CURRENT AFFAIRS WEEKLY

MAINS

GS-I
- FEWER CYCLONES IN THE BAY OF BENGAL BUT FREQUENCY INCREASED IN THE ARABIAN SEA
- 'TWO-FINGER TEST' OF RAPE VICTIMS IS 'PATRIARCHAL' AND 'SEXIST': SC

GS-II
- PAKISTAN, CHINA TO BUILD RAIL PROJECT TO LINK KARACHI WITH PESHAWAR
- RIGHT TO VOTE FOR UNDER TRIALS AND CIVIL PRISONERS'
- THE IDEA OF ONE NATION, ONE POLICE UNIFORM
- 'CONSTITUTIONALITY' OF THE FIRST AMENDMENT ACT, 1951
- THE DOCTRINE OF PLEASURE

GS-III
- RBI FELL BEHIND IN CONTAINING INFLATION FOR THREE-CONSECUTIVE QUARTERS
- HOW THE STATE'S ROOM FOR EXPENDITURE IS RELATED TO GROWTH IN THE ECONOMY?
- RBI'S PILOT LAUNCH OF THE WHOLESALE DIGITAL RUPEE WHOLESALE SEGMENT (CBDC)
- DBT AND FINANCIAL INCLUSION
- THE UN CLIMATE CHANGE REPORT 2022 RELEASED

GS-IV
- THE ETHICS LINKED TO OCEAN-BASED CARBON DIOXIDE REMOVAL

PRELIMS

HISTORY
- Mangarh Massacre: A Tale of Tribal Valour Less Told

ART & CULTURE
- Coinage with images of gods and goddesses dates back to Kushans

GEOGRAPHY
- Eruption of the world's largest active volcano 'Mauna Loa

INTERNATIONAL RELATIONS
- UN counter-terrorism meet

POLITY & GOVERNANCE
- Pahari ethnic community added to Scheduled Tribes list of Jammu and Kashmir
- Tulu, and Kodava speakers demand priority for their languages
- World Cities Day

ECONOMY
- India cuts windfall tax on crude oil

ENVIRONMENT
- Invasive species in the Mudumalai Tiger Reserve (MTR)
- Panamaram heronry set to get a new lease of life
- A chance to expand the world's biosphere footprint

SCIENCE & TECH
- DRDO conducts maiden flight-test of phase-II ballistic missile defense interceptor
- India's Defence Ministry is the world's biggest employer: 'Statista' report
- Tuberculosis cases surged for the first time in many years: WHO
- Kalanamak rice, 'Buddha's gift to people, is now small, strong
- After GM mustard, GEAC to recommend Bayer's herbicide-tolerant cotton

SPECIAL
- India's Aircraft Industry

GS SCORE
An Institute for Civil Services
www.iasscore.in

— Disclaimer —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS WEEKLY

CONTENTS

WEEK - 1 (NOVEMBER, 2022)

****

SECTION: A
(MAINS)

CURRENT AFFAIRS

FEWER CYCLONES IN THE BAY OF BENGAL BUT FREQUENCY INCREASED IN THE ARABIAN SEA

CONTEXT:

Recently a report highlighted the events of occurrence of Cyclones in the Arabian Sea has increased as compared to the Bay of Bengal over several years due to Climate Change.

The name game

Cyclones are the local name of the Indian Ocean and the South Pacific Ocean, but in the Northwest Pacific Ocean they are known as typhoons, and in the Northeast Pacific Ocean and North Atlantic, they are known as hurricanes.
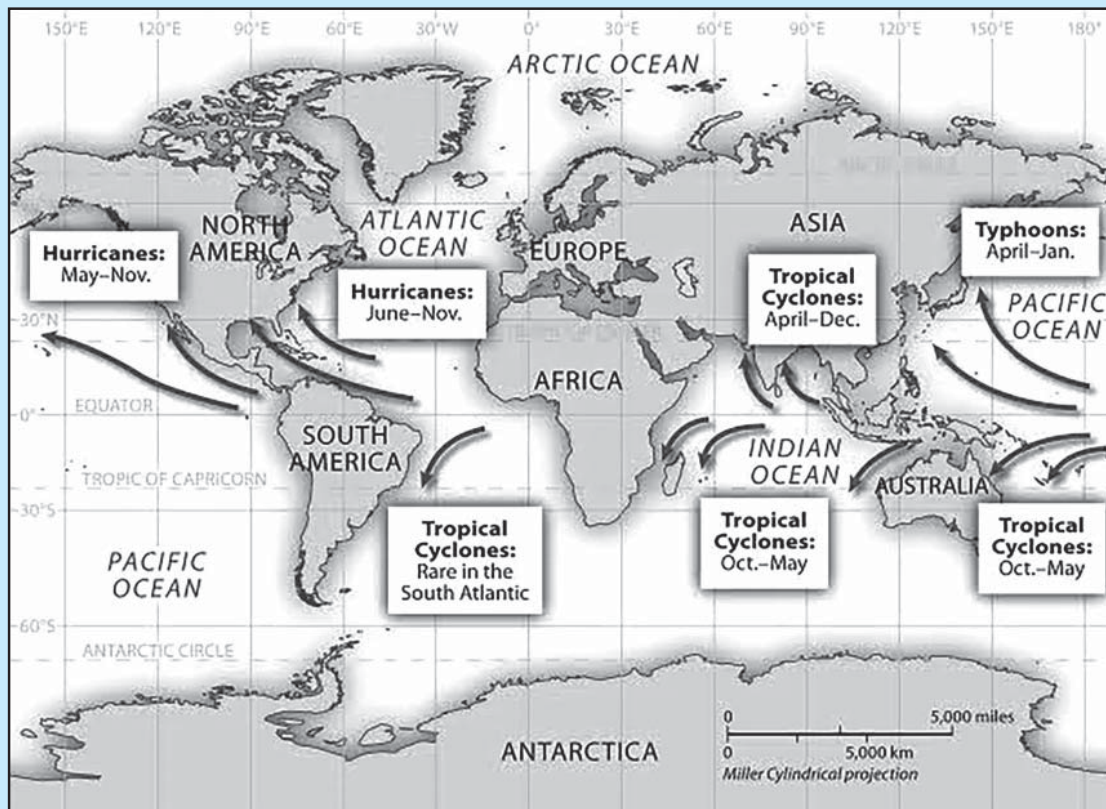
What are Cyclones?

◉ A cyclone is a huge **strong wind system** that blows around the centre of an intense low-pressure area.

How are they formed?

◉ Tropical storms are those that form between the latitudes **Tropic of Cancer** and the **Tropic of Capricorn** and rotate in the **anti-clockwise direction.**

◉ The surface of oceanic waters heats up due to the sun and as warm air and moisture rise up from the surface of the warm waters, more air rushes to fill the space in.
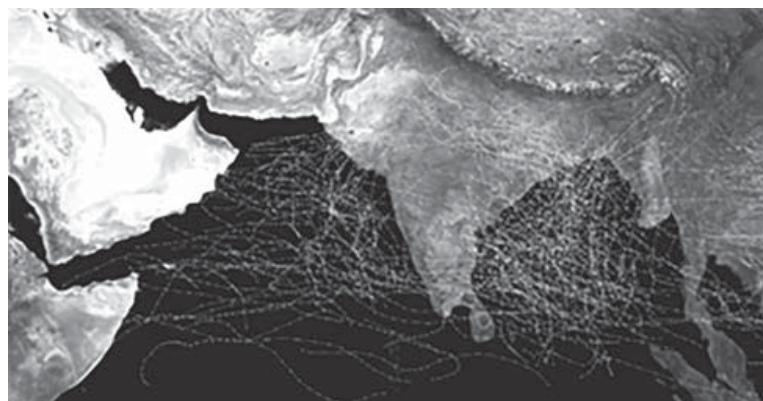
- This air in turn rises with humidity, creating a cycle of warm, moist air rising up. This system grows in height and size, spreading out and causing a **tropical cyclone.**
- In the northern hemisphere, cyclone winds blow **anticlockwise** and they reverse in the **southern hemisphere.**

What is the general trend of cyclones?

- Generally, India gets **5 cyclones** on an average in a year.
  - ➤ 4 in the Bay of Bengal
  - ➤ 1 in the Arabian Sea

> **The Geographic Location:**
>
> The Arabian Sea and the Bay of Bengal are both a part of the Indian Ocean, which extends on the west along the African coast and Madagascar up to the Arabian Peninsula and the Gulf of Oman, down to the North Indian Ocean below India, along the Andaman Sea, and goes all the way to the Australian coast

Bay of Bengal vs. Arabian Sea

Factors affecting cyclones in the Bay of Bengal	Factors affecting cyclones over the Arabian Sea
• The Bay of Bengal is fed by a constant source of freshwater in the form of giant rivers like the Ganga and the Brahmaputra.	• Conversely, the northern, central, and western parts of the Arabian Sea have much cooler temperatures.
• The river water that empties into the Bay of Bengal warms up at the surface and rises up as moisture.	• The mountains in east Africa direct winds toward the Arabian Peninsula, dissipating heat much more efficiently throughout the Arabian Sea.
• This makes it difficult for the warm layers of water to mix properly with the cooler layers of water below, keeping the surface always warm and ready to feed any potential cyclone over it.	• As a result, this region is not favourable to feed potential cyclones, and about half the cyclones that move into this area typically lose energy and dissipate.
• Furthermore, because of the shape of the land around the Bay of Bengal, the winds are slower and weaker over the ocean, ready to spin.	• However, this year, the sea surface temperatures continue to remain abnormally high, in the 30s, feeding cyclonic conditions.

The changing trend of cyclone frequency:

- In recent years, the frequency of cyclones has increased and more than that, there has been a decrease in the length of the monsoon season as well in the post-monsoon season.
- However, in the particular case of the Arabian Sea, in the last 30 years, from 1990 onwards, there is a significantly increasing trend of **extremely severe cyclones**. And as a result, the most intense cyclones in the region are causing a lot of devastation over the **western coast of India.**
- Not only is the Arabian Sea, but the Bay of Bengal also witnessing many severe cyclones in recent times.

How climate change is contributing to the increased frequency of cyclones?

- Climate change is increasing the damage that cyclones, cause in several ways like;
  - ➤ increasing sea surface temperatures that can make cyclones more powerful
  - ➤ increasing the rainfall intensity during the storm
  - ➤ Rising sea levels, which increase the distance inland that storm surges reach
- The strongest cyclones have become more common across the world and scientists project that climate change will continue to make the strongest cyclones more powerful.
- The **strength of cyclones** affecting the countries bordering the North Indian Ocean has been increasing as the planet has warmed.
- Climate change is increasing the danger from cyclones in several ways like cyclones are fuelled by available heat**.**

'TWO-FINGER TEST' OF RAPE VICTIMS IS 'PATRIARCHAL' AND 'SEXIST': SC

CONTEXT:

Recently, the Supreme Court (SC) has declared that any person conducting the invasive 'two-finger' or vaginal test on rape or sexual assault survivors will be found guilty of misconduct, as checking the virginity of the rape victim or whether she is 'sexually active' or not, is irrelevant to the fact whether she was 'raped' or not.

⦿ ABOUT

What is a Two-Finger Test?

- ⦿ The '**two-finger test**' or '**per Vaginal**' is a regressive procedure that involves the insertion of two fingers into a person's vagina to gauge the laxity of vaginal muscles, thereby determining her **'virginity'.**

- ⦿ Doctors also check how habituated the woman who has been raped is to sexual intercourse and her sexual history.

Patriarchal norms in the society for medical examinations of Rape Victims:

- ⦿ **The Indian Evidence Act**: In terms of **Section 53A** in the **Indian Evidence Act,** the evidence of a victim's character or her previous sexual experience with any person shall not be relevant to the issue of consent or the quality of consent in the prosecution of sexual offenses.

- ⦿ **Determining the Virginity of a Woman:** Determining a women's virginity as evidence against the character of the woman is a patriarchal norm and a societal barrier for Women.

'TWO-FINGER TEST **IS NOT SCIENTIFIC'**

AN INVASIVE EXAMINATION

➤ Also called virginity test, it is an inspection of female genitalia to determine whether a woman or girl has had vaginal intercourse

➤ In rape cases, this was used to identify whether the victim was habitual to sexual intercourse

➤ Common techniques are inspection of the hymen for size or tears, and insertion of two fingers to measure laxity of vaginal wall

LEGAL POSITION ON TEST

The Supreme Court in May 2013 banned the test, stating that it violates a rape survivor's right to privacy

STATE'S ACTION

➤ The state subsequently issued a government resolution (GR) banning the test for sexual assault victims

➤ The GR criticized the undue importance given to external injuries like signs of resistance, hymen examination and assessment of virginity

➤ It was based on a report by an eight-member panel appointed after a PIL was filed

GUIDELINES IN GR | Receiving survivor's consent for any examination and mandatory presence of female nurse or attendant

Impacts:

On Rape Victim	On Society	On Family of the Victim
• Re-victimises and re-traumatises women • A personal affront to her dignity • Character assault • Harassment of the rape survivor by police officials.	• Allow people to judge the character of the women/Rape victim. • Patriarchal norms to get strengthened.	• Due to societal pressure can blame the victim for the act/Rape happened. • Do not accept her as earlier.

What is Supreme Court's take on the issue?

- In **May 2013,** the Supreme Court had banned the **two-finger test** on rape victims on the grounds that it violates their **right to privacy**. The court had asked the government to provide better medical procedures in order to confirm sexual assault.

- According to the Apex court, it is faulty logic behind the test was that a woman cannot be believed when she said she was raped merely for the reason that she was sexually active.

- This test has **no scientific basis** and neither **proves nor disproves** allegations of rape. It instead **re-victimizes** women who may have been sexually assaulted.

PAKISTAN, CHINA TO BUILD RAIL PROJECT TO LINK KARACHI WITH PESHAWAR

CONTEXT:

With Pakistan's Prime Minister's Visit to China for the Joint Coordination Committee (JCC) meeting, both countries have agreed to go ahead with the USD 10 billion Karachi to Peshawar rail line agreement as a key part of the ambitious China-Pakistan Economic Corridor (CPEC) project.

Linking Karachi to Peshawar Rail line:

- The Karachi-Peshawar rail line is one of **four main railway lines** in Pakistan, operated and maintained by **Pakistan Railways.**

- The line begins from Karachi City station or Kiamari station and ends at Peshawar Cantonment Station.

- The total length of this railway line is **1,687 kilometers (1,048 mi).**

- There are **184 railway stations** from Kiamari to **Peshawar Cantonment** on this line.

- The line serves as the main passenger and freight line of the country. 75% of the country's cargo and passenger traffic uses the line.

- The line is currently undergoing a six-year **Rs.1286.68 billion (US$5.6 billion)** upgrade and renovation as part of the China-Pakistan Economic Corridor, with average rail speeds expected to be doubled to **160 kilometers per hour** upon completion.

The China-Pakistan Economic Corridor (CPEC):

- It was launched in 2013 with the aim to build a corridor linking Pakistan's **Gwadar port** on the Arabian Sea with **Kashgar in northwest** China's Xinjiang Uygur Autonomous Region, which highlights energy, transport, and industrial cooperation.

> The massive infrastructure project connecting **China's Xinjiang province with Gwadar port** in Pakistan's Balochistan province has raised concerns of huge Chinese debt on Pakistan's fledgling economy, though China has recently played down the debt concerns.

- CPEC is part of China's ambitious **Belt and Road Initiative (BRI).**

- The CPEC was planned to be completed in three phases. The first phase of CPEC was to remove key economic bottlenecks namely energy and infrastructure.

- The current phase is about industrialization, socio-economic and agricultural cooperation, and promoting business and consolidating developments.

Map for informational purpose. Not drawn to scale.
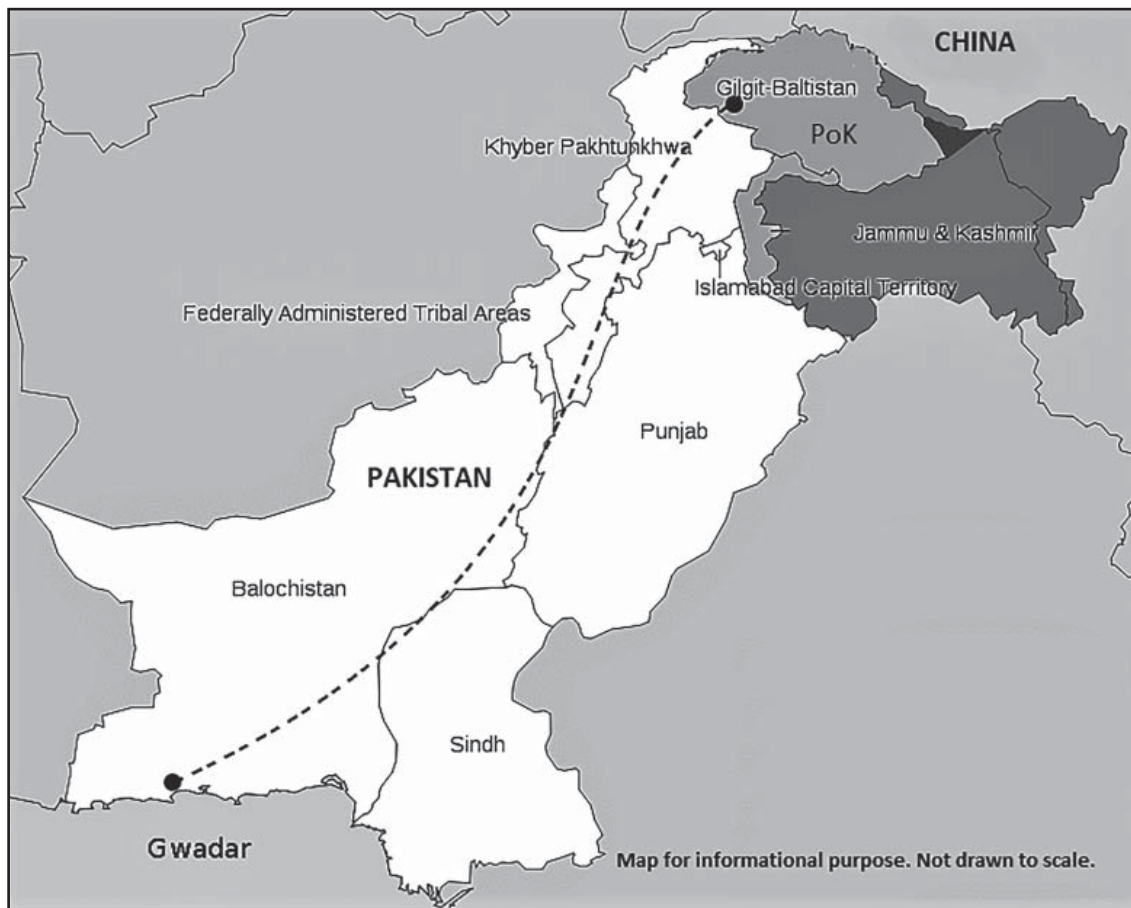
Future aspirations of Pakistan with China:

- The Pakistan government has made several new proposals that include post-disaster reconstruction, strengthening of digital investment in the economy, initiatives for global development, and an agreement between geological survey institutions of the two countries and cooperation to develop the export potential of Pakistan.

Upcoming Projects:
- The Karachi Circular Railway (KCR)
- Peshawar-Karachi Motorway (Multan-Sukkur Section)

India's Sovereignty Argument:

- India has repeatedly registered its protests over CPEC, saying it violates its sovereignty as it passes through **Pakistan-occupied Kashmir (PoK) - Indian Territory** illegally occupied by Pakistan.

- It also violates the **Party agreement** and used the conflicted region of any other country's territory to build infrastructure without its consent.

RIGHT TO VOTE FOR UNDER TRIALS AND CIVIL PRISONERS'

CONTEXT:

Recently, the Supreme Court (SC) decided to examine a petition challenging a provision in the election law that imposes a blanket ban on under trials, persons confined in civil prisons, and convicts serving their sentence in jails were deprived of their right to vote.

⊙ BACKGROUND

- The latest **National Crime Reports Bureau (NCRB) report of 2021** shows that a total of 5, 54,034 prisoners were confined as on December 31, 2021, in various jails across the country.

- A hike of **14.9%. Uttar Pradesh** has the maximum number of under trials (21.2%, 90,606 under trials) in the country followed by **Bihar (13.9%, 59,577 under trials)** and **Maharashtra (7.4%, 31,752 under trials)** at the end of the year 2021.

- This growing number of under-trials and conviction rates lead to keeping a large section of society away from their right to cast their votes over a longer period of time.

UNDERTRIALS & JAILS

Worst performing states (Percentage of undertrials who spent over three months in jail)

State	Percentage
Goa	85%
J&K	82%
Punjab	79%
Gujarat	76%
Haryana and Bihar	73%

4,18,536 people in jails

70% of convicts either illiterate or had not passed Class X

67.6%(2,82,879) Undertrials

Total capacity of jails: 3,56,561
Overcrowding: 117.4%

MOST OVERCROWDED JAILS IN
Dadra & Nagar Haveli: 331.7%
Chhattisgarh: 258.9%
Delhi 221.6%

Source: National Crime Records Bureau data for 2014

⊙ ABOUT

Provisions related to Prisoners' right to cast their vote:

- The right to vote is a **constitutional right** under **Article 326** of the Constitution.

- Under **Section 62(5)** of the **Representation of the People Act, 1951**, individuals in the lawful custody of the police and those serving a sentence of imprisonment after conviction cannot vote. Undertrial prisoners are also excluded from participating in elections even if their names are on the electoral rolls.

- Only those under **preventive detention** can cast their vote through **postal ballots.**

Why undertrials should be given voting rights?

- The present voting ban is criticized on the ground that it makes no offense-based or sentence-based classification — that is, prisoners are debarred from voting irrespective of the gravity of the offense they have committed, or the length of their sentence.

➤ It also makes no distinction between convicted prisoners, undertrials, and those in lawful police custody.

◉ Besides, a person is innocent until proven guilty by the law. Despite this, it denies an undertrial the right to vote but allows a detainee the same.

◉ The provision also violates the **rights to equality, and votes (Article 326) and is arbitrary.** It is not a reasonable restriction.

What are the concerns associated?

◉ **Denial of Rights to people for un-proven convictions**: Denying the right to vote does not comply with the requirements for legitimate punishment.

◉ **Lack of any Classification against the nature of Crime**: The ban to vote, lacks reasonable classification based on the nature of the crime or duration of the sentence imposed unlike in countries like South Africa, the United Kingdom, France, Germany, Greece, Canada, etc.

➤ This lack of classification is anathema to the fundamental right to equality under Article 14 (right to equality).

◉ **Discrimination:** It has been seen that if a convicted person can vote if she is **out on bail**, whereas the same right is denied to an under trial who is not yet found guilty of a crime by a court of law.

THE IDEA OF ONE NATION, ONE POLICE UNIFORM

CONTEXT:

While addressing the State Home Ministers' conference in Haryana, the Prime Minister has flagged the idea of "one nation, one police uniform" to have a brand recall just like the red-and-black post boxes in the country.

◉ BACKGROUND

◉ While police personnel in India are often associated with the **colour khaki**, their uniforms do differ in varying degrees in different regions.

◉ Since state governments and even an individual force can decide the uniform of their personnel, there are at times inconsistencies in their official attire.

◉ **For example:**

➤ The **Kolkata Police** wear **white uniforms.**

➤ **Puducherry Police** constables wear **bright red caps** with their **khaki uniforms**.

➤ **Delhi Traffic Police** personnel wear a **white and blue uniform**

Provisions for Police forces in India:

◉ The **Indian Constitution** puts '**police forces**' under the jurisdiction of **state governments**, and each of the **28 states** has its own police force.

◉ Both 'public order and the 'police' are placed in **List II (State List) of the Seventh Schedule** of the Constitution, which deals with the division of powers between the Union and States.

Significance of One Nation, One police uniform:

- Reduction in the cost of Uniform production.
- Uniformity in Police forces uniform will bring a sense of collectivism among police forces of different states.

'CONSTITUTIONALITY' OF THE FIRST AMENDMENT ACT, 1951

CONTEXT:

Recently, the Supreme Court (SC) has agreed to view the plea challenging the 'Constitutionality' of the First Amendment Act, 1951 which had put the reasonable restrictions under clause(2) of Article 19 (a) of Freedom of Speech and Expression.

◉ ABOUT

Reasons behind Amendment:

- To remove certain practical difficulties created by the court's decision in several cases such as Kameshwar Singh Case, Romesh Thapar Case, etc.
- Issues involved in the cases included **freedom of speech**, acquisition of the Zamindari land, State monopoly of trade, etc.

The 1st Amendment Act, 1951:

- Empowered the state to make special provisions for the advancement of socially and economically backward classes.
- Provided for the saving of laws providing for the acquisition of estates, etc.
- **Added Ninth Schedule** to protect the land reforms and other laws included in it from judicial review. After Article 31, Articles 31A and 31B were inserted.
- Added three more grounds for restrictions on freedom of speech and expression: public order, friendly relations with foreign states, and incitement to an offense. Also, it made the restrictions '**reasonable**' and thus, justiciable in nature.
- Provided that state trading and nationalisation of any trade or business by the state is not to be invalid on the **ground of violation of the right to trade or business.**

Amendments in response to issues against Freedom of Speech:

- The Amendment included **Clause (2) under Article 19**, dealing with reasonable restrictions on the freedom of speech and expression guaranteed under **Article 19(1)(a).**
- The citizen's **right to practice any profession or to carry on any occupation, trade, or business conferred by article 19(1)(g)** is subject **to reasonable restrictions** which the laws of the State may impose "**in the interests of the general public".**

What are the arguments against this Amendment?

- According to the petitioners, it contains "**two objectionable insertions**" allowing restrictions also "**in the interest of public order**" and "**in relation to incitement to an offense**".
- The new Clause (2) also omitted the expression "**tends to overthrow the State**" as appeared in the original Clause (2).
- These two insertions protect **Sections 124A (sedition), 153A (promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc.**, by words, either spoken or written

or by signs or by visible representations or otherwise and doing acts prejudicial to maintenance of harmony, **295A** (deliberate and malicious acts, intended to outrage religious feelings of any class by insulting its religion or religious beliefs) and **505** (statements conducing to public mischief) of the **Indian Penal Code** and hence are unconstitutional.

◉ The amendment also neglects **national security** by dropping the expression 'tends to overthrow the State' which raises grave concern in the context of the dangers posed to the concept of a **secular democratic republic by radicalism**, **terrorism, and religious fundamentalism.**

THE DOCTRINE OF PLEASURE

CONTEXT:

Recently, the Kerala has seen debates over using the 'Doctrine of Pleasure' for the appointment and dismissal of the Vice-Chancellor of Universities by the Governor of the State as Chancellor of all the State Universities.

What is the Doctrine of Pleasure?

◉ The pleasure doctrine is a concept derived from **English common law**, under which the crown can dispense with the **services of anyone** in its employ at any time.

◉ In England, the moral rule is that **a civil servant of the Crown holds office during the pleasure of the Crown**. This means his services can be terminated at any time by the Crown, without assigning any reason.

Provisions in India for Appointment and dismissal of Civil servants:

◉ In India, **Article 310** of the Constitution says every person in the **defence or civil service** of the Union holds office during the **pleasure of the President**, and every member of the civil service in the States holds office during the **pleasure of the Governor**.

◉ However, **Article 311** imposes restrictions on the removal of a civil servant. It provides for civil servants being given a reasonable opportunity for a hearing on the charges against them.

◉ There is also a provision to dispense **with the inquiry** if it is not practicable to hold one, or if it is not expedient to do so in the **interest of national security**.

◉ In practical terms, the pleasure of the President referred to here is that of the Union government, and the Governor's pleasure is that of the State government.

What did the Supreme Court say about one Vice-Chancellor's appointment?

◉ **Against the UGC norms**: In a case challenging the appointment of **Dr. M.S. Rajasree** as V-C of the APJ Abdul Kalam Technological University, Thiruvananthapuram, the Supreme Court held that her appointment was contrary to the regulations of the **University Grants Commission (UGC).**

  ➤ According to the Search Committee, they had identified **only one candidate** and recommended the name to the Chancellor for the appointment.

  ➤ However, under UGC regulations, a panel of **three to five names** should be recommended so that the Chancellor has a number of options to choose from.

◉ **State Governments' stand**: The court rejected the **State government's argument** that it had not specifically adopted the UGC regulations, holding that the regulations framed under a Central law will override the State government's relevant rules.

Does Governor have the power to use this doctrine?

◉ Under **Article 164,** the Chief Minister is appointed by the Governor; and the other Ministers are appointed by the Governor on the CM's advice. It adds that Ministers hold office during the pleasure of the Governor.

◉ In a **constitutional scheme** in which they are appointed solely on the CM's advice, the 'pleasure' referred to is also taken to mean the right of the Chief Minister to dismiss a Minister and not that of the Governor.

◉ In short, **the Governor** of an Indian State cannot **remove a Minister** on his own.

RBI FELL BEHIND IN CONTAINING INFLATION FOR THREE-CONSECUTIVE QUARTERS

CONTEXT:

Recently, the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) was convened to formulate its response to the Government of India regarding the on-going high rate of inflation for three-consecutive quarters in the country.

⊙ BACKGROUND

- ⊙ The current obtained Retail inflation for September 2022 was **7.4 per cent**, which means the price level for retail consumers last month was 7.4 per cent higher than what it was in September 2021.

- ⊙ This also means that retail inflation — which is calculated using the **Consumer Price Index (CPI)** — has been outside the RBI's comfort zone for **three consecutive quarters** beginning from January 2022.

⊙ ABOUT

The Monetary Policy Committee:

- ⊙ **Composition**: The MPC has **six members** including;
  - ➤ The RBI Governor
  - ➤ Three each nominated by the RBI and the government.

- ⊙ **Meetings**: The MPC meets every **two months** — that is, six times a year — in February, April, June, August, October, and December to evaluate the current status and outlook for inflation and economic growth.

HOW RBI FELL BEHIND THE CURVE ON CONTAINING INFLATION

Source: RBI   Graphic: IE Design

- ⊙ **Functions:** Based on the assessment, it regulates the repo rate, which is the interest rate at which the RBI loans money to the banking system.
  - ➤ It is for this reason that movements in the **repo rate influence** the **overall interest rates** in the economy.
  - ➤ When the MPC wants to contain inflation, it raises the repo rate.
  - ➤ Such a "**dear money**" policy makes all types of borrowing — both for consumers (say, car loans) and producers (say, fresh business investments) costlier and effectively **slows down** economic activity in the Country.
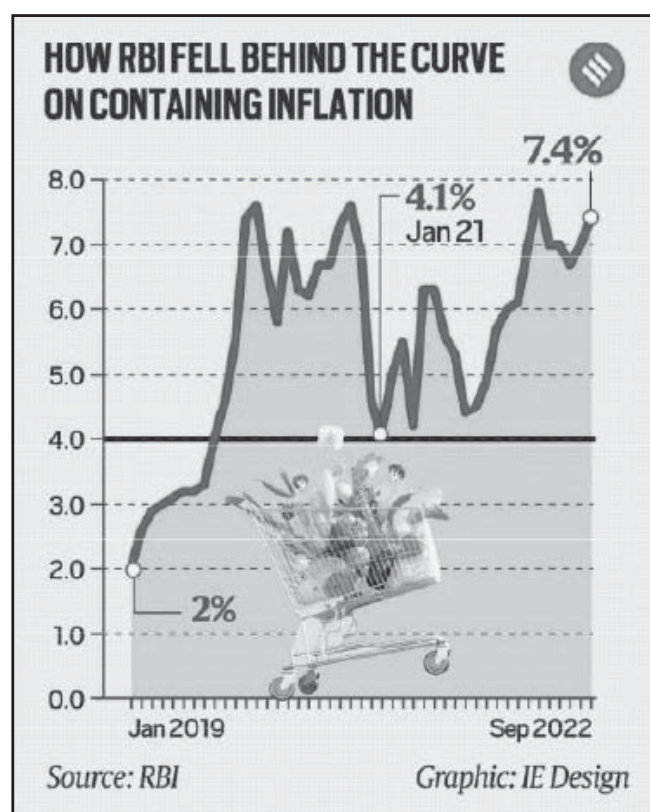
> **Dear Money Policy:**
>
> Dear money policy refers to a monetary policy by the central bank where the central bank sets high-interest rates so that credit is not easily available to the general public to decrease the rate of inflation in the economy by curbing demand.

Reasons behind the Failure to curb inflation:

- ⊙ India had been witnessing high headline inflation since late 2019. While there was some relief on the headline inflation front in the first half of 2021, core inflation became a concern by October.

- It underscored India's vulnerability to sudden spikes in inflation if either food or fuel prices went up. However, the RBI kept the repo rate unchanged at **4 per cent**.

- By this time, headline and core inflation were converging at the **6 per cent level**. But the MPC still refused to raise interest rates, stating that "inflation is likely to moderate" between December 2021 and September 2022.

What happens if inflation targets by the Central Bank do not get achieved?

Under the **RBI Act, of 1934**, if the central bank fails to meet the inflation target **for three consecutive** quarters, it is required to provide the following **information to the government**:

- Reasons for the failure to achieve the inflation target;

- Remedial actions proposed to be taken; and

- An estimate of the time period within which the inflation target shall be achieved pursuant to the timely implementation of the proposed remedial actions.

HOW THE STATE'S ROOM FOR EXPENDITURE IS RELATED TO GROWTH IN THE ECONOMY?

CONTEXT

With the global economic scenario and slowing down demand in advanced economies with continued aggressive monetary tightening by central banks, the States' effective investments can ramp up their spending which will have a critical bearing on the pace of the Indian economy.

⊙ ABOUT

The States and Expenditure:

- The States' ability to ramp up **capital expenditure** and take advantage of the fiscal space can become a key determinant of the aggregate fiscal impulse to the economy at this time in the country.

- The analysis has been made among growing state economies including Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, and West Bengal — that account for **85 percent of India's GDP.**

How State Expenditure can help for growing Economy?

In response to the **financial slowdown** and its impact on the economy, the government plays a key role by increasing its spending to boost economic growth. Some of the roles include;

- **Provides a well-functioning legal and political system:** Any economy facing political or economic turmoil is not conducive to economic growth since it has very little trust in the economy. Moreover, there is uncertainty in the economy and people are also unwilling to invest.

- **Lays regulatory role to provide a competitive market:** There should be certain regulations to ensure that the economy does not drift to a monopolistic situation. The government needs to think about trade policies with foreign countries, regulations on natural resources available in our country, etc.

- **Stimulate the economy by increasing government spending:** This was one of the philosophies given by one of the renowned economists **John Maynard Keynes**. He was of the view that the government's role is very important "when the economy is in recession or depression-like situation and the government should increase spending to have a pickup in the economic activity."

Impact of government spending on the economy

- **Rise in Expenditure and Growth:** There is a high possibility that the rise in taxes will negate the impact of rising government spending which would leave **Aggregate Demand (AD)** However, it is possible that increased spending and a rise in tax could lead to an increase in GDP.

- **During downfalls in the economy**: In a recession, consumers may reduce spending leading to an increase in private sector savings. Therefore a rise in taxes may not reduce spending as much as usual.

- **The Multiplier Effect**: Increased government spending may create a multiplier effect. If government spending causes the unemployed to gain jobs then they will have more income to spend leading to a further increase in aggregate demand. In these situations of spare capacity in the economy, government spending may cause a bigger final increase in GDP than the initial injection.

Possible implications:

- **Can crowd out Private sector lending**: However, if the economy is at full capacity, the increase in government spending would tend to crowd out the **private sector leading** to no net increase in Aggregate demand from switching from private sector spending to government sector spending.

- **Inappropriate allocation of funds**: Some economists would argue increasing government spending through higher taxes would lead to a more inefficient allocation of resources as governments tend to be less effective in spending money.

- **Increase in Off-budget Borrowings**: The off-budget borrowings by states refer to loans taken by its entities, special purpose vehicles, etc., which are expected to be serviced through the state government's own budget, instead of the cash flows or revenues generated by the borrowing entity.

Government spending and its impact on our Economy

Government spending plays a key role to boost economic growth in response to the financial slowdown in the economy.

Source of Income
- Tax revenue
- Non Tax revenue

Expenditure
- Revenue expenditure
- Capital expenditure

Budget Deficit

A budget deficit is an indicator of financial health in which expenditures exceed revenue

Consequences of high budget deficit

- High inflation
- High tax
- High interest rate

Impact on the economy

Government spending in the situation of spare capacity in the economy, may cause a bigger final increase in GDP than the initial injection.

However, if the economy is at full capacity, the increase in government spending would tend to crowd out the private sector leading to no net increase in GDP.

The Union government has recently clarified that henceforth; off-budget borrowings would be considered as borrowing of the state government and would be subject to the provisions of Article 293(3) of the Constitution of India.

RBI'S PILOT LAUNCH OF THE WHOLESALE DIGITAL RUPEE WHOLESALE SEGMENT (CBDC)

CONTEXT:

The Reserve Bank of India (RBI) is going to commence the pilot launch of the wholesale digital Rupee Wholesale segment (CBDC) on November 1, 2022, and has also issued a concept note.

Details:

- The first pilot in the Digital Rupee, Wholesale segment (e₹-W) will commence on November 1, 2022.

- The use case for this pilot is the **settlement of secondary market transactions in government securities.**

- **Nine prominent banks** have been identified for participation in the pilot.

- Other wholesale transactions and cross-border payments will be the focus of future pilots.

- The first pilot in the **Digital Rupee-Retail segment (e₹-R)** is also planned alongside for rollout in select locations in a closed user group.

Highlights of the Concept Note issued on CBDC:

- The purpose behind the issue of this Concept Note is to **create awareness about CBDC**s in general and the planned features of the Digital Rupee (e₹).

- It **explains the objectives, choices, benefits, and risks** of issuing a CBDC in India. The Note also seeks to explain Reserve Bank's approach toward the introduction of the CBDC.

- It **discusses key considerations** such as technology and design choices, possible uses of the Digital Rupee, issuance mechanisms, etc.

- It **examines the implications** of the introduction of CBDC on the banking system, monetary policy, and financial stability, and analyses privacy issues.

About Central Bank Digital Currency (CBDC):

- A CBDC is no different from the cash that we hold in our wallets, except that it exists in a digital form.

- The CBDC will be held in a digital wallet that is supervised by the Central bank.

- In India, it will be the RBI that supervises the digital rupee although it may delegate some power to banks.

- RBI's digital rupee will not directly replace demand deposits held in banks.

- Physical cash will continue to be used by banks, and people who wish to withdraw cash from banks can still do so.

Types of CBDC:

- CBDC can be classified into two broad types viz. general purpose or retail (CBDC-R) and wholesale (CBDC-W).
  - ➤ **Retail CBDC** would be potentially available for use by all viz. private sector, non-financial consumers, and businesses. Retail CBDC is an electronic version of cash primarily meant for retail transactions.
  - ➤ **Wholesale CBDC** is designed for restricted access to select financial institutions. Wholesale CBDC is intended for the settlement of interbank transfers and related wholesale transactions.

Advantages:

- The use of e₹-W is expected to make the **interbank market more efficient.**
- Settlement in central bank money would **reduce transaction costs** by pre-emptying the need for **settlement guarantee infrastructure** or for **collateral to mitigate settlement** risk.

DBT AND FINANCIAL INCLUSION

CONTEXT:

The International Monetary Fund (IMF) has lauded India's Direct Benefit Transfer (DBT) Scheme as a "logistical marvel" that has benefitted millions of people.

Direct benefit Transfer (DBT):

- The DBT scheme that began as a pilot in 2013-14, when the Government of India, introduced the Direct Benefit Transfer or DBT scheme to streamline the transfer of government-provided subsidies in India.
- DBT Mission was created in the Planning Commission to act as the nodal point for the implementation of the DBT programme.
- The scheme was later expanded under PM Narendra Modi.
- The Government introduced the scheme with the objective of improving the delivery system and redesigning the existing procedures in welfare schemes.
- DBT aims to transfer subsidy benefits from various Indian welfare schemes directly into the beneficiary's bank accounts.
- To avail of the DBT benefits, beneficiaries must ensure they link their bank account to their Aadhaar number.
- Since the inception of the DBT scheme, the Government has launched 450 projects and reached over 900 million people.

Objectives of DBT:

- Curbing pilferage and duplication
- Accurate targeting of the beneficiary
- Reduced delay in payments
- Electronic transfer of benefits, minimizing levels involved in benefit flow.

Reasons behind the efficient DBT:

- **An enabling policy regime**: Proactive government initiatives and supportive regulatory administration allowed the private and public sector entities in the financial sector to overcome longstanding challenges of exclusion of a large part of the population.
- **Creation of a dedicated ecosystem**: These are essential elements of the pioneering ecosystem created by the government for the aggressive rollout of the ambitious DBT programme, achieving impressive scale in a short span of six years.
- **Mission-mode approach for financial inclusion**: The government endeavored to open bank accounts for all

households, expanded Aadhaar to all, and scaled up the coverage of banking and telecom services.

- ◉ **Public Finance Management System through Aadhar:** It evolved the Public Finance Management System and created the Aadhaar Payment Bridge to enable instant money transfers from the government to people's bank accounts.

- ◉ **Participation of various stakeholders for extensive UPI**: The Aadhaar-enabled Payment System and Unified Payment Interface further expanded interoperability and private-sector participation.

- ◉ **Directly receiving of subsidies:** This approach not only allowed all rural and urban households to be uniquely linked under varied government schemes for receiving subsidies directly into their bank accounts but also transferred money with ease.

Components of DBT:

- ◉ Primary components in the implementation of DBT schemes include a Beneficiary Account Validation System, a robust payment and reconciliation platform integrated with RBI, NPCI, Public & Private Sector Banks, Regional Rural Banks, and Cooperative Banks (core banking solutions of banks, settlement systems of RBI, Aadhaar Payment Bridge of NPCI), etc.

- ◉ In FY2022-23 so far, 303 crore DBT transactions amounting to Rs 298,101 crore have taken place across 318 schemes.

Funds transferred via DBBT in FY 23
Government data for FY22-23

Scheme	Total Direct Benefit Transfer (In Rs crore)
PAHAL	3,897.19
MGNREGS	24,736.5
NSAP	1,548.76
SCHOLARSHIP SCHEME	1,692.21
PMAYG	28,94.777
PDF	100,406.0
FERTILISER	72,961.97
OTHERS	63,911.16
Grand Total	298.101.62

Advantages of Direct Benefit Transfer

- ◉ DBT transfers help **expedite the flow of funds** and information securely while reducing the possibility of fraud.

- ◉ It **eliminates the need for intermediaries**, including government officers, in transferring the subsidy amount directly into the beneficiary accounts.

- ◉ It brings about transparency and **reduces instances of pilferage** from the distribution of Central Government-sponsored funds.

- ◉ DBT ensures **accurate targeting of beneficiaries**.

- ◉ Beneficiaries can link only one bank by seeding the fund deposits to their Aadhaar details to **avoid duplication of subsidies**.

- ◉ It enables the Government to **simultaneously reach out to both citizens and beneficiaries of the scheme.**

- ◉ DBT will **bring efficiency, effectiveness, transparency, and accountability** to the Government system and infuse confidence among citizens in governance.

Accomplishments:

- **Enabling Instant Money Transfer:** It evolved the Public Finance Management System and created the Aadhaar Payment Bridge to enable instant money transfers from the government to people's bank accounts.

- **Integration of Households into govt. schemes:** The Aadhaar-enabled Payment System and Unified Payment Interface further expanded interoperability and private-sector participation.

- India has come a long way primarily on account of the **aggressive rollout** of the DBT programme.
  - ➤ This has been made possible by the inclusive financial sector system where the most marginalized sections of society have been uniquely linked to the formal financial network.

- It evolved the **Public Finance Management System** and created the **Aadhaar Payment Bridge** to enable instant money transfers from the government to people's bank accounts.
  - ➤ The **Aadhaar-enabled Payment System** and **Unified Payment Interface** further expanded interoperability and private-sector participation.

- The DBT programme has reached commanding heights toward achieving the government's vision of **"sabka vikas"**.

- **Rural Areas:** In rural Bharat, DBT has allowed the government to provide financial assistance effectively and transparently to farmers with lower transaction costs – be it for fertilizers or any of the other schemes including the **PM Kisan Samman Nidhi, PM Fasal Bima Yojana, and PM Krishi Sinchayi Yojana**- thus becoming the backbone for supporting the growth of the agricultural economy.
  - o The benefits received under the Mahatma Gandhi National Rural Employment Guarantee Act and Public Distribution System drive the rural demand-supply chain.

- **Urban India:** In urban India, the **PM Awas Yojana and LPG Pahal scheme** successfully use DBT to transfer funds to eligible beneficiaries.
  - ➤ Various scholarship schemes and the National Social Assistance Programme use the DBT architecture to provide social security.
  - ➤ DBT under rehabilitation programmes such as the Self Employment Scheme for Rehabilitation of Manual Scavengers opens new frontiers that enable social mobility of all sections of society.

- **Pandemic**: The efficacy and robustness of the DBT network were witnessed during the pandemic. It aided the government to reach the last mile and support the most deprived in bearing the brunt of the lockdown.
  - ➤ From free rations to nearly 80 crore people under the Pradhan Mantri Garib Kalyan Yojana, fund transfers to all women Jan Dhan account holders and support to small vendors under PM-SVANidhi, DBT helped the vulnerable to withstand the shock of the pandemic.

- **Global Recognition**: Recently, the President of the World Bank Group, had also urged other nations to adopt India's move of targeted cash transfer instead of broad subsidies noting that "India managed to provide food or cash support to a remarkable 85 percent of rural households and 69 per cent of urban households.
  - ➤ An ambitious vision, holistic approach, and a multi-pronged strategy enabled the DBT ecosystem to deliver impact at a phenomenal scale — an accomplishment that has been acknowledged by the IMF and World Bank.

Challenges of Direct Benefit Transfers in India:

- Poor implementation may make beneficiaries worse off.
- The value of transfers may be inadequate (especially if they are not indexed to market prices and inflation).
- Access to banks/ATMs and markets may vary across locations.
- Recipients may also use cash for non-food items, which might be their preference but would reduce the impact on policy goals for food security and nutrition.
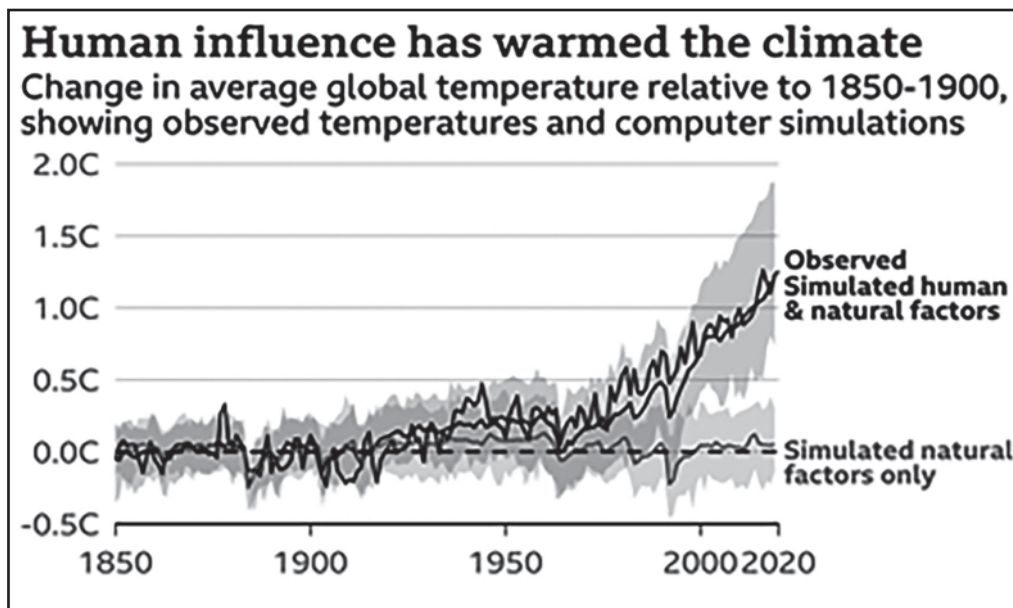
THE UN CLIMATE CHANGE REPORT 2022 RELEASED

CONTEXT

A new report from UN Climate Change shows countries are bending the curve of global greenhouse gas emissions downward but underlines that these efforts remain insufficient to limit global temperature rise to 1.5 degrees Celsius by the end of the century.

Key highlights of the Report:

◉ According to the report, the combined climate pledges of **193 Parties** under the **Paris Agreement** could put the world on track for around **5 degrees Celsius** of warming by the end of the century.

◉ It also shows current commitments will increase emissions by **6% by 2030**, compared to 2010 levels. This is an improvement over last year's assessment, which found countries were on a path to increase emissions by **13.7%** by 2030.

◉ The analysis shows that the emissions will **no longer** increase after 2030.

◉ **Targets defined**: The IPCC released earlier this year uses **2019 as a baseline**, indicating that GHG emissions need to be cut by **43% by 2030**. This is critical to meeting the Paris Agreement goal of limiting temperature rise **to 1.5 degrees Celsius** by the end of this century and avoiding the worst impacts of climate change, including more frequent and severe droughts, heat waves, and rainfall.

Human influence has warmed the climate
Change in average global temperature relative to 1850-1900, showing observed temperatures and computer simulations

◉ **Focused on Parties' contributions**: UN Climate Change analyzed the climate action plans – known as **nationally determined contributions (NDCs)** – of 193 Parties to the Paris Agreement, including 24 updated or new NDCs submitted after the UN Climate Change Conference in **Glasgow (COP 26).**

◉ **Contributing partners**: Current long-term strategies (representing 62 Parties to the Paris Agreement) account for 83% of the world's GDP, 47% of the global population in 2019, and around 69% of total energy consumption in 2019. This is a strong signal that the world is starting to aim for **net-zero emissions**.

◉ The report notes, however, that many net-zero targets remain uncertain and postpone the future critical action that needs to take place now. Ambitious climate action before 2030 is urgently needed to achieve the long-term goals of the Paris Agreement.

Need for stringent measures against Climate change:

◉ Declaration of the year 2019 as the **second warmest year** on record and the end of the warmest decade (2010-2019) ever recorded.

- **Carbon dioxide (CO2)** levels and other greenhouse gases in the atmosphere rose to new records in 2019.
- **Climate change** is affecting every country on every continent. It is disrupting national economies and affecting lives.
- Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme.
- Saving lives and livelihoods requires urgent action to address both the pandemic and the climate emergency.
- The Paris Agreement, adopted in 2015, aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels.
- This agreement also aims to strengthen the ability of countries to deal with the impacts of climate change, through appropriate financial flows, a new technology framework, and an enhanced capacity-building framework.

THE ETHICS LINKED TO OCEAN-BASED CARBON DIOXIDE REMOVAL

CONTEXT

With an aim to trap Carbon dioxide to control Global warming and Climate change effects, the Oceans are being used deliberately to lock it. However, it arises several social and ethical questions regarding this technique against the lives related to the Ocean ecosystem.

◉ ABOUT

How Carbon can be trapped using Oceans?

- Ocean carbon dioxide removal is any action designed to use the ocean to remove even more carbon dioxide from the atmosphere and store it.
- It spans a wide range of techniques – from increasing the amount and vitality of carbon dioxide-absorbing mangrove forests to using ocean fertilization to stimulate the growth of phytoplankton that absorb carbon dioxide to building pipelines that pump liquid carbon dioxide into formations under the seabed, where it can eventually solidify as carbonate rock.
- There are other forms of carbon dioxide removal i.e. planting trees. But they require large amounts of land that are needed for other essential uses, such as agriculture.
- Hence Oceans provide a large space and has the capacity to bear sustainably more carbon dioxide.

> **Do you Know?**
> The ocean covers about **70%** of the planet, and it naturally takes up carbon dioxide. In fact, about a quarter of human-produced carbon dioxide ends up in the ocean.

What are the ethical Questionings related to the process?

Ocean carbon dioxide removal also raises a variety of ethical questions that do not have straightforward answers.

- Does it force people to consider the relationship between humans and nonhumans?
- Are humans obliged to intervene to reduce the impact on the climate, or ought we avoid ocean interventions?
- Do people have the right to purposefully intervene in the ocean or not?
- Are there specific obligations that humans ought to recognize when considering such options?
- Who is responsible to make decisions about ocean carbon dioxide removal and the consequences?
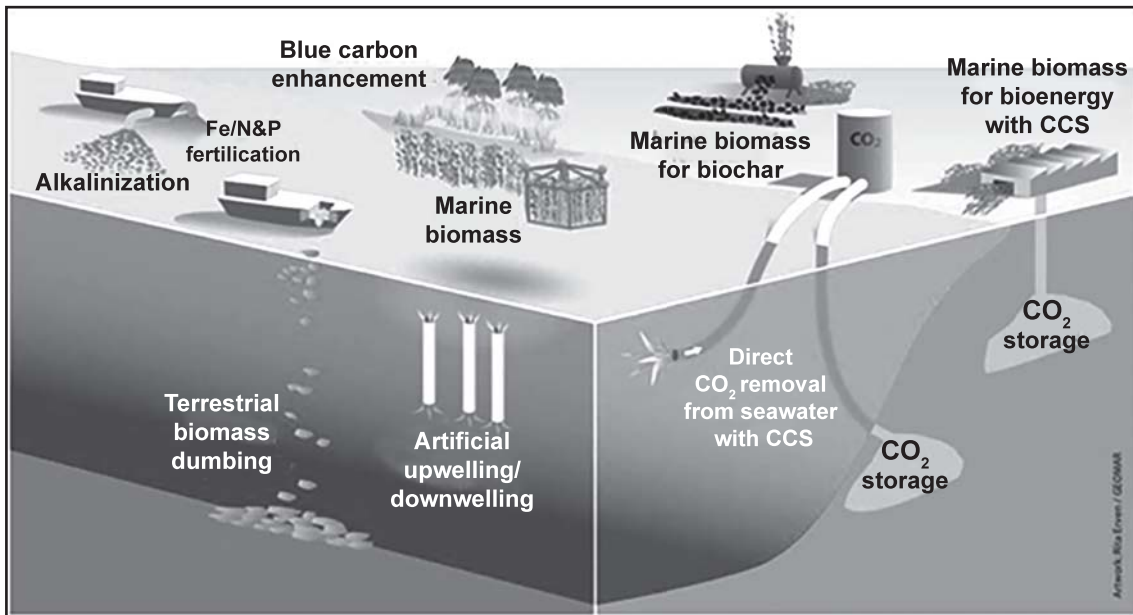
Stakeholders involved:	Ethical values to keep in mind
• Ocean as a living Entity • Microorganisms in the oceans • Fishes and Marine organisms • Global Government • Humans/ Society	• Responsibility and Humanity • Sustainability • Morality for Living entities • Environmental justice • Collectivity

What are the ethical factors associated between Humans and the Environment?

๏ It must be considered that the issue of responsible personal conduct with respect to natural **landscapes, resources, species, and non-human organisms** is foremost important.

๏ Conduct by persons is the direct concern of moral philosophy. Moral responsibility normally **implies knowledge, capacity, choice, and value significance.**

๏ It is also concerned with the do's and don'ts of human beings to the environment.

๏ It deals with the ecological rights of all creatures present today as we are fruitful as those who will come next to live on the Earth.

๏ Hence, Ethical standards are necessary for the long–term conservation and maintenance of nature and its resource

****

Section: B
(SPECIALS)

CURRENT AFFAIRS

INDIA'S AIRCRAFT INDUSTRY

A manufacturing facility for C-295 transport aircraft will be set up at Vadodara in Gujarat by Tata Advanced Systems Ltd. (TASL) in partnership with European aviation major Airbus.

⊙ ABOUT C-295 AIRCRAFT

- The C-295 is an aircraft of 5-10 tonne capacity used for tactical transport of up to 71 passengers or 50 paratroopers.

- It will be used for logistic operations to locations that are not accessible by current heavier aircraft.

- It can operate from short or unprepared airstrips.

- The C-295 has very good fuel efficiency.

- India has become the 35th C-295 operator worldwide.

- It will replace the legacy Avro aircraft in the Indian Air Force (IAF) procured in the 1960s.

- Of the 56 aircraft contracted, 16 will come in fly-away condition from Spain between September 2023 and August 2025.

- The first made-in-India aircraft is expected from September 2026 and completed by 2031 at the rate of eight aircraft per year.

Impact of the C-295 manufacturing facility on the Aircraft Industry

- **Start of an entire ecosystem:** The foundation of the aircraft plant is the start of an entire ecosystem for the aviation sector. This facility will act as the regional maintenance, repair, and overhaul (MRO) hub for all C-295.

- **Entering into global aircraft manufacturing domain:** This is the first time a private sector company would be manufacturing a full aircraft in the country. This is a huge step forward for India in the global aircraft manufacturing domain.

- **Employment opportunities:** The C-295 project is expected to create more than 15,000 skilled direct and indirect jobs across the aerospace ecosystem.

⊙ AIRCRAFT INDUSTRY IN INDIA

Defense aircraft Industry

- India has the **third largest armed forces in the world** and plans to spend billions of dollars on defense articles over the next several years.

- India's resolve to drastically reduce its reliance on imports is referred to as **"Aatmanirbharta" (self-reliance).**

Civilian Aircraft Industry

- India has a much bigger footprint in civil aviation manufacturing than defense, in addition to being a market itself.

- India is currently the **7th largest civil aviation market** in the world.

Policy Support to the Sector

- Foreign investment of up to 49% is allowed under the automatic route.

- Under Union Budget 2021-22, the government lowered the custom duty from 2.5% to 0% on components or parts, including engines, for the manufacturing of aircraft by public sector units of the Ministry of Defence.

- The Ministry of Civil Aviation (MoCA) launched Regional Connectivity Scheme (RCS) – **Ude Desh ka Aam Nagrik (UDAN)** in 2016.

- **"Digi Yatra"**, intends to give a seamless, hassle-free, and paperless journey experience to every domestic air traveller in India. With Digi Yatra, passengers will no longer need to show their tickets/ boarding passes and their physical Identity cards at many of the checkpoints at the airport.

- In 2016, the Ministry of Civil Aviation released the **National Civil Aviation Policy (NCAP).**

- **Two Defense Industrial Corridors** in the Indian states of Uttar Pradesh and Tamil Nadu were announced in the 2018-2019 budget, which will attract manufacturers and suppliers.

- India's total 2022 defense budget is $70 billion. Sixty-eight percent of the budgeted defense capital expenditure is earmarked for the procurement of domestically manufactured weapons and military platforms.

- India is formulating the 10-year Integrated Capability Development Plan, which would be the basis for future defense procurement.

- Recently Made-in-India light combat helicopters Prachand' has been inducted into Indian Air Force.

Growth Drivers

- **NABH (NextGen Airports for Bharat):** Nirman is a government initiative to expand airport capacity

---

more than five times to handle bn trips a year, in the next 10-15 years.

- ◉ **GIFT City Advantage for Aviation Sector:** Aircraft Leasing and Tax Incentives available in GIFT city

- ◉ **Regional connectivity Scheme:** Boost air connectivity to smaller cities & northeast states.

◉ WAY FORWARD

- ◉ The private defence sector is still nascent and a conducive and stable regulatory and policy environment will be an important enabler. A realistic roadmap and enabling policy framework can be scripted to make the country a hub for aircraft manufacturing.

- ◉ Defence procurement is tightly regulated, timelines are often long, and transparency is limited. Substantial payment delays are common. India should work towards mitigating these issues and facilitating deals, particularly in the case of government procurements.

****

Section: C
(PRELIMS)

CURRENT AFFAIRS

MANGARH MASSACRE: A TALE OF TRIBAL VALOUR LESS TOLD

⊙ **CONTEXT:** The PM has said that the Mangarg massacre of tribals to crush the Mangarh uprising was not given its due place, but now is the time.

Key points highlighted by PM

- PM has ensured the **Bhil Tribal of Mangarh** on **Gujrat-Rajasthan Border** that the sacrifices of tribals during the freedom struggle will get due importance.

- PM hailed the role of **Govind Guru** in the movement launched in the **Banswara region** by tribals in 1913 against colonial rule.

About Mangarh massacre

- The Mangarh massacre (**17 November 1913**) took place six years before the infamous **Jallianwala Bagh massacre** in 1919.

- **Also known as:** Adivasi Jallianwala

- The soldiers of the British Indian Army fired indiscriminately on Bhil protesters who were demanding the **abolition of bonded labour.**

- The Bhil tribe's movement was challenging the colonial government as well as the wrongs of the princely states in which they were residing.

- Approximately **1,500 Bhil tribals** and forest dwellers died in the incident which came to be known as the Mangarh massacre.

- The movement was initiated by **Guru Govindgiri** who raised a front against local rulers who were forcing the Bhils into unpaid labour, to pay heavy taxes and high rates of land revenue.

Events at Mangarh massacre:

- Govindgiri's representatives submitted a list of grievances and demands against the Rajput States after which the British called upon the Bhils to leave Mangarh Hill before November 15, 1913.

- The princely kingdoms of nearby Dungarpur, Banswara, and Sunth pressured the colonial government who then sent in the Mewar Bhil Corps to attack the Mangarh Hill.

- According to Bhil's oral accounts and later records, more than 1,500 men, women, and children were killed and many were wounded in the indiscriminate firing.

- In 1952, an annual fair was instituted in Mangarh in memory of Guru Govindgiri and his disciples.

> **Bhil tribe**
> - The word Bhil is derived from "Veel", which means "bow" in the Dravidian language.
> - The Bhil tribe is called "Dhanush Purush of India" because they are highly adept at learning Dhanush.
> - Bhils are a group of tribal Indians scattered throughout India from Gujarat in the west to Tripura in the Far East.
> - As of 2013, they were the largest tribal group in India with the majority living in the states of Gujarat, Madhya Pradesh, Rajasthan, and Chhattisgarh.

- The Bhilala subdivision is known for its Pithora painting.
- Ghoomar is a traditional folk dance of the Bhil tribe. Ghoomar is the symbol of femininity. The young women take art in this dance and declare that they are stepping into women's shoes.

COINAGE WITH IMAGES OF GODS AND GODDESSES DATES BACK TO KUSHANS

⊙ **CONTEXT:**   **Recently, the coins used in the Kushana Empire have been found with images consisting of God and Goddesses and are considered the first to use the image of 'Goddess Lakshmi' on their coins.**

⊙ **BACKGROUND**

- India has a long tradition of coinage with images of **gods and goddesses.**
- The Coinage of India began anywhere between the early **1st millennium BCE to the 6th century BCE** and consisted mainly of **copper and silver coins** in its initial stage.
- The coins of this period were '**Karshapanas' or 'Pana'.**
- The kingdoms that minted their own coins were; **Gandhara, Kuntala, Kuru, Magadha, Panchala, Shakya, Surasena, Saurashtra, and Vidarbha, etc.**
- The **Vijayanagara kings** also used coinage with Hindu idols.
- Harihara –II (1377-1404) introduced coins that had **Brahma-Saraswati**, Vishnu-Lakshmi, and **Shiva-Parvati.**
- The tradition of minting coins to win the confidence of local people continued when the **French and Dutch** minted coins showing **Vishnu** between 1715 and 1774 and **Goddess Kali** till the late 17th century.

> *Do you know?*
> The tradition of '**Indian coinage'** in the 2nd millennium evolved with **Indo-Islamic** rule in India and the British Raj in the **19th century**.

⊙ **ABOUT**

The Coins discovered:

- According to historians, the Kushans, who hailed from the **Central Asian region** and ruled till the 3rd century AD, were the first to use the **image of Goddess Lakshmi** on their coins, along with '**Ardochsho',** the **Iranic Goddess** of wealth.

- The Kushans also depicted **Oesho (Shiva), moon deity Miro** and **Buddha in their coinage**.

- **Evidence found**: A specimen is now in the **British Museum repository** which mentions that coins were fundamental to their acceptance and success as currency, and **Mohammed bin Sam** issued these coins which maintained a visual tradition begun in India.

The Kushana Empire:

- **Kushanas** were descended from the **Yuezhi**, a people that ruled over most of the northern Indian subcontinent, Afghanistan, and parts of Central Asia during the first three centuries of the Common Era.

- The Yuezhi conquered Bactria in the **2nd century BCE** and divided the country into five chiefdoms, one of which was that of the Kushans (Guishuang).

- Under Kaniska I (flourished 1st century CE) and his successors, the Kushan kingdom reached its height.

- It was acknowledged as one of the four great **Eurasian powers** of its time (the others being China, Rome, and Parthia).

- The Kushans were instrumental in spreading Buddhism in Central Asia and China and in developing **Mahayana Buddhism** and the **Gandhara and Mathura schools of art.**

ERUPTION OF THE WORLD'S LARGEST ACTIVE VOLCANO 'MAUNA LOA

⊙ **CONTEXT:**   Scientists and researchers have alarmed the residents of Hawaii Island as the world's largest active volcano 'Mauna Loa' is at risk of eruption.

The Mauna Loa volcano:

- It is the **World's largest active Volcano** in the Island of Hawaii in the U.S. state of Hawaii in the Pacific Ocean.

- The volcano makes up **51%** of the Hawaii Island landmass.

- It is an **active shield volcano** with relatively gentle slopes, with a volume estimated at 18,000 cubic miles (75,000 km^3).

- Lava eruptions from Mauna Loa are **silica-poor and very fluid**, and they tend to be non-explosive.
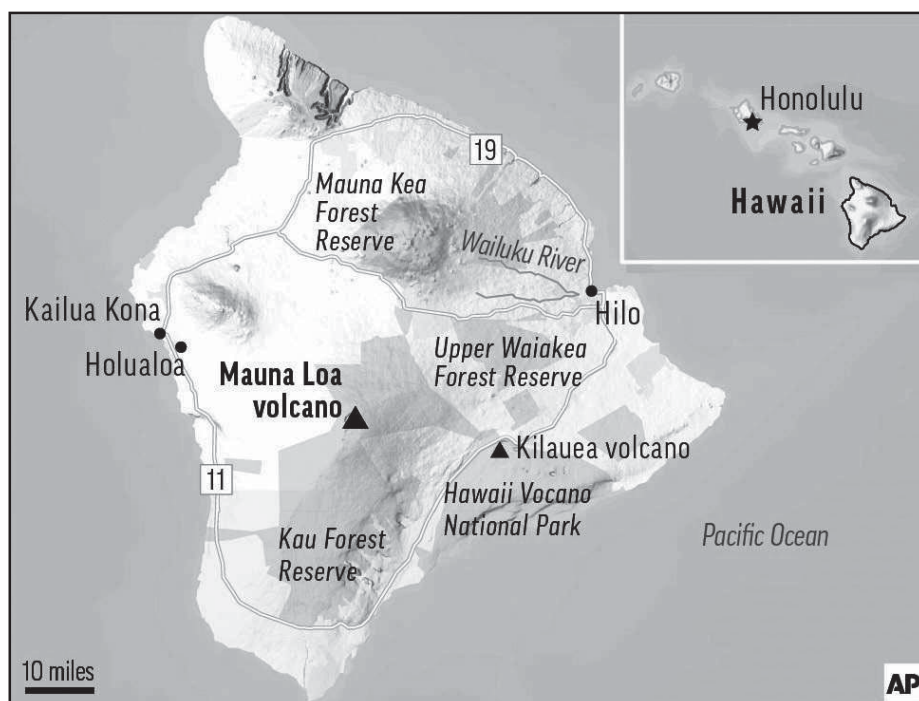
- It last erupted in **1984** which led to destruction on the Island.

What is Shield Volcano?

- A shield volcano is a broad volcano with sloping sides that is formed mainly out of runny lava that flows out of its central summit vent.
- **Examples of Shield Volcanoes**: are Mauna Loa on the Island of Hawaii, Wolf volcano on the Galapagos Islands, and Nyamuragira in the Democratic Republic of Congo.

Characteristics:

➤ Basaltic magma, is high in temperature, very low on silica, and with low gas content.

➤ Basic lava, which is non-acidic and very runny.

➤ Gentle sides as the lava flow for long distances before it solidifies.

➤ No layers, as the volcano just consists of lava.

Some Active volcanoes on earth:

Major Active Volcanoes Around The World
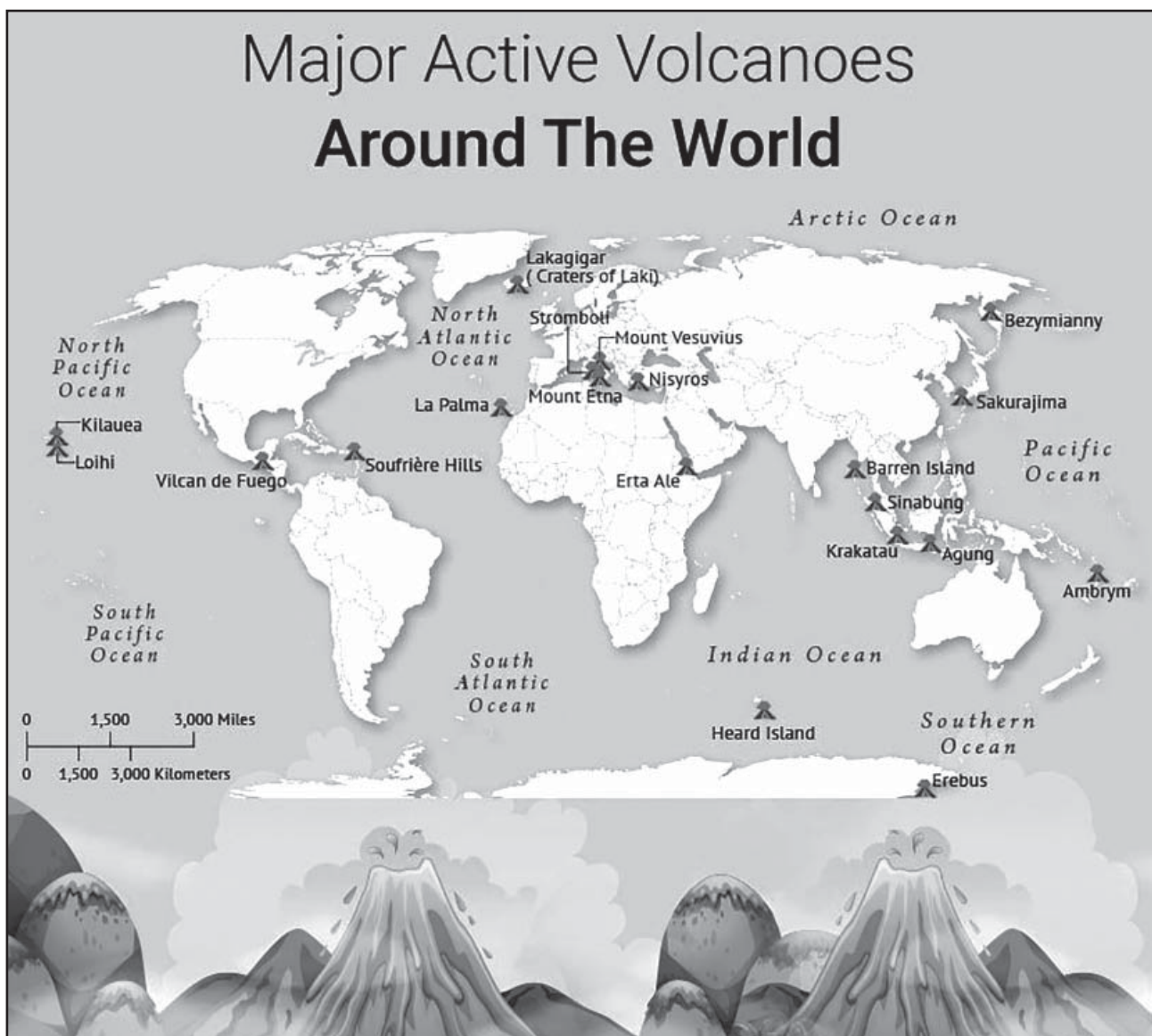
UN COUNTER-TERRORISM MEET

⊙ **CONTEXT:** A special meeting of the UN Counter-Terrorism Committee on 'Countering the use of new and emerging technologies for terrorist purposes, was held recently. The meeting was attended by the representatives of all 15 United Nations Security Council (UNSC) members.

- Counter-Terrorism Committee (CTC) unanimously adopted the Delhi Declaration on countering the use of new and emerging technologies for terrorist purposes.

- India also gave 5 point suggestion to the committee.

About UN Counter-Terrorism Committee

- A dedicated Counter-Terrorism committee of the UNSC was established in 2001, in the aftermath of the 11 September attack against the United States.

- **Resolution:** The committee was formed after the UNSC resolution of 1373 (2001).

- **Members:** The Committee is composed of 15 Member States - Albania (2023), Brazil (2023), China, France, Gabon (2023), Ghana (2023), India (2022), Ireland (2022), Kenya (2022), Mexico (2022), Norway (2022), Russian Federation, United Arab Emirates (2023), United Kingdom and United States.

- **Thematic Areas:** The Counter-Terrorism Committee has a global mandate and focuses on specific thematic areas including Counter-terrorism strategies, countering the financing of terrorism, Border security and arms trafficking, Law enforcement, Human Rights, etc.

Delhi Declaration

- **Aim:** It aims to cover the main concerns surrounding the abuse of drones, social media platforms, and crowd-funding, and create guidelines that will help to tackle the growing issue.

- **Non-binding Document:** Delhi Declaration on countering the use of new and emerging technologies for terrorist purposes is a non-binding document.

- **Thematic coordination:** Members of the Committee will draft recommendations on the three themes- namely

  ⊚ Countering terrorist exploitation of Information and Communication Technologies (ICTs)

  ⊚ Countering terrorism financing

  ⊚ Threats poses by terrorist use of unmanned aircraft systems (UAS)

- **Good practices:** A compilation of good practices on the opportunities offered by the same set of technologies to tackle threats will also be issued.

5-point suggestion

India made a 5-point suggestion for the UN Counter-terrorism Committee's consideration:

- **Curb Terror Financing:** Effective and sustained efforts at countering terror financing is at the heart of the issue of countering terrorism. Normative efforts at the UN need to be coordinated through collaboration with other fora like the Financial Action Task Force (FATF) and the Egmont Group.

- **Transparency:** We need to ensure the effective and transparent functioning of the Security Council sanctions regime and make sure that they are not rendered ineffective for political reasons.

- **International Cooperation:** International cooperation and concerted action against terrorists and their sponsors, including through the dismantlement of terrorist safe havens, sanctuaries, training grounds, and financial and ideological as well as political support structures, are critical imperatives to defeat this scourge.

- **Terror-crime nexus:** Terrorism's nexus with transnational organized crime, illicit drugs, and arms trafficking is now well established."

- **Technology misuse:** Over the years, terrorist groups have diversified their funding portfolio. They have also begun to exploit the anonymity afforded by new and emerging technologies such as virtual currencies for fundraising and finances.

PAHARI ETHNIC COMMUNITY ADDED TO SCHEDULED TRIBES LIST OF JAMMU AND KASHMIR

◉ **CONTEXT:** **National Commission for Scheduled Tribes (NCST) has cleared the way for the inclusion of the 'Pahari ethnic group' in the Scheduled Tribes list of the UT of Jammu and Kashmir.**

◉ **BACKGROUND:**

- The suggestion for inclusion had come from the commission set up for socially and educationally backward classes in the Union Territory, headed by Justice (Retd.) G.D. Sharma.

- Later the Union Ministry of Tribal Affairs sought opinions and views of the ST commission on the proposal to include four communities in the ST list of Jammu and Kashmir.

- In response, the ST commission has shown green-lit to the proposal for inclusion of the '*Pahari ethnic group', Paddari tribe", "Koli",* and *"Gadda Brahman"* communities in the ST list of J&K.

- Currently, Jammu and Kashmir have 12 communities that have been notified as STs.

Resentment of Gujjars and Bakarwals:

- Pir Panjal valley is also home to Gujjars and Bakarwals, and the possibility of inclusion of Paharis in the ST list has been looked at as diluting their share of benefits.

Scheduled Tribes in India

- The term **'Scheduled Tribes'** first appeared in the Constitution of India. **Article 366 (25)** defined scheduled tribes as "such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under **Article 342** to be Scheduled Tribes for the purposes of this constitution".

- **Article 342,** which is reproduced below, prescribes the procedure to be followed in the matter of specification of scheduled tribes.

- The tribal population of the country, **as per the 2011 census, is 10.43 crore, constituting 8.6% of the total population.**

  ◉ 89.97% of them live in rural areas and 10.03% in urban areas.

  ◉ The decadal population growth of the tribal from Census 2001 to 2011 has been 23.66% against the 17.69% of the entire population.

  ◉ The sex ratio for the overall population is 940 females per 1000 males and that of Scheduled Tribes is 990 females per thousand males.

What is the Process of Inclusion in the ST List?

- The process to include tribes in the ST list begins with a **recommendation from the respective State governments**, which is then sent to the Tribal Affairs Ministry, which reviews and sends them to the **Registrar General of India** for approval.

- This is followed by the **National Commission for Scheduled Tribes'** approval before the list is sent to the Cabinet for a final decision.

What will be the Benefits of Inclusion in the ST List?

- The move will enable members of the communities newly listed in the revised list of Scheduled Tribes to derive benefits meant for STs under the existing schemes of the government.

- Some of the major benefits include post-matric scholarship, overseas scholarship, and national fellowship, besides education, concessional loans from the National Scheduled Tribes Finance and Development Corporation, and hostels for students.

- In addition, they will also be entitled to the benefits of reservation in services and admission to educational institutions as per government policy.

National Commission for STs

- The **National Commission for Scheduled Tribes (STs)** is also a constitutional body in the sense that it is directly **established by Article 338-A** of the Constitution.

- The Commission was established under Article 338 of the Constitution with the objective of monitoring all the safeguards provided for the SCs and STs under the Constitution or other laws.

- It consists of a chairperson, a vice-chairperson, and three other members.
  - ➤ They are **appointed by the President** by warrant.
  - ➤ Their **conditions of service and tenure of office are also determined by the President**.
  - ➤ The **Commission presents an annual report to the President**.

Related Committees:

- Xaxa Committee (2013)
- Bhuria Commission (2002-2004)
- Lokur Committee (1965)

TULU, AND KODAVA SPEAKERS DEMAND PRIORITY FOR THEIR LANGUAGES

⊙ **CONTEXT:** Speakers of Tulu and Kodava have opposed the draft of the Kannada Language Comprehensive Development Bill, 2022, which aims to ensure the "extensive use and propagation" of the Kannada language.

Kannada Language Comprehensive Development Bill, 2022

- **S.R. Bannurmath-headed committee** prepared the draft of the Kannada Language Comprehensive Development Bill, 2022.

- The Bill only gives importance to Kannada and to the use of English for administrative purposes like communication with the Union government or in courts etc.

- There is no mention of Kodava and Tulu in the bill.

- The Bill provides for penalties for violations of rules, with fines prescribed for various offenses.

Tulu

- Tulu is a Dravidian language spoken mainly in two coastal districts Dakshina Kannada and Udupi of Karnataka and Kasaragod district of Kerala.

- As per the 2011 Census report, there are 18,46,427 Tulu-speaking people in India.

- People have been demanding it to give official language status and include it in the eighth schedule.

Kodava

- The Kodava is an endangered Dravidian language and it is spoken in the Kodagu district in Southern Karnataka, India.
- The 2011 Census of India, for a total of 113,857 persons who identified one of these languages as their mother tongue.

Protection of Local Languages under the constitution and other provisions

- **Articles 347:** President may direct that such language shall also be officially recognized throughout that State or any part if he is satisfied that the language is spoken by a substantial proportion of the population of a State.

- **Articles 350:** Every person shall be entitled to submit a representation for the redress of any grievance to any officer or authority of the Union or a State in any of the languages used in the Union or in the State.

- **Articles 350A:** State to provide adequate facilities for instruction in the mother tongue at the primary stage of education to children belonging to linguistic minority groups.

- **Articles 350B: T**here shall be a Special Officer for linguistic minorities to be appointed by the President. It shall be the duty of the Special Officer to investigate all matters relating to the safeguards provided for linguistic minorities.

WORLD CITIES DAY

⊙ **CONTEXT:** On World Cities Days, the experts have highlighted that India is heading towards catastrophe in the next three decades unless tough policy decisions are taken.

About World Cities Day:

- The 31st of October is celebrated as World Cities Day. The first ever world cities day was observed on 31st October 2014.

- The global observance day was co-hosted by **UN-Habitat** and the **Government of the Arab Republic of Egypt.**

- It is an attempt to address the challenges of urbanization, and contribute to sustainable urban development.

The Theme Game

- The overall World Cities Day theme is **Better City, Better Life.**

- This year's theme of World Cities Day highlights how: **'Act Local to Go Global. '**

- The theme underlines the importance of Agenda 2030 especially SDG11 and its focus on **"ensuring access for all to adequate, safe, and affordable housing and basic services"**.

World Cities Day October 31, 2022
BETTER CITY, BETTER LIFE
Act local to go global
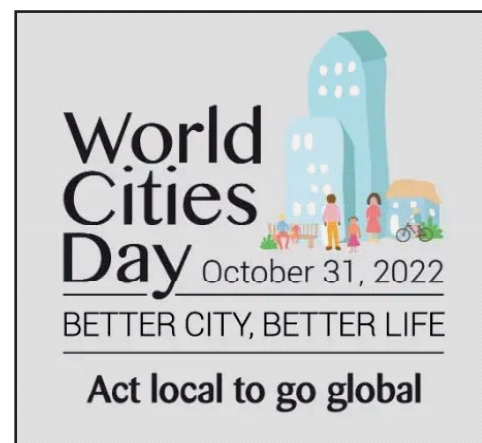
Key Highlights:

- Indian cities are lacking in many aspects, like construction, master plans, bylaws, drainage, water security, air pollution, and transit.

- According to the United Nations, seven of every 10 people in the world will live in cities by 2050.

- At present, around 55% of the world's population is living in towns and cities, with the level of urbanization projected to become around 70% by 2050.

- Much of the growth in urban populations will take place in Asia and Africa, especially China, India, and Nigeria, where the fertility rates are high.

- Haphazard development due to Urbanization is affecting many, most of them being extremely poor and from marginalized sections.

Status of India's urban planning:

- Master Plans of only 1,500-1,600 of 7,000 census towns had been prepared.

- Master Plans, land use controls, and by-laws are the instruments to mitigate climate inequality.

- Legalized Master Plans may just be around 500 towns.

- The number of urban planners per capita is also short.

- There is no legal sanctity or power accorded to any institution to control or channelize urban development.

> **Schemes/Programmes Related to Urban Development:**
> - Smart Cities
> - AMRUT Mission
> - Swachh Bharat Mission-Urban
> - HRIDAY
> - Pradhan Mantri Awas Yojana-Urban

India's Global Commitments regarding Urban Development:

- The **SDGs Goal 11** promotes urban planning as one of the recommended methods for achieving sustainable development.

- The **UN-Habitat's New Urban Agenda** was adopted at Habitat III in 2016.

- The **UN-Habitat (2020)** suggests that the spatial conditions of a city can enhance its power to generate social, economic, and environmental value and well-being.

- **Paris Agreement**: **India's National Determined Contributions (NDCs**) include the goals to reduce the emission intensity of the country's GDP by 33 to 35% by 2030 from the 2005 level.

INDIA CUTS WINDFALL TAX ON CRUDE OIL

⊙ **CONTEXT:** India has slashed the windfall tax on the export of crude oil from Rs 11,000 to Rs 9,500 per tonne and has hiked it for Aviation Turbine Fuel (ATF) and diesel.

About Windfall Tax:

- Windfall taxes are **designed to tax the profits a company derives** from an external, sometimes unprecedented event— for instance, the energy price rise as a result of the **Russia-Ukraine conflict.**

- These are profits that cannot be attributed to something the firm actively did, like an investment strategy or an expansion of business.

- A windfall is defined as an "unearned, unanticipated gain in income through no additional effort or expense".

- Governments typically levy a one-off tax retrospectively over and above the normal rates of tax on such profits, called **windfall tax.**

- One area where such taxes have routinely been discussed is oil markets, where price fluctuation leads to volatile or erratic profits for the industry.

Impacts of Windfall tax:

- **On External Trade**: For India, which imports 85% of its requirements, costlier oil implies a higher import bill and inflation, besides straining the current account, the broadest measure of India's goods and services transactions with the rest of the world.

- **Less Investment**: Investments in the Oil sector and related industry hit hard after the spur in Windfall tax.

Issues with Imposing Windfall Tax:

- **Uncertainty in the Market:** Since windfall taxes are imposed retrospectively and are often influenced by unexpected events, they can brew uncertainty in the market about future taxes.

- **Populists in Nature**: It is believed that such taxes are populist and politically opportune in the short term.

- **Reduces Future Investment:** Introducing a temporary windfall profit tax reduces future investment because prospective investors will internalize the likelihood of potential taxes when making investment decisions.

- **Not Defined Precisely:** It is not defined what exactly constitutes true windfall profits and how it can be determined what level of profit is normal or excessive.

INVASIVE SPECIES IN THE MUDUMALAI TIGER RESERVE (MTR)

⊙ **CONTEXT:** **The Forest Department is coming up with a comprehensive strategy to deal with the spread of the invasive species, in the Mudumalai Tiger Reserve (MTR), which continues to spread rapidly in the buffer zone.**

About the Species

- An invasive species, **Senna spectabilis** is an exotic tree. The species has taken over between 800 and 1,200 hectares of the buffer zones of the Mudumalai Tiger Reserve (MTR).

- The species has now become highly invasive in the **Sigur plateau** in both the core and buffer zones of the MTR.

- *Senna spectabilis* is spreading fastest in the Singara and Masinagudi forest ranges in the MTR buffer zone.

- *Senna spectabilis* poses a major threat if proper action is not taken soon.

- Now the Forest Department is coming up with a comprehensive strategy to deal with the spread of the invasive species, which continues to spread rapidly in the buffer zone.

Senna spectabilis:

- It is native species of America, introduced to India as an ornamental plant.

- Senna spectabilis belongs to the **Fabaceae family** and is grown as an ornamental plant across tropical America.

- This invasive species is very hardy and survives under challenging conditions. Removing it is a big task and eradicating it from a landscape can take years.

- It can **grow 7 - 18 meters tall**; is evergreen in climates with rain all year round, but can become deciduous in some regions, and **produces yellow flowers.**

- Spectabilis has been **commonly used in traditional medicine** for many years. It possesses **significant biological activity**, such as antibacterial, antibiofilm, antifungal, and antioxidant properties.

- It **is considered an environmental weed by the Global Compendium of Weeds**.

- As compared to Eucalyptus and pine, though exotic, do not spread as quickly as the other species and are considered easier to manage.

About Mudumalai Tiger Reserve:

- Mudumalai Tiger Reserve is located in the Nilgiris District of Tamil Nadu state at the tri-junction of three states, viz, **Karnataka, Kerala, and Tamil Nadu**.

- **It is a part of Nilgiri Biosphere Reserve (1st Biosphere Reserve in India)** along with Wayanad Wildlife Sanctuary (Kerala) in the West, Bandipur National Park (Karnataka) in the North, Mukurthi National Park and Silent Valley in the South.

- The name Mudumalai means "the ancient hill range". Indeed, it is as old as 65 million years since when the Western Ghats were formed.

Flora:
- The Reserve has tall grasses, commonly referred to as '**Elephant Grass'**.
- Bamboo of the giant variety, valuable timber species like Teak, Rosewood, etc.
- There are several species of endemic flora.

Fauna:
- **Flagship Species**: Tiger and Asian Elephant.
- **Other species**: Indian Gaur, Spotted Deer, Common Langur, Malabar Giant Squirrel, Wild Dog, and Jungle Cat among others.
- **Birds:**
  ➤ Reserve has got a wide variety of more than 260 species of birds.
  ➤ **8% of bird species found in India are recorded in Mudumalai.**
  ➤ This includes rare birds like the Malabar grey hornbill, Malabar pied hornbill, and Malabar laughing thrush among others.

PANAMARAM HERONRY SET TO GET A NEW LEASE OF LIFE

⦿ **CONTEXT:** **Panamaram heronry is set to get a fresh lease of life, thanks to the intervention of the Kerala State Biodiversity Board (KSBB) and the Panamaram grama panchayat.**

What is Panamaram heronry?

- It is the largest breeding ground of different species of herons in the **Malabar region.**
- The heronry, formed on a sandbank on the Panamaram river, is a breeding ground for nine species of waterbirds.
- The heronry, situated on a small islet on the **Kabani river**, is a breeding ground for many globally threatened water bird species
- It is a haven for globally threatened waterfowls, including the black headed-ibis, purple heron, large egret, median egret, little egret, pond heron, night heron, and little cormorant.
- The site is also the only location in State where the cattle egret breeds.

Malabar Region
- The Malabar region, is an area of southern India lying between the Western Ghats and the Arabian Sea.
- Malabar covers the geographical area, north of the Bharathapuzha, stretching over parts of Thrissur, Palakkad, Malappuram, Kozhikode, Wayanad, Kannur and Kasaragod districts of Kerala.

A CHANCE TO EXPAND THE WORLD'S BIOSPHERE FOOTPRINT

◉ **CONTEXT:** November 3 is going to be the first 'The International Day for Biosphere Reserves', to be celebrated beginning 2022.

What is a Biosphere Reserve?

- The Biosphere Reserve is a large protected area for the conservation of wildlife, plant and animal resources, and traditional tribal life in the area.

> At present India has **18 biosphere Reserves. Panna National Park** is India's latest declared Biosphere Reserve.

- A biosphere reserve contributes to the preservation of a region's biodiversity and culture.

- Reserves are designated under the intergovernmental MAB Programme by the Director-General of UNESCO following the decisions of the **MAB International Coordinating Council (MAB ICC).**

Their status is internationally recognized. Member States can submit sites through the designation process.

- **Core Areas:** It comprises a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation

- **Buffer Zones:** It surrounds or adjoins the core area(s), and is used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.

- **Transition Area:** The transition area is where communities foster socio-culturally and ecologically sustainable economic and human activities.

> **World Network of Biosphere Reserves (WNBR)**
>
> - The **World Network of Biosphere Reserves (WNBR)** was formed in 1971, as a backbone for biodiversity conservation, ecosystem restoration, and living in harmony with nature.
> - There are now 738 properties in 134 countries, including 12 in India, four in Sri Lanka, and three in the Maldives.
> - **Bangladesh, Bhutan, and Nepal** do not have biospheres as yet.

The 'Expansion' Plan

- The **'South and Central Asia MAB Reserve'** Networking Meeting (where MAB stands Man and the Biosphere) is planned for 2023, to advance biosphere reserve establishment, and management.

- UNESCO is ready to assist in carrying out a professional potentiality analysis.

- In addition, an expert mission has been planned for spring 2023 — to Bhutan, India's north-east and the Sundarbans in Bangladesh.

Biosphere Reserve in South Asia

- In South Asia, over 30 biosphere reserves have been established.

- The first one was the **Hurulu Biosphere Reserve**, in Sri Lanka, with 25,500 hectares of tropical dry evergreen forest.

- In India, the first biosphere reserve was designated by UNESCO in 2000, namely, the blue mountains of the **Nilgiris** stretching over Tamil Nadu, Karnataka and Kerala.

- India's network of reserves has gone from strength to strength.

DRDO CONDUCTS MAIDEN FLIGHT-TEST OF PHASE-II BALLISTIC MISSILE DEFENSE INTERCEPTOR

◉ **CONTEXT:**   India has successfully conducted the maiden flight test of the Phase-II Ballistic Missile Defence (BMD) interceptor AD-1 missile.

About AD (Air Defense)-1:

- The AD-1 is a **long-range interceptor missile**.

- AD-1 is a unique type of interceptor with advanced technologies available with only a very few nations in the world.

- It is designed for both **low exo-atmospheric and endo-atmospheric interception** of long-range ballistic missiles as well as aircraft.

- It is propelled by a two-stage solid motor and equipped with an indigenously-developed advanced control system, navigation, and guidance algorithm to precisely guide the vehicle to the target.

Apprehensions:

- **BMD is ineffective against Cruise missiles**. Both China and Pakistan have cruise missile capable of delivering the nuclear payload.

- **No BMD can have a 100% success rate** in the interception of the projectile (ballistic missile).

- **BMD is a very costly affair**.

- Even after interception there remain **chances of damage**, especially if the interception is done in the terminal phase of the ballistic missile.

What's Ballistic Missile Defence (BMD) System?

- A Ballistic Missile Defence system (BMD) is a missile defense system that acts as a shield against ballistic missile attacks.

- You may not that the purpose is defense (by intercepting a ballistic missile) and not attack/offense.

- A ballistic missile can be intercepted in three phases:

  ◎ **Terminal phase**: During the atmospheric descent phase.

  ◎ **Mid-course interception (in-flight interception):** Most preferred interception.

  ◎ **Lift-off phase:** Targeting at the launch point- requires advanced radars.

Indian Ballistic Missile Defence Programme:

- The Indian Ballistic Missile Defence Program is an initiative to develop and deploy a multi-layered ballistic missile defense system to protect India from ballistic missile attacks.

- **It was launched in 2000 after Kargil War** by the Atal Bihari Vajpayee government.

- India has an active ABM development effort using indigenously developed and integrated radars, and indigenous missiles.

- In November 2006, India successfully conducted the PADE (Prithvi Air Defence Exercise) in which an anti-ballistic missile, called the Prithvi Air Defence (PAD), an exo-atmospheric (outside the atmosphere) interceptor system, intercepted a Prithvi-II ballistic missile.

Two- tiers of India's BMD

Prithvi Air Defence (PAD)	Advanced Air Defense (AAD)
- Also referred as Pradyumna Ballistic Missile Interceptor. - It's designed for High altitude interception (exo-atmospheric interception). - Intercept missiles at altitudes between 50 – 80 km. - The interceptor is Prithvi Defense Vehicle (PDV) which has two-stage, both with solid propellants.	- It is also called Ashwin Ballistic Missile Interceptor. - It's an endo-atmospheric interception system (for low-altitude interception). - Altitude of interception is range up to 30 km. - It has a single-stage solid-fueled missile.

INDIA'S DEFENCE MINISTRY IS THE WORLD'S BIGGEST EMPLOYER: 'STATISTA' REPORT

⊙ **CONTEXT:** As per the released 'Statista' report, a Germany-based *private organization* that provides data and statistics has mentioned that India's Defence ministry is the world's biggest employer with around 2.92 million people in the year 2021-22.

Key highlights of the Report:

- A report said that India's Ministry of Defence is the world's biggest employer with 2.92 million people which includes **combined active service personnel, reservists, and civilian staff.**
- According to the report, no company in the world has more employees **than Walmart**, a US retail giant which is around 2.3 million employees.
- India's military spending of USD 76.6 billion ranked **third highest** in the world.

> **Do you know?**
> - According to Stockholm International Peace Research Institute (SIPRI), the five largest spenders in 2021 were the United States, China, India, the United Kingdom, and Russia, together accounting for 62 per cent of defence expenditure.

India's Defence Expenditure:

- The overall defence expenditure planned for FY 2021-2022 is **Rs.3,62,345.62 Crore (US$ 49.6 billion)**, an increase of Rs.24,792.62 Crore (US$ 3.4 billion) over the Budget Estimates of FY 2020-2021.
- India is spending **2.7 per cent** of its GDP on defence. In the list of top ten defence spenders, only the US, Russia, and Saudi Arabia spend a larger share of their GDP on defence.

What does the Military Budget mean?

- The **military budget or defense budget** of India is the portion of the **overall budget** of the Union budget of India that is allocated for the funding of the Indian Armed Forces.
- The military budget finances;

◎ Employee salaries and training costs,

◎ maintenance of equipment and facilities,

◎ support of new or on-going operations, & development and

◎ Procurement of new technologies, weapons, equipment, and vehicles.

- The **Indian Army** accounts for more than **half of the total defense budget of India**, with most of the expenditure going to the maintenance of cantonments, salaries, and pensions, instead of critical arms and ammunition.

TUBERCULOSIS CASES SURGED FOR THE FIRST TIME IN MANY YEARS: WHO

⊙ **CONTEXT:** According to the recently released report on Global TB Report 2022 by WHO, highlighted the concerns over the growing cases of Tuberculosis and people dying due to the disease.

The Global TB Report:

- It was found that **6 million** people fell ill due to TB in 2021 with an increase of **4.5 percent** from 2020, and 1.6 million people died from TB.

- The burden of **drug-resistant TB (DR-TB)** also increased by 3 percent between 2020 and 2021, with 450 000 new cases of **rifampicin-resistant TB (RR-TB)** in 2021.

- This is the **first** time in many years an increase has been reported in the number of people falling ill with TB and drug-resistant TB.

- The number of people provided with treatment for **RR-TB** and multidrug-resistant TB and multidrug-resistant TB (MDR-TB) has also declined between 2019 and 2020.
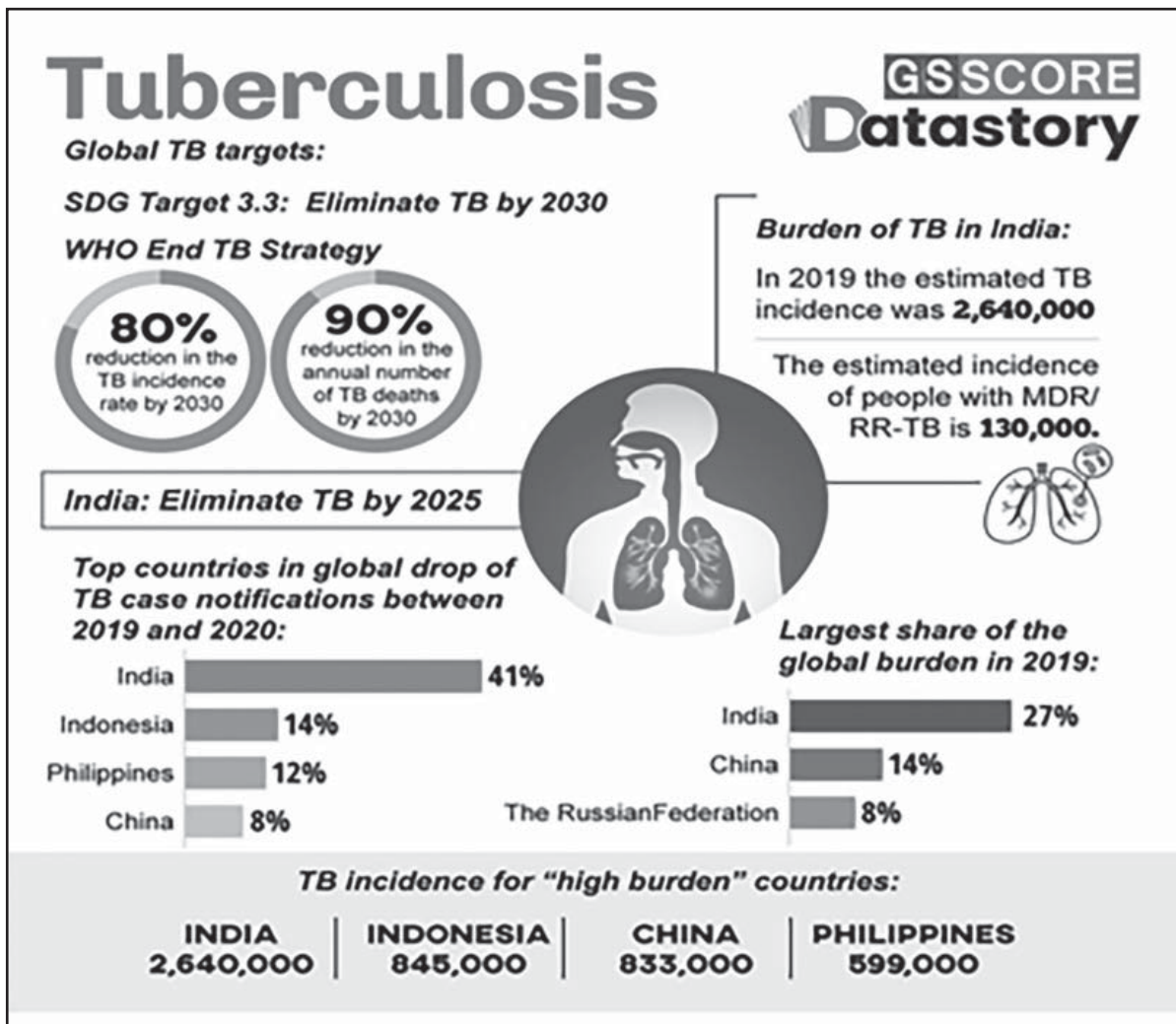
> **Do you know?**
>
> - The main source is **the Global Fund** to Fight **AIDS, Tuberculosis, and Malaria across the world.**
>
> - The **United States** is the largest contributor of funding to the Global Fund and is also the largest bilateral donor; overall, it contributes close to **50 percent** of international donor funding for TB.

About Tuberculosis (TB):

- TB is caused by a bacterium called **Mycobacterium tuberculosis**, belonging to the Mycobacteriaceae family consisting of about 200 members.

- In humans, TB most commonly affects the **lungs (pulmonary TB), but it can also affect other organs (extra-pulmonary TB).**

- TB is a very ancient disease and has been documented to have existed in Egypt as early as 3000 BC.

- TB is a **treatable and curable disease**.

- **Transmission**: TB is spread from **person to person through** the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.

> **Important national and international initiative to end TB:**
>
> - National TB Elimination Programme (NTEP)
> - National Strategic Plan (NSP) for Tuberculosis Elimination (2017-2025)
> - The Nikshay Ecosystem (National TB information system)
> - **Nikshay Poshan Yojana** (NPY- financial support)
> - TB Harega Desh Jeetega Campaign
> - TB Free India Campaign
> - Revised National Tuberculosis Control Programme (RNTCP)
> - International Union Against Tuberculosis and Lung Disease (The Union)

Tuberculosis

GSSCORE
Datastory

Global TB targets:

SDG Target 3.3: Eliminate TB by 2030

WHO End TB Strategy

80% reduction in the TB incidence rate by 2030

90% reduction in the annual number of TB deaths by 2030

India: Eliminate TB by 2025

Burden of TB in India:

In 2019 the estimated TB incidence was **2,640,000**

The estimated incidence of people with MDR/RR-TB is **130,000.**

Top countries in global drop of TB case notifications between 2019 and 2020:

- India — 41%
- Indonesia — 14%
- Philippines — 12%
- China — 8%

Largest share of the global burden in 2019:

- India — 27%
- China — 14%
- The Russian Federation — 8%

TB incidence for "high burden" countries:

INDIA	INDONESIA	CHINA	PHILIPPINES
2,640,000	845,000	833,000	599,000

Treatments available for TB:

- **Drugs:**
  - **For previously treated cases of TB,** the intensive phase is of **12 weeks**, where injection of streptomycin is given for eight weeks along with four drugs FDCs (INH, Rifampicin, Pyrazinamide, and Ethambutol).
  - **Second-line drugs** are the TB drugs that are used for the treatment of drug-resistant TB. The second line drugs include **levofloxacin, moxifloxacin, bedaquiline, delamanid and linezolid.**

> Lodging is a condition in which the top of the plant becomes heavy because of grain formation, the stem becomes weak, and the plant falls on the ground.

- **Vaccines**: Currently, the following **two vaccines** have been developed and identified for TB, and are **under Phase-3 clinical trial:**
  - VPM (Vaccine Projekt Management) 1002

MIP (Mycobacterium Indicus Pranii)

Important Facts:

- **World TB Day is observed on** March 24.
- **TB Mukt Bharat (TB-free India):** India is committed to ending the TB epidemic by 2025, five years ahead of the SDG target timeline.

KALANAMAK RICE, 'BUDDHA'S GIFT TO PEOPLE, IS NOW SMALL, STRONG

⊙ **CONTEXT:** Indian Agriculture Research Institute has successfully tested two new dwarf varieties of Kalanamak rice (Pusa Narendra Kalanamak 1638 and Pusa Narendra Kalanamak 1652) in Uttar Pradesh that give double the yield.

⊙ **ABOUT**

The Kalanamak rice:

- Kalanamak is a traditional variety of paddy with black husk and a strong fragrance.

- It has high salt content and overshadows basmati due to its agronomic potential.

- Two dwarf varieties of Kalanamak rice are named;

  ⊙ Pusa Narendra Kalanamak 1638

  ⊙ Pusa Narendra Kalanamak 1652

- The yield of the new varieties is double that of the traditional variety. The length of the old variety plant is 140 centimeters, and the new variety is between 95- 100 centimeters.

- It is grown in **11 districts** of the Terai region of north-eastern **Uttar Pradesh and in Nepal.**

- The traditional variety of rice has been prone to 'lodging' which resulted in low yield and poor quality.

Lodging is a condition in which the top of the plant becomes heavy because of grain formation, the stem becomes weak, and the plant falls on the ground.

- To overcome the problem of lodging, the Indian Agriculture Research Institute (IARI) has successfully developed two dwarf varieties of Kalanamak rice.

- This rare rice has been awarded the Geographical Indication (GI) tag in 2013 which recognized Siddharthnagar and the adjacent districts for the tag.

- Under the **One District One Product (ODOP) Scheme**, it has earned the Prime Minister's award for Excellence in Public Administration 2021.

- It was featured in the book **'Speciality Rices of the World**by the Food and Agriculture Organization (FAO) of the United Nations.

Significance:

- The traditional Kalanamak rice is protected under the **Geographical Indication (GI)** tag system.

- The traditional paddy variety Kalanamak, which has a black husk and a potent scent, is thought to have been a gift from **Lord Buddha** to the **Sravasti people** when he visited the area after attaining enlightenment.

AFTER GM MUSTARD, GEAC TO RECOMMEND BAYER'S HERBICIDE-TOLERANT COTTON

⊙ **CONTEXT:** After the clearance for GM-Mustard crops for field trials, the Genetic Engineering Appraisal Committee (GEAC) is going to recommend an 'environmental release' of genetically modified (GM) cotton.

GEAC is a body under the **Ministry of Environment, Forest and Climate Change** that appraises GM products for their **testing and commercialization** (environmental release).

⊙ BACKGROUND

- Nearly two decades ago, a genetically modified type of cotton, known as **Bt cotton,** was introduced to India to reduce farmers' insecticide use.
- Though the effects of Bt cotton on farmers' yield vary across Indian states, most states show a decrease in insecticide use since the introduction of Bt cotton.
- A reduction in insecticide use may be beneficial for farmers' health and the environment by reducing pollutants.

About BG-II RRF cotton:
- Earlier, the BG-II RRF cotton had already undergone biosafety research and field trials by 2012-13.
- **Bollgard II Roundup Ready Flex (BG-2 RRF)** is a herbicide-tolerant and insect-resistant variety of BT cotton.
- BGII RRF offers protection against weeds such as **American Bollworm, besides continuing protection against insects.**
- India has already allowed commercial use of BG-1 and BG-2 GM cotton while the approval for the BG-2 RRF has been pending at various stages.

Recent GM-Cotton alterations:

- A German multinational company '**Bayer AG'** is going to introduce a modification in cotton plants that will allow farmers to spray the herbicide '**glyphosate'**.
- The **transgenic cotton — Bollgard II Roundup Ready Flex (BG-II RRF)** contains three alien genes; the first two **('cry1Ac' and 'cry2Ab')** are isolated from a soil bacterium,
- Bacillus thuringiensis or Bt, and coding for proteins toxic to the American bollworm, spotted bollworm, and tobacco caterpillar insect pests.
- The third gene, '**cp4-epsps'**, is sourced from another soil bacterium, Agrobacterium tumafaciens.

⊙ SIGNIFICANCE:

- Its incorporation into cotton makes the crop "**tolerant"** to glyphosate.
- This herbicide cannot be applied on normal cotton, as the chemical does not distinguish between the crops and weeds.

****

GS SCORE
An Institute for Civil Services

OUR CLASSROOM & ONLINE COURSES

GS FOUNDATION

- ☑ 1 Year IAS Foundation
- ☑ 3 & 2 Year IAS Foundation
- ☑ GS Mains Foundation

OPTIONAL FOUNDATION

- ☑ Political Science
- ☑ History
- ☑ Geography
- ☑ Public Administration
- ☑ Anthropology

MAINS COURSES

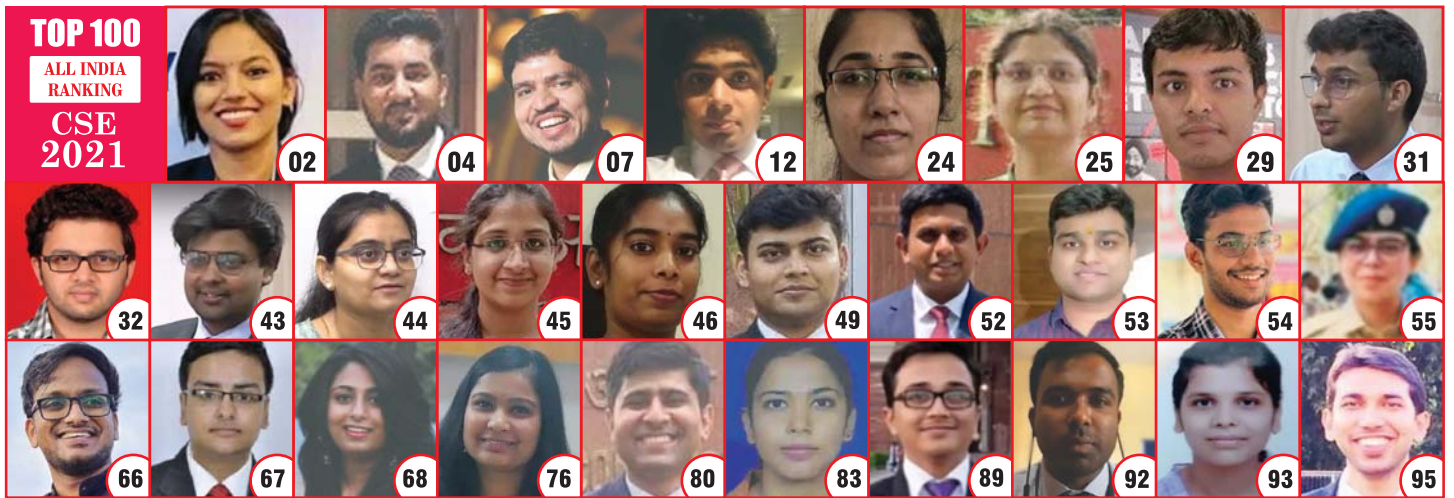- ☑ GS Mains Advance
- ☑ Applied GS
- ☑ Ethics Integrity & Aptitude
- ☑ Essay Writing
- ☑ GS Paper 2
- ☑ GS Paper 3

TEST SERIES

- ☑ Prelims Test Series
- ☑ GS Mains Test Series
- ☑ Essay Test Series
- ☑ Ethics Test Series
- ☑ Optional Test Series
  - ◉ Political Science
  - ◉ Geography
  - ◉ History
  - ◉ Public Administration
  - ◉ Anthropology
  - ◉ Sociology

Visit: 🌐 **www.iasscore.in**

GS SCORE
An Institute for Civil Services

CSE RESULTS

SUCCESS IS A PRACTICE WE DO!

TOP 100 ALL INDIA RANKING CSE 2021: 02, 04, 07, 12, 24, 25, 29, 31, 32, 43, 44, 45, 46, 49, 52, 53, 54, 55, 66, 67, 68, 76, 80, 83, 89, 92, 93, 95

TOP 100 ALL INDIA RANKING CSE 2020: 8, 9, 12, 13, 14, 16, 17, 19, 20, 24, 26, 28, 30, 31, 36, 38, 41, 45, 50, 51, 52, 55, 56, 58, 59, 67, 68, 70, 71, 73, 74, 76, 78, 83, 84, 85, 86, 89, 93, 98, 100

TOP 100 ALL INDIA RANKING CSE 2019: 3, 6, 10, 11, 16, 17, 21, 22, 28, 30, 33, 38, 39, 42, 44, 46, 53, 54, 59, 66, 69, 70, 72, 77, 78, 80, 82, 84, 86, 87, 94, 97, 98