyappan temple** located in the **Pathanamthitta** district of **Kerala** on top **Sabarimala Hill**.
- The temple is dedicated to a **Brahmachari** (Celibate) deity **Ayyappan** also known as **Dharma Shasta**.
- The temple is situated on a **hilltop** amidst **eighteen hills** at an altitude of **1260 m** above sea level, and is surrounded by mountains and dense forests which is a part of **Periyar Tiger Reserve**.



of the

### Sabarimala Pilgrimage

- The temple is open for worship only during the days of **Mandalapooja** (approximately **15 November to 26 December**), **Makaravilakku** or "**Makara Sankranti**" (**14 January**) and **Maha Thirumal Sankranti** (**14 April**), and the **first five days** of each **Malayalam month**.

- The pilgrimage includes a unique tradition, that of offering prayer at a mosque of **Vavar**, a **Muslim** devotee of **Ayappan**.
- As per the custom followed, no pilgrim without "**Irumudikkettu**" can ascend the 18 sacred steps.
- The devotees are expected to follow a **Vratham (41-day austerity period)** prior to the pilgrimage.
- This begins with wearing of a special **Mala** which is a chain made of Rudraksha or Tulasi beads.
- During the 41 days of Vratham, the devotee who has taken the vow, is required to strictly follow the rules that include follow only a **lacto-vegetarian diet, follow celibacy, follow teetotalism, not use any profanity** and have to **control the anger, allow the hair and nails to grow without cutting**.

### The Temple Architecture:

- The temple was rebuilt after arson and vandalism in **1950** and the earlier **stone image** of the deity was **replaced** by a **panchaloha**
- The temple consists of a **sanctum sanctorum** with a **gold-plated roof** and **four golden finials** at the top, **two mandapams**, the **balikalpura** which houses the **altar**.
- The **Pathinettu thripadikal** or the 18 sacred steps is the main **stairway** to the temple.

## Conflicts on Judicial appointments

### For Prelims

### National Judicial Appointments Commission:

- NJAC was a constitutional body proposed to **replace** the present **Collegium** system of appointing judges.
- It was to be **responsible** for the **appointment** and **transfer** of judges to the **higher judiciary** in India.
- National Judicial Appointments Commission was created by the **Ninety-Ninth** Constitutional Amendment Act of **2014**.

### Composition of NJAC

- The Chief Justice of India
- 2 senior-most judges of the Supreme Court
- The Law Minister of India
- 2 eminent members that are chosen by the Selection Committee

### For Mains

### The Cause of Conflict:

- The current conflict has **two triggers**.
- **One** is the government's repeated public **criticism** of the **Collegium system** on the ground that it is "**opaque**".
- The court has accused the government of not **appointing persons** who are not "**palatable**" to it.
- Another major concern of the government is the court's decision to declare **NJAC** as **unconstitutional** in the **Fourth Judges Case**.

## What can be done:

- The government can bring a **new law** on judicial appointments while taking the **concerns** of the **court** into **account**.
- The **parliamentary standing committee** on **Law and Personnel** in its report said both the judiciary and the government need to do some “**out-of-the-box**” thinking to deal with the “perennial” judicial vacancies in High Courts.

## Vacancies in higher Judiciary:

- As on **November 30, 2022**, there are **332** judicial **vacancies** in the **High Courts** out of a **total** sanctioned strength of **1,108 judges**.
- The High Courts have made **146 (44%) recommendations** which are under consideration of the government and the Supreme Court.
- The High Courts are required to **make recommendations** for the remaining **186 vacancies (56%)**.
- Many High Courts have **not made recommendations** under the **Bar and Service** quotas for vacancies in the past one to five years.
- It said **43 High Court judges** are scheduled to **retire** between **December 1, 2022 and May 31, 2023**, taking the vacancies up to 229.
- So far, no recommendations have been received.
- The **delay** in the appointment process has **affected** the timely **filling** up of **vacancies** in the High Courts. The **Supreme Court** itself has **six vacancies**.

## Yemeni Civil War

### For Prelims:

### Yemen:

- Yemen officially the Republic of Yemen, is a country in **Western Asia**.
- It is situated on the **southern end** of the **Arabian Peninsula**, and **borders Saudi Arabia** to the north and **Oman** to the northeast and shares **maritime borders** with **Eritrea, Djibouti, and Somalia**.
- Yemen is the **second-largest Arab sovereign state** in the **peninsula**.



### Yemeni Civil War:

- The **eight-year-old** conflict is between the **internationally** recognized **government**, which is backed by a **Saudi-led** military coalition, and **Houthi** rebels supported by **Iran**.
- Yemen’s civil war began in **2014** when **Houthi** insurgents **took** control of Yemen’s **capital** and **largest city, Sana’a**, demanding **lower fuel prices** and a **new government**.
- Beginning in **March 2015**, a **coalition of Gulf states** led by **Saudi Arabia** launched a campaign of **economic isolation** and **air strikes** against the Houthi insurgents, with **U.S. logistical** and **intelligence support**.

## The Houthis:

- The Houthis, officially known as **Ansar Allah** (Partisans of God), are an **Iranian-backed, Shiite** Muslim military and political movement in Yemen.
- The movement was founded in the **1990s** by **Hussein Badreddin al-Houthi**, a member of Yemen's **Shia** majority.
- Its members, who subscribe to the minority **Zaidi sect** of Shiite Islam, advocate regional **autonomy** for **Zaidis** in northern Yemen.

## Assam Accord

### For Prelims:

### Assam Accord:

- The Assam Accord was signed in 1985 by the **Centre** and the **Assam government** with the **All Assam Student Union (AASU)** and the **All Assam Gana Sangram Parishad**.
- This accord was reached to end the conflict in the state due to **1979-85 Assam Movement** against **migration** from **Bangladesh**.

### Key Features of the Accord:

- All those **foreigners** who had entered Assam between **1951** and **1961** were to be given **full citizenship, including the right to vote**.
- Those who entered between **1961** and **March 24, 1971** were to be **denied voting rights for ten years** but would enjoy **all other rights of citizenship**.
- The foreigners who entered the country **after March 24, 1971** were to be **deported**.
- A parallel **package** for the **economic development of Assam**, including a **second oil refinery, a paper mill and an institute of technology**, was also worked out.
- **Clause 6** of the Assam Accord, promises “**constitutional, legislative and administrative** safeguards to **protect, preserve and promote** the **cultural, social, linguistic identity and heritage** of the **Assamese people**”

## National Register of Citizens (NRC)

- National Register of Citizens, 1951 is a register prepared after the conduct of the **Census of 1951** in respect of each **village**, showing the **houses or holdings** in a serial order and indicating against each house or holding the **number** and **names** of **persons** staying therein.
- The NRC was published only once, in **1951**.
- Assam is the **only state** where an NRC was compiled under the supervision of the **apex court**.

## NRC and Assam Accords:

The **NRC of 1951** and the **Electoral Roll of 1971** (up to midnight of 24 March 1971) are together called **Legacy Data**.

Legacy Data is the **primary** set of **documents** admissible to **prove** the **claim of citizenship** for inclusion in NRC updated for the state of Assam.

# Sri Aurobindo

For Prelims

## Sri Aurobindo

- Aurobindo Ghose was born in **Calcutta** on **15th August 1872**.
- He was a **yogi, seer, philosopher, poet, and Indian nationalist** who propounded a **philosophy of divine life on earth** through **spiritual evolution**.
- From **1902** to **1910** he partook in the struggle to free India from the British.
- In **Pondicherry** he founded a **community** of spiritual seekers, which took shape as the **Sri Aurobindo Ashram** in **1926**.
- He was much influenced by the **American Revolution**, revolts in **Italy** and the medieval **French** revolts against England.
- He died on **5th December 1950** in **Pondicherry**.



1872.  
earth  
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## In India's freedom struggle:

- He attended **Congress sessions** and at the same time, helped establish the **Anushilan Samiti** of **Calcutta** in **1902**.
- He was the **first political leader** in India to openly put forward, in his newspaper **Bande Mataram**, the idea of **complete independence** for the country.
- He and his brother revolutionary **Barin Ghose** contributed articles to the magazine **Jugantar** which inspired many young people to take up **revolutionary** work.
- In May 1908, Aurobindo was arrested in connection with the **Alipore Conspiracy Case**.
- Two years later he fled British India and found refuge in the **French** colony of **Pondicherry** (Puducherry), **gave up overt political activities** and embraced **spiritual pursuits**.

## Publications and literary works:

- He was also a journalist, editing newspapers such as **Bande Mataram**.
- In 1914, he started publishing a magazine, **Arya**.
- Among his many writings are **The Life Divine**, **The Synthesis of Yoga** and **Savitri**.

## Spirituality of Sri Aurobindo:

- In **Pondicherry** he founded a community of spiritual seekers, which took shape as the **Sri Aurobindo Ashram** in **1926**.
- He believed that the basic principles of **matter, life, and mind** would be succeeded through terrestrial evolution by the **principle of supermind** as an intermediate power between the **two spheres** of the **infinite** and the **finite**.
- During his forty years in Pondicherry, he evolved a new method of spiritual practice, which he called **the Integral Yoga**.

- If you connect the n-type and p-type layers with a **metallic wire**, the **electrons** will

## **Doubling of Farmers Income**

- Government had constituted an Inter-Ministerial Committee in April, 2016 to examine issues relating to “Doubling of Farmers Income (DFI)” and recommended strategies to achieve the same.
- The Committee submitted its final report to the Government in September, 2018 containing the strategy for doubling of farmers’ income through various policies, reforms & programmes.
- To achieve the objective, the Committee identified following seven sources of income growth: -
  1. Increase in crop productivity
  2. Increase in livestock productivity
  3. Resource use efficiency – reduction in cost of production
  4. Increase in cropping intensity
  5. Diversification to high value agriculture
  6. Remunerative prices on farmers’ produce
  7. Shift of surplus manpower from farm to non-farm occupations

The premise of the strategy for doubling farmers income is based on the following primary principles:

1. Increasing total output across the agricultural sub-sectors through realising higher productivity
2. Rationalizing/reducing the cost of production
3. Ensuring remunerative prices in the agricultural produce
4. Effective risk management
5. Adoption of sustainable technologies

## **The Rise of Rural Manufacturing**

**For Mains:**

### **The urban-rural manufacturing shift:**

- A steady stream of investments in rural locations over the last **two decades** has ensured that **42% of factories** and **62% of fixed capital** is in the **rural** side.
- This is evidence of a conspicuous trend in India of a shift in **manufacturing activity** and **employment** from bigger **cities** to smaller **towns** and **rural** areas.
- Given the **size** of the **Indian economy** and the need for **balanced regional development**, the **dispersal** of manufacturing activities is a **welcome sign**.
- However, the compulsions of **global competition** often extend beyond the considerations of **low-wage production** and depend on the virtues of ‘**conductive ecosystems**’ for firms to grow.

### **The cause of this shift:**

- Work Bank in its 2012 report titled “**Is India’s Manufacturing Sector Moving Away from Cities?**” suggested that **higher urban-rural cost ratios** caused this shift.

- They mainly observed that **manufacturing** plants in the **formal** sector are moving **away from urban areas** and into rural locations, while the **informal sector** is moving **from rural** to urban locations.
- However, it is now believed that there could be **three explanations** for this shift of manufacturing away from urban locations.
- **First** is the factory **floorspace supply constraints**.
- When locations get more **urbanised** and **congested**, the greater these space constraints are.
- The **second** explanation hinges on the **production cost differentials**.
- Many firms experience substantially **higher operating costs in cities** than in rural areas, with inevitable **consequences** for the firm's **profitability** and **competitiveness**.
- The third is the possibility of **capital restructuring**.
- This means that big firms **deliberately** shift production from cities to take advantage of the **availability** of **less skilled, less unionised and less costly rural labour**.

### The need of this shift:

- The shift in manufacturing activities from urban to rural areas has **helped maintain** the importance of **manufacturing** as a source of **livelihood** diversification in **rural** India.
- In the aftermath of trade **liberalisation**, import **competition intensified** for many Indian manufacturers, forcing them to look for **cheaper** methods and **locations** of production.
- One way to **cut costs** was to **move** some operations from **cities** to **smaller** towns, where **labour** costs are **cheaper**.
- This trend helped to **make up** for the **loss of employment** in some **traditional rural industries**.
- The growth of rural manufacturing, by **generating new jobs**, thus provides an economic base for the **transition out of agriculture**.

### The Concerns:

- The shift towards rural manufacturing faces **two major challenges**.
- **First**, though firms reap the benefits of lower costs via **lower rents**, the cost of **capital** seems to be **higher** for firms operating on the rural side.
- The rural segment accounted for only **35% of the total rent paid**, while it had **60% of the total interest payments**.
- Second, there exists an issue of "**skills shortage**" in rural areas as manufacturing now needs higher skilled workers to compete in the highly technological global 'new economy'.
- Manufacturers who **depend only on low-wage workers** simply **cannot sustain** their **competitive edge** for longer periods as this cost advantage vanishes over time.

### Geographical Indication (GI) Tag

- Geographical Indication (GI) is an internationally recognised identification method used to **identify goods** having special **characteristics originating** from a **definite geographical territory**.
- It is governed and directed by the **WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.
- In order to be recognised as a GI tag, there must be a method of recognising a product as **originating** in a given **place**.

- The **Geographical Indications of Goods (Registration and Protection) Act, 1999** provides for the **registration** and **protection** of geographical indications relating to goods in India.
- The GI tag is **valid** for a period of **10 years** following which it can be renewed.
- This provides the product with **legal protection** and **prevention** against **unauthorised** use by others.
- GI tag aids in promoting the exports of the product.

## India's slowing exports

For Mains

### Decline in India's Export:

- India's exports **declined** about **16.7%** in **October** compared with the same month last year.
- This is the **first** time a **decline** for any month was reported **since February 2021**.
- **Engineering goods**, which generally provides a good chunk of India's goods exports in recent years, **slid 21%**.
- **Steel and allied products** exports saw a **decline** of **\$2 billion** in **October**.



### The causes of this decline:

- The global slowdown is believed to be driven by a **confluence** of **high inflation**, rising **borrowing costs** and **geopolitical tensions**.
- The slowdown in steel exports can be because the government **levies** an **export duty** on these **products** to help **increase** local **availability** which was later **removed**.
- Another reason can be that in the month of **Diwali** every year, **workers** tend to take **leave**, thus **impacting output**.

### Global Exports:

- According to **tradingeconomics.com**, **Vietnam** recorded a **4.5% growth** in exports from a year earlier to \$29.18 billion
- Exports by the **Philippines** grew **20%** in October.

### Exports and Forex

- For the week ended **December 2**, foreign exchange **reserves** stood at about **\$561 billion**.
- If we take **October imports** at **\$56.7 billion** which was an eight-month low, as a benchmark, **India** has roughly about **9-10 months'** worth of import cover.
- This is not as healthy as the **14-to-15-month** cover that we had seen **during** the **pandemic**.
- However, it is to be noted that this isn't as bad as **2013** when foreign investors began pulling out of India's financial markets.
- At that time, we had less than **seven months'** worth of import cover.

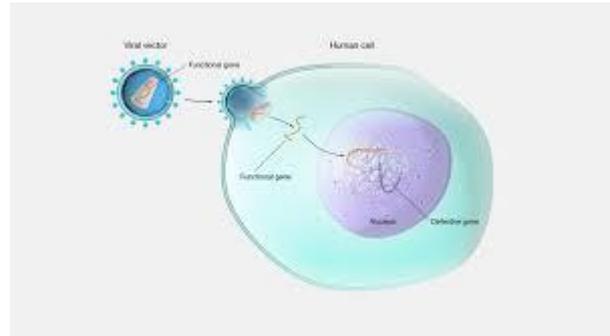
- And if anything, **forex reserves** have been **rising** in recent weeks signalling hope for the future.

# Gene Therapy

For Prelims

## Gene Therapy:

- Gene therapy is a technique which **uses Gene editing** for the **replacement** of **defective** genes with healthy ones in order **to treat genetic disorders**.
- In simple terms, it is an **experimental technique** through which **healthy genes** are **inserted** into an **individual** or **embryo** to treat disease.
- A **viral** or **bacterial vector** (harmless) is to **carry a corrective gene** into a patient's where the gene then **directs the cell** to produce the **proteins** necessary to **treat the disease**.



used cells,

## Working of Gene Therapy:

Gene therapy can be done through the following ways.

- **Replace a mutated gene** with a **healthy** version of that **gene**.
- **Introduce** a new **functioning gene** to fight disease.
- **Inactivate** a **faulty gene** that is causing disease.

## Types of Gene Therapy

### Somatic Gene Therapy:

- In this method, therapeutic genes are transferred into the **somatic** cells or the **stem** cells of the human body which means that the effects will **not be transferred** into the **next generation**.

### Germline Gene Therapy:

- The process involves introducing a **healthy DNA** into the **cells responsible** for **producing reproductive cells, eggs or sperms** hence effects are **transferred** to the **next generation**.
- Germline gene therapy is **not legal** in many places due to religious and moral reasons.

## Base Editing

- A person's genetic code contains several permutations of four bases viz., **Adenine (A)**, **Guanin (G)**, **Cytosine (C)** and **Thymine (T)**.
- A **mis-arrangement** in the **sequence** of **bases** can become **cancerous**, the process of **correcting** this is known as **Base editing**.
- **Base editing** is more **effective** at **treating blood disorders** which are **caused** by so-called **single point mutations**, or when a **change** in a **single base pair** can cause **terminal disease**.
- The **CRISPR-cas9** system is one of the most popular among these approaches.

## CRISPR-cas9

- **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)** is a **gene editing** technology.
- This helps in **replicating** the **natural defence mechanism** in bacteria to fight virus attacks, using a special protein called **Cas9**.
- CRISPR-cas 9 system, uses Cas9 which acts like **molecular scissors** and can be made to **cut** a piece of **DNA** at a **precise location**.
- In the next stage a **guide RNA** can be used to **insert** a changed **genetic code** at the sites of incision.

## Building Climate Resilience Collectively

For Prelims

### Long-Term Low-Carbon Development Strategy (LT-LCDS):

- LT-LCDS is India's **long-term climate action plan** unveiled at the 27th Conference of the Parties to the UNFCCC (**COP27**), held in **Sharm el-Sheikh, Egypt**, in **November**.
- It has multi-sectoral measures to reach a **net-zero emissions** status, **climate-resilient urbanisation** and forms a cornerstone of the Government of India's strategy under the Paris Agreement.

For Mains

### Need of Data and Urban Planning:

- A data-driven approach is essential to facilitate **implementation** of the LT-LCDS and other missions, and **enable** their **integration**.
- Adequate data would make it **easier** to **demonstrate urban planning** strategies aimed at climate resilience through **specific actions** and **interventions**.
- It would also allow us to **link** them to various **finance streams** accessible to the **urban local bodies**, which is highly important.
- **Cities** need to have effective and efficient **planning instruments** that can **translate** master **plans** into transformative **investment** projects.
- The Urban Sustainability Assessment Framework (USAF) is a major tool which help in this.
- USAF is a decision support tool of **UN-Habitat** for **municipal commissioners** and urban practitioners.
- It enables cities to capture **inter-sectoral** data regularly and does the corresponding **analysis** on urban **metrics**.
- This in turn helps in **monitoring** the **performance** of a **city** in **static** and dynamic contexts.

### The urban transport sector and GHG emissions:

- The urban transport sector is one of the major contributors to greenhouse gas (GHG) emissions.
- We can see this in cities such as **Bhopal** (Madhya Pradesh) where they make up for **19%** of the city's **GHG emissions**.
- Bhopal heavily favours **non-motorised transport** (NMT) with a **43% NMT modal share**.
- However, they provide access to **public bike docking** stops to **only 24%** of its population and only **half** of its **streets** have **footpaths**.

- Hence, the city can immensely reduce its carbon footprint by designing ‘**shared streets**’ for **personal vehicles, public transport, NMT and pedestrians**.
- They can also link these with **future economic activity zones** and **underserved areas**.
- These streets can also be conduits for **native plant species** and improving **groundwater recharge** by integrating **water-sensitive urban design features**.
- These measures have the potential of reducing Bhopal’s GHG emissions by up to **15 tCO2/annum per kilometre**.

### What needs to be done:

- The suggested planning approach needs to have a **comprehensive participation** of all **stakeholders** in order to build climate resilience.
- Active involvement from various tiers of **government, non-governmental, community-based organisations, and academic institutions** is needed at each step.
- The means from building a **sustainability profile** to arriving at very **specific interventions**, there needs to be a **coordination** between **government** and **civil society**.
- **Changes** in the **city performance indicators** will help to **communicate** the **impact** of these interventions to the decision-makers and the community at large.
- This **evidence-based** approach can make the **cities sustainable, resilient** and **inclusive** with no one and no place left behind.

## Nataraja idol

For Prelims

### Nataraja

- Nataraja (Lord of the Dance), is the **cosmic** the **Hindu god Shiva** and is represented in in many **Shaivite temples**, particularly in **South**
- This form came to prominence during the **Chola**
- The artwork and pose are denoted and described texts such as the **Anshumadbhed agama** and **agama**.
- Nataraja’s four hands are believed to be representing the **four cardinal directions** viz., **North, South, East, and West**.
- These cardinal directions are central to **Vaastu Shastra** the traditional Indian system of architecture.



**dancer form** of bronze or stone **India**. **dynasty** rule. in many ancient **Uttarakamika**

### The Pose and symbolism:

- His left leg is in **Bhujangatrastha stance**, depicting **kicking** away **tirobhava** or **illusion** from the devotee’s mind.
- The foot of the right leg is suppressing the **apasmara** i.e., the **demon** of **forgetfulness** or ignorance.
- The four arms of the Nataraja are shown outstretched.
- Main right hand is in **Abhaya hasta** mudra.
- Upper right-hand holds his favourite musical instrument i.e., the **Damaru** (a percussion instrument) to keep rhythm.

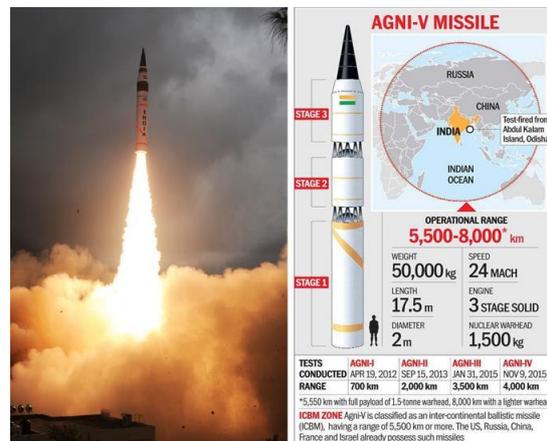
- Main left hand is in **Dolahasta** mudra and connects with the right hand's **Abhayahasta**.
- Upper left-hand carries a **flame** symbolising **creation** and **destruction**.
- Entire dancing figure is surrounded by the **jwala mala** or the garland of flames symbolising the **cosmic fire**.
- The arch of fire emerges from two **makara** on each end, which are **water creatures** and part of Hindu mythologies.
- Shiva's locks fly on either side touching the jwala mala because of the **wildness** and **ecstasy** of the **dance**.
- The matted and flowing **locks** of Shiva represent the flow of **river Ganges**.
- The dance is a pictorial allegory of the **five** principal **manifestations** of eternal energy viz., **creation, destruction, preservation, salvation, and illusion**.
- Shiva is shown as the **source of all movement** within the cosmos and as the god whose **doomsday dance**, accompanies the **dissolution** of the **universe** at the end of an **eon**.

## Agni-V Ballistic Missile

For Prelims

### Agni-V

- It is India's most advanced **surface-to-surface indigenously** built It is a **three-stage, solid metre-tall** rocket.
- The missile has a **range** of more than **5,000 km** capable of **carrying nuclear warhead** of more one **tonne**.
- It is the latest in India's "Agni" family of **medium** to **intercontinental** range missiles.
- It can target **almost all of Asia** including **Pakistan** and **China** and **Europe**.
- Agni is a **fire** and **forgets** ballistic missile and once **fired cannot be stopped**, except by an **interceptor** missile.
- It is one of the missiles developed under the **Integrated Guided Missile Development Programme (IGMDP)**.
- Agni V allows India to join an elite club of nations that possess the **ICBM** launch **capability**.



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## Strategic Forces Command (SFC)

- The Strategic Forces Command (SFC), sometimes called **Strategic Nuclear Command**, is the major part of India's **Nuclear Command Authority (NCA)**.
- Agni V along with other nuclear capable ballistic missiles are operated by the Strategic Forces Command.
- It was created on **4 January 2003** to **manage** and **administer** all **strategic forces** by exercising **complete command** and **control** over nuclear assets.

## Integrated Guided Missile Development Programme (IGMDP)

- It was conceived by **Dr A.P.J. Abdul Kalam** with an aim to enable India to attain **self-sufficiency** in the field of **missile technology**.

- It was **initiated** by Government of India in **1983** and was successfully **completed** in **January 8, 2008**.
- The 5 missiles developed under this program are **Prithvi, Agni, Trishul, Nag, Akash**.

## APJ Abdul Kalam Island

- Dr. Abdul Kalam Island was formerly known as **Wheeler Island**, and is an island off the coast of **Odisha**.
- On **4 September 2015**, the island was **renamed** in honour of the late president of India, Dr. A. P. J. Abdul Kalam.
- The **Integrated Test Range** missile testing facility is located on the island, and serves as the test facility for most of India's missiles.

## Air Pollution in South Asia:

- Over **60%** of **South Asians** are exposed to an **average 35 g/m<sup>3</sup>** of **PM<sub>2.5</sub>** annually.
- This figure increases to as much as **100 g/m<sup>3</sup>** over some **parts** of the **Indo-Gangetic Plain (IGP)**.

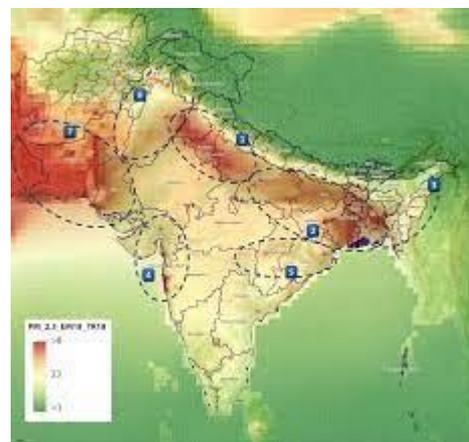
## The need for international cooperation to combat air pollution:

- India has **six large airsheds** between which air pollutants move, some of them **shared** with **Pakistan**.
- This means that **measures** by the **government** to **reduce particulate matter** can be effective only if the **territories spanning** the airsheds implement **coordinated policies**.
- During days with winds from **northwest** to the **southeast**; **30%** of the **air pollution** in **Indian Punjab** came from the Punjab Province in **Pakistan**.
- In similar circumstances **30%** of the air pollution in the largest **cities** of **Bangladesh** (Dhaka, Chittagong, and Khulna) **originates** in **India**.
- Hence it is evident that even if even if Delhi were to fully implement all air pollution control measures by **2030**, it wouldn't be enough to keep pollution exposure below **35 g/m<sup>3</sup>**.

## The Airsheds in South Asia:

The six major airsheds in South Asia where air quality in one affected the other are:

1. **West/Central IGP:** Punjab (Pakistan), Punjab (India), Haryana, part of Rajasthan, Chandigarh, Delhi, Uttar Pradesh;
2. **Central/Eastern IGP:** Bihar, West Bengal, Jharkhand, Bangladesh;
3. **Middle India:** Odisha/Chhattisgarh;
4. **Middle India:** Eastern Gujarat/Western Maharashtra;
5. **Northern/Central Indus River Plain:** Pakistan, part of Afghanistan; and
6. **Southern Indus Plain and further west:** South Pakistan, Western Afghanistan extending into Eastern Iran



# India's Trade Deficit

For Prelims

## Trade Deficit:

- Trade deficit or **negative balance of trade (BOT)** is the **difference** between **exports** and **imports** when **imports** are **higher** than **exports**.
- It can be calculated **separately** for different **goods** and **services** or for **international transactions** such as **current account, financial account, and capital account**.
- The **opposite** of trade deficit is called **trade surplus** and is the condition when **exports** are **higher** than **imports**.
- Trade deficit is a part of the **Current Account Deficit**.

## Causes:

- Trade deficit could be due to **insufficient domestic manufacturing capability** resulting in **higher imports**.
- Another common reason for trade deficit could be the **lack of availability of natural raw materials** in the country such as **crude oil** for India.
- It can also be sign of **economic growth** since a **rise** in the **average income** can mean **consumers** will **purchase** more **goods** from overseas, which will **increase** the trade **deficit**.
- An **increase** in the **strength** of a country's **currency** can make **imports cheaper** which in turn **increases** trade **deficit**.
- Improving **foreign relations** by way of **removal of barriers to trade**, such as tariffs can make **imports** more **accessible** to people there by **increasing imports**.

For Mains

## Status of India's trade deficit:

- The trade deficit **reduced** to **\$23.9 billion** in **November** from **\$26.9 billion** in the previous month.
- On a **month-on-month** basis in **November**, **exports** **increased** by **7.4%**, while **imports** **reduced** by **1.4%**, which helped to **narrow** the **trade deficit**.
- **November** saw the **Imports** **falling** to their **lowest** level in **10 months** due to **lower international commodity prices** and **weaker domestic demand**.

# India's Rupee Trade Settlement Mechanism

For Prelims:

## Currencies used for International Transactions:

The Most Popular Currencies for International Trading are;

### The U.S. Dollar:

- The U.S. dollar, which is sometimes called the **greenback**, is the **most traded currency** on the planet. Which makes it **first** and **foremost** in the world of **forex trading**.
- The Dollar often acts as the **intermediary** in **triangular currency transactions**.
- Since it is held by nearly every central bank and institutional investment entity in the world **USD** acts as the **unofficial global reserve currency**.
- U.S. dollar also act as a **benchmark** or target rate for **countries** that choose to fix or **peg** their **currencies** to the **dollar's value**.

### **The Euro:**

- The euro is **issued** by the **European Central Bank** and is the **second most traded currency** behind the U.S. dollar.
- Euro is the **official currency** for most **eurozone countries** while also being the world's **second-largest reserve currency**.
- Many **nations** within **Europe** and **Africa** **peg** their **currencies** to the **euro** to stabilize the exchange rate.

### **The Japanese Yen:**

- **Japanese yen** is the **most traded** of **Asian currencies**.
- **Yen** is used to **gauge** the overall **economic health** of the **Pan-Pacific region**.

### **Pound Sterling:**

- Pound Sterling also known as the Great British pound is the **fourth** most **traded** currency in the forex market.
- U.K. **never adopted** the **euro** as its official currency even when it was a member of the European Union.
- The British pound acts as a large reserve currency due to its **historically high** relative **value** compared to other global currencies.

### **Rupee trade settlement mechanism:**

- India will open **Vostro** accounts of **correspondent bank/s** of the partner country for trading which will **allow** Indian **importers** to make **payments** in **rupees**.
- This **rupee** will be used to **pay** **Indian exporters** for the export proceeds from the partner country.

### **Vostro Account:**

- Vostro Account is an account that a **correspondent bank** holds on **behalf** of **another bank**.

### **For Mains:**

### **Advantages:**

- It will lead to a **growth** of **global trade** and will provide **support** to the increasing **interest** of the global trading community **in the Rupee**.
- This scheme will allow India to have **transactions** with the countries **under** the economic **sanctions** of **US** such as **Russia** and **Iran**.
- This will **reduce** the risk of **forex fluctuation** and help **save forex reserves**.

## Kurdistan

- Context: Turkey has launched a military offensive against Kurdistan Workers' Party (PKK) and People's Protection Units (YPG) on the Syrian border towns



against

## Who are Kurds

- Kurds have been termed as the world's **largest stateless ethnic group** and have an estimated **population of 25 million to 35 million**.
- While **majority** among the Kurdish people today **adhere** to **Sunni Muslim** there are followers of **other faiths** as well, such as **Sufism** and other mystical practices.
- Significant population of Kurds live in the highlands of **southern and eastern Turkey, northern Iraq, the northeastern Syria, northwestern Iran, and parts of south Armenia**.
- While small communities are scattered across **Georgia, Kazakhstan, Lebanon, and eastern Iran** as well.
- The Kurds are a **minority** in each of these **countries**.
- After World War I the allies had made **provisions** for a **Kurdish state** in the **1920 Treaty of Sèvres**.
- However, this was **never fulfilled** as the **Treaty of Lausanne** set the boundaries of modern Turkey and **made no such provision**.
- This has left the Kurds with minority status in all of the new countries.
- Currently Kurds enjoy partial statehood in the **autonomous** region of **Iraqi Kurdistan**.

## Kurdistan Workers' Party (PKK):

- The Kurdistan Workers' Party or PKK is a Kurdish **militant** political **organization** and armed guerrilla movement which seeks to **establish** an **independent Kurdistan** nation.
- The PKK is designated as a **terrorist** organization by **Turkey, the United States, the EU** and few other countries.

## Ecologically Sensitive Zone (ESZ)

For Prelims

### Ecologically Sensitive Zone (ESZ):

- ESZs also known as **Ecologically Fragile Areas (EFAs)** are areas notified by the **MoEFCC** around **Protected Areas, National Parks and Wildlife Sanctuaries**.
- They are created to be the "**shock absorbers**" to the protected areas by **regulating** and **managing** the **activities** around such areas.

- The **Environment (Protection) Act, 1986** does not contain the word “Eco-Sensitive Zones”.
- **Supreme Court** declared a mandatory minimum of **1km** of **ESZ** to serve as a buffer for every national park and wildlife sanctuary in the country.
- In case any national park or protected forest **already** has a **buffer zone** extending **beyond one km**, that would **be maintained**.
- Eco-sensitive zones **need not** be **uniform** all around and it could have **variable width** and **extent**.

For Mains

### **Rules for ESZ:**

- The **National Wildlife Action Plan (2002-2016)** of **MoEFCC** encourages the **state governments** to declare land falling within **10 km** of the **boundaries** of **national parks** and **wildlife sanctuaries** as eco-fragile zones or Eco-Sensitive Zones (ESZs) under the **Environmental (Protection) Act, 1986**.
- The **Supreme Court**, on **June 3, 2022**, directed that every **national park** and **wildlife sanctuary** in the country will have a **mandatory eco-sensitive zone (ESZ)** of at least **one kilometre** starting from its **demarcated boundaries**.

### **The need of ESZ:**

- These areas act as a **buffer** for protected areas and help to **reduce developmental pressures** around a wildlife sanctuary or national park.
- They also act as a **transition zone** from areas of **high protection** to areas having **lesser protection**.

### **Prohibited activities in ESZ:**

- Commercial **mining**, saw **mills**, **Tourism**, establishment of **major hydroelectric projects (HEP)**, **commercial** use of **wood**, **discharge** of **effluents** or any **solid waste** or production of **hazardous substances**.

### **Regulated activities in ESZ:**

- **Felling** of **trees**, establishment of **hotels** and **resorts**, **commercial** use of **natural water**, erection of **electrical cables**, **widening** of **roads**, drastic **change** of **agriculture system**, such as adoption of heavy technology, **pesticides** etc.

### **Permitted activities in ESZ:**

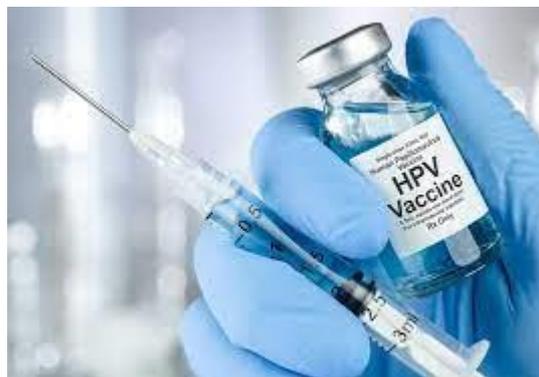
- **Ongoing** agricultural or horticultural practices, **rainwater harvesting**, **organic farming**, use of **renewable energy** sources, adoption of **green technology** for all activities.

# Cervical Cancer Vaccine

For Prelims

## Cervical Cancer:

- Cervical cancer is a type of cancer that occurs **cells** of the **cervix** (the lowermost part of the and results in the formation of a malignant there.
- Cervical cancer is **treatable** as well as **curable**; however, the possibility of **recurrence exists**.
- However, it is the **second** most **prevalent** form of **cancer** and the **second** largest **cause of death** by **cancer** in women of **reproductive age** (15-44).
- Various strains of the **Human papillomavirus (HPV)** are the major cause for the largest number of cervical cancer cases.
- **27%** of global cervical cancer cases are recorded **from India**.



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## CERVAVAC:

- CERVAVAC is a **quadrivalent vaccine** which makes it effective against **at least four variants** of Human Papilloma Virus (HPV).
- The vaccine has been developed by **Serum Institute of India (SII)**, and was approved by the **Drug Controller General of India** in **July 2022**.
- It has been developed by SII in partnership with Department of Biotechnology's **Biotechnology Industry Research Assistance Council (BIRAC)**, and the **Bill and Melinda Gates Foundation**.
- CERVAVAC is expected to cost ₹ **200-₹ 400 a shot** which is a substantiate **reduction** from the current price of ₹ **3,500 to ₹ 6,000 per dose**.
- The development of CERVAVAC makes it the **third HPV vaccine** available in India after the **Gardasil** (a **quadrivalent** vaccine from **Merck**) and **Cervarix** (a **bivalent** vaccine from **GlaxoSmithKline**).
- The vaccine will be available to the public through **Universal Immunisation Programme** by **mid-2023**.
- The government is expected to roll out this vaccine for girls aged between **nine** and **14** through **schools**.
- Girls who are **unable to attend school on the day** of the vaccination campaign will be provided the vaccine at a health facility.
- **Out-of-school girls** will be reached through **community outreach** and **mobile teams**.

## About Human papillomavirus:

- Human papillomavirus (HPV) is a **DNA virus** from the **Papillomaviridae** family and is the **most common sexually transmitted infection** (STI).
- **Most people** with HPV **don't develop** any **symptoms** but can **act** as **carriers** infecting others **through sexual contact**.
- HPV vaccines **can prevent** the most **common types of infection**.

## New Weekend Batch for 2024

The weekend batch is exclusively designed for working professionals. We are here to help you with achieving your dreams.

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**Saturday** - 02:00 PM to 07:00 PM

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Starts  
**10th**  
DECEMBER  
2022



## Greenwashing

For Prelims

### Greenwashing:

- Greenwashing can be defined as practice of **projecting** a company's **products** as **more environmentally friendly** or as having a bigger **positive** influence on the **environment** than they actually do.
- This is seen as an attempt to **capitalize** on the growing **demand** for **environmentally sound products** **without** taking **pro-environment measures**.
- Greenwashing involves making **unverifiable, misleading, or dubious** claims that are aimed at creating a more **positive image** of the **company** among **people**.
- The term greenwashing is evolved from the term "**whitewashing**," which means using false information to intentionally **hide wrongdoing, error**, or an unpleasant situation in an attempt reduce its impact.



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For Mains:

### Impact of Green Washing:

For consumers

- The primary impact goes to the consumers as consumer sentiment is slanted toward being green and environmentally sustainable.
- Evidence of greenwashing makes consumers **loose trust in genuine green products** which can result in collapse of such companies.
- Greenwashing can also lead to **degradation of customer satisfaction, erosion of brand loyalty and can potentially affect repeat purchases**.
- Companies also use greenwashing to **increase price** of products, by **labelling** them **environment-friendly** which increases the **financial burden** for consumers.

# In U.S. Actions, the Worry of Global Trade Lawlessness

For Prelims

## World Trade Organization (WTO):

- The World Trade Organization (WTO) is an **intergovernmental** organization that **regulates** and **facilitates trade** between **nations**.
- **World Trade Organization** and two **Bretton Woods Institutions**, **IMF** and **World Bank** are the stalwarts of the international **liberal economic order**.
- It was founded **on 1 January 1995**, under the **1994 Marrakesh Agreement**, by which it **replaced** the **General Agreement on Tariffs and Trade (GATT)** which was established in **1948**.
- The WTO is the world's **largest international economic organization**, with **164 member** states who represents over 98% of global trade and global GDP.
- **India** had joined **WTO** as one of its founding members.
- The headquarters of WTO is located in **Geneva, Switzerland**.

For Mains:

## US and the WTO:

- The United States during the presidency of Donald Trump had imposed tariffs of **25% and 10% on steel and aluminium**, respectively.
- This was challenged by **China, Norway, Switzerland, and Turkey** in the WTO, which has declared that these tariffs were are **inconsistent** with **WTO law**.

## US justifications:

- The justification of the US was that **Article XXI(b)(iii)** of **GATT** allows a country to take **any action 'which it considers'** necessary for the protection of its **essential security interests** taken in time of **war** or other '**emergency in international relations**'.
- US also tried to argue that the increase in the tariff rates primarily motivated by **global excess capacity**, which could lead to **excessive imports** of these two commodities used in **defence production**, thus compromising the U.S.'s national security.

## Findings of WTO panel:

- WTO declared that the national security rule in Article XXI is **not** entirely '**self-judging**' and can be **reviewed by a panel** as laid down in the **Russia-Transit** and the **Saudi Arabia- IPR** cases.
- It also held that the global excess capacity **does not** constitute an '**emergency in international relations**' under Article XXI(b)(iii) because **it lacked severity**.

## Threat to Neoliberal Order:

- In the neoliberal order **economic** and **security** interests of countries are seen as relatively **independent** from each other.
- US **supported** this free trade regime **in the past** because it **did not fear** the growth of its **strategic rivals** such as **China**.

- However, since the **difference** between the **size** of the **Chinese** and **American** economies are **shrinking** at a rapid pace, the **U.S.** seems to have **given up free trade** and is swiftly **embracing protectionism**.
- The use of the **national security** as a **justification** for economic nationalism is an attempt to **blunt** the possibility of **international courts** reviewing state action.

## Centrally Protected Monuments

For Prelims

### Centrally protected monuments in India:

- India has a total of **3,695 Centrally Protected Monuments** or Sites at present **UP** having the **highest** number at **743**.
- Centrally Protected Monuments are protected by **Archaeological Survey of (ASI)** under **Ancient Monuments and Archaeological Sites and Remains (Amendment) Act, 2010**.



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### Encroachment of Centrally protected monuments:

- **Uttar Pradesh** has the **largest number (75)** of Centrally Protected Monuments which have been encroached upon, **followed by Tamil Nadu (74)**.

### Archaeological Survey of India (ASI):

- ASI was founded in **1861** by a British Army engineer, **Alexander Cunningham** who was appointed as its **first Director-General**.
- It is currently existing as an **attached office** under the **Department of Culture (Ministry of Culture)**.
- ASI is India's premier organization for the **archaeological research, scientific analysis, excavation of archaeological sites, conservation and preservation of protected monuments**.
- It helps in regulation of all **archaeological activities** in the country under the provisions of the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.

### Ancient Monuments and Archaeological Sites and Remains Act, 1958:

- The AMASR Act has been enacted for the **preservation of ancient and historical monuments and archaeological sites and remains of national importance**.
- Government proposed amendments to **remove the ban** on construction within 100 metres of a monument and only **regulate construction** within **100-200 metres**.

### Section 20 of the 'Ancient Monuments and Archaeological Sites and Remains' Act:

- The Act prohibits construction in 'prohibited area', an area of 100 meters around protected monument over 100 years old.

- It does not permit construction in such prohibited areas even if it is for public purposes, except under certain conditions.

## Alleviating the Scourge of Private Healthcare

For Prelims

### Healthcare Expenditure in India:

- India's **public health expenditure as a percentage of its GDP is 1.28%.**
- While its share of **general government expenditure dedicated to health** remains **4.8%.**
- Due to these parameters **private spending** still constitutes nearly **60% of overall expenditure on health.**

For Mains

### The Issues with private Healthcare:

- Indian Healthcare system suffers from **income disparities, backwardness, and under-regulation.**
- The increasing number of **healthcare providers in urban areas** has only served to drive prices up.
- The private healthcare sector in India is divided **geographically** as well as **economically**, with marked **inequities** between **rural** and **urban** areas and widespread **market failure.**
- This has resulted in the private sector **differentiating** into a multitude of **organisations of varying sizes and scopes**, each **servicing its own customer base.**
- Many of these organisations provide care at **inexpensive rates** but **lack adequate quality.**
- **Public health insurance** schemes have often been **criticised** for imposing **unreasonable package rates** on private providers **without any consideration** for actual **costs of care.**
- Another major concern is the **high costs of medical education** which forces people to **recover** the cost through **resource-intensive ways** of practice.

## Tele Mental Health Assistance and Networking Across States (MANAS)

For Prelims

### Tele-MANAS

- Tele-MANAS is a **toll-free 24/7 number (14416)** launched on **October 10 2022** on **World Mental Health Day** by the Union government.
- It aims to provide **free tele-mental health services** over the country round the clock, its focus is on **catering to people in remote or under-served**
- It is based on **Karnataka** government's **e-Manas service**, which was **launched** during the **first wave COVID-19.**
- Tele-MANAS works under the **National Mental Health Programme (NMHP).**



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- The program has been spread to **24 States and Union Territories**.
- The **National Institute of Mental Health and Neuro Sciences (NIMHANS)** works as the nodal centre for the project and **International Institute of Information Technology Bangalore (IIITB)** provides technical assistance.
- As per and International Institute of Information Technology Bangalore (IIITB), Tele-MANAS has received over **20,000 calls** to date.
- The most common issues faced by the callers are **stress, sleep disorders and anxiety**.
- Tele-MANAS received the highest number of callers from the state of **Tamil Nadu (3,631)**.

## Working of Tele-MANAS

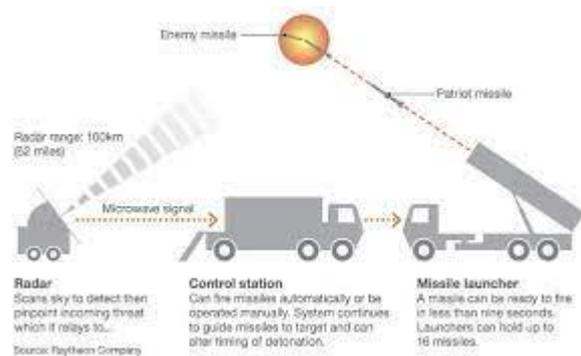
- Tele-MANAS has been organised into a **two-tier system**;
- **Tier 1** comprises of **state Tele-MANAS cells** which will include **trained counsellors and mental health specialists**.
- Tier 2 will include specialists at **District Mental Health Programme (DMHP)/Medical College** resources for physical consultation and/or **e-Sanjeevani** for audio visual consultation.
- Tele-MANAS will be **linked** to other services like **National tele-consultation service, e-Sanjeevani, Ayushman Bharat Digital Mission, mental health professionals, Ayushman Bharat health and wellness centres and emergency psychiatric facilities** for specialised care.

## Patriot Missile Defence System

For Prelims

### Patriot missile defence system:

- Patriot is a **surface-to-air missile (SAM)** system manufactured by the U.S. defense contractor **Raytheon**.
- It is named after the **Patriot (Phased Array Tracking Radar to Intercept on Target) radar** system used in it.
- The Patriot system replaced the **Nike Hercules** system and the **MIM-23 Hawk** system as the U.S. Army's primary **High to Medium Air Defense (HIMAD)** system and **medium tactical air defense** system respectively.
- While it was initially developed as a system to **intercept high-flying aircraft**, it was **modified** in the **1980s** to counter other threats such as **ballistic missiles**.
- Currently the **Patriot missile system** has the ability to defend against **ballistic missiles, cruise missiles, drones, jets and “other threats”**.
- However, it **doesn't** offer protection **against low-flying small drones**.
- Patriot system's radar has a **range** of over **150 km** and it can **track** over **50 potential targets** at the same time.
- The mobile Patriot system **includes** a **control centre, a radar station** to detect threats, **missile launchers** to take out those threats and **other support vehicles**.
- As of now the Patriot system has been deployed in **18 countries**, including the **U.S.** and other NATO countries.
- It is also deployed in **West Asia**, with America's allies such as **Saudi Arabia, the UAE and Israel** as a counter to Iran.



# Unlawful Activities (Prevention) Act

For Prelims

## Unlawful Activities (Prevention) Act

- Unlawful Activities (Prevention) Act was enacted in **1967** by the Union Government for effective prevention of **unlawful activities associations** in **India**.
- According to the act, an activity can be **deemed unlawful** if and when the **central government** by way of an **Official Gazette**, **declare** it so.
- "Unlawful" activities **till 2004**, referred to actions related to **secession** and **cession of territory**.
- The **UAPA (Amendment) Act of 2004**, added "**terrorist act**" to the list of offences to **ban organisations** for **terrorist activities**.
- Presently **34 organisations** are **banned** under this provision.
- The **UAPA (Amendment) Act of 2019** included the provision of **designating an individual** as a **terrorist** on certain grounds provided in the Act.

### Provisions of UAPA:

- **UAPA** allows the **investigating agency** to **file a charge sheet** in maximum **180 days** after the arrests and the **duration** can be **extended** further after informing the **court**.
- It also allows the **union government** to proclaim or **designate** an **organisation** as a terrorist organisation if it: (i) **commits or participates in acts of terrorism**, (ii) **prepares for terrorism**, (iii) **promotes terrorism**, or (iv) **is otherwise involved in terrorism**.
- The Bill also empowers the government to designate **individuals** as **terrorists** on the **same grounds**.
- Both **Indian** and **foreign** nationals can be **charged** under **UAPA**.
- According to the Act, an **investigating officer** need to obtain the **prior permission** of the **Director-General of Police** to seize properties that may be connected with terrorism.
- The **2019 Amendment** changed this provision to say that if the investigation is conducted by an **officer** of the **National Investigation Agency (NIA)**, the **approval** of the **Director-General of NIA** would be required for seizure of such property.
- The act empowers officers of the rank of **Deputy Superintendent or Assistant Commissioner of Police** or **above** to **conduct the investigation** of cases under **UAPA**.
- The **2019 Amendment** additionally empowers the officers of the **NIA**, of the **rank of Inspector** or **above**, to investigate such cases.

## Srimukhalingam Temple

For Prelims

### Srimukhalingam:

- **Srimukhalingam** also known as **Kalinganagara** was the **capital** of the **Eastern Ganga dynasty** and is located on the banks of **River Vamsadhara**.
- It is home to a group of **three Siva temples** viz, **Madhukeswara, Someswara, Bhimeswara**, are dated from late **eighth century** to early **eleventh century CE**.
- The main temple of Srimukhalingam is believed to have been built by Eastern Ganga Dynasty **King Kamaranava deva II**.



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### Eastern Ganga Dynasty:

- Eastern Ganga Dynasty also known as **Chodagangas** ruled **Kalinga** (consisting of present-day **Odisha, parts of West Bengal, Chhattisgarh and Andhra Pradesh**) from the **11th – 15th century**.
- As per **Jirjingi Copper Plate Grant**, **Indravarman I** is earliest known independent king of the dynasty.
- However, **Anantavarman Chodaganga** is known as the founder of the dynasty.

### Famous Rulers of Eastern Ganga Dynasty:

#### Anantavarman Chodaganga:

- He was given the title **Trikalingadhipathi** (the ruler of three Kalingas) in 1076 CE due to having control over the three Kalingas i.e., **Utkal** (north), **Kosal** (west) and **Kalinga** proper (south).
- He is also remembered for having built the famous **Jagannath Temple** of **Puri** in Odisha.

#### Narsimhadeva:

- He is famous for having built the **Sun Temple at Konark** which is a **UNESCO World Heritage site**.

**Bhanudeva IV** (1414-1434 CE) was the **last king** of the Dynasty and the region was taken over by **Chalukyas of Vengi**.

## Animation, Visual Effects, Gaming and Comics (AVGC) Sector

For Prelims

### AVGC Promotion Task Force:

- The AVGC Promotion Task Force was set up under the headship of **Secretary, Ministry of Information & Broadcasting**.



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- Its creation was announced in the **Union Budget 2022-23** to further unleash the scope of AVGC sector in India.
- The taskforce has **Secretaries of the Ministry of Skill Development and Entrepreneurship; the Ministry of Education; the Ministry of Electronics and Information Technology and the Department for Promotion of Industry and Internal Trade** as its members

## **Terms of Reference of the Task Force**

Terms of Reference of the Task Force include:

- To frame of a national AVGC policy,
- To recommend national curriculum framework for Graduation, Postgraduate and Doctoral courses in AVGC related sectors,
- Facilitate skill development initiatives in collaboration with academic institutions, vocational training centres & Industry,
- Boost employment opportunities in the sector,
- Extend the global reach of the Indian AVGC Industry through facilitating promotion and market development activities,
- Recommend incentives and enhance exports to attract FDI in the AVGC sector.

For Mains

## **Recommendation of the task force**

The taskforce has recommended the following measures to improve the AVGC sector in India:

- Start a “Create in India” campaign with an exclusive focus on content creation.
- Create an international platform for animation, visual effects, gaming and comics (AVGC) which can attract foreign direct investment, co-production treaties and innovation in collaboration with international counterparts.
- Form national and regional centres of excellence for skill development.
- Leverage the National Education Policy for developing creative thinking from school level.
- Establish AVGC accelerators and innovation hubs in academic institutions.
- Democratise AVGC technologies by promoting subscription-based pricing models for micro, small and medium enterprises (MSME), start-ups and institutions.
- Develop indigenous technology through incentive schemes and Intellectual Property (IP) creation. Set up a dedicated production fund for domestic content creation from across India to promote the country’s culture and heritage globally.

## • **National Commission for Protection of Child Rights (NCPCR)**

- NCPCR is a statutory body created on **March** under **Commission for Protection of Child (CPCR) Act, 2005**.
- The act defines “child rights” as the children’s adopted in the **United Nations Convention on Rights of the Child in November 1989**.
- The convention was **ratified** by the Indian Government on **11 December 1992**.
- NCPCR works under the **administrative** of the **Ministry of Women & Child Development**.



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### **Powers and Duties of the Commission:**

- The Commission has been mandated to ensure that **all Laws, Policies, Programmes, and Administrative Mechanisms** are in **accordance** with **the Rights of Children** as enshrined in the **Constitution of India** and also the **UN Convention on the Rights of the Child**.
- It is empowered to enquire into complaints relating to a child's right to free and compulsory education under the **Right to Education Act, 2009**.
- It is also tasked with monitoring the implementation of **Protection of Children from Sexual Offences (POCSO) Act, 2012**.

### **Members and Composition:**

- The commission comprises of a **chairperson** and **six members** of which **at least two** are required to be **women**.
- The chairman and members are to be **appointed** by **Central Government** for a term of **three years**.
- The Chairman and Members are **not allowed** to hold office for **more than 2 terms**.
- The **Chairman** can have a **maximum age** of **65 years** and **60 years** for **members**.

### **Resignation and Removal**

The **Chairperson** or **Members** can resign from their office at any time by addressing the **letter of resignation** to the **Union Government**.

The Chairperson or any other Member can be removed by Central Government, if the Chairperson or, such other Member:

- is adjudged an insolvent; or
- engaged in any paid employment outside his official duties during his term of office; or
- incapable of acting or refused to act in accordance with the provisions; or
- is of unsound mind and so declared by the court; or
- has misused his position in such a way that it would be bad for the public interest; or
- is convicted and sentenced to imprisonment for an offense that involves moral turpitude; or
- is absent from 3 consecutive meetings of the commission without obtaining a leave of absence.

## National Mobile Monitoring System

- National Mobile Monitoring System app was launched by **Ministry of Rural Development (MoRD)** on **May 2021**.
- The app is meant for “**improving citizen oversight and increasing transparency**” in MGNREGS works.
- The app allows for the **real-time, photographed, geo-tagged attendance** to be for every worker once in **each half of the day**.
- The app is to be deployed by MGNREGA Mates who are **local women** who are **selected and trained to monitor MGNREGS worksites**.
- Attendance of workers employed under the MGNREGS **all over the country** needs to be captured using NMMS from **January 1<sup>st</sup> 2023** onwards.



taken

## A Warship Programme that must go Full Steam Ahead

### INS Vikrant:

- Named after India's **first aircraft carrier**, INS Vikrant is **the largest naval ship** to be **designed and built** in India and has a displacement of **45,000 tonnes**.
- Vikrant is run by **four General Electric LM2500+ gas turbines** on two shafts which generate over **80 megawatts (110,000 hp)** of power.
- The ship plays home to Russian **MiG-29K fighters** and the **Kamov 31 helicopters**, as well as the soon to be acquired **American MH-60R Seahawk helicopters**.

### History of Aircraft Carriers:

- The history of Aircraft carriers dates back to the **first world war**.
- The **Imperial Japanese Navy ship Wakamiya** conducted the world's **first successful ship-launched air raid**.
- The first carrier-launched airstrike was the **Tondern raid** in **July 1918** when seven **Sopwith Camels** were launched from the **battlecruiser HMS Furious** to attack the German airbase at **Tondern, Germany**.
- **HMS Argus in 1918** became the world's first **carrier** capable of **launching and recovering** naval aircraft.
- As of **September 2022**, there are **47 active aircraft carriers**, including INS Vikrant, in the world operated by **fourteen navies**.
- The **United States Navy** operates the highest number of Aircraft Carriers **with 11 large nuclear-powered Carriers** which can carry around 80 fighters each.
- The **United Kingdom, India and China** each operate **two aircraft carriers**.
- **France and Russia** each operate a **single aircraft carrier**.
- **Italy** operates **two light fleet carriers** and **Spain** operates **one**.
- **Helicopter carriers** are operated by **Japan, France, India, Australia, Egypt, South Korea, China, Thailand and Brazil**.

# Mullaperiyar Dam

- Mullaperiyar dam is a **126-year-old dam** located on the confluence of the **Mullayar** and **Periyar** rivers in **Kerala's Idukki** district.
- The dam though **fully located within Kerala**, is **owned, operated and maintained by Tamil Nadu**.
- This agreement was reached due to a lease indenture for **years (the Periyar Lake Lease Agreement)** signed between the **Maharaja of Travancore** and the **Secretary State** for India for the **Periyar Irrigation** works in **1886**.
- The dam was constructed between **1887 and 1895** and is used to **redirect** water to the **Bay of Bengal**, instead of the **Arabian Sea**.
- The dam is a major source of **irrigation** and **drinking water** to the arid **rain shadow** regions of **Theni, Madurai, Sivaganga, Dindigul** and **Ramnad** districts.



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## The dispute:

- The dispute originated in **1979** over **the safety of the dam** due to its location in an earthquake prone region.
- As the result of the dispute, a **tripartite meeting** under the chairmanship of the then head of the Central Water Commission, **K.C. Thomas** was held in **November 1979**.
- It was decided in this meeting, that water level had to be reduced from the full reservoir level of **152 ft** to **136 ft**, in order to enable **Tamil Nadu to carry out dam strengthening works**.
- This was completed by the mid-1990s and Tamil Nadu started demanding restoration of the water level.
- Failure to reach a consensus on the issue resulted in both parties approaching the Supreme Court.
- Supreme Court in two separate judgements, in **2006** and **2014**, held that the **water level be raised to 142 ft**.

## The Jan Vishwas Bill, 2022

- The Jan Vishwas Bill, 2022 has been introduced with the objective of “**decriminalising**” **183 offences** across **42 laws** thereby enhancing the **ease of living and doing business** in India.
- The Bill aims to change the **penal provisions** and **replaces them with fines** in case of **minor offenses** across **42 laws**.
- Some of such acts includes **Air Act, Environment Protection Act, Forest Act, Drugs and Cosmetics Acts, Cinematograph Act, Patents Act** and **others**.
- The bill also aims at **rationalising monetary penalties** based on the gravity of the offence thereby **bolstering trust-based governance**.
- The idea behind the bill was proposed by **the Department for Promotion of Industry and Internal Trade (DPIIT)**.

## The need for the bill

- The fear of imprisonment for minor offenses can be a major factor in slowing down the growth of the business ecosystem and eroding individual confidence.
- The presence of a large number of outdated rules and regulations causes trust deficit.
- The governments ideology of Minimum Government, Maximum Governance and the need to redefine the regulatory landscape of the country under the Ease of Living and Ease of Doing Business reforms.

## The Threat of Overcriminalisation

- The criminalisation has often been used by governments to put across a strong image instead of a method to punish wrongful conduct.
- This phenomenon has been termed “overcriminalisation” by scholars.
- Such decisions often have little in the way of justifications.

## The need for Decriminalisation

- As per the National Judicial Data Grid, nearly 3.2 crore cases of the 4.3 crore pending cases are in relation to criminal proceedings.
- As per the Prison Statistics 2021 of the National Crime Records Bureau, a total of 5.54 lakh prisoners were confined in prisons against a capacity of 4.25 lakh.

## Delegated legislation

For Prelims

### Delegated legislation

- ‘Delegated legislation’ refers to the **exercising of legislative** power by an **agent** who is of a **lower rank** to the **Legislature**, or who is **subordinate** to the **Legislature**.
- This type of legislation is also known as **subordinate legislation** or **secondary legislation** or **subsidiary legislation**.
- Since **2005** such legislation came to be also known as **Legislative Instruments**.
- Such a power can be **bestowed** to the **executive** by the **legislature**,
- This authority is usually established in a **parent act** of parliament called a “**enabling act**.”
- The enabling act establishes the **framework** of the **legislation** and then delegate’s powers to others to make more comprehensive law in the field.

For Mains

### The need of Delegated Legislation

- Delegated Legislation can help in improving the **time management** of Parliament and State Legislative assemblies.
- It allows for the **use of experts** especially in fields such as IT security, money laundering, clinical research etc.
- This is highly positive since most of the politicians in India have no education nor experience in technical fields.

- Delegated Legislation allows the rules and regulations to be **more flexible** and allows for fast and updated regulations.

## Concerns of Delegated Legislation

- It threatens the **separation of powers** by allowing executive to insert itself in the work of legislature.
- Delegated Legislation can lead to laws which **curtails individual liberty, leads to arbitrariness and injustice**.
- This is highly probable as administrators are **not responsible** to the people even while making laws that affect their lives.
- Delegated legislation can decrease the control of legislature over executives which affect the **doctrine of checks and balances**.
- Parliament lack the adequate facilities to scrutinize every piece and section of delegated legislation.

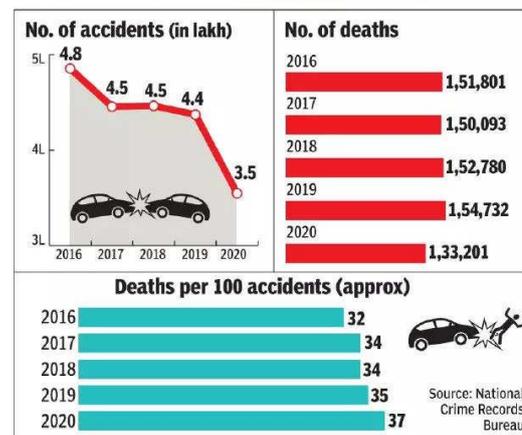
## Fatalities due to road accidents

For Prelims

### Road accident deaths in India:

- As per Road Transport Ministry's annual **Road Accidents in India-2021** report, road accident deaths **increased by 1.9%** in **2021** from the **2019** figure.
- A total of **4,12,432** road **accidents** were reported in country in **2021** which resulted in **1,53,972** deaths.
- These numbers mean an **average of 1,130 accidents and 422 deaths every day** or **47 accidents and 18 deaths every hour**.

### 37 DEATHS PER 100 CRASHES



### Road Accidents by Age:

- Young adults who are in the **18-45 age** group accounted for about **67.6%** of victims during 2021.
- People who are in the **working age** group of **18-60** made up **84.5%** of total road accident fatalities.
- Those who are **under 18** totalled **5%** of all road accident deaths, and those **above 60** accounted for **7.6%**.

### Road accident severity

- Road accident severity means the **number of persons killed per 100 accidents**.
- Road accident severity increased **to 37.3 in 2021 from 33.7 in 2019**.

## India's Population Control

For Prelims

### Total Fertility Rate (TFR):

- The total fertility rate in a specific year can be defined as “the **total number of children** that can be born to each woman if she were to **live to the end of her child-bearing years** and **give birth** to children in accordance with the existing **age-specific fertility rates**.”
- TFR can be calculated as the sum of the age-specific fertility rates for all women multiplied by five.
- India’s TFR at the national level has **declined** from **2.2 to 2.0**.
- India’s TFR in **1950**, was at around **5.9**, and has **fallen down** to **2.0** in **2021**.

### States with highest TFR:

- Bihar (2.98), Meghalaya (2.91), Uttar Pradesh (2.35), Jharkhand (2.26) and Manipur (2.17).

### States with lowest TFR:

- Sikkim (1.1), Andaman and Nicobar Islands (1.3), Goa (1.3), Ladakh (1.3), Jammu and Kashmir (1.4) and Lakshadweep (1.4) reported a TFR of less than 1.5 children per woman.
- **Kerala** was the only state that has shown an **increase** in TFR to 1.8 from 1.6 in 2015-16.

### Fertility and Development:

- India’s total fertility rate took a steep decline after the 1970s.
- This shows an inversely proportional relationship between economic prosperity and the fertility rate.

### Concern of forced population control:

- Forced population control can have very dangerous consequences as it can create/increase a gender imbalance.
- Forced population control measures have not shown impressive results in the countries that have implemented them.
- This has been most evident in China, as evidenced by the results of the one-child policy.
- China’s one-child policy has proved to be disastrous, and have resulted in a demographic imbalance.
- The population of China has been aging faster than in any other country, due to the impact of years of forced population control policies.

### What needs to be done:

- Like all the modern countries India too need to adopt population control measures.
- However, the focus needs to be on strengthening public health infrastructure and creating awareness about the need for population control.

## Remote EVM

### Electronic Voting Machines (EVM)

- EVMs were introduced in India for the **first time** during the **by-election** to the North Paravur Assembly constituency in **Kerala** in **1982**.
- The EVMs were used in the **general election** for the first time in the **state assembly election** of **Goa** in **1999**.
- They allow the citizens to vote **electronically** which **reduces** the **effort** of the Election Commission of India **in counting** the **votes**.

- EVMs comprises of **two units, control unit and balloting unit** which are connected by a cable.
- It can even be **used in areas** that have **no electricity** since it **runs on a 6-volt** single alkaline **battery**.
- The control unit is kept with **the polling officer** selected by **Election Commission**.
- Currently the EVMs used by the Election Commission of India **can record a maximum of 2,000 votes**.
- Post **2013** EVMs can have a **maximum of 384 candidates including NOTA**.
- The EVMs have been designed by the **Technical Experts Committee (TEC)** of the Election Commission in collaboration with **Bharat Electronics Ltd. Bangalore and Electronic Corporation of India Ltd. Hyderabad**.

## Remote EVM (RVM)

- Remote EVMs can handle **multiple constituencies** from a **single remote polling**
- Its aim is to enable **remote voting by migrant**
- RVM can handle up to **72 different constituencies** from a **single remote polling**

## The need for remote voting:

- Over **30 crore electors** had not exercised their during the **2019 Lok Sabha** election which **voter turnout** was only **67.4%**.
- The inability to vote due to **internal migration** is one of the prominent reasons for the low voter turnout.

## The causes of Migration:

- The major **causes of migration** among the rural population are **the need to work, marriage, and education**.
- Approximately **85%** of the domestic migration happens **within the States**.

## Why people don't enrol in their place of work:

The most common reasons why people don't enrol in their place of work are;

- Frequently changing residences,
- not having enough social and emotional connect with the issues of an area of migration, and
- unwillingness to get their name deleted in the electoral roll of their home/native constituencies as they have permanent residence/property.

## Central Drugs Standard Control Organization

For Prelims

## Central Drugs Standard Control Organisation (CDSCO):

### What is an RVM?

The machine allows migrant voters living outside their home constituencies to vote from their current residence

- The remote voter must register online/offline within a pre-notified time before the elections with their home constituency Returning Officer



booth.  
voters.

- After successful verification at their home constituency, the voter will be approved for the remote voting facility

EVMs being sealed after an election

- Booths will be set up near their current homes

- In an RVM, a single ballot unit can cater to many constituencies at a single polling station by using dynamic ballot display instead of the usual printed paper ballot sheet

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- CDSCO works under Directorate General of Health Services, **Ministry of Health & Family Welfare**.
- It is the **National Regulatory Authority (NRA)** of India.
- The **headquarters** of CDSCO is in **New Delhi** and there are **six functioning** central drug testing **laboratories** under CDSCO.

### Functions of CDSCO:

CDSCO is granted a multitude of responsibilities under **Drugs and Cosmetics Act**, these include;

- Giving approval of New Drugs,
- Conducting Clinical Trials,
- laying down the standards for Drugs,
- maintain control over the quality of imported in the country and
- coordinating the activities of State Drug Control Organizations by providing expert advice with a bring about the uniformity in the enforcement of Drugs and Cosmetics Act.



- **CDSCO** along with **state regulators**, is given the **joint responsibility** for granting licenses of certain specialized categories of critical Drugs.
- They include **blood and blood products, I. V. Fluids, Vaccine and Serum**.

### Drug Controller General of India

- The Drug Controller General of India (DCGI) is the head of CDSCO.

### Functions of DCGI:

- The DCGI establishes the standards for the manufacturing, import, sales, and distribution of drugs in India.
- DCGI also responsible for regulation of medical and pharmaceutical devices.
- The DCGI is the appellate authority in case of disputes with respect to the quality of the drug.
- The DCGI is responsible for preparing and maintaining the national reference standard for drugs.
- They ensure the uniformity in the implementation of the Drugs and Cosmetics Act.
- They are responsible for the training of Drug Analysts of the State Drug Control Laboratories and other Institutions.
- They are also in charge of the analysis of cosmetics received from the CDSCO as survey samples.
- The DCGI is also the central licensing authority for medical devices which fall under the Medical Device Rules 2017.

### Current Account Deficit

- The current account deficit is the measure of a country’s trade when the **value of** the goods and services it **imports** is **more than** the **value of** the products it **exports**.

- Current account deficit is indicative of the fact that a **country is importing more** than it is **exporting**.
- Calculating current account **includes net income**, such as **interest** and **dividends**, and **transfers**, such as **foreign aid**.
- The **difference of exports and imports of goods** is referred to as the **trade balance**.
- **Trade Balance** is also a **part of 'Current Account Balance'**.
- The current account is representative of a country's foreign transactions and along with the capital account, is a **component** of a **country's balance of payments (BOP)**.

## Balance Of Payments (BOP)

- The balance of payments (BOP) is also known as the **balance of international payments**.
- It is the statement which **includes all transactions** made **between** entities in **one country** and the **rest of the world** over a **defined period of time**, such as a quarter or a year.
- It is calculated as the sum of all transactions that a **country's individuals, companies, and government bodies** complete with individuals, companies, and government bodies outside the country.

## BrahMos

- The BrahMos missile is a **two-stage missile** with a **solid-fuel booster engine**.
- Its **first stage** accelerates the missile to **supersonic speeds** before detaching itself.
- In cruise phase, the **liquid ramjet**, or **second stage** **accelerates the missile to three times** the of **sound**.
- The missile has a **low radar signature** and go in a number of directions, increasing its **stealth capability**.
- BrahMos is the world's **fastest anti-ship cruise missile** in operation.
- It is capable of carrying a **regular warhead** as as a **nuclear warhead**.
- BrahMos was developed as a **joint venture** between India's **Defense Research and Development Organisation (DRDO)** and Russian Federation's **NPO Mashinostroyeniya**.
- **BrahMos Aerospace** was jointly created by both organisation and is responsible for the development of BrahMos.
- It is named after **two major rivers of India** and **Russia** viz, **Brahmaputra** and **Moskva**.



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## Features of BrahMos

- Stealth Technology.
- Advanced guidance system.
- High Target Accuracy (irrespective of weather conditions).
- Constant supersonic speed.
- Operates on 'Fire and Forget' Principle.
- BrahMos is a multiplatform missile hence it can be launched from land, aircraft, ships, and even submarines.
- It is one of the heaviest missiles, weighing up to 2.5 tonnes.
- The range of BrahMos missile was initially capped at 290 km as per obligations of the Missile Technology Control Regime (MTCR).
- Since India joined MTCR on June 2016 the extended range variant has been under development.

# Leveraging voice technology to combat cyber-fraud

## The threat of Cyber-Fraud:

- As per **Reserve Bank of India**, an estimated **₹100 crore a day** have been lost due to frauds in the country over the **last seven years**.
- In **2021-22**, the number of fraud **cases reported** were **23.69% higher** than in the previous year which translates to **9,103 cases** compared to **7,359** in **2020-21**.
- However, there was a **decline** in the **amount of money** involved in the fraud.
- The rise in fraud is mainly due to **greater use of digital payments, telephone banking, and online banking** services.
- The major **concern** with biometrics is that such methods are **cumbersome, not entirely secure, and vulnerable to deep fakes**.

## Voice Technology (VT):

- Voice Technology (VT) means the use of **voice biometrics** or **voice/speech recognition technology** as a security measure.
- VT uses the **unique characteristics of a person's voice** as a method of **identification**.
- Voice authentication can significantly **improve security** over traditional **knowledge-based authentication** methods such as **passwords**.
- Though commonly used, passwords are the **weakest** form of security since **81%** of **hacking-related breaches involve weak passwords**.

## The advantage of Voice Technology (VT):

- The biggest advantage VT has compared to other biometrics is that voice use is the **cheapest** technology and it **does not require a reader or special device**.
- It is also **non-invasive, portable and allows for remote identification**.
- Unlike a password, a customer's **voice** is rather **impossible to spoof or copy**, and is far more **difficult to hack**.
- VT allows for **swift verification** of a caller in seconds by analysing the caller's voice and **flags suspicious calls**.
- VT **does not violate the privacy** of the customer because it **does not require** users to reveal **personal information**.
- The technology is sensitive enough to **differentiate impersonation** of the user or **playing a recording**.

## Other Applications of VT

- VT is fast becoming an essential tool for **forensics** and **law enforcement**.
- The police can make use of voice technology to **improve investigation efficiency, identify criminals, track criminals, and better respond to and prevent crimes**.
- Voice is finding use in criminal **background checks** to **airport security** as well.
- The currently used **Facial recognition technology** has a **high error rate** and **works best** when the **person is looking directly at the camera**.
- However, Voice Technology has a much **lower error rate**, and **requires no eye contact**.



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