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FEBRUARY 2024

1. IMPORTANT TOPICS OF THE MONTH

1.1 75th Anniversary of Supreme Court

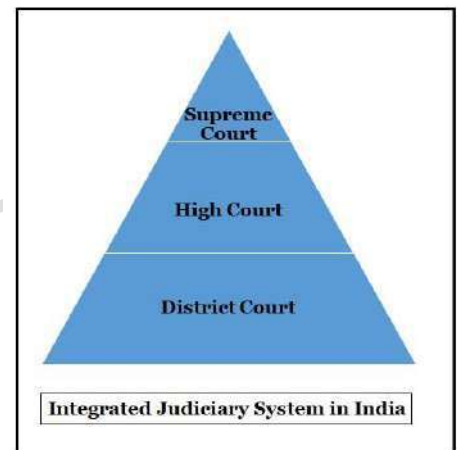
Why in news?

Recently Chief Justice of India DY Chandrachud addressed a unique ceremonial bench as the country's highest court turned 75 years.

What is the history of Supreme Court (SC)?

- **Regulating Act 1773**- Supreme Court was established at Calcutta (1774) comprising one chief justice and three other judges.
- The Supreme Courts at Madras and Bombay were established by King George III in 1800 and 1823 respectively.
- **Act of 1823**- The newly established Supreme Courts at Madras and Bombay would have the power to administer, carry out duties, and hold powers of the same magnitude as the Supreme Court at Fort William in Calcutta.
- **Indian High Court 1861**- High Courts were established in three Presidency towns of Calcutta, Madras and Bombay which provided unification in judicial system.
- **Government of India Act 1935**- The creation of the Federal Court of India under this Act, reduced the High Court's distinction as highest courts for all.
- **Post-independence**- The Supreme Court of India was inaugurated on January 28, 1950 which succeeded the Federal Court of India.

Sir Elijah Impey was the 1st Chief Justice of the Supreme Court of Calcutta.



What are the Constitutional provisions provided for the SC?

- It is a single system of Courts which establishes both Centre laws and State laws.
- **Composition**- Article 124 deals with composition, at present 34 judges are present in the Supreme Court.
- **Qualifications** - The Constitution has not prescribed minimum age for appointment of Supreme Court judges.
 1. He should be a citizen of India.
 2. He should have been a judge of a High Court (or high courts in succession) for five years; or He should have been an advocate of a High Court (or High Courts in succession) for ten years; or
 3. He should be a distinguished jurist in the opinion of the president.
- **Appointment**- The judges of the Supreme Court are appointed by the president.
- **Chief Justice of India**- She/ He is appointed by the President after consultation with such judges of the Supreme Court and high courts as he deems necessary.
- **Other judges of the SC**- Appointed by president after consultation with the chief justice and such other judges of the Supreme Court and the high courts as he deems necessary.
 - The consultation with the chief justice is **obligatory** in the case of appointment of a judge other than Chief justice
- **Collegium system**- The system of consulting judges and Chief Justice while appointing judges were replaced by **National Judicial Appointments Commission (NJAC) and 99th Constitutional Amendment Act of 2014**.
- Both were declared unconstitutional and void by the Supreme Court as it affects the independence of judiciary.

Articles 124 to 147 in Part V of the Constitution deal with organisation, independence, jurisdiction, powers, and procedures and so on of the Supreme Court.

Original Constitution has not mentioned about collegium system

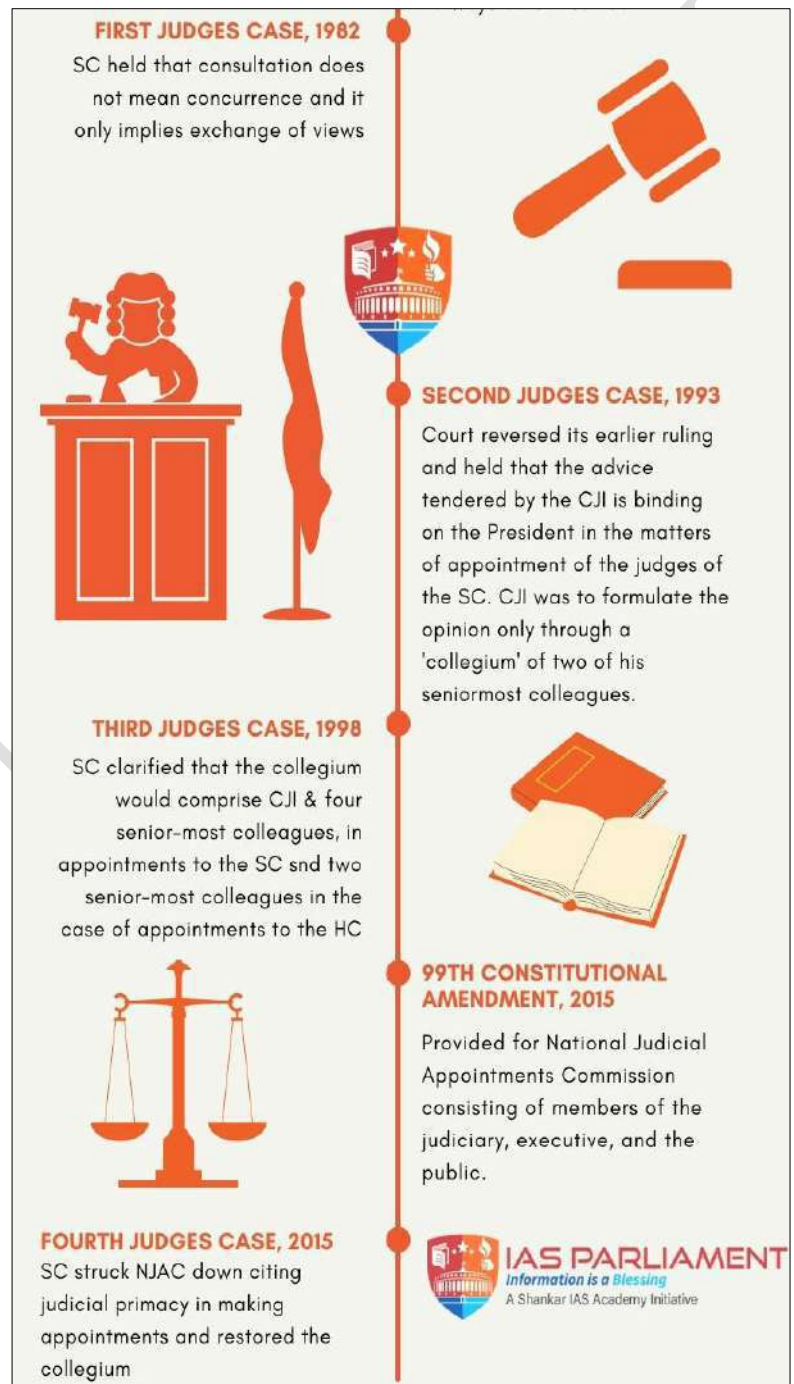
- **Fixed service conditions-** The salaries, allowances, privileges, leave and pension of the judges of the Supreme Court are determined from time to time by the Parliament.
- They cannot be changed to their disadvantage after their appointment except during a financial emergency.
- **Security of tenure-** They can be removed from office by the **President** only in the manner and on the grounds mentioned in the Constitution.
- **Removal-**The *Judges Enquiry Act (1968)* regulates the procedure relating to the removal of a judge of the Supreme Court by the process of impeachment.
- **Seat of Supreme Court** - The Constitution declares **Delhi** as the seat of the SC. It also authorizes the CJI to appoint other place or places as seat of the Supreme Court only with the approval of the President.
- **Jurisdiction** - The Constitution has conferred a very extensive jurisdiction and vast powers on the SC.

Jurisdiction	About
Original	<ul style="list-style-type: none"> • Between the Centre and one or more states. • Between Centre and any State or States on one side and one or more States on the other side. • Between two or more States.
Writ	<ul style="list-style-type: none"> • SC is empowered to issue writs including habeas corpus, mandamus, prohibition, quo warranto and certiorari for the enforcement of the fundamental rights of an aggrieved citizen.
Appellate	<ul style="list-style-type: none"> • SC is primarily a court of appeal and hears appeals against the judgements of the lower court
Advisory	<ul style="list-style-type: none"> • It gives the power to president to seek the opinion of SC on any question of law or fact of public importance. • The President can seek the opinion of Supreme Court on any dispute arising out of any pre-constitution treaty, agreement, covenant, engagement, sanad or other similar instruments
Court of Record	<ul style="list-style-type: none"> • The judgements, proceedings and acts of the SC are recorded for perpetual memory and testimony. • It has the power to punish for contempt of court
Judicial Review	<ul style="list-style-type: none"> • It is the power to examine the constitutionality of legislative enactments and executive orders of both the Central and state governments. • They can be declared as illegal, unconstitutional and invalid (null and void) by the SC.
Constitutional interpretation	<ul style="list-style-type: none"> • The Supreme Court is the ultimate interpreter of the Constitution. • It can give final version to the spirit and content of the provisions of the constitution and the verbiage used in the constitution
Election of President and Vice President	<ul style="list-style-type: none"> • Disputes regarding the election of President and Vice President is dealt by Supreme Court. • It has the original, exclusive and final authority.
Union Public Service Commission	<ul style="list-style-type: none"> • It enquires into the conduct and behaviour of the chairman and members of the Union Public Service Commission on a reference made by the president.
Power to review	<ul style="list-style-type: none"> • It has power to review its own judgement or order. Thus, it is not bound by its previous decision and can depart from it in the interest of justice or community welfare. • For example, in the Kesavananda Bharati case (1973), the Supreme Court departed from its previous judgement in the Golak Nath case (1967)
Cases in High Court	<ul style="list-style-type: none"> • It is authorised to withdraw the cases pending before the high courts and dispose by itself. • It can also transfer a case or appeal pending before one high court to another high court.

Decree and order of Supreme Court	<ul style="list-style-type: none">• Its law is binding on all courts in India.• Its decree or order is enforceable throughout the country.• All authorities (civil and judicial) in the country should act in aid of the Supreme Court
Judicial superintendence	<ul style="list-style-type: none">• Supreme Court has the power of judicial superintendence and control over all the courts and tribunals functioning in the entire territory of the country.

What are the issues associated with the collegium system?

- The collegium consists of CJI and 4 senior most judges of the Supreme Court.
- **First Judge Case, 1981-** The Supreme Court ruled that the word “consultation” could not be interpreted as “concurrence”.
 - Accordingly the CJI’s opinion was not binding on the executive.
- **Second Judges Case, 1993-** The court overruled its earlier decisions and held that “consultation” meant “concurrence”.
 - This means that the advice rendered by the CJI on matters of appointments is binding on the President.
- **Third Judges Case, 1998-** The court clarified that the collegium would comprise
 1. CJI and 4 senior-most colleagues - Appointments to Supreme Court
 2. CJI and 2 senior-most colleagues - Appointments to High Courts
- **NJAC-** The government, through **99th constitutional amendment**, sought to replace the collegium with the National Judicial Appointments Commission (NJAC).
- **Fourth Judges Case, 2015-** The court ruled that the primacy of the judiciary in judges’ appointments was embedded in the basic structure of the Constitution.
 - **NJAC** included the Union Minister for Law and Justice and 2 eminent persons, besides the CJI and next two senior most SC judges.
 - NJAC was declared as **unconstitutional and void** by the Supreme Court.



FIRST JUDGES CASE, 1982
SC held that consultation does not mean concurrence and it only implies exchange of views

SECOND JUDGES CASE, 1993
Court reversed its earlier ruling and held that the advice tendered by the CJI is binding on the President in the matters of appointment of the judges of the SC. CJI was to formulate the opinion only through a 'collegium' of two of his seniormost colleagues.

THIRD JUDGES CASE, 1998
SC clarified that the collegium would comprise CJI & four senior-most colleagues, in appointments to the SC and two senior-most colleagues in the case of appointments to the HC

99TH CONSTITUTIONAL AMENDMENT, 2015
Provided for National Judicial Appointments Commission consisting of members of the judiciary, executive, and the public.

FOURTH JUDGES CASE, 2015
SC struck NJAC down citing judicial primacy in making appointments and restored the collegium

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To know about judicial selection click [here](#)

What are the structural issues affecting the judiciary?

- **Pendency of cases-** As of 2022, over 4.7 crore cases are pending across different levels of the judiciary.
- **Archaic procedures-** Some procedural norms may be outdated and cumbersome, modernizing these procedures can enhance efficiency and accessibility.
- **Judicial vacancies-** The pendency of cases in the judiciary is due to judicial vacancies.

- **Culture of adjournments**- Frequent adjournments can delay justice delivery, this should be minimized to reduce unnecessary delays.
- **Lack of diversity** - The absence of an institutional mechanism to ensure diversity on the Bench in the judiciary is a problem.
- **Lack of transparency**- [Collegium](#) is seen as a closed-door affair with no prescribed norms regarding eligibility criteria, or even the selection procedure.
- **Long court vacations**- The court takes a week-long break each for Dussehra and Diwali, and 2 weeks at the end of December which impact the functioning of judiciary.

What are the key takeaways from the Diamond Jubilee Celebration of Supreme Court?

- **Principles**- The Chief Justice of India emphasised three principles that are necessary for the Supreme Court to function according to the constitutional mandate.
- **Independent judiciary**- The Supreme Court must be independent of the legislature and executive.
- **Constitutional interpretation**- The Supreme Court must interpret the Constitution not as a rigid body of rules, but as a living organism.
- **Citizen's respect**- The Supreme Court must secure the respect of citizens for it to establish itself as a legitimate institution.
- **Enhance faith in justice delivery system**-
 1. **Dynamic Jurisprudence**- The court recognizes that the law is not static but constantly evolving. It deliberately avoids conferring permanence upon judicial decisions, allowing space for disagreement.
 2. **Increase access to Courts**- This would reduce the judicial burden as currently 65,915 registered cases are pending in the Supreme Court.

Article 50 says that the State is directed to take measures to ensure the separation of the judiciary from the executive within the public services of the State.

To know about revamping Indian judiciary click [here](#)

What are the steps taken to promote the functioning of Indian judiciary?

- **Digital Supreme Court Reports (Digi SCR)**- It has 36,308 cases of SC since 1950, accessible to the public in the digital format.
- **Digital Courts 2.0** -It enables access of court records to the Judges of the district courts in digital form, it is coupled with the use of AI for transcribing speech to text on a real-time basis.
- **New website of the SC**-It will be in bilingual format in English and Hindi and has been redesigned with a user-friendly interface.
- **Suswagatam**- An online app launched in 2023 that allows users to register and request e-pass to attend court proceedings or meet lawyers, among other activity.
- **Jan vishwas bill**- The [bill](#) proposed appointing adjudicating officers which would reduce pressure on the justice system.
- **eCourts**- It is a mission mode pan-India project, monitored and funded by Department of Justice, Ministry of Law and Justice, for the District Courts across the country.

There has never been a woman Chief Justice of India.

1.2 Interim Budget 2024-2025



Click [here](#) to read about India's Interim Budget (Simplified)

1.3 CMS COP 14

Why in news?

The 14th Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) was held in the historic city of Samarkand, Uzbekistan.

Key aspects	Convention of Migratory Species (CMS)
Conception	<ul style="list-style-type: none"> It began at the 1972 Stockholm Conference on the Human Environment.
Launch year	<ul style="list-style-type: none"> 1979 in Bonn, Germany (called as Bonn Convention)
Entered into force	<ul style="list-style-type: none"> 1983
Secretariat	<ul style="list-style-type: none"> Provided by United Nations Environment Program, based in Bonn in Germany
Depository	<ul style="list-style-type: none"> Germany
Out-post office	<ul style="list-style-type: none"> Abu Dhabi, United Arab Emirates.
Aim	<ul style="list-style-type: none"> To provide a global platform for the conservation and sustainable use of migratory animals and their habitats. To lay the legal foundation for internationally coordinated conservation measure throughout a migratory range.
Parties	<ul style="list-style-type: none"> 133 as of 2022, Jamaica has signed but not ratified to become a party yet. India has been a part of Bonn convention since 1983.
CMS Trust Fund	<ul style="list-style-type: none"> Each Party shall contribute to this fund according to a scale to be agreed upon by the COP.
Listed species	<p>It has about 1,200 species listed in 2 Appendix</p> <ul style="list-style-type: none"> Appendix I- Endangered migratory species. Appendix II- Migratory species conserved through Agreements. Birds occupied the first place followed by terrestrial mammals.
Appendix I	<ul style="list-style-type: none"> Prohibits the taking of such species, with very restricted scope for exceptions Conserve and where appropriate restore their habitats Prevent, remove or mitigate obstacles to their migration and control other factors that might endanger them.
Appendix II	<ul style="list-style-type: none"> It covers migratory species that have an unfavorable conservation status and that require international agreements for their conservation and management.

What is the organizational structure of CMS?

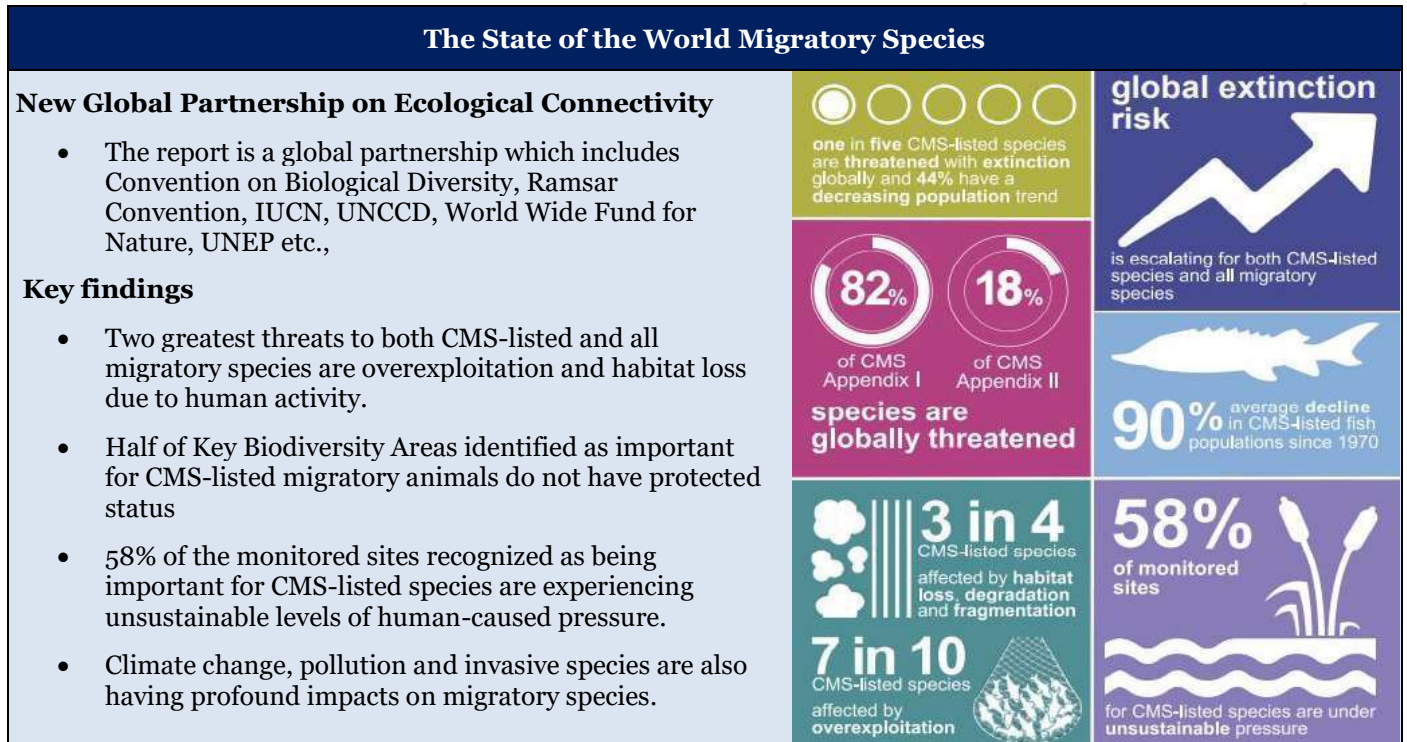
- **Conference of the Parties (COP)** - It is the decision-making body of the Convention which meets at **three-yearly intervals**.
- **Standing Committee**- It gives policy and administrative guidance between meetings.
- **Scientific Council**- It meets between COP sessions to offer scientific advice and identify research and conservation priorities.
- **Secretariat**- It develops and promotes Agreements, service meetings and supervises research and conservation projects and co-operates with governments and partner organizations.

CMS is the only global convention specializing in the conservation of migratory species, their habitats and migration routes.

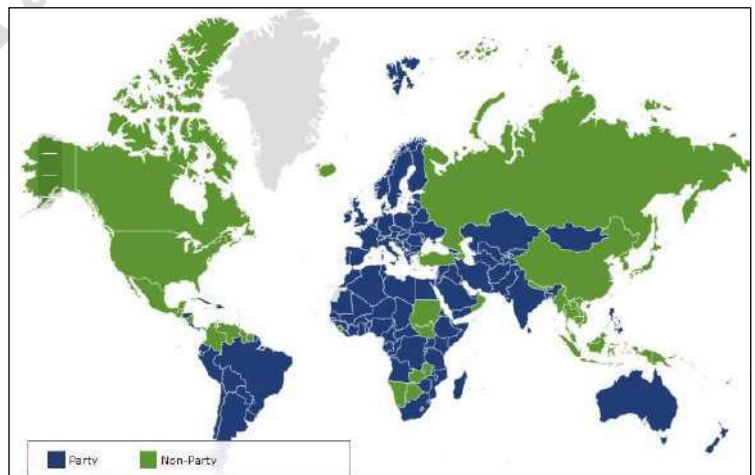
What are the key takeaways of CMS COP14?

- **Slogan-** Nature Knows No Border.
- **Samarkand Strategic Plan (2024-2032)** - It is a framework for the conservation and sustainable use of migratory species and their habitats based on the [Kunming-Montreal Global Biodiversity Framework](#) (GBF) adopted in 2022.
- **The State of the World's Migratory Species-** It is the first ever report that provides a comprehensive overview and analysis of the conservation status of migratory species.

This is the 1st COP of any global environmental treaty to take place in Central Asia, a region home to many migratory species including Saiga Antelope, Snow Leopard, and many migratory birds.



- **Atlas of Animal Migration-** It is a publication that maps the distribution, movement, and threats of migratory animals across different regions and habitats
- **Agreement on an Initiative for the Central Asian Flyway-** It spans 30 Range States with a coordinating unit in India with financial support from the Indian Government.
- **Action Plan for African-Eurasian Migratory Landbirds Action Plan (AEMLAP)-** Aims to improve the conservation status of migratory landbird species along the African-Eurasian flyway region.
- **Action Plan for Great Bustard in Asia-** It provides for current status and threats of Asian population of the Great Bustard, a large migratory bird that is endangered by habitat loss, poaching, infrastructure and climate change.
- **Transboundary Jaguar initiative-** It is launched to establish a new regional conservation initiative for the Jaguar, a species listed in CMS Appendices I and II.
- **Central Asian Mammals Initiative (CAMI)-** It is a framework for the conservation of 15 migratory mammal species and their habitats in the Central Asian region adopted by CMS in 2014.
- **Global Partnership on Ecological Connectivity-**The objective is to ensure that ecological connectivity is maintained, enhanced, and restored in places of importance for migratory species of wild animals.



CMS COP 13- Held in India for the 1st time at Gandhinagar in 2020

Ecological connectivity

- It is defined by CMS as the “unimpeded movement of species and the flow of natural processes that sustain life on Earth”.
- Key priority areas of Global Partnership on Ecological Connectivity
 1. **Data Research and Monitoring**- Prioritizing the integration and analysis of scientific data to inform conservation measures.
 2. **Policy and Legislation**-Supporting evidence-based decision-making to enhance policies and laws that foster ecological connectivity, integrating it into global targets and national priorities.
 3. **Uptake and Implementation**- Encouraging the application of connectivity conservation strategies.
 4. **Awareness Raising and Outreach**-Increasing public understanding and support for ecological connectivity.

- **Insect Decline and its Threat to Migratory Insectivorous Animal Populations**- As insect biodiversity plays a vital role in the proper functioning of many of the world's ecosystems and their services their decline can have a significant impact on a range of migratory insectivorous species, especially bird and bat species.
- **Global guidelines on light pollution**- Light pollution contributes to the death of millions of birds, internationally agreed guidelines on light pollution covering marine turtles, seabirds and migratory shorebirds already exist and have been endorsed by COP 13.
- New international guidelines focusing on migratory land birds and bats are currently being developed under CMS.
- **Migratory Aquatic species**- A new mandate on addressing the impacts of deep-seabed mineral exploitation on migratory species, their prey, and their ecosystem.
 - Three new Action Plans for aquatic species, the Atlantic Humpback Dolphin, the Hawksbill Turtle and the Angelshark.
- **Wildlife health**- CMS Parties are encouraged to implement the recommendations of the scientific report ‘Migratory Species and Health: A Review of Migration and Wildlife Disease Dynamics, and the Health of Migratory Species, within the context of [‘One Health’](#).
- **Vessel strike**- A new resolution on reducing the risk of vessel strikes for marine megafauna, based on a new scientific report presented which focusses on the Appendix I & II-listed Whale Shark.
- **Marine debris** - Along with bycatch and ship strikes, this is one of the major threats to marine fauna, with animals becoming entangled in discarded fishing gear and ingesting plastics.
- **Amend Convention’s Appendices**- The proposals for amendment of CMS Appendices I and II were discussed and recommended by the Committee of the Whole (COW) or countries for adoption.
- **Inclusion of 14 migratory species**- They are Eurasian lynx, Peruvian pelican, Pallas’s cat, guanaco, Laulao catfish, Balkan lynx, Lahille’s bottlenose dolphin, harbour porpoise, Magellanic plover, bearded vulture, Blackchin guitarfish, Bull ray, Lusitanian cownose ray and Gilded catfish.

As part of CAMI, Uzbekistan announced a new programme to introduce the Cheetah in the country.

1.4 Two years of Russia-Ukraine War

Why in news?

February 24, 2024 marks second year of [Russia-Ukraine war](#) which started in 2022.

History of conflict between Russia and Ukraine

- **Crimea’s annexation**: Russia took over Crimea, a part of Ukraine, by force in 2014 as Ukraine wanted to join the European Union which Russia sternly objected.
- **Sea of Azov clash**-Post Crimea’s annexation, Russia and Ukraine fought over the Sea of Azov. It is connected to the Black Sea by a narrow strait.
- Russia built a bridge over the [Kerch strait](#) and blocked Ukraine’s ships from passing through.

- Russian backed rebels- Russia has been criticized for its involvement in the Donetsk and Luhansk regions in eastern Ukraine, it acknowledged that the two regions of [Donbass region](#) as independent republics which aggravated the issue.

- **Migration crisis-** Belarus, Russian ally sent many migrants to the border of Poland (EU member), it caused issues for Poland and EU.

- **Ukraine's pro-West stand-** Ukraine became independent from Russia after the collapse of Soviet Union, Russia described Ukraine as a puppet of West.

- **NATO's expansion-** Ukraine's request to be a part of NATO angered Russia and it started placing troops near the Ukraine border.



How the war evolved in 2 years?

- **Russia invasion-** It attacked Ukraine from 3 direction the **south** (from Crimea and the Black Sea), the **east** (from the Donbass region and the border), and the **north** (from Belarus and the border).
- **Ukraine resistance-** Ukraine fought back against the Russian invasion, but faced a huge disadvantage in terms of military strength, resources, and allies.
- **Russian advance-** It captured key cities and ports such as [Mariupol](#), [Kherson](#), and [Zaporizhzhia](#) and imposed naval blockade on Ukraine cutting off its access to the Black Sea and the global market.
- **Black sea Grain initiative-** It is a [UN brokered deal](#) signed by Russia, Ukraine and Turkey to allow the safe transportation of grain and foodstuffs from Ukrainian ports to the rest of the world
- **Zaporizhzhia nuclear plant-** It is situated in Ukraine, both Russia and Ukraine have accused each other of shelling Europe's largest nuclear power plant.
- **Sabotage of Nord Stream pipeline-** It is a network of offshore natural gas pipelines that run under the [Baltic Sea from Russia to Germany](#).
- The [sabotage](#) was widely blamed on Ukrainian nationalists, who claimed responsibility for the attack.
- **Kerch Strait bridge-** It was seen as a symbol of Russia's control over Crimea, it was damaged by a large explosion which caused parts of Road Bridge to collapse but Ukraine denied any involvement.
- **Ukraine gains-** Ukraine launched its 1st counter-offensive attack against Russian invasion focusing on Kharkiv region.
- Ukraine managed to regain some grounds in [Kharkiv](#) and recaptured [Kerson](#), a strategic city in Black Sea coast.
- **The Battle of Bakhmut-** It is a city in the [Donetsk region](#), it resulted in more number of casualties on both sides.
- **Wagner group rebellion-** In 2023, Ukraine launched a counteroffensive operation but faced a challenge from Wagner group, a Russian-backed private military company that had been fighting in Ukraine since 2014.
- **Adviivka-** Recently Russia captured the town Avdiivka, near Donetsk which was the largest territorial gain for Russia.

Ukraine has recaptured 54% of occupied territory, while Russia still occupies 18% of the country.

What is the current status of war?

- **Ukrainian resistance-** Despite initial predictions of a quick Russian victory, Ukraine has managed to hold its ground and repel Russian attacks.
- **Russia's advantage-** It has an edge over Ukraine in terms of military strength, resources and diplomacy. Russia has weathered the Western sanctions and maintained its economic growth and energy exports.
- **War of attrition-** War of attrition is a prolonged period of conflict during which each side seeks to gradually wear down the other by a series of small-scale actions.

- Russia has adapted this strategy using hybrid warfare, cyberattacks, and propaganda.
- **Reduced fund from US-** [Israel Palestine conflict](#) has reduced media attention for Ukraine. US, as the main supporter of Ukraine and a key ally of Israel, has faced a dilemma of how to balance its involvement in both conflicts which would reduce funding from US to Ukraine.
- **Decline of Europe economy-** The European countries is witnessing economic decline, this would reduce the support for the Ukraine war.

What are the impacts of the war?

- **Humanitarian crisis-** As per UN 6.5 million civilians are internally displaced and 4 million have forced to flee to neighbouring countries.
- **Geopolitical change-** The war has challenged the transatlantic system, UN and it also challenged the security and stability of Europe.
- **Impact on bilateral relations-** It has affected the relations between Russia and other countries such as China, India, Turkey and Iran.
- **Impact on economy-** The war has disrupted the global supply chains of energy, agriculture, and manufacturing, leading to higher prices and shortages in some regions.
- **Strengthening of NATO-** Due to Russia’s actions, new countries like Finland and Sweden have joined NATO.

Impact of War on India	Impact of War on China
<ul style="list-style-type: none"> • Balanced position- India has refused to join the Western sanctions on Russia, it also expressed its support for Ukraine's sovereignty and, and has provided humanitarian assistance. • Operation Ganga - India launched a massive evacuation operation to bring back its citizens from the conflict zones of Ukraine. • India’s oil imports - India has continued to buy Russian oil despite the war and the Western sanctions, taking advantage of the low prices and the availability. • Diversification of imports - India has diversified its source of oil imports from Middle East, Africa and US. 	<ul style="list-style-type: none"> • Bilateral trade- China has become Russia's largest trading partner, while Russia has become China's main source of oil and gas. • Strong relationship- China and Russia have supported each other on various global issues, such as the war in Ukraine, the conflict in Syria, the nuclear deal with Iran, and the situation in North Korea. • Common adversary- Both Russia and China perceived US as a threat to their interests and security. • China hopes that the US focus on Ukraine and West Asia would reduce its attention in Indo-Pacific region.

What lies ahead?

- Russia does not aim to conquer all of Ukraine, but rather to achieve its strategic and political objectives, such as weakening Ukraine’s sovereignty, securing its military and economic interests, and challenging the US and NATO influence in the region.
- Ukraine has defended its territory and sovereignty, but has faced difficulties and uncertainties in securing sufficient and continued support from the West.
- Ukraine wants to restore its borders and integrity, while Russia wants to keep its occupied territories and ensure Ukraine’s neutrality.

G.S PAPER I

2. GEOGRAPHY

2.1 Atmospheric Rivers

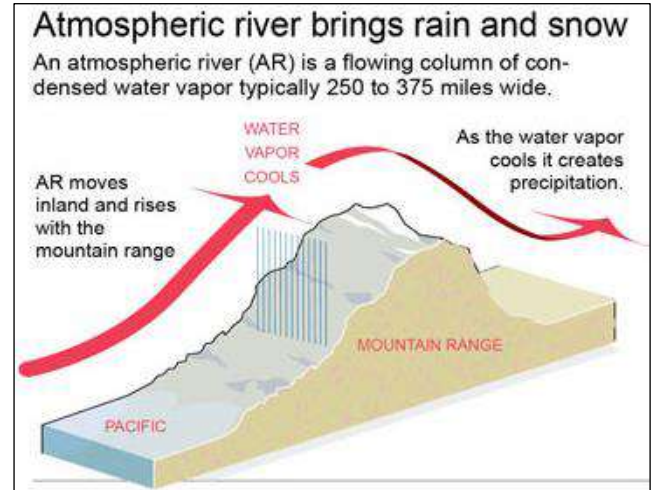
Why in news?

Recently atmospheric river has put millions at risk in California.

What is an atmospheric river?

- A relatively narrow plume of moisture that forms over an ocean and can produce intense rainfall or snowfall when it reaches land.

- **Concentrated water vapour**-It produce intense rainfall or snowfall when it encounters mountains or local atmospheric dynamics.
- **River in the sky**- Atmospheric River is the weather phenomenon can produce torrential amounts of rain.
- **Occurrence**- It occur all over the world, most commonly in the mid-latitudes, they can be over 1,600 kilometres long.
- **Formation**- They form when large-scale weather patterns align to create narrow channels, or filaments, of intense moisture transport.
- These start over **warm water**, typically tropical oceans, and are guided toward the coast by low-level jet streams ahead of cold fronts of extratropical cyclones.
- **Pineapple Express**- It is a type of atmospheric river that originates near Hawaii and brings warm and moist air to the US West Coast, especially California.
- **Pacific Ocean** - Along US West Coast the Pacific Ocean serves as the reservoir of moisture for the storm, and the mountain ranges act as barriers, which is why the western sides of the coastal ranges and Sierra Nevada see so much rain and snow.
- **Atmospheric River (AR) families**- It is caused by Madden-Julian Oscillation which results in consecutive atmospheric rivers that can lead to significant flooding.



What causes atmospheric river?

- **Warm tropical air masses**- In tropical regions, warm temperatures cause ocean water to evaporate and rise into the atmosphere. Strong winds then help carry this water vapour through the atmosphere.
- **Cold air masses**- When cold air masses interact with warm, moist air, they create a high concentration of moisture in the atmosphere.
- This moisture-laden air becomes part of the atmospheric river.
- **Orographic conditions**- They occur when air is lifted over geographic features such as mountain ranges. Atmospheric rivers often form along the boundaries between large areas of divergent surface air flow, including some frontal zones associated with extratropical cyclones over oceans.
- These orographic features enhance water vapour transport and contribute to the narrow bands of enhanced moisture characteristic of atmospheric rivers.
- **Precipitation** - Atmospheric River can carry an immense amount of water vapour, when this moisture-laden air encounters topographical features, it leads to significant precipitation.
- **Climate change**- As global temperatures rise, atmospheric rivers are expected to become more intense, frequent and variable, leading to more extreme precipitation events and seasonal shifts.
- **Madden-Julian oscillation**- It is an eastward moving disturbance of clouds, rainfall, winds, and pressure that traverses the planet in the tropics and returns to its initial starting point in 30 to 60 days, on average.

On average, atmospheric rivers have about twice the regular flow of the Amazon River.

An active MJO shift occurred during the early 2023 events, tilting the odds toward increased atmospheric river activity over California.

What are the impacts of atmospheric river?

Positive impact	Negative impact
<ul style="list-style-type: none"> • Water supply enhancement- It serve as essential contributors to water supply in drought prone-areas like California. They bring substantial moisture replenishing reservoirs, rivers and groundwater. 	<ul style="list-style-type: none"> • Extreme Flooding- This can lead to extreme flooding, disrupting travel, causing mudslides, and posing a threat to life and property
<ul style="list-style-type: none"> • Quenching wildfires- Intense rainfall reduces fire risk by saturating the landscape and providing much-needed moisture. 	<ul style="list-style-type: none"> • Debris flows- When atmospheric rivers combine with saturated soil, they can trigger debris flows. These fast-moving mixtures of water, mud, and debris can be highly destructive.

<ul style="list-style-type: none"> • Snowpack accumulation- The moisture they bring falls as snow at higher elevations, which gradually melts and feeds rivers during spring and summer. 	<ul style="list-style-type: none"> • Economic impact- They cause an average of 1.1 billion dollars in flood damages yearly in western US.
<ul style="list-style-type: none"> • End droughts- When an atmospheric river delivers substantial precipitation it can end prolonged droughts, these events play crucial role in maintaining ecological balance and sustaining ecosystems. 	<ul style="list-style-type: none"> • Disrupt normal life- Flooded roads, power outages, and property damage impact communities

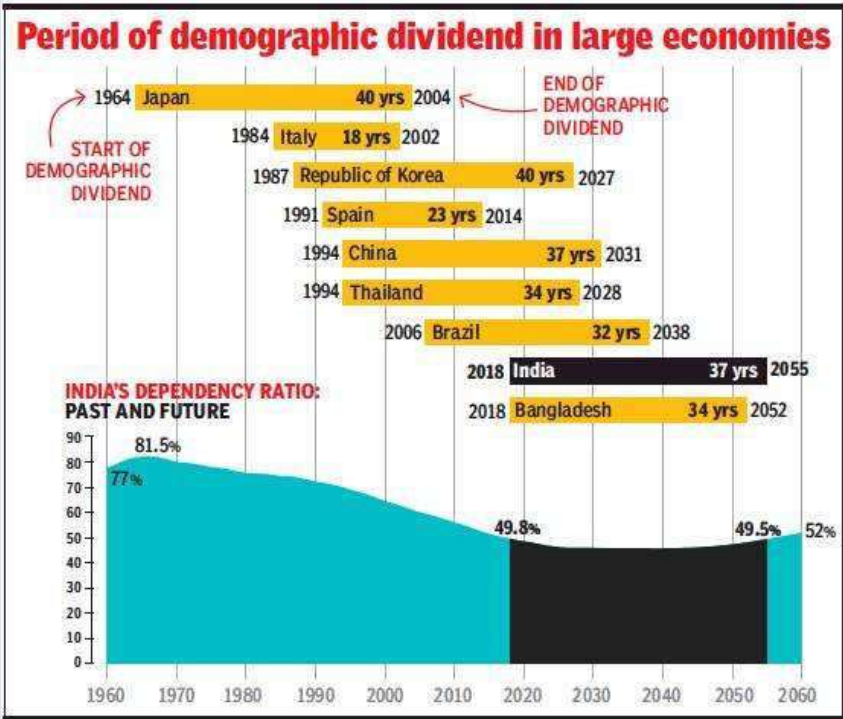
2.2 India's Demographic Dividend

Why in news?

[Interim budget](#) announced the formation of "high-powered committee to study India's population growth.

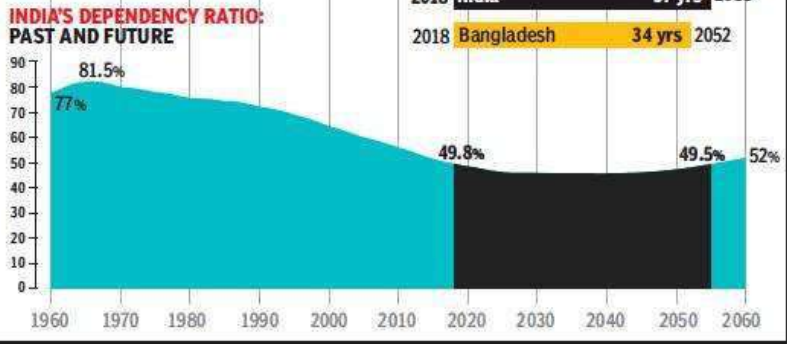
Status of India's demographic dividend

- Demographic dividend, as defined by the United Nations Population Fund (UNFPA), is "the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older)".
- In 2022, India's population stood at 1.417 billion, surpassing China's 1.412 billion, making India the most populous country in the world.
- According to the latest projections by the United Nations, India's population is expected to reach 1.46 billion by 2030, comprising 17% of the world's projected population.
- India's population growth and fertility have declined since the 1970s, this is reflected in the Total Fertility Rate which has been instrumental in shaping India's demographic trajectory.
- India's TFR will drop to 1.73 by 2035, leading to a demographic transition with more working-age people and fewer children.
- As per *Economic Survey 2018-19*, India's demographic dividend age will peak around 2041, when the population of working age (those aged 20 to 59 years) will reach 59%.



Period of demographic dividend in large economies

Country	Start Year	Duration (yrs)	End Year
Japan	1964	40 yrs	2004
Italy	1984	18 yrs	2002
Republic of Korea	1987	40 yrs	2027
Spain	1991	23 yrs	2014
China	1994	37 yrs	2031
Thailand	1994	34 yrs	2028
Brazil	2006	32 yrs	2038
India	2018	37 yrs	2055
Bangladesh	2018	34 yrs	2052



INDIA'S DEPENDENCY RATIO: PAST AND FUTURE

Year	Dependency Ratio (%)
1960	81.5%
1970	77%
2020	49.8%
2030	49.5%
2050	49.5%
2060	52%

What is population growth committee?

- **Mandate**- To study India's population growth to ensure that the nation is on target to meet the Viksit Bharat goal by 2047.
- **Role**- To examine the "challenges arising from fast population growth and demographic changes.
- **Address issues**- It will focus on issues such as family planning, maternal and child health, education, employment, and socio-economic development.
- **Interdisciplinary approach**- The committee will draw expertise from fields such as demography, public health, economics, sociology, and governance.

The term 'Viksit Bharat' means 'Developed India'. Viksit Bharat 2047 represents the government's vision to transform the country into a developed entity by its 100th independence in 2047.

What the population committee should consider?

- **Modernize data infrastructure-** It includes establishing robust systems for data collection, management and analysis, need to upgrade data collection methods to ensure data security and privacy.
- **Data reliability-** Independent audits, data validation exercises, and peer review processes can help identify and rectify data errors and inconsistencies.
- **Open data initiatives-** It can facilitate access to population data for researchers, policymakers, and the public, making population data freely available in standardised formats promotes data reuse, transparency, and accountability.
- **Multi-stakeholder approach-** It should collaborate with various stakeholders, including government agencies, non-governmental organisations, civil society groups etc., to fostering partnerships and enable collective action to carry out population-related policies and programmes at the national and grass-root levels.
- **Awareness generation-** The committee should empower individuals and communities with accurate information and resources, this would promote responsible family planning practices and improve health outcomes.
- **International cooperation-** The population committee should also facilitate international collaboration with UN Population Division, World Bank etc., for the exchange of best practices in population management.

How India can leverage its demographic dividend?

- **Invest in human capital-** To maximise the benefits of a favourable age distribution, India must invest in greater development of its human capital.
- **Increase fund in health-** India requires concerted efforts to ensure access to essential commodities, nutrition programmes targeting vulnerable populations, and interventions to improve water availability and sanitation.
- **Employment generation-** It is essential to absorb India's large and young workforce, this would reduce poverty and inequality.
- **Formalisation of workforce-** India needs to integrate the informal sector which accounts for about 90% of India's employment with formal sector, this would improve productivity, wages and social protection for millions of workforce.
- **Skill upgradation-** To ensure that the growing proportion of middle-aged workers can keep up with the changing demands of an increasingly technologically driven economy, we must invest in continued skill upgradation and on-the-job training above and beyond formal education.
- **Focus on dependency burden-** Rising retirement age, enhanced old age pension schemes, and increased ability to sell land or homes this will increase the ability of older population to be self-sustaining.
- **Gender equality-** Female labour force should be empowered as they face issues such as social norms, discrimination and lack of education and skills.

Human capital - The intangible collective resources possessed by individuals and groups within a given population.

Dependency burden - Number of individuals ages 15-59 supporting children under 15 and older population above 60, will vary dramatically between states.

What lies ahead?

- India can realise its demographic potential by adopting a holistic approach to population management, prioritising investments in health, education, employment and statistical systems.
- India can navigate its demographic transition to emerge as a global leader in inclusive and sustainable development with strategic planning, effective implementation and international collaboration

3. SOCIAL ISSUES

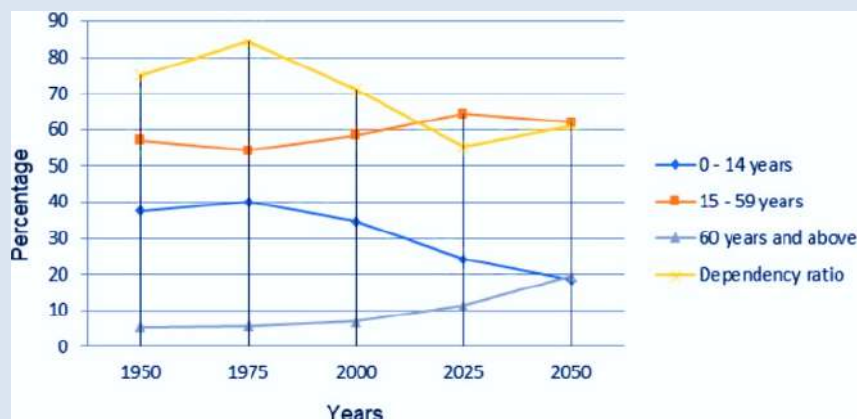
3.1 NITI Aayog report on Senior Care Reforms

Why in news?

Niti Aayog recently released a report titled "Senior Care Reforms in India - Reimagining the Senior Care Paradigm: A Position Paper".

Status of elderly population in India

- Senior citizens, i.e. people aged 60 years and above, currently comprise a little over 10% of the population, translating to about 104 million.
- The *United Nations Population Fund (UNFPA)* projects that elderly population will make up 158 million people by 2025, it is the one that is ageing at the fastest rate.
- By 2050, the elderly population in India would be *19.5% of the total population*.
- **Longitudinal Ageing Study of India (LASI) 2021**- It is released by Ministry of Health & Family Welfare, highlights that 75% of the elderly have one or more chronic diseases.
- The report highlights that 70% of the elderly population is dependent for everyday maintenance, and 78% is living without any pension cover



What are the challenges faced by the elder population?

Domain	Issues
Health inclusion	<ul style="list-style-type: none"> • Lack of a comprehensive and integrated package of services. • Infrastructure gap in elderly care and inadequate emergency response. • Shortage of skilled manpower. • Lack of evidence-backed geriatric diseases knowledge repository. • Insufficient focus on hygiene related issues.
Social inclusion	<ul style="list-style-type: none"> • Limited scope of social security nets. • Limited awareness regarding their rights and provisions available • Changing family structure and loss of social support. • Inadequate elderly-friendly infrastructure and R&D activities.
Economic inclusion	<ul style="list-style-type: none"> • Financial illiteracy leads to financial abuse and fraud. • Financial insecurity as elderly people are assumed to be 'less productive', pension and health facilities are inadequate. • Lack of universal and comprehensive financial systems for old age security. • Deficient support in lifetime financial planning.
Digital inclusion	<ul style="list-style-type: none"> • Digital illiteracy among seniors. • Insufficient access to digital goods. • Paucity of digital training modules for the elderly. • Unaffordable digital equipment and limited broadband connection.

What are the key recommendations suggested by Niti Aayog?

Health domain

- **Promote health literacy**- It should be done among seniors as well as their caregivers to enhance their understanding of geriatric health issues and related risks.
- **Strengthen health services**- The comprehensive primary healthcare services can be extended under Ayushman Bharat-Health and Wellness Centre initiative.

- **Enhance skilled workforce-** WHO Global Strategy on Human Resources for Health highlighted that investment in HRH can deliver a triple return of improved health outcomes, global health security, and economic growth.
- **Increase accessibility of services-** It can be done in terms of home health care, mental health services, Poshan Abhiyan for senior citizens etc.,
- **Institutional support-** A **national senior care centre** must be established to feed in continuous data for the formulation of evidence-based strategies and policies.

Social Inclusion

- **Awareness-** Efforts need to be made to sensitize the larger community on the needs and challenges experienced by the elderly, to facilitate their social inclusion.
- **Elder for the elderly model-** Establish peer support groups where seniors can exchange experiences and information about various issues.
- **Legal reforms-** Strengthen the existing Welfare and Maintenance Act to encompass the components of abuse, harassment, protection, maintenance, and other support specific to the elderly population
- **Elderly-friendly living/housing sector reforms-** A participative regulatory framework must be encouraged a single window portal must be established to expedite the execution of senior living projects.
- **A 'one stop' centralized portal-** A national portal for senior care must be developed for senior citizens to provide easy access of services to them.
- **Promoting care economy for senior care-** There is a need to recognize care work as well as care workers in the senior care sector by ensuring their rights, emoluments, and entitlements, especially for women, who continue to bear most of the burden of care activities.

Economic empowerment

- **Reskill elderly-** There is a need to take initiatives to foster age-friendly labour markets and employment opportunities.
- **Grey interns-** Work opportunities that can provide a platform for the elderly to use and utilize their experience and expertise in various sectors
- **Protection from financial fraud-** There is a need to increase awareness regarding different types of financial fraud that the elderly population may be more susceptible to using various means.
- **Promote silver economy-** An economy driven by goods & services demanded by the elderly.
- **Tax and GST reforms-** Reforms can be made in senior care products to increase the ease of adoption and safeguard the elderly population from the financial burden.
- **Mandatory savings plan-** A regulatory mechanism is required to set a *viable base rate for the interest* accrued on senior citizen deposits, giving a further concession to older women will contribute to their financial well-being.

Senior care Ageing Growth Engine (SAGE) program promotes silver economy by encouraging youth to come up with innovative ideas for senior care products.

Digital inclusion

- **Accessibility-** Improving access to digital devices for seniors by making them affordable through various means like senior discounts.
- **Digital literacy-** This can be done through targeted campaigns, workshops, self-help groups, and non-governmental organizations to improve digital adoption.
- **Harness technology-** Modern technologies like Artificial Intelligence, IoT, Big Data etc., can be used to take charge of routine procedures.

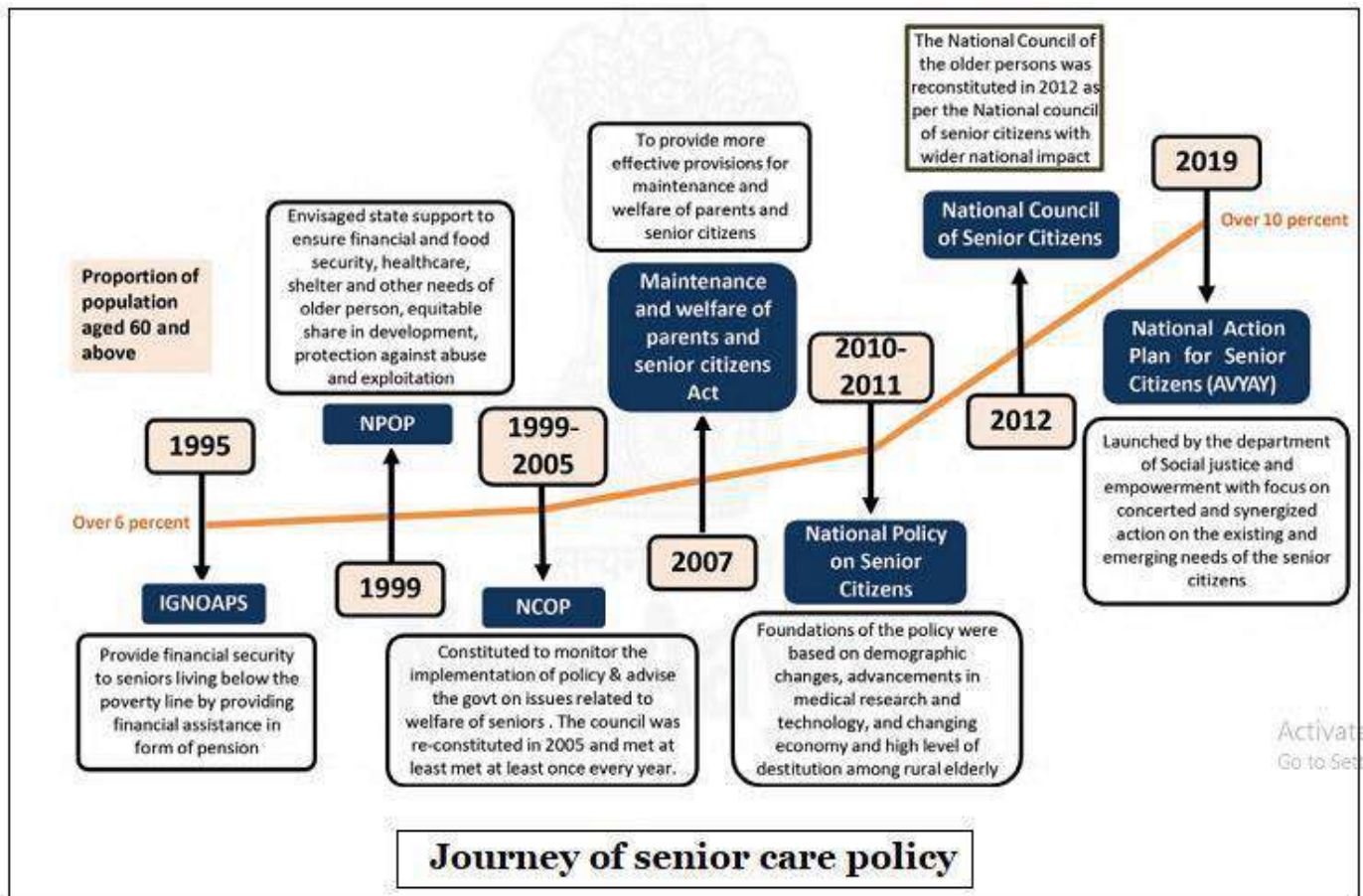
Private participation

- **Strengthening the PPP model for senior care-** The Public Private Partnership model could support the development of private infrastructure and enhance access to senior care facilities for all economic segments of seniors.
- **Channelizing CSR funds for elderly care-** Earmarking CSR funds as a contribution to national funds or for care provided to the non-affording category of seniors in their facilities in lieu of concessional land, utilities, tax rebates, etc.

- Hospital scheme under Maharashtra Public Trusts Rules 1951

- **Explore various sectors**- The private sector can explore avenues like elder care homes, mobile medical units, health camps, skill building program etc., through PPP model and CSR funds.

To know about initiatives taken by Ministry of Social Justice and Empowerment for elderly click [here](#)



3.2 Women in Indian Armed Forces

Why in news?

Recently Supreme Court tells Centre to grant permanent commission to women officers in Indian Coast Guard.

How the women military officers are recruited in Indian army?

- **Permanent commission**- In the Indian Army it means a career until the age of retirement.
- **Short Service Commission**- The jobs are for a few years, a few officers get to opt for permanent commissions based on available vacancies.
- **1992**- For the first time women officers were inducted in the Indian army.
- **Tenure**- They were commissioned for 5 year periods in certain streams like the Army Education Corps and the Corps of Engineers.

Armed forces	% of women in armed forces
Indian Army	0.56%
Indian Air Force	1.08%
Indian Navy	6.5%

- **Women Special Entry Scheme (WSES)** - It had shorter pre-commission training periods than those stipulated for men commissioned under the SSC scheme.
- **Men**- They could be commissioned for 10 year periods, which could be extended up to 14 years.
- **SSC scheme for women**- In 2006, WSES scheme was replaced by the SSC scheme for women.
- Existing WSES officers were given the option to move to the new scheme.
- **Limited options**- Infantry and armoured corps were not open to women.

Key aspects	Permanent Commission	Short Service Commission
About	A long-term career option until retirement age.	A temporary commission for a specific duration (usually 10-14 years).
Tenure	Officers serve until they reach the age of superannuation (usually around 54-58 years).	Officers serve for a fixed term and have the option to extend their service.
Availability	Available to both men and women.	Initially, SSC was not open to women, but this changed over time.
Stream options	Officers can choose from various streams based on their qualifications and preferences.	SSC officers are usually recruited for specific roles or projects.
Pension	Eligible for pension after retirement	No pension after retirement, but they receive other benefits during service.

What is the judiciary’s ruling for women in armed forces?

- **Formation of permanent commission**-The court justified the women's right to seek a Permanent Commission (PC) or a full-length career, bringing them on par with their male counterparts in various streams of the Army.
- **Centre’s stand**- The Centre argued that Article 33 of the Constitution allows fundamental rights to be restricted when it comes to the armed forces.
- It also argued that there were “dangers involved in serving in the army” and adverse service conditions including “absence of privacy in field and insurgency areas, maternity issues and child care”.
- The Supreme Court, in its ruling, emphasized the need for a change in attitudes and mindsets even 70 years after India's independence, recognizing the commitment to constitutional values.
- **Number 5 selection board**- It was constituted in 2020 by Army to induct all eligible female officers as permanent commission officers, it includes a women officer in the rank of brigadier.
- **Ex-servicemen status**- There were issues regarding the denial of ex-servicemen status to military nurses, potentially affecting their re-employment opportunities in civil services.
- Recently, a division bench of the Punjab and Haryana High Court ruled that Military Nursing Service (MNS) officers cannot be denied ex-servicemen status under the Punjab Recruitment of Ex-Servicemen Rules, 1982.
- Former permanent commissioned officer Lt. Selina John, of the Military Nursing Service, was released from employment in 1988 on grounds of her marriage.
- MNS is an integral part of the Armed Forces Medical Services (AFMS), which includes the Army Medical Corps (AMC) and Army Dental Corps (ADC).
- AFMS personnel serve in India’s medical establishments and its officers have played a role in United Nations peacekeeping missions abroad.
- John approached the Armed Forces Tribunal, Lucknow, which called the termination “illegal” and directed her reinstatement with back wages.
- However, the Central government then moved the SC to challenge this order
- **Union of India & Others vs. Ex. Lt. Selina John** -Recently the Supreme Court has directed the Ministry of Defence to pay Rs 60 lakh in compensation stating that her termination was a "coarse case of gender discrimination and inequality."
- **Permanent commission for women officers in ICG** - The Supreme Court has asked the Centre to ensure that eligible women officers get permanent commission in the Indian Coast Guard.
- It said that women cannot be left out and if the government does not do it, the court will do it.

Prior, only male SSC officers could opt for permanent commission after 10 years of service, depriving women officers of government pension, which is granted after 20 years of service.

The Indian Air Force was first among the three services to grant PC to SSC women officers.

G.S PAPER II

4. INDIAN POLITY

4.1 Issues in Judiciary

Why in news?

The Chief Justice of India highlighted issues in legal profession while addressing [diamond jubilee celebration](#) of Supreme Court.

What are the issues in the judiciary and how it can be addressed?

Key issues	About	Possible solution
Adjournment culture	<ul style="list-style-type: none"> An adjournment refers to the court practice of delaying a scheduled hearing to a later date. Order XVII of the Civil Procedure Code, 1908- Provides rules for courts when faced with adjournment requests. The courts shall not grant an adjournment to a party <u>more than 3 times</u> during the hearing of a suit. 239th Law Commission Report (2012) stated that the heavy workload in the courts is taken advantage of by the advocates to press for adjournments. 	<ul style="list-style-type: none"> Courts should meticulously <u>record reasons</u> for granting adjournments beyond the next day and the exceptional circumstances should be documented. Judges and litigants must <u>strictly adhere</u> to the rules regarding adjournments. Courts should prioritize <u>timely disposal of cases</u>, discouraging unnecessary delays. Create <u>awareness</u> among litigants about the impact of adjournments on the justice system. <u>Training</u> judges and legal professionals on efficient case management. High courts must take <u>proactive steps</u> to prevent misuse of adjournments.
Oral arguments	<ul style="list-style-type: none"> In constitutional bench matters, the court will direct the parties to confer and <u>create a time schedule</u> for oral arguments. This is to ensure <u>efficiency</u> and so that arguments are not repeated by lawyers on the same side. In 2019, <u>Ayodhya title dispute</u> has been seen 60 times within the span of three months. 	<ul style="list-style-type: none"> Efforts should be made to <u>prevent oral arguments</u> from delaying judicial decisions. The lawyers must adhere to <u>proper time schedule</u> framework. Example- <u>EWS reservation</u> hearing was completed in 8 days. Adopt approach similar to that of <u>United States</u> where lawyers are instructed to strictly limit their arguments to 30 minutes a side. In 2009, the 230th Law Commission Report suggested limiting oral arguments to <u>1.5 hours</u>, unless the case involved constitutional interpretation or a complex question of law.
Court vacation	<ul style="list-style-type: none"> The Supreme Court has <u>193 working days</u> a year for its judicial functioning. The High Court's function for approximately <u>210 days</u>, and trial courts for <u>245 days</u>. In 2014, Supreme Court notified its new Rules, it said that the period of summer vacation <u>shall not exceed 7 weeks</u> from the earlier 10-week period. It is recommended in line with the <u>Malimath committee</u>. 	<ul style="list-style-type: none"> 230th Law Commission Report recommended that the vacations in the higher judiciary must be curtailed by <u>at least 10 to 15 days</u> and the court working hours should be extended by at least half an hour. A <u>flexi-time</u> for lawyers and judges can be considered. It is a practice where employees are allowed to choose their daily working hours so long as they work for a set total number of hours in a given period. The High Court judges can take turns going on vacation as recommended by 133rd report of Parliamentary Standing Committee.

First generation lawyers	<ul style="list-style-type: none"> • There is a need to provide a level-playing field for first-generation lawyers and those from marginalised segments who have the “will to work” and “potential to succeed”. • Financial burdens can significantly impact career choices for first-generation lawyers. • Many young first-generation lawyers grapple with imposter syndrome—feeling inadequate or like they don’t belong. 	<ul style="list-style-type: none"> • The SC Annual Report took note of the Supreme Court Advocates-on-Record Association’s (SCAORA) efforts to facilitate more diversity in the legal profession. • This included providing better facilities for women lawyers, giving more “weightage” to first-generation lawyers when designating Senior Advocates. • It also includes allowing lawyers to appear via video conference on all working days so that first-generation lawyers and women lawyers with young children can appear with fewer obstacles.
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4.2 Competition Commission of India

Why in news?

As India marks 75 years of independence, Competition Commission of India reaffirms its commitment to steering India's economic journey towards a future that is competitive, inclusive, and resilient.

What is Competition Commission of India (CCI)?

CCI is the chief national competition regulator in India.

- **Established** - 2003
- **Ministry**- Ministry of Corporate Affairs
- **Statutory body**- CCI has been established to enforce the competition law under **Competition Act 2002**.
- **Aim**- To establish a competitive environment in the Indian economy by engaging with all stakeholders, the government, and international jurisdiction
- **Raghavan committee**- Based on the recommendations the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the Competition Act, 2002.
- **Competition (Amendment) Act 2009**- The Competition Appellate Tribunal have been established.
- **Competition Appellate Tribunal**- It is the judicial body that hears and decides appeals against the orders of the CCI.
- **Appellate mechanism**- The government of India replaced Competition Appellate Tribunal (COMPAT) with the National Company Law Appellate Tribunal (NCLAT) in 2017.
- **Composition**- CCI consists of a Chairperson and not more than 6 Members.
- **Appointment**- It is made by the Central Government.

What is the role of Competition Commission of India?

- **Vision**- To promote and sustain an enabling competition culture through engagement and enforcement that would inspire businesses to be fair, competitive and innovative; enhance consumer welfare; and support economic growth.
- **Mission**- CCI aims to establish a robust competitive environment through
 1. Proactive engagement with all stakeholders, including consumers, industry, government and international jurisdictions.
 2. Being a knowledge intensive organization with high competence level.
 3. Professionalism, transparency, resolve and wisdom in enforcement.
- **Enforcement actions**- They are taken to address potential anti-competitive practices by issuing suitable punitive and remedial solutions.
- **Advocacy measures**- They are undertaken with the stakeholders to foster a culture of competition in the markets and to nudge market participants towards competition compliance.
- **Quasi-judicial body**- It has been entrusted with implementation of law, has always believed in complementing robust enforcement with facilitative advocacy.

- **Promote market freedom-** CCI ensures that no business exploits its 'dominant position' in a market by controlling supply, manipulating purchasing prices, or engaging in tactics preventing other businesses from entering the market.
- **Competition regulator-** CCI is an antitrust watchdog for smaller companies that cannot protect themselves against major enterprises.
- **Business facilitator-** To encourage market participants to engage in fair and constructive competition.
- **Issue warnings-** CCI has the right to issue warnings to companies that export to India if it believes they are distorting competition in India's home market.
- **Provide opinion-** CCI gives opinion on competition concerns in response to a referral from a statutory authority formed under any law and to engage in competition advocacy, raise public awareness, and provide competition training.
- **Collaboration-** CCI ensure communication and collaboration with other economic and regulatory bodies, ensuring that sectoral regulatory legislation and competition laws are in sync.

Key provisions Competition Commission Act 2002

- **Objective-** To remove all impediments to competition among strong groups, whether they be private or public.
- **Anti-agreements-** No individual or business shall engage in production, transmission, or supply in a way that would harm competition in India.
- **Abuse of dominating position-** It will get deemed an abuse of dominant position if an enterprise or an associated individual is engaging in unfair or discriminatory acts.
- **Combinations-** It is described as terms that lead to acquisitions or mergers, CCI will investigate the parties involved if such combinations breach the Act's restrictions.
- **Consumer Protection Councils-** To establish the councils at the National level, State level, and District level.
- **Gun jumping-** If the combining parties close a notified transaction before the approval, or have consummated a reportable transaction without bringing it to the Commission's knowledge, it is seen as gun-jumping.
- **Penalty-** The penalty for gun-jumping was a total of 1% of the asset or turnover.
- **Cartel-** It includes an association of producers, sellers, distributors, traders or service providers who, by agreement amongst themselves, limit, control or attempt to control the production, distribution, sale or price of, or, trade in goods or provision of service.
- **Cartelisation-** It is one of the horizontal agreements that shall be presumed to have appreciable adverse effect on competition.

To know about Competition (Amendment) Bill 2022 click [here](#)

What are the landmark judgements?

- **Google Inc. vs CCI-** Google has been accused of abusing its dominant position in the internet advertising industry by promoting its vertical search services such as Youtube, Google News, Google Maps etc.,
- Delhi High Court ruled that CCI can recall or review its order to investigate Google, but only under specific conditions and not in every case.
- **Steel manufacturers case-** Steel manufacturers faced a complaint from the Engineering Export Promotion Council of India for increasing the steel prices in India more than the rest of the world.
- The CCI had to decide whether to apply the Competition Act or the previous Monopolies and Restrictive Trade Practices Act, which was replaced by the Competition Act in 2002.
- **Faridabad Industries Association vs M/s Adani Gas Limited (AGL) -** The CCI found that AGL was violating the Competition Act and ordered it to stop unfair practices and modify the Gas Supply Agreements.

4.3 All About Delimitation

Why in news?

The delimitation of constituencies for the Lok Sabha and State Legislative Assemblies is to be carried out on the basis of the first Census after 2026.

What is delimitation?

- It is the act of redrawing boundaries of Lok Sabha and state Assembly seats to represent changes in population.
- Delimitation means the process of fixing the number of seats and boundaries of territorial constituencies in each State for the Lok Sabha and Legislative assemblies.
- **Objective-** To provide equal representation to equal segments of a population.
- **Constitutional provisions-** *Article 82 and 170* of the Constitution provide that the number of seats in the Lok Sabha and State Legislative assemblies as well as its division into territorial constituencies shall be readjusted after each Census.
- **Delimitation Commission-** Set up under an act of Parliament which performs the delimitation processes.
- Such an exercise was carried out after the 1951, 1961 and 1971 Census.
- **Exemption-** Several States such as Assam, Arunachal Pradesh, Nagaland and Manipur are left out from the exercise due to “security risks.”

What is delimitation commission?

- **Delimitation exercise-** It is carried out by an independent Delimitation Commission, appointed by the Government of India under provisions of the Delimitation Commission Act.
- **Article 82-** It provides for Parliament to readjust, after completion of each census, seats allocated to the House of the People to the States and division of each State into territorial constituencies.
- **Appointment-** By the President of India.
- **Election Commission-** Delimitation Commission works in collaboration with the ECI.
- **Composition-** It is composed of
 1. A retired Supreme Court judge,
 2. Chief Election Commissioner of India and
 3. Respective State Election Commissioners.
- **Independence-** Delimitation Commission is to work without any executive influence.
- **Bar on court-** The Constitution mandates that the Commission’s orders are final and cannot be questioned before any court as it would hold up an election indefinitely.
- **Role-** It determines the number and boundaries of constituencies in a way that the population of all seats, so far as practicable, is the same.
- **Reserved seats-** The Commission is also tasked with identifying seats reserved for Scheduled Castes and Scheduled Tribes.
- **Public feedback-** The draft proposals are published for public opinions by holding public sittings, after hearing the public it considers objections and suggestions and carries out changes.
- **Final order-** It is published in the Gazette of India and the concerned State Gazette, it comes into force on a date specifies by the President.

Article 81 of the Constitution defines the composition of the Lok Sabha and mandates that the composition should represent changes in population.

Why is Delimitation pending since 1976?

- **1971 Census-** The seats are frozen as per the 1971 Census in order to encourage population control measures so that States with higher population growth do not end up having higher number of seats.
- **42nd Amendment Act, 1976-** It froze the number of Lok Sabha seats and put off delimitation for 25 years until the 2001 Census under Article 82.
- **84th Amendment Act, 2001-** Extended the deadline for delimitation to 2026, hence the population based on which the number of seats is allocated refers to the population as per 1971 Census.
- **Uniformity-** This was justified on the ground that a uniform population growth rate would be achieved throughout the country by 2026.
- **Readjustment-** The boundaries of territorial constituencies were readjusted (without changing the number of seats) and seats for SC and ST were determined as per the 2001 Census and will again be carried out after 2026.

The 1st Census after 2026 will be the Census in 2031.

What are the issues?

- **Population explosion**- During the last five decades the population has been high in some States like Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan.
- **Population control measure**- States like Kerala, Tamil Nadu, Karnataka and Andhra Pradesh have shown positive population control measure.
- **Lack of representation**- Smaller northern States such as Punjab, Himachal Pradesh and Uttarakhand and north-eastern States may be at disadvantage compared to large northern States like Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan in terms of representation.
- **Concern of federal principles**- It contradicts the federal principles of the country, which emphasizes equitable representation across regions.
- **Contradicts freezing seats philosophy**- The seats were frozen to stabilize population, States that have been more successful in controlling their population may lose out on their political significance due to this approach.

International practices

- **United States**- It follows an *equal proportion method*, it ensures that there is no significant gain or loss for any State during reapportionment.
- **European Union** - Employs *degressive proportionality* to allocate seats based on population size.

What lies ahead?

- **Fix Lok Sabha seats**- The role of Member of Parliament (MP) is to legislate on Union List like defence, railways etc., and hold the Central government accountable.
- Majority of the schemes of the Centre are implemented only by the State government, hence the number of MPs in Lok Sabha may be capped at the present 543 which would uphold the *federal principle*.
- **Balance democratic representation**- The number of MLAs in each State may be increased in line with the current population without changing the number of Rajya Sabha seats.
- **Empower local bodies**- It is the most important reform for strengthening democracy is to empower local bodies of panchayats and municipalities who engage with the citizens on a day-to-day basis.
- The devolution of power and finances to these bodies must be significantly increased to strengthen democracy at grass root levels.

4.4 Uttarakhand Uniform Civil Code

Why in news?

The Uttarakhand government tabled the Uniform Civil Code (UCC) 2024 Bill in the Assembly.

Uniform Civil Code

- It seeks to create a uniform set of laws to replace the distinct personal laws of every religion pertaining to subjects such as marriage, divorce, adoption, and inheritance.
- It is defined in **Article 44** as part of the Directive Principles of State Policy (DPSP), in part of Part IV of the Constitution – “The State shall endeavour to secure for the citizens a [uniform civil code](#) throughout the territory of India”.
- **Aim**- To replace the existing diverse personal laws that vary based on religious affiliations
- **Minerva Mills vs Union of India, 1980**- The Court ruled that striking a balance between fundamental rights and Directive Principles of State Policy was part of the [basic structure of the Constitution](#).
- **Shah Bano Begum case, 1985**- The Court observed that “it is a matter of regret that Article 44 has remained a dead letter” and called for its implementation.
- **Goa**- It is the *only state in India* that has a uniform civil code regardless of religion, gender and caste. It inherited the Portuguese Civil Code, 1867 even after it joined the Indian Union in 1961.
- **Jose Paulo Coutinho case, 2019**- The Court hailed Goa as a shining example where the UCC is applicable to all, regardless of religion except while protecting certain limited rights and urged for its pan-India implementation.

Although the UCC is desirable, it should remain “purely voluntary” during the initial stages. The provision is merely recommendatory and should not be imposed upon all citizens.

- Dr. B.R. Ambedkar



What is Uttarakhand Uniform Civil Code?

- **State appointed Committee-** It is led by retired Supreme Court judge Justice Ranjana P Desai to examine ways and submit draft for the implementation of a UCC.
- **Application-** It is applicable to residents of the state, but only to those who identify within the binary genders of male and female who are in heterosexual relationships, thus leaving most LGBT persons outside its ambit.
- **Secular laws-** The Code borrows significantly from laws such as The Special Marriage Act, 1954, and The Indian Succession Act, 1925, and repeals all family laws — secular, personal, and customary — to the extent that they are inconsistent with it.
- **Objective-** To establish a legal structure that ensures consistency in marriage, divorce, land, property, and inheritance laws for all citizens within the state, irrespective of their religion.

If passed by the Assembly, Uttarakhand will be the 1st State in India to implement UCC after Independence.

Key provisions	About
Exemptions	<ul style="list-style-type: none"> • The tribal communities which comprise 2.9% of Uttarakhand's population have been exempted from the application of the Bill.
Live in relationship	<ul style="list-style-type: none"> • It has been defined as a “relationship between a man and a woman who cohabit in a shared household through a relationship in the nature of marriage.”
Registration of live in relationships	<ul style="list-style-type: none"> • It requires compulsory registration of live-in relationships through a “statement of live-in relationship”. • It may be terminated by either of the parties to the live-in relationship by submitting a “statement of termination”. • A woman is also eligible to claim maintenance in case she is “deserted” by her live-in partner.
Penalty for non-registration of live in relationship	<ul style="list-style-type: none"> • The couples will be served a notice following which criminal prosecution can be initiated against them. • All live-in relationships must be registered within a month or else both partners are liable to Rs 25,000 fine and/or 6 months in jail.
Legal recognition of children born out of wedlock	<ul style="list-style-type: none"> • The Bill abolishes the concept of “illegitimate children”. • It extends legal recognition to children born in void and voidable marriages, as well as children born in live-in relationships.
Legal equality of children	<ul style="list-style-type: none"> • The Code treats adopted, born through surrogacy, or born through assisted reproductive technology on an equal footing with other biological children
Legal age for marriage	<ul style="list-style-type: none"> • The minimum age of marriage to 18 and 21 for Muslim women and men, in line with the Hindu Marriage Act, 1955 and the Special Marriage Act, 1954.
Registration of marriages	<ul style="list-style-type: none"> • Marriages that occur after the enactment of the Bill have to be compulsorily registered regardless of any other existing laws or customs. • The registration will have to be done within 60 days from the date of the marriage. • No marriage can be dissolved without a court order or else it can attract imprisonment up to 3 years.
Divorce proceedings	<ul style="list-style-type: none"> • Men and women have been accorded similar rights with respect to divorce. • Grounds for divorce- Adultery, cruelty, desertion, conversion to another religion, mental disorder, incurable venereal disease, renunciation of the world, absence for 7 years, bigamy and failure to comply with maintenance orders. • In case of divorce, the custody of a child up to 5 years of age remains with the mother.

Voidable marriages	<ul style="list-style-type: none"> It can be annulled on grounds such as non-consummation, contravention of marriage conditions, force or coercion in obtaining consent, or pregnancy by someone other than the spouse.
Special rights to women to seek divorce	<ul style="list-style-type: none"> If the husband has been found guilty of rape or any kind of unnatural sexual offence or If the husband has more than one wife.
Criminalisation grounds in marriage	<ul style="list-style-type: none"> Child marriage and marrying within prohibited degrees of relationship were criminalised. Dissolution of marriage through modes other than the judicial mode of divorce prescribed under the Code is punishable with imprisonment as well as fine. Compelling, abetting, or inducing any person to observe any condition for remarrying is also punishable with imprisonment up to 3 years.
Prohibition of bigamy or polygamy	<ul style="list-style-type: none"> The Bill says that neither party has the spouse living at the time of the marriage thus prohibiting bigamy or polygamy.
Degree of prohibited relationship	<ul style="list-style-type: none"> Two people are considered to be within the "degrees of prohibited relationship" if a common ancestry is shared or if they are the wife/husband of a common ancestor. This exception applies to those communities where an established custom allow marriage within the degree of prohibited relationship.
Inheritance rights	<ul style="list-style-type: none"> It ensures equal rights in property for both sons and daughters, regardless of their category.
Equal property rights after death	<ul style="list-style-type: none"> Following a person's demise, the bill grants equal property rights to the spouse and children. Additionally, equal rights extend to the deceased person's parents.

To know about Kerala's resolution on UCC click [here](#)

What are the cons of the bill?

- Non recognition of queer relationship-** The bill leaves out the members of **LGBTQIA+** community, it is a missed opportunity to follow through on the Supreme Court's decision in the [marriage equality verdict](#).
- Irretrievable breakdown of marriage-** It has not been included as the ground for divorce despite being recognised in several Supreme Court judgements.
- Division of matrimonial estate-** The court has the authority to decide how to divide matrimonial property, especially when it is not jointly owned.
- Against privacy-** The compulsory registration of live-in relationships infringes upon individual's freedom to choose not to marry, the state should not interfere in the private affairs of the consenting citizens.
- It is against the **Right to Privacy (Article 21)** which is recognised as fundamental right in the Puttaswamy ruling.

What lies ahead?

- Following the footsteps of Uttarakhand, two other States Madhya Pradesh and Gujarat have appointed committees to initiate the formulation of a UCC.
- AS UCC comes under DPSP, it is fundamental in the governance of the country and it shall be the duty of the State to apply these principles in making laws."

4.5 The Provision of bail in UAPA

Why in news?

Supreme Court denied bail to Gurwinder Singh an accused in an alleged "Khalistan module" as it doesn't find any place in the stringent anti-terror Unlawful Activities Prevention Act (UAPA).

What are the key provisions under UAPA?

Key aspect	About
Unlawful organisation	<ul style="list-style-type: none"> Any organization could now be termed as ‘unlawful’ by the government subject to <i>judicial review</i>.
Terrorist act	<ul style="list-style-type: none"> Any act done with the intention to threaten or likely to threaten the unity, integrity, security, economic security, or sovereignty of India or with intent to strike terror or likely to strike terror in the people or any section of the people in India or in any foreign country.
Terrorist gang	<ul style="list-style-type: none"> It empowered the authorities to investigate and arrest a group of people who are involved in unlawful activities and the central government can term them as ‘terrorist gang’.
Terrorist organization	<ul style="list-style-type: none"> It means an organization listed in the Schedule or an organization operating under the same name as an organization so listed.
Custody of accused	<ul style="list-style-type: none"> The accused could be taken into custody without a charge sheet, it could be extended to 180 days.
Grant of bail	<ul style="list-style-type: none"> Section 43D (5) states that the test for denying bail under the UAPA is that the court must be satisfied that a “prima facie” case exists against the accused.
Economic offence	<ul style="list-style-type: none"> To fulfil obligation under Financial Action Task Force, the government added offences that threaten the country’s economic security in the definition of ‘terrorist act’.
Individuals as terrorists	<ul style="list-style-type: none"> Unlawful Activities (Prevention) Act, 2019 allows the government to tag ‘individuals’ as terrorists as they are the one who carries out the terrorist act and not an organization.
Seizure of property	<ul style="list-style-type: none"> It empowers the Director-General of National Investigation Agency (NIA) to grant approval of seizure or attachment of property when the case is investigated by the agency.

UNLAWFUL ACTIVITIES PREVENTION ACT (UAPA)

The Act was enacted in 1967 to deal with matters of profound impact on the ‘Defence of India’ and to address threats to the very existence of our Nation



Permits keeping a person in prison for up to 180 days, without even filing a charge sheet.



Empowers the government to declare an organisation or an individual as “terrorist” and ban it.

An investigating officer needs prior approval of Director General of Police for seizure of properties.



Deprives the accused of the right to bail thus making them live under detention.



Investigation is done by officers of rank of Deputy Superintendent or ACP or above, & in case of NIA, the rank of Inspector or above.

How UAPA restricts bail?

- Public prosecutor hearing-** A person accused of an offense under specified chapters of the UAPA shall not be released on bail if in custody unless the Public Prosecutor has been given an opportunity of being heard on the application for such release.
- Court’s evaluation-** Even if the public prosecutor has been heard, the court is required to evaluate whether there are reasonable grounds to believe that the accusations are true based on an initial examination of the case diary or the police report.

- **Burden of proof-** The accused while seeking bail, must demonstrate to the court that it is unreasonable to believe that the accusations against them are true.

What is the stand of Supreme Court?

- **Watali case, 2019** - The courts should not examine the evidence in detail but rather accept it at face value. This approach is distinct from regular criminal trials where the defense has a broader scope to challenge evidence and present arguments.
- **Broad probabilities standard-** The role of the court in a UAPA bail hearing is to record a finding based on broad probabilities regarding the accused's involvement in the alleged offence.
- **Additional burden on accused-** The accused must satisfy the court that the alleged offence do not make out reasonable grounds for believing that the accusation against them is prima facie ("first sight") true.
- **Post Watali ruling-** It effectively closed the window, especially for trial courts, to look at the prosecution's case critically while granting bail.

Court's ruling on bail under UAPA case

- Delhi High Court granted bail to student activists, it emphasized that the prosecution must present specific factual allegations rather than relying on broad speculations and inferences.
- **Anand Teltumbde's Case-** Bombay High Court insisted on the prosecution demonstrating a nexus between the accused and the offense.
- **Union of India vs KA Najeeb, 2021-** It allowed bail considering the significant period of incarceration undergone by the accused.
- The decision acknowledged that bail under UAPA is an exception but should be balanced with the right to a speedy trial.
- **Gonsalves case, 2023-** It differed from Watali judgement and said that the courts must do a surface-analysis of the evidence and its worth before granting bail.
- **Gurwinder Singh case-** It relied on the Watali ruling entirely without considering the Gonsalves ruling.

What lies ahead?

- The *evolving nature* of legal interpretations in UAPA cases underscores the need for a balanced approach that considers both national security concerns and individual rights.
- Achieving *clarity and consistency* in legal principles is essential to uphold the *rule of law* and ensure fair and just outcomes in cases involving sensitive issues covered by the UAPA.

4.6 SC Verdict on Electoral Bonds

Why in news?











Recently in a landmark unanimous judgment, the Supreme Court struck down electoral bond scheme as "unconstitutional and manifestly arbitrary".

What is electoral bond scheme?

- **Launch year-** 2018
- **Aim-** To 'cleanse the system of political funding in the country' and make political donations transparent.
- **Promissory notes-** It is an Interest-free bearer bond or a money instruments that can be purchased by companies and individuals in India from authorised branches of the **State Bank of India (SBI)**.
- **Amendments-** The government brought in amendments to Acts to introduce the Electoral Bond Scheme via the Finance Act of 2016 and 2017.
- These acts are [Representation of the People Act, 1951](#), (RPA), the Companies Act, 2013, the Income Tax Act, 1961, and the [Foreign Contributions Regulation Act, 2010 \(FCRA\)](#), through the Finance Acts of 2016 and 2017.
- **Donor-** A person being an individual can buy Electoral Bonds through cheque/digital payment, *either singly or jointly* with other individuals by approaching the banks.
- **Eligibility criteria-** Eligible individuals, including Indian citizens and entities incorporated in the country, can procure these bonds from specified branches of the State Bank of India.

1. A Hindu Undivided Family (HUF)
 2. A company
 3. A firm
 4. An Association of Persons (AOP) or a Body of Individuals (BOI), whether incorporated or not
 5. Every other artificial juridical person
 6. Any office, agency or branch owned or controlled by an artificial judicial person
- **Condition-** These bonds are sold in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore.
 - They can be purchased through a KYC-compliant account to make donations to a political party.
 - The political parties have to encash them within a stipulated time.
 - **Anonymity-** The name and other information of the donor are *not entered* on the instrument and thus electoral bonds are said to be anonymous.
 - **Maximum limit-** There is *no cap* on the number of electoral bonds that a person or company can purchase.
 - **Taxation-** The donors *would receive a deduction* for their contributions, and the recipient political party would be eligible for tax exemption, contingent upon the filing of returns by the political party.
 - **Prior to the introduction of the scheme-**
 1. The political parties were required to make all donations above Rs 20,000 public, and
 2. No corporate company was allowed to make donations amounting to more than 10% of their total revenue.

To know more about electoral bond scheme click [here](#)

	<p>What are Electoral Bonds?</p> <ul style="list-style-type: none"> • A way to donate to Political Parties • Similar to demand draft, but solely for donation to political parties. • Bears name of the party that donor donates to, NOT name of donor 		<p>How to purchase EBs³:</p> <p>Bonds issued in multiples of ₹ 1000, 10000, 1 Lakh and 1 crore</p>
	<p>Who can buy EBs?</p> <ul style="list-style-type: none"> • Any Indian citizen • Any body incorporated in India i.e. All private, public, one-person companies based in India • Indian subsidiaries of foreign companies (but NOT foreign companies) 		<p>purchasable at</p> <p>Authorised SBI branches; buy with cheque/digital payment (NO CASH)</p>
	<p>Who can receive EBs?</p> <ul style="list-style-type: none"> • Any Political Party with >1% votes in previous Lok Sabha/State Assembly Elections • One SBI bank account must be specified to receive EBs; Election Commission (EC) must be notified 		<p>KYC details of buyer are collected by bank, but remain confidential</p> <p>Buyers purchase bonds bearing ONLY party name, NOT buyer's name</p>
	<p>When can EBs be purchased?</p> <p>In a 10-day period in the beginning of each quarter i.e. 1 - 10 January 1 - 10 April 1 - 10 July 1 - 10 October</p>		<p>EB physically handed over to party</p> <p>Donation to regd. parties with >1% vote share in last Lok Sabha/State Assembly election</p>
	<p>Where can EBs be purchased?</p> <p>At 29 authorised State Bank of India branches⁴ across India. Account holders and non-holders with SBI can purchase bonds on supplying KYC details</p>		<p>Bonds must be encashed within 15 days of receipt</p> <p>Bonds redeemable ONLY in authorized SBI account notified to EC</p>

Who can receive funding via electoral bonds?

- **Eligibility-** Political parties that secured *at least 1% of the votes* polled in the recent Lok Sabha or State Assembly elections and are registered under the RPA can get a verified account from the Election Commission of India (ECI).

- **Validity**-The bond amounts are deposited in this account *within 15 days* of their purchase. If a party does not encash any bonds within this period, the SBI deposits them into the **Prime Minister's Relief Fund**.
- **Purchase time**-They are available for a *period of 10 days* in a gap of four months (January, April, July and October).
- **Election period**- They are also open for 30 days in Lok Sabha election years.

What are the arguments for the electoral bonds?

- **Digitalised funding**- Electoral bond aims to make political funding digitised and safe.
- **Curbs black money**-The bonds are redeemed in a bank account under the purview of the government, it reduces malpractice and the chances of tax evasion.
- **Improves accountability**-Electoral bonds promote transparency and accountability as they can be redeemed only through designated banks.
- **Checks and balance**- Electoral bonds act as a deterrent for political parties focused solely on fundraising, as only registered parties securing a minimum of 1% of the votes in general elections qualify for electoral funding.

What are the arguments against electoral bond?

- **Enables backdoor lobbying**- It provides opportunities for corporations via electoral bond to political parties in power to get some favours.
- **Opens shell companies**- Recent amendments to Foreign Contribution Regulation Act (FCRA) provides that even a loss-making company or a company that does no business (a pure shell company) can also donate.
- **Influence of foreign powers**- The amendment to the FCRA permitted foreign companies with subsidiaries in India to fund Indian political parties would expose "Indian politics and democracy to international lobbyists" having their own agendas.
- **Lack of transparency**- *Section 29C of the RPA* had been amended to exempt political parties from informing the Election Commission about the details of contributions made to them through electoral bonds.
- **Selective anonymity**- The contributions made in this scheme will be known only the government, since the SBI comes under government donations to the opposition can come under scrutiny by an investigative agency, which leads to selective anonymity.
- **Use for other purposes**- The scheme is a misnomer as the money can be used for any purpose after it is withdrawn, the party is not mandated to give details about expenditure of money from the electoral bond.
- **Tool for money laundering**- RBI terms electoral bonds as '*opaque financial instruments*', it points out that the bonds are transferable any number of times like currency, their inherent anonymity can be exploited for money laundering.
- **Uneven playing field**- The scheme would distinctly favour the ruling government of the time, as the guarantee of anonymity would allow the government to provide concessions in the form of licenses, leases, policy changes and government contracts.
- **Unfair discrimination**- It gives anonymity to corporate donors but citizens who are donating Rs 2000 in cash will disclose their names.
- **Create black money**- The scheme reroute non-anonymous funding from normal banking channels to anonymous electoral bonds.
- **Diminish shareholders influence**- The companies funnel money to political parties without any oversight from shareholders, it denies the owners of said company the ability to decide how their company should act in the political sphere.
- **Trade electoral bonds**- Though there is prohibition on trading of electoral bonds the person could be an aggregator of bonds and may give the bonds to ten others.

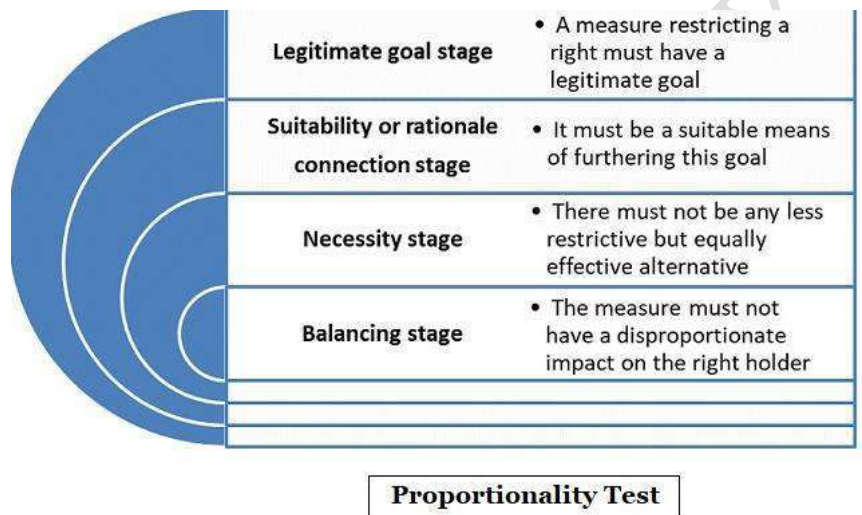
Section 29C of RPA, 1951 mandated political parties to declare all contributions exceeding Rs 20,000

What is Supreme Court's verdict on electoral bond?

- **Violates Article 19(1)(a)**- The scheme and the amendments made to the RPA, Income Tax Act violated the voter's right to information about political funding.
- **Unconstitutional**- The Court rules that the amendment to the Companies Act which allows blanket corporate political funding is unconstitutional as it violates free and fair election.

Article 19 (1) (a) in the Constitution of India guarantees all citizens the "right to freedom of speech and expression."

- **Fosters corruption**- The absolute non-disclosure of the source of political funding through electoral bonds promotes corruption.
- **Culture of quid pro quo**- - The contributions made by companies are purely business transactions made with the intent of securing benefits in return with the ruling party to introduce a policy change or for bagging a license.
- **Economic inequality**-The amendments promoted “economic inequality” by giving corporations with financial power an unsurpassable advantage over ordinary citizens in the electoral process and political engagement.
- **Right to donor privacy**- The financial contributions to political parties are made as an expression of support and as a quid pro quo measure.
- The latter type of contributions, especially by large corporations and companies should not be covered by the right to privacy of political affiliation, as they may be used to influence policies.
- **Failed the test of proportionality**- The primary justification for the scheme is curbing the use of ‘black money’ for political or electoral funding by allowing donations through banking channels. It has failed the test of proportionality, as it was not the least restrictive measure to abridge the voters’ right to know.



The proportionality test was laid down in 2017 in KS Puttaswamy case which upheld the right to privacy.

- **Arbitrary provision**- The amendments to the Companies Act removed the cap of 7.5% of a company’s profit that can be donated to political parties without any requirement to disclose details of the recipient parties in its profit and loss accounts.
- **Quashed amendment to RPA, 1951**- The original disclosure requirement would not apply to donations received through electoral bonds, this was struck down to foster a delicate balance between the voters' right to information and the donors' right to privacy.
- **Stop issuing electoral bonds**- The State Bank of India, which is the only authorised bank to issue electoral bonds, have been asked to immediately stop issuing it.
- **Publish information**- The SBI has been directed to issue purchase details with the date of purchase, name of purchaser and denomination since 2019 to the Election Commission.
- The Election Commission of India shall subsequently publish all such information shared by the SBI on its official website by 13 March 2024.
- **Refund**- Electoral bonds that are within the validity period of 15 days but have not yet been encashed by the political party will have to be returned following which the issuing bank will refund the amount to the purchaser’s account.

What lies ahead?

- RBI recommended that the political funding can be ensured through formal banking channels like normal cheque, demand draft or any electronic or digital mode of payment.
- The political parties and corporates will fall back upon the pre-2018 route of splitting the funding into cash donations of less than Rs 20,000 per donation.

4.7 Revenue Sharing Between States

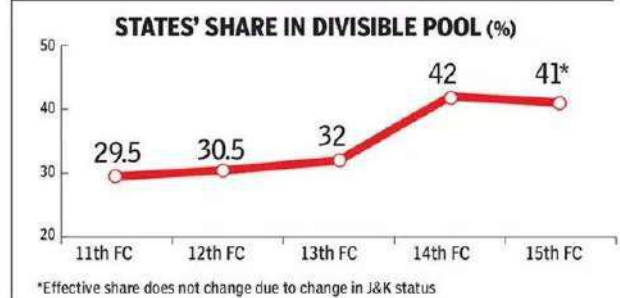
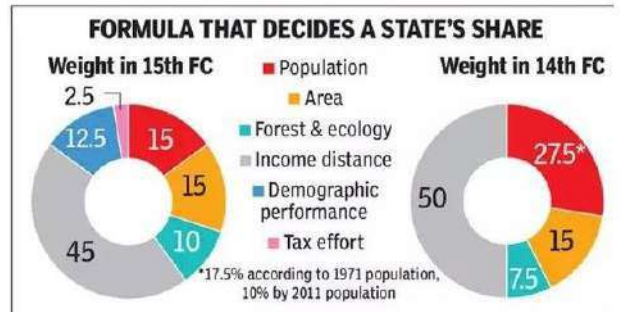
Why in news?

The revenue sharing by the Finance Commission between Centre and all the four Southern States have fallen over the last two decades.

Finance Commission

- **Constitutional body** -The Finance Commission is a constitutional body formed by the President of India to give suggestions on centre-state financial relations.
- **Autonomous body**- The Finance Commission (FC), an autonomous body which is governed by the government of India.
- **Article 280**-It was established by the **President of India** in 1951 under Article 280 of the Indian Constitution.
- **Role**- To define the financial relations between the central government of India and the individual state governments.
- **15th finance commission**- It was chaired by Mr. N. K. Singh which submitted the recommendations for 2021-26 period.
- **Key recommendations for 2021-26**- The share of states in the central taxes for the 2021-26 period is recommended to be 41%, same as that for 2020-21.
- This is less than the 42% share recommended by the **14th Finance Commission** for 2015-20 period.
- The adjustment of 1% is to provide for the newly formed UTs of Jammu and Kashmir, and Ladakh from the resources of the centre.
- **Criteria for devolution**- Population (15%), Area (15%), Ecology and Forest (10%), Income Distance (45%), Demographic performance (12.5%) and Tax effort (2.5%).

HOW THE BOOTY IS DIVIDED



Why southern States gets less revenue share from Centre?

- **Income distance**- This is the main criterion used to allocate the share of union taxes to each State, based on the gap between their per capita income and the highest per capita income among the States.
- The higher the income distance, the higher the share, this is fair as it reflects the principle of federalism and the need to redistribute wealth among the States.
- **Inequitable formula**- Population and area these two criteria have increased in weight over the years, and have resulted in a shift of revenue share towards larger and more populous States, such as Uttar Pradesh and West Bengal.
- **Area**- The weight given to area has doubled from 7.5% under 11th Finance Commission to 15% under the 15th Finance Commission, this tilts the scale in favour of States with large area, and is unfavourable to States such as Kerala which have a smaller area.
- **Population**- It was just 10% under the 11th Finance Commission (2000-05), increased sharply to 25% by the 12th Finance Commission (2005-10).
- The 15th Finance Commission has given a lower 15% weight to the population and 12.5% weight to demographic performance.
- **Demographic performance**- The formula for calculating the weight for demographic performance inverses the TFR and multiplies it by the population in 1971. This results in higher weight once again going to more populous states such as Uttar Pradesh and West Bengal.
- **Penalize States**-This formula is unfair as it penalizes States that have smaller area or have controlled their population growth, such as Kerala.
- **Reduced weightage**- The criteria “demographic performance” and “fiscal discipline” have been reduced in weight by the 15th finance commission, they are meant to reward States that have lower fertility rates or better fiscal management.
- **South's loss**- The changing weight in the devolution formula have hurt the southern states more, as they have seen their share of union taxes decline significantly over the last two decades.
- The share lost by southern states by considering 2011 population was made up by the demographic performance criteria.

4.8 Money Bill

Why in news?

A seven judge bench of the Supreme Court has been tasked with the authoritative ruling on the scope of money bill.

What is a money bill?

- **Article 110-** Deals with the definition of money bills.
- **Rules-** A bill is not to be deemed to be a money bill by reason only that it provides for
 1. The imposition of fines or other pecuniary penalties, or
 2. The demand or payment of fees for licenses or fees for services rendered or
 3. The imposition, abolition, remission, alteration or regulation of any tax by any local authority or body for local purposes.
- **Speaker** takes the final call if a bill is a money bill or not, his decision cannot be challenged in any court.

Article 110 of the Constitution defines the Money Bill	
Money Bills are those Bills which contain "only" provisions dealing with all or any of the matters specified in Article 110 sub-clauses :	
➤ Imposition, abolition, remission, alteration, regulation of any tax	➤ Appropriation of moneys out of Consolidated Fund of India
➤ Regulation of borrowing of money or the giving of any guarantee by govt	➤ Declaring of any expense to be expenditure charged on the Consolidated Fund of India or the increasing of the amount of any such expenditure
➤ Custody of the Consolidated Fund of India, the payment of moneys into or the withdrawal of moneys from any such fund	➤ Receipt of money on account of Consolidated Fund of India or Public Account of India or the custody or issue of such money or the audit of the accounts of the Union or of a State

Key aspect	Lok Sabha	Rajya Sabha
Introduction	• It can be introduced only in Lok Sabha with the prior recommendation of President.	• Money Bill cannot be introduced in Rajya Sabha.
Power to amend or reject	• After a money bill is passed by the Lok Sabha, it is transmitted to the Rajya Sabha for its consideration. • The Lok Sabha can either accept or reject all or any of the recommendations of the Rajya Sabha.	• It cannot reject or amend , it can make recommendations and return the bill within 14 days , whether with or without recommendations.
Unequal power	• If the Lok Sabha accepts any recommendation, the bill is then deemed to have been passed by both the Houses in the modified form. • If the Lok Sabha does not accept any recommendation, the bill is then deemed to have passed by both the Houses in the form originally passed by the Lok Sabha without any change	• If the Rajya Sabha does not return the bill to the Lok Sabha within 14 days, the bill is deemed to have been passed by both the Houses in the form originally passed by the Lok Sabha.

To know about Money Bill vs Financial Bill click [here](#)

What are the legal challenges present before the Supreme Court over Money Bill?

- Several Bills passed as money Bills, such as the Aadhaar Act, the Finance Act, 2017, and the Finance Act, 2018, have been challenged in the Supreme Court for violating Article 110.
- **Verdict on Aadhaar-** The petitioners had claimed that parts of the Aadhaar Act were passed as a money Bill, despite containing provisions that were unrelated to the subjects listed under Article 110, the apex court upheld the Act as constitutional
- **Appellate tribunal rules-** The Finance Act, 2017 has certain provisions that gave the Centre additional control over the service conditions of tribunal members.
- They were challenged in the Supreme Court for violating the independence and autonomy of the tribunals and for being passed as a money bill, the Court struck down the rules as unconstitutional and arbitrary.
- It also held that the Speaker's decision on certifying a Bill as a money Bill is subject to judicial review and referred the question of what constitutes a money Bill to a larger seven-judge bench.
- **Finance Act, 2018-** It contained several provisions that were not related to the fiscal matters specified in Article 110, such as the amendment of the [Prevention of Money Laundering Act, 2002 \(PMLA\)](#), the introduction of the [Electoral Bond Scheme](#), and the amendment of the Foreign Contribution (Regulation) Act, 2010.
- The Court did not address the money Bill issue on account of the pending case before the seven-judge bench, its decision will have impact on the Acts that have been challenged in the Court for violating Article 110.

4.9 Panchayats as Self-governing Institutions

Why in news?

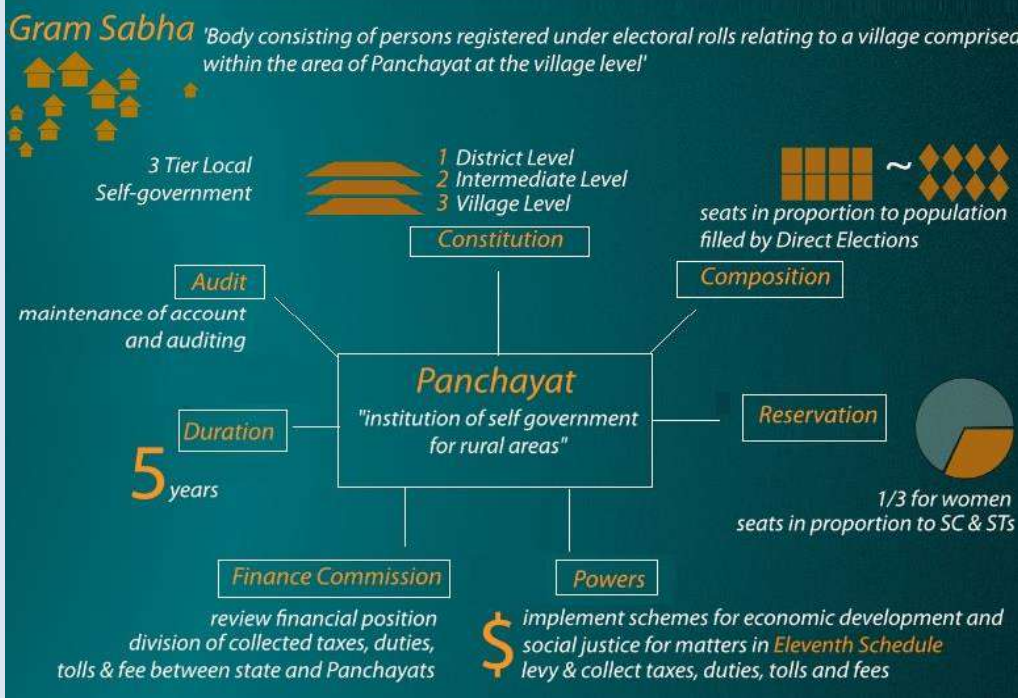
Three decades have passed since the 73rd and 74th Constitutional Amendments Acts came into effect, which envisaged that local bodies in India would function as institutions of local self-government.

73rd Amendment Act, 1993

- The Act has given constitutional status to panchayat raj institutions and practical shape to the Article 40.
- Article 40-** The State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government.
- Part-IX-** It is entitled as 'The Panchayats' and consists of provisions from **Articles 243 to 243 O.**
- Eleventh Schedule-** It contains 29 functional items of the Panchayat.

73rd Constitutional Amendment Act - Part IX - The Panchayats

Gram Sabha 'Body consisting of persons registered under electoral rolls relating to a village comprised within the area of Panchayat at the village level'



- Devolution of finances-** The State legislature may
 1. Authorise a panchayat to levy, collect and appropriate taxes, duties, tolls and fee
 2. Assign to a panchayat taxes, duties, tolls and fees levied and collected by the state government.
 3. Provide for making grants-in-aid to the panchayat from the consolidated fund of the state and
 4. Provide for constitution of funds for crediting all moneys of the panchayats.
- State Finance Commission-** The governor of a state shall, after every five years, constitute a finance commission to review the financial position of the panchayats.
- Gram Sabhas -** They have a significant role in fostering self-sufficiency and sustainable development at the grass-roots level by leveraging local resources for revenue generation.
- Inclusive participation-** Gram sabhas can be engaged in planning, decision-making, and implementation of revenue-generating initiatives that range from agriculture and tourism to small-scale industries.
- Financial management-** Gram sabhas have the authority to impose taxes, fees, and levies, directing the funds towards local development projects, public services, and social welfare programmes.

How panchayat raj generate revenues?

- Article 280-** Grants from the Union Government based on recommendations of the Central Finance Commission as Article 280 of the Constitution.
- Article 243-I-** Devolution from the State Government based on recommendations of the State Finance Commission.
- Loans and grants from the State Government.
- Programme-specific allocation under Centrally Sponsored Schemes and Additional Central Assistance.
- Internal resource generation such as tax and non-tax collection.

Tax revenue	Non-Tax revenue
Property tax, cess on land revenue, surcharge on additional stamp duty, tolls, tax on profession, advertisement etc.,	User charges for water and sanitation and lighting, fees, rent, income from investment sales and hires charges and receipts, etc.

What are the challenges associated with devolution of finances?

- **Lack of fiscal empowerment-** States have not given adequate attention to fiscal empowerment of the panchayats, as they have own tight fiscal position.
- **Lack of adequate devolution-** Many States have not taken adequate steps to devolve 3Fs (i.e., functions, funds and functionaries) to the PRIs to enable them to discharge their constitutionally stipulated function.
- **Fiscal disparity-**There is a disparities in the tax collection and revenue sharing among the three tiers of panchayats (gram, intermediate and district)
- **Poor internal resource generation-** It is weak due to thin tax domain due to panchayat's own reluctance in collecting revenue.
- **Heavy dependency-** -As per a data panchayat earns only 1% of revenue with 80% of revenue from Centre and 15% from States.
- **Limited power-** A major portion of the grants both from Centre and State is scheme specific, hence panchayat have limited discretion and flexibility in incurring expenditure.
- **Limited implementation-** State government is responsible for implementation of programs in the most of the critical 11th Schedule matters like primary education, healthcare, water supply etc.,
- **Lack of authority-** The gram panchayats lack the authority to collect taxes, while in numerous others, intermediate and district panchayats are not delegated the responsibility of tax collection.
- **Lack of incentivisation-** Panchayats do not have a strong incentive or mechanism to collect revenue from the defaulters, who fail to pay their taxes or dues to the panchayats.

What lies ahead?

- There is a need to demarcate own source of revenue for the entire three-tier panchayats and minimise the dependency on grants to ensure equitable sharing.
- There is a need to educate elected representatives and the public on the significance of raising revenue to develop panchayats as self-governing institutions

5. GOVERNMENT POLICIES AND INTERVENTIONS

5.1 Places of Worship (Special Provisions) Act 1991

Why in news?

Civil suits challenging the religious character of mosques in Varanasi and Mathura is advancing rapidly.

What are the provisions of Places of Worship (Special Provisions) Act 1991?

- **Aim-** To protect the religious character of all houses of worship as it stood on August 15, 1947 and forbid any changes that would compromise that character.
- **Places of worship-** It is defined as any structure used for public religious worship, such as a temple, mosque, gurudwara, church, monastery, or congregation.
- **Restricts conversion-** The Act limits converting a house of worship of one religious group into a house of worship of another religious group, or even a different sect within the same religious group.
- **Establish religious character-** The religious nature of a house of worship must continue to be the same as it existed on August 15, 1947.
- **Bar on jurisdiction of court-** No new suit or legal process shall be instituted if there is already a suit or legal proceeding currently before any court regarding the conversion of the religious character of any place of worship existing on August 15, 1947.

- **Penalty-** If any one violates the terms of the Act, such a person could face up to 3 years in prison and shall also be liable to fine.

What are the exemptions provided under the Places of Worship (Special Provisions) Act 1991?

- Ram Janmabhoomi-Babri Masjid case and any appeal or procedure arising out of it are exempt from its coverage.
- Any religious structure protected as an ancient and historical monument or archaeological site or remains under the *Ancient Monuments and Archaeological Sites and Remains Act of 1958*.
- Any action, appeal, or procedure that was determined, settled, or disposed of by a court, tribunal, or other body prior to the effective date of this Act.
- Any disagreement over related aspects that has been resolved amicably between the parties before the start of the proceeding.
- Any prior conversion to religious or secular use of such a location that was allowed to take place with the owner's approval.

What is the status of the ongoing cases?

Gyanvapi Mosque, Varanasi	Sri Janmabhoomi Case, Mathura
<ul style="list-style-type: none"> • In 1991 a suit was filed which aims to declare that the part of the mosque site belongs to <i>Lord Vishweshwar</i>. • They contend that an old temple of Lord Vishweshwar existed at the centre of the Gyanvapi compound since ancient times. • They assert that the temple was demolished on the order of Emperor Aurangzeb in 1660. • The Court orders have favored the position that these suits are not barred by the Places of Worship Act. • The court ruled that a structure cannot have the dual character of being both Hindu and Muslim, and that only an examination of evidence can determine its religious character. • The Act cannot be an absolute bar on proceedings to ascertain its religious character. • The Varanasi district court ordered the Archaeological Survey of India (ASI) survey of Gyanvapi complex on an application moved by four Hindu women in 2023. • The ASI report claims the existence of a temple prior to the mosque's construction. 	<ul style="list-style-type: none"> • The suits in Mathura relate to the Shahi Idgah mosque which stands adjacent to the Krishna Janmabhoomi Temple. • It claims that the mosque was built over the birthplace of Lord Krishna. • The dispute was settled through a he dispute was settled through a compromise between the Sri Krishna Janmasthan Seva Sansthan and the Shahi Idgah Trust in 1968. • The settlement was implemented through a decree in 1974, with the Sansthan giving up a portion of the land to the Idgah. • In 2020 many cases were filed challenging 1968 pact as the decree is drawn up before the commencement of the 1991 Act and it is not applicable to the case. • Allahabad High Court ordered the scientific survey of the Shahi Idgah mosque, which is believed to be built on the birthplace of Lord Krishna. • It is similar to the one in Varanasi's Gyanvapi Mosque, also built adjacent to a venerated Hindu temple. • The Supreme Court declined to halt the Allahabad High Court's order permitting the survey of Mathura Shahi Idgah complex near the Shri Krishna Janmabhoomi Temple

5.2 Water (Prevention and Control of Pollution) Amendment Bill, 2024

Why in news?

Recently Rajya Sabha passed the Water (Prevention and Control of Pollution) Amendment Bill.

Water (Prevention and Control of Pollution) Act 1974

- **Article 252-** It enables Parliament to legislate for 2 or more States by consent, as **Water is a State list** through this Article the Act is enacted by the Central government.
- **Objectives-**

1. To provide for prevention, control and abatement of water pollution
 2. For maintenance or restoration of the wholesomeness of water.
 3. For the establishment of pollution control water boards.
 4. To assess pollution levels and punish polluters.
- **Pollution-** Any contamination of water or alteration of the physical, chemical and biological properties of water or disposing of any sewage waste in water which is likely to cause nuisance or render such water to be harmful to public health or safety or to domestic, industrial or other legitimate use or harmful to the life and health of the animals and aquatic plants.
 - **Agencies-**
 1. Central Pollution Control Board (CPCB)
 2. State Pollution Control Board (SPCB)
 3. Joint Board
 - **Role of CPCB-** It advise the Central Government on any matter concerning the prevention and control of water pollution.
 - **Role of SPCB-** To plan a comprehensive program for preventing and controlling the pollution of the wells and streams in the state and to secure its execution.
 - **Joint Board-** An agreement may be entered into by the state government of one state with the state government of another state to set up a joint Board.

What are the key provisions of the Water (Prevention and Control of Pollution) Amendment Bill, 2024?

- **Amend-** The bill amends the Water (Prevention and Control of Pollution) Act, 1974.
- **Aim-** To decriminalize minor offences related to water pollution, and exempt certain categories of industrial plants from statutory restrictions.
- **Initial application-** The bill will apply to Himachal Pradesh, Rajasthan, and the union territories. Other states may pass resolutions to extend its applicability to their states.
- **Adjudicating officer to determine penalties-** The Bill allows the central government to appoint adjudication officers to determine penalties under the Act.
- The officer must be of the level of a Joint Secretary to the central government, or of Secretary to the state government.
- **National Green Tribunal-** Appeals against orders passed by the adjudicating officer may be made before the National Green Tribunal, after depositing 10% of the penalty levied.
- Penalties imposed by the adjudicating officer will be credited to the Environment Protection Fund established under the Environment (Protection) Act, 1986.

Key aspects	Water (Prevention and Control of Pollution) Act, 1974	Water (Prevention and Control of Pollution) Amendment Bill 2024
Chairman of SPCB	<ul style="list-style-type: none"> • It is nominated by the State government. 	<ul style="list-style-type: none"> • The Bill adds that the Central government will prescribe the manner of nomination and the terms and conditions of service of the chairman.
Consent exemptions for establishing industries	<ul style="list-style-type: none"> • The prior consent of the SPCB is required for establishing any industry or treatment plant, which is likely to discharge sewage into a water body, sewer, or land. 	<ul style="list-style-type: none"> • The Central government, in consultation with the CPCB, may exempt certain categories of industrial plants from obtaining such consent. • The Bill also adds that the central government may issue guidelines for the grant, refusal, or cancellation of consent granted by the SPCB.
Penalty for establishing industries without consent	<ul style="list-style-type: none"> • If an industry is established and operating without obtaining consent from the SPCB, 	<ul style="list-style-type: none"> • The Bill retains the same provision.

	it is punishable with imprisonment up to 6 years and fine.	
Tampering with monitoring devices	<ul style="list-style-type: none"> No such provision is mentioned in the Act. 	<ul style="list-style-type: none"> The Bill penalizes between Rs 10,000 and Rs 15 lakh for tampering with monitoring devices used in determining whether any industry or treatment plant can be set up.
Discharge of polluting matter	<ul style="list-style-type: none"> The SPCB may issue directions to immediately restrain any activity which is leading to discharge of noxious or polluting matter in water bodies. The Act also prohibits violation of standards (laid down by SPCB) regarding polluting matter in water bodies or on land, barring some exemptions. Exemptions- Depositing non-polluting materials on the bank of a stream for reclaiming land. Penalty- Violation of these provisions is punishable with an imprisonment term between one and a half years and six years, and a fine. 	<ul style="list-style-type: none"> The Bill <i>removes the punishment</i> and instead, imposes a penalty between Rs 10,000 and Rs 15 lakh.
Penalty for other offences	<ul style="list-style-type: none"> An offence for which punishment is not explicitly specified is punishable with an imprisonment term of up to 3 months or a fine of up to Rs 10,000, or both. Failure to pay penalty for violation of any provision will attract an imprisonment term of up to 3 years, or a fine up to twice the amount of penalty imposed. 	<ul style="list-style-type: none"> The Bill <i>removes imprisonment</i> as a punishment, and prescribes a penalty between Rs 10,000 and Rs 15 lakh.
Cognizance of offences	<ul style="list-style-type: none"> A court may take cognizance of an offence if a complaint is made by the CPCB or SPCB, or a person who has given a notice of the complaint to the Boards. 	<ul style="list-style-type: none"> The Bill adds that cognizance may also be taken if a complaint is made by the <i>adjudicating officer</i>.
Offences by government departments	<ul style="list-style-type: none"> The head of a department will be deemed guilty for offences committed by government departments, provided that they prove due diligence was carried out to avoid such contravention. 	<ul style="list-style-type: none"> The Bill specifies that the head of a department will be required to <i>pay penalty equal to one month</i> of their basic salary if the department violates any provision of the Act.

5.3 Amendment in Surrogacy Rules

Why in news?

The Centre has allowed married couples with medical complications to use donor gametes for surrogacy, revoking a previous ban.

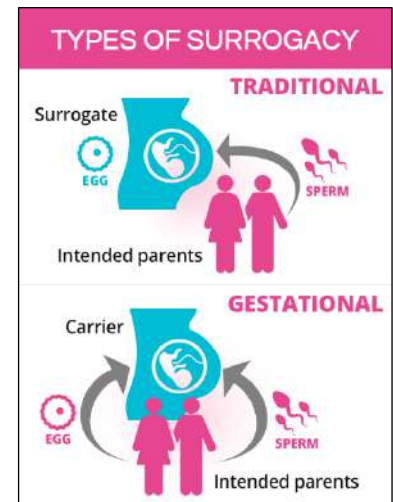
What are the key provisions of Surrogacy Act 2021?

Key aspects	About
Definition of Surrogacy	<ul style="list-style-type: none"> It is a practice where a woman gives birth to a child for an intending couple with the intention to hand over the child after the birth to the intending couple.
Regulation of surrogacy	<ul style="list-style-type: none"> The Act <i>prohibits commercial surrogacy</i> (carrier is paid), but allows altruistic surrogacy

	<ul style="list-style-type: none"> • Altruistic surrogacy involves <i>no monetary compensation</i> to the surrogate mother other than the medical expenses and insurance coverage during the pregnancy.
Purpose for which surrogacy is permitted	<ul style="list-style-type: none"> • For intending couple who suffer from proven infertility. • Altruistic and not for commercial purposes. • Not for producing children for sale, prostitution or other forms of exploitation • For any condition or disease specified through regulation.
Eligibility criteria	<ul style="list-style-type: none"> • They should have a certificate of essentiality and certificate of eligibility.
Certificate of eligibility	<ul style="list-style-type: none"> • The intended couple shall be a legally married Indian man and woman for at least 5 years. • The man shall be between the ages of 26-55 years and the woman shall be between the ages of 25-50 years. • The intending couple shall not have any previous biological, adopted, or surrogate child.
Certificate of essentiality	<ul style="list-style-type: none"> • It is issued by District Medical Board when either the wife or the husband or both husband and wife have any medical conditions which indicates the <i>necessity of gestational surrogacy</i>. • An order will be passed by Magistrate's court that the custody of the child will be given to the intending parent. • Insurance will also be provided to the surrogate mother for the period of 16 months.
Eligibility criteria for surrogate mother	<p>To obtain a eligibility certificate from appropriate authority, surrogate mother has to be</p> <ul style="list-style-type: none"> • A close relative of the intending couple • A married woman having a child of her own • 25 to 35 years old • A surrogate only once in her lifetime • Possess a certificate of medical and psychological fitness for surrogacy
Registration of surrogacy clinics	<ul style="list-style-type: none"> • Clinics must apply for registration within a period of 60 days from the date of appointment of the appropriate authority. • Registration shall be renewed after every 3 years.
Institutional mechanism	<ul style="list-style-type: none"> • National level- Central government will appoint <i>National Surrogacy Board</i>. • State level- The State governments will appoint <i>State Surrogacy Board</i>.
2023 amendment	<ul style="list-style-type: none"> • The donor eggs could not be used for gestational surrogacy (In-Vitro Fertilization), a type of assisted reproductive technology (ART) where sperm and an egg are fertilized outside of the human body and is inserted in the uterus of the surrogate mother.
Surrogacy (Regulation) Amendment Rules, 2024	<ul style="list-style-type: none"> • The married couples to use a donor gamete on the condition that a District Magistrate Board certifies that either the husband or the wife suffers from a medical condition. • Eligibility condition- It outlines that the child to be born through surrogacy must have at least one gamete from the intending parents. • This implies that a married couple where both partners are unable to use their gametes due to an existing medical condition cannot opt for surrogacy. • There is a separate rules for single women.
Single women	<ul style="list-style-type: none"> • Single women opting for surrogacy should be a <i>divorcee or a widow</i>. • Single women undergoing surrogacy must use self-eggs and donor sperms to avail surrogacy procedure.

Why have the surrogacy rules been changed?

- **MRKH syndrome**- The Supreme Court allowed a women with Mayer Rokitansky Kuster Hauser (MRKH) Syndrome to use donor eggs for surrogacy.
 - It is a rare congenital disorder that can affect the development of the female reproductive system.
 - It causes the absence or underdevelopment of the uterus, cervix, and upper vagina.
- The Court observed that the law permitting gestational surrogacy was “woman-centric” as it was a woman’s choice to have a surrogate child owing to existing medical or congenital conditions.
- **Delhi High Court**- It observed that 2023 amendment banning donor gametes in surrogacy violates the “basic rights” of a married infertile couple to parenthood by denying them access to legally and medically regulated procedures and services.
- **Implications of 2024 rules**- It bars single unmarried women from having children through surrogacy which violates Article 14 (right to equality) and Article 21 (right to life) of the Constitution.
- The Court stated that the institution of marriage needed to be “protected” in the country, unlike the West where it was normal to have children without getting married.



Surrogacy cannot be accessed by single persons, live-in couples, and LGBTQ couples.

6. GOVERNANCE

6.1 Evaluation of India's public sanitation programmes

Why in news?

The government needs to identify the shortcomings in Swachh Bharat Mission-Gramin if it wants to transform India from open defecation free to open defecation free-plus status by 2024-25.

Status of Swachh Bharat Mission

- Until 2014, 600 million people (approximately 60% of the world’s open defecators) were practicing open defecation across the country, of these 550 million were in rural India.
- As per Government of India, sanitation coverage in the country improved from 39% in 2014 to 100% in 2019.
- **Swachh Bharat Mission Gramin (SBM-G)** - Around 50% villages achieved ODF+ status under phase II.
- **ODF+ village**- It is one which has sustained its Open Defecation Free (ODF) status along with implementing either solid or liquid waste management system.
- **Top performing States**- In terms of % of ODF+ villages are
 1. **Big States**- Telangana, Karnataka and Tamil Nadu
 2. **Small States**- Goa and Sikkim.
 3. **Union Territories**- Andaman and Nicobar Islands, Dadra Nagar Havelli & Daman Diu and Lakshadweep have 100% ODF+ Model villages.



What are the steps taken by India in sanitation?

- **Central Rural Sanitation Programme** - It was started in 1986, India’s first efforts to provide safe sanitation in rural areas focussed mainly on providing subsidies to people to construct sanitation facilities.
- **Total Sanitation Campaign**- In 1999, a restructured Total Sanitation Campaign (TSC) was initiated to create supply-led sanitation by promoting local sanitary marts and a range of technological options.
- **Nirmal Bharat Abhiyan**- TSC is modified into Nirmal Bharat Abhiyan in 2012 to achieve total sanitation by promoting toilet construction, solid waste management, and hygiene education.

- **Swachh Bharat Abhiyan** - It is a "Clean India Mission" launched in 2014 to make India open defecation-free (ODF) by constructing toilets, promoting proper waste management and fostering a culture of cleanliness.
- **Swachh Bharat Mission**- It involves toilet construction, waste management practices and awareness campaigns. It has two components
 1. **Swachh Bharat Mission-Urban (SBM-U)** - It concentrates on making cities and towns clean.
 2. **Swachh Bharat Mission-Gramin (SBM-G)**- It aimed at universal sanitation coverage in rural areas, to make India ODF by October 2, 2019, as a tribute to Mahatma Gandhi on his 150th birth anniversary.

What are the initiatives taken under SBM-G?

- **Phase I**-It was launched from 2014-2019 to improve the levels of cleanliness in rural areas through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitized.

- **Phase II**- It will be implemented in mission mode from 2020-21 to 2024-25 with a focus on the sustainability of ODF status and Solid and Liquid Waste Management (SLWM).



- **Goal of ODF status**- The primary objective is to make all rural areas in India Open Defecation Free by constructing toilets in households and ensuring the usage of these facilities.
- **Toilet Construction and Individual Household Latrine (IHHL) Scheme**- It provides financial assistance to eligible households to build toilets.
- **Community-Led Total Sanitation (CLTS)** - It emphasizes community participation and behavioural change by mobilizing communities to collectively take action to end open defecation.
- **Information, Education and Communication (IEC)** - The mission places a strong emphasis on IEC activities to create awareness about the importance of sanitation, hygiene practices, and the usage of toilets.
- **Awards**- They are given to districts, states, and individuals for outstanding contributions to the mission.
- **Solid and Liquid Waste Management (SLWM)**- The mission recognizes the importance of proper waste management and efforts are made to promote the construction of compost pits, soak pits, and other waste management infrastructure in rural areas.
- **Swachhagrahis** - They are volunteers who play a crucial role in mobilizing communities and promoting sanitation and hygiene practices at the grassroots level.
- **Gramin Swachh Survekshan**- It assesses the cleanliness and sanitation status of rural areas, encouraging healthy competition among districts.

What are the challenges in achieving total sanitation in India?

- **Unused toilets**- NSSO survey in 2012 revealed the reasons for non-use included lack of superstructure (21%), malfunctioning (22%), unhygienic conditions (20%), and personal reasons (23%).
- **Factors impact toilet use**- Education, household size and economic conditions impact the toilet use.
 - For example- Larger households have higher chances of not using toilets due to overcrowding and social norms.
- **Infrastructural deficit**- The absence of a superstructure or a proper shelter around the toilet facility can discourage its use.
- **Water supply**- A higher non-use of toilets in Gujarat was due to a lack of access to water in Dahod district, one of the two districts selected from the State.
- **Lack of privacy**- This may make individuals uncomfortable and hesitant to use the toilet.
- **Poor quality**- Individuals are likely to avoid facilities that are not in proper working condition due to concerns about hygiene and functionality.
- **Unhygienic conditions**- Issues such as inadequate cleaning, foul odors, presence of pests, can contribute to non-use, poor sanitation and may lead individuals to seek alternative, perceived cleaner options.

- **Personal reasons-** IT may include cultural or habitual preferences, psychological factors, or individual choices such as convenience, comfort, or privacy.
- **Purity concept-** Cultural beliefs surrounding notions of purity may dissuade individuals from using toilets on their premises, leading to avoidance based on social and religious considerations.
- **Caste-** Social hierarchies and caste dynamics can influence toilet usage patterns, with certain groups facing stigma or discrimination related to sanitation practices.
 - A multi-State study reveals a higher percentage of non-users among upper castes compared to backward castes
- **Gender disparity-** Gender norms may impact toilet usage, particularly for women who may face challenges related to safety, accessibility, and menstrual hygiene.
- **Data challenge-** The left-out households and toilets unused for defecation must be identified under phase II as there is 10% gap between access to toilets and unused toilets.
- **Policy paralysis-** Phase II lacks criteria for multiple toilets in larger households and does not address the provision for attached bathrooms.
 - The Jal Jeevan Mission (JJM) to provide tap water by 2024 shows no correlation between expenses and ODF Plus villages.
- **Behavioural change-** It remains a challenge as it depends on social networks like caste and overall improvement in living standards.

What lies ahead?

- The behavioural change in sanitation needs better coordination and synergy of programmes that address the basic needs of the rural population.
- Social engineering can be adopted through social networks to overcome regressive norms and caste hierarchy.

6.2 Fact Checking Unit

Why in news?

The IT Rules of 2023, which allow the government's Fact Check Unit, were contested in the Bombay High Court.

Fact Check Unit (FCU)

- The Centre has decided to create an FCU to track fake and misleading news related to the government on online platforms such as Facebook and Twitter.
- **Amended IT rules 2021-** It allows Ministry of Electronics and Information Technology to appoint a [fact-checking body](#) that will take a call on whether online information related to the Union government is accurate.
- **Appointment-** The members of the proposed new entity will be made by the Union government.
- **Composition-** FCU comprises of a representative from the Union Ministry of Information and Broadcasting, one from the Union Ministry of Statistics and Programme Implementation, a media expert, and a legal expert.
- **Safe harbour protection-** The online intermediaries will have to take down the content labelled as fake by the FCU or lose their legal immunity against third-party content online.
- **Online intermediary-** Including social media platforms such as Twitter, Facebook, and YouTube and internet service providers such as Airtel, Jio and Vodafone Idea should make "reasonable efforts" to not host content related to the central government that is "identified as fake or misleading" by an FCU.
- If any piece of information is marked as fake by the FCU, social media sites will have to take down such posts, and internet service providers will have to block URLs of such content.

What is the issue?

- Earlier, online intermediaries were only required to "inform" users of their obligation to not upload or share any "patently false or misleading information."
- **Reasonable efforts provision-** It specifically requires intermediaries to make "reasonable efforts" to ensure that its users do not upload or transmit any content that has been identified as "fake or false or misleading" by the Centre's FCU.

- Such flagged content would have to be taken down if the intermediaries want to retain their “safe harbour” protection.
- **Ambiguity**-The amendment does not define the term ‘any business of the Central government’.
- **Role of government**-The amendment allows the government to be a prosecutor, the judge, and in that loose sense, the executioner” of what constitutes the ‘truth’ online, thereby violating the cardinal principles of natural justice.
- **Against right to be heard**-The rules do not provide users with an opportunity to be heard before a decision is made on the "fake, false, or misleading" nature of content.
- Several parties challenged the FCU’s authority and the amendment’s validity in the High Court.
- **Government’s stand**- It defends the regulations, stating that the FCU only informs intermediaries of content being fake, false, or misleading.
- The government argues that the notice is advisory and users can approach a court of law if they are aggrieved by the intermediary’s decision.

What is Bombay High Court’s split verdict on Centre’s Fact-Check Unit?

For FCU

- Justice Neela Gokhale was of the opinion that it did not prohibit any critical opinion of the government and was therefore not a disproportionate measure.
- **Proper regulation**-The regulation is necessary to regulate online content in the era of ‘infodemic’.
- **Proper access to information**-The amendment would protect the concept of democracy by ensuring citizens have access to ‘authentic information’.
- **Not disproportionate**-The amendment was not excessive, as it only targeted misinformation that was shared with bad intentions
- The government appointees were not necessarily biased.
- **Access court**-The FCU’s details were unclear, but the users could challenge its decisions in court if needed.
- **Amendment is valid**- It could not be invalidated based on hypothetical abuse.

Against FCU

- Justice G.S. Patel observed that the amendment promoted censorship and violated a host of fundamental rights.
- **Against Article 19**- The amendment “takes the form of censorship of user content” and does not fall within the ambit of reasonable restrictions permitted under Article 19(2) of the Constitution.
- **Role of government**-The government cannot be the sole judge of what is fake or misleading, as some statements are subjective or debatable.
- The government cannot claim special status for its own information, and that citizens have the right to question and criticize it.
- **Business of the government**- “It is not the business of the government to keep citizens from falling into error”. It is the other way around. For it is very much business and should be the duty of every citizen to prevent the government from falling into error.
- **Need of new regulator**- It was questioned, as the Public Information Bureau already has a role in disseminating government information.
- **Inconsistent Standards**- FCU amendment unfairly restricts online media more than print media, he argued that the same content should not be treated differently based on the medium of publication.
- **Lack of safeguard**- FCU lacks safeguard against bias due to lack of guidelines and hearing procedures.
- **Arbitrary power**- The government has too much power to decide what is a fake content, without any checks and balances.
- **Online criticism**- The government is not vulnerable to online criticism as it has the means and power to rebut any criticism and defend its actions.
- **Double standard approach**- FCU amendment creates a double standard for different types of complaints, because it allowed the government to flag and remove any content related to its business, without following the same procedure as other complaints, such as those involving pornography, child abuse, or intellectual property violations

What lies ahead?

- The Bombay High Court had two judges with opposing views on the validity of the FCU amendment to the IT Rules, 2021, the Chief Justice appointed a third judge to break the tie and decide on the fate of the FCU.
- The Internet Freedom Foundation said they would challenge the FCU amendment in the Supreme Court if the third judge upheld it.
- The outcome of the Bombay High Court case would affect the legality of similar FCUs in other states ([Tamil Nadu](#), Karnataka, and Uttarakhand)

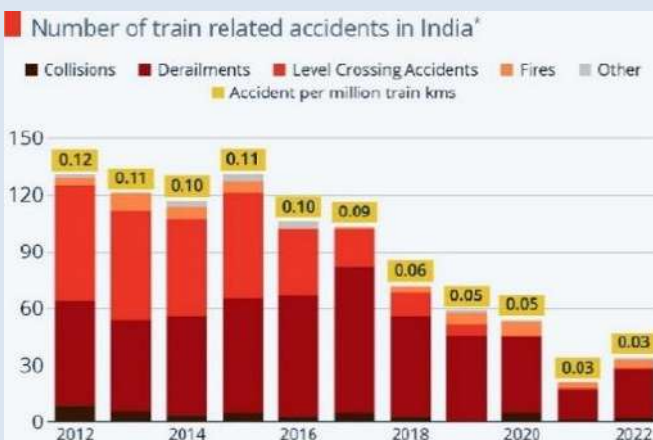
6.3 Rail Safety in India

Why in news?

The government has taken steps to enhance the level of passenger safety in Railways.

Status of train accidents

- According to data from the National Crime Records Bureau of India, 2021 saw a total of 16,431 deaths and 1,852 cases of injuries from railway accidents.
- 67.7% of these were from people falling from trains or from collisions with people on the tracks.
- Of the 14,769 train accidents that occurred between 1960-61 and 1970-71, 11,312 were incidents of derailments.
- The 2nd most common cause is level crossing accidents.
- Fire and collisions are the 3rd and 4th most common categories of train accidents, respectively.
- **Balasore triple train collision, 2023**- The accident claimed the lives of 288 passengers in Odisha, it happened due to a change in electronic interlocking.



Number of train related accidents in India*

Year	Collisions	Derailments	Level Crossing Accidents	Fires	Other	Accident per million train kms
2012	10	50	50	10	10	0.12
2014	10	40	40	10	10	0.11
2016	10	50	40	10	10	0.11
2018	10	40	30	10	10	0.09
2020	10	30	20	10	10	0.05
2022	10	20	10	10	10	0.03

What are the steps taken by government for passenger safety in Railways?

Steps	About
Rashtriya Rail Sanraksha Kosh	<ul style="list-style-type: none"> • Launch year- 2017-18 • Aim- To reduce accidents at railway crossings, derailments, and collisions by investing in track renewals, telecommunications, signalling, and rolling stock.
Kavach system	<ul style="list-style-type: none"> • It is an automatic train protection system that was developed by Indian Railways to enhance the safety and efficiency of train operations. • It uses radio frequency identification, GPS, and electronic devices to monitor and control the speed, signals, and movements of trains.
Electrical/ Electronic Interlocking Systems	<ul style="list-style-type: none"> • These are systems that use electrical circuits and relays to control train movements and ensure safety. • These systems use electrically operated switches and signals to manage the routing of trains, offering a more automated and streamlined approach compared to purely mechanical systems.
Modern track structure	<ul style="list-style-type: none"> • It consists of stronger and more durable tracks and bridges, using Prestressed Concrete Sleeper (PSC), higher Ultimate Tensile Strength (UTS) rails, fan shaped layout turnout on PSC sleepers, Steel Channel Sleepers on girder bridges etc.,
Interlocking of Level Crossing (LC) Gates	<ul style="list-style-type: none"> • It involves the use of electrical or electronic devices to control the movement of trains and gates, such that a train cannot approach or pass through a level crossing unless the gates are closed and locked, and the gates cannot be opened unless the signals are at stop.

Complete Track Circuiting of stations	<ul style="list-style-type: none"> To enhance safety for verification of track occupancy by electrical means.
Vigilance Control Devices	<ul style="list-style-type: none"> It is a safety devices that monitor the alertness of the loco pilot and prevent accidents due to human error or incapacitation. They work by requiring the loco pilot to perform certain actions or acknowledge certain signals at regular intervals, otherwise they trigger an emergency brake application.
Retro-reflective sigma boards	<ul style="list-style-type: none"> They are provided in electrified territories to warn the crew about the signal ahead when visibility is low due to foggy weather. They are mandatory for all signals in electrified territories.
GPS based Fog Safety Device (FSD)	<ul style="list-style-type: none"> It is a device that helps train drivers to navigate safely in foggy weather. It uses GPS technology to provide real-time information about the location and distance of the next three signals, level crossing gates and other landmarks on the route.
Use of Linke Hofmann Busch (LHB) coaches	<ul style="list-style-type: none"> It is a type of passenger coach used by Indian Railways in collaboration with German company that is designed for higher speed, safety, and comfort. LHB coaches have many features such as stainless steel body, FIAT bogies, air suspension, disc brakes, anti-climbing couplers, and fire and smoke detection systems.

6.4 Anganwadi Services

Why in news?

The Government of India incentivizes and encourages Anganwadi Workers and Anganwadi Helpers, through various initiatives.

What is Anganwadi?

- Anganwadi Services is a Centrally Sponsored Scheme implemented by States/UTs in India.
- Coverage-** Children in the 0-6 age group, pregnant women and lactating mothers.
- Established-** In 1975 as part of the [Integrated Child Development Services](#) program
- Need-** To combat child hunger and malnutrition.
- Anganwadi centre-** It provides basic health care facilities in Indian villages as a part of the Indian public health-care system.
- Basic health-care activities-** It include contraceptive counselling and supply, nutrition education and supplementation, as well as pre-school activities.
- The centres may also be used as depots for oral rehydration salts, basic medicines, contraceptives and child care.

The meaning of the word 'Anganwadi' in English is "courtyard shelter".



MINISTRY OF WOMEN AND CHILD DEVELOPMENT SCHEMES

What are the key components of Anganwadi services?

Components	About
Nutrition services	<ul style="list-style-type: none"> Provision of supplementary nutrition to children below six years of age, pregnant women, and lactating mothers. This includes nutritious meals, take-home rations, and other nutritional support.
Health check-ups	<ul style="list-style-type: none"> Regular health check-ups for children and mothers to monitor their health and growth. Immunization services are also often provided at Anganwadi Centres.

Pre-school education	<ul style="list-style-type: none"> • Early childhood care and education activities to promote the overall development of children. • It also includes cognitive, social, and emotional development
Health and nutrition education	<ul style="list-style-type: none"> • Awareness programs on health, hygiene, and nutrition for mothers and caregivers to improve their understanding of essential health practices
Referral services	<ul style="list-style-type: none"> • Identification and referral of children and mothers in need of specialized medical care or support services to appropriate healthcare facilities.
Community mobilization	<ul style="list-style-type: none"> • Engagement with the local community to create awareness about health, nutrition, and early childhood development. • Anganwadi Workers play a crucial role in fostering community participation
Pregnant and lactating women support	<ul style="list-style-type: none"> • Support and counseling for pregnant and lactating women to ensure proper care during these critical periods.
Services for adolescent girls	<ul style="list-style-type: none"> • Programs targeting the nutritional and health needs of adolescent girls, including awareness about menstrual hygiene.
Record keeping	<ul style="list-style-type: none"> • Maintenance of records related to the health and development of children and mothers attending the Anganwadi Centres.

What are the steps taken by government to encourage anganwadi workers and helpers?

- **Social Security Insurance Schemes**- Insurance benefits have been extended to Anganwadi Workers and Helpers under Pradhan Mantri Jeevan Jyoti Bima Yojana and Pradhan Mantri Suraksha Bima Yojana (PMSBY).
- **Pradhan Mantri Garib Kalyan Package**- Those engaged in Covid-19 related tasks, including Anganwadi Workers and Helpers, are provided insurance cover of Rs. 50 lakh.
- **Pradhan Mantri Shram Yogi Maan-Dhan (PM-SYM)**- States and UT Administrations are encouraged to enroll eligible Anganwadi Workers and Helpers under the voluntary and contributory pension scheme.
- **Ayushman Bharat Coverage**- In the interim budget for 2024-25, the coverage of [Ayushman Bharat](#) has been expanded to include all Anganwadi Workers and Helpers across the country, providing health coverage of up to Rs. 5 lakh per family annually for secondary and tertiary medical care.
- **Leave policies**- Anganwadi Workers are now entitled to a paid maternity leave of 180 days, paid leave for abortion/miscarriage for 45 days, and 20 days of annual leave.
- **Uniform provision**- A provision has been made for a set of two uniforms (saree/suit per annum) for Anganwadi Workers and Anganwadi Helpers.
- **Leverage IT through Poshan Tracker**- It utilizes IT systems to enhance transparency and delivery support systems at Anganwadi Centres.
- Anganwadi Workers have been provided with smartphones to facilitate the digitization and automation of their work.

Poshan Tracker - Mobile based application rolled out in 2021 through National e-Governance Division (NeGD) under Saksham Anganwadi & Poshan 2.0

6.5 Dilution of Right to Education Act, 2009

Why in news?

Recently Maharashtra have introduced rules that dilute the Right to Education Act, 2009 obligation of 25% reservation for students from weaker section and disadvantaged groups in private schools.

Key aspects	Key provisions of Right to Education Act, 2009
Right to education as a Fundamental right	<ul style="list-style-type: none"> • Every child of the age group of 6 to 14 years shall have the right to free and compulsory education in a neighbourhood school till the completion of his or her elementary education.

Financial burden	<ul style="list-style-type: none"> Both the Central Government and the state governments share concurrent responsibility for providing and sanctioning funds to enforce and carry out the provision of the Act.
Responsibility of Central government	<ul style="list-style-type: none"> Curriculum development Teacher training Technical support and resources
Duty of state government	<ul style="list-style-type: none"> It is the duty upon the state to establish schools in neighbourhoods for the purpose of implementation of the provisions of this Act within 3 years of the commencement of the Act. School Management Committee (SMC) shall be constituted for every State school and aided school, consisting of elected members of the local Authority and parents, teachers and community members.
Duty of the parent	<ul style="list-style-type: none"> It is the duty of every parent or guardian to admit his or her child or ward, as the case may be, to an elementary school in the neighbourhood for an education.
Free provision	<ul style="list-style-type: none"> No school fee, capitation fee, charges or expenses to be borne by the child to get elementary education. Every student is entitled to free textbooks, writing materials and uniforms.
Children with disabilities	<ul style="list-style-type: none"> Any child with disabilities will also have the right to access free and compulsory education at par with children with disabilities. Any child with 'multiple disabilities' or 'severe disabilities may also have the right to home-based education.
Special provision	<ul style="list-style-type: none"> The Act protects the children who even after six years of age were not admitted to schools or though admitted could not complete their elementary education. They have the right to free and compulsory education even beyond the age of fourteen years till the completion of his or her elementary education.
Right to transfer to other schools	<ul style="list-style-type: none"> If a school fails to provide the necessary facilities for completing elementary education, any student has the right to transfer to another school. Exemption- It is not available for schools belonging to specified categories or unaided schools.
Reservation	<ul style="list-style-type: none"> All aided schools must reserve a minimum of 25% of their seats for students from economically weaker and disadvantaged groups. It also applies to schools falling under specified categories and unaided schools that do not receive any government or local authority aid or grant.
Reimbursement for Unaided Schools	<ul style="list-style-type: none"> Unaided schools fulfilling RTE duties are eligible for reimbursement of expenses incurred
Child friendly schools	<ul style="list-style-type: none"> 2 trained teachers will be provided for every 60 students at the primary level. If a problem with the infrastructure it must be improved in every 3 years, else recognition will be cancelled.
Amendment in 2019	<ul style="list-style-type: none"> There shall be regular exams for all the students at the end of class 5 and class 8 and removed no detention policy. Any students failing such exams will get a chance for re-examination within 2 months. In very rare cases, schools can fail students with the permission of the government after failure in the re-examination. But under no circumstances a student will be expelled till the completion of his or her elementary education.

What is the recent Maharashtra rules about Right to Education Act?

- The private unaided schools within a 1 km radius of government or aided schools are exempt from the 25% admission requirement.
- Instead, students in these areas will be considered for admission in government or aided schools first. This exemption also applies to private schools established in the future within the same radius.
- **Similar rules in other States-**
 1. **Karnataka-** It introduced in 2018 which aimed to prevent a drop in enrollment in government schools and encourage parents to choose government schools over private ones.
 2. **Kerala-** It was introduced in 2011 where the fee concessions for RTE quota students are conditional upon the absence of government or aided schools within walking distance (1 km).

What are the implications of the rules with respect to RTE?

- **Enrolment in government schools-** The primary reasons for introducing these exemptions are concerns about a decline in enrolment ratios in government schools.
- **Less access to quality education-** The amendment closes the window for marginalized students to access quality education in private schools.
- **Dilutes RTE Act** - The Act aims to contest education apartheid and promote equality by providing opportunities to disadvantaged children, the recent rules dilutes the core of the Act.
- **Delay in payment-** There are concerns in delay and pending payments from State have been reported in various states, including Maharashtra.
- **Inadequate reimbursement-** It placed a financial burden on private schools as the State did not provide payment in timely manner, even if they provide it is not adequate to meet the financial needs of the education.

State government are obligated under RTE Act to reimburse private schools for the expenses incurred per child or the fee amount, whichever is less.

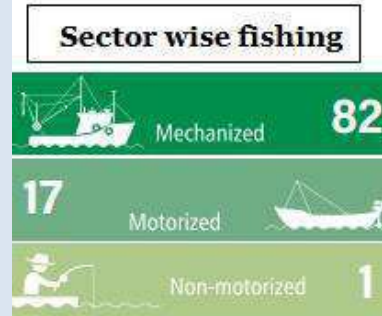
6.6 Fishing Subsidies in India

Why in news?

Ahead of 13th Ministerial Conference of World Trade Organization meeting, National Fishworkers Forum asked Ministry of Commerce and Industry to urge WTO to exclude small scale fishing from fisheries subsidies.

Status of India's marine fishing

- The marine fisheries sector in India accounts for more than 40% of its total fish production, is essential in supplying protein-rich food to the country's population at less cost, and generates lucrative foreign exchange earnings through seafood export.
- India's marine fisher folk population is 3.77 million as per Central Marine Fisheries Research Institute (Census 2016).
- Nearly 67.3% of these families were in the below poverty line (BPL) category.
- India is the only country where small-scale fishers fish in large numbers.



How India provides subsidies in fishery sector?

- The subsidy for fisheries in India is provided by the government under the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.
- **PMMSY**- It is a scheme to bring about Blue Revolution through sustainable and responsible development of the fisheries sector in India.
- **40% subsidy-** The government will provide up to 40% subsidy for setting up a biofloc fish farm, and various other financial assistance for fishing infrastructure, fish farmers, fish transportation, fish processing, and fish marketing.
- **Credit-linked subsidy for fish farmers-** The scheme provides a credit-linked subsidy for fish farmers to encourage them to take up fish farming as a business.

- As per an estimate by International Institute for Sustainable Development (IISD) India has seen 43% increase in subsidies to fisheries from 2016 to 2019.

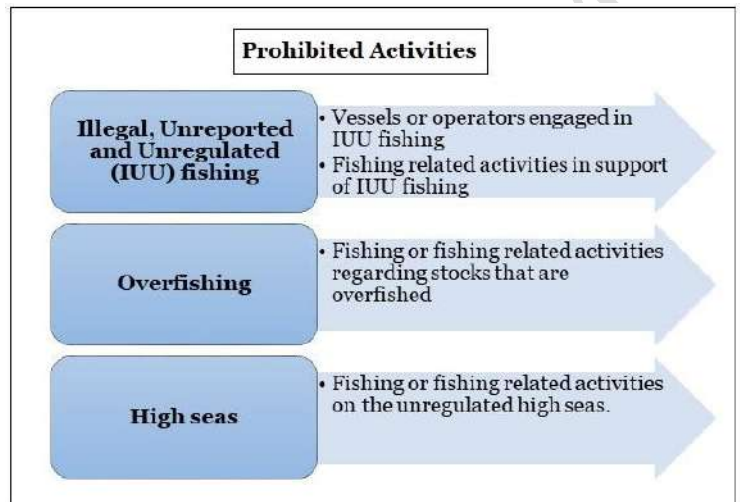
What is the WTO Agreement on Fisheries Subsidies?

- Adoption-** In [12th WTO Ministerial Conference](#).
- Mandates SDG-** It is the first Sustainable Development Goal target to be met through a multilateral agreement.
- Prohibited subsidies-**
 - Subsidies contributing to Illegal, Unreported and Unregulated (IUU) fishing.
 - Subsidies regarding overfished stocks.
 - Subsidies provided to fishing or fishing related activities in the unregulated high sea

Goal 14.6 targets the cessation of harmful fisheries subsidies by 2020, addressing overcapacity, overfishing, and combatting illegal fishing subsidies.



- Robust transparency-** The agreement aims to strengthen WTO member's notification of fisheries subsidies and enabling effective surveillance of the implementation of the obligations in the Agreement.
- Capacity building-** Targeted technical assistance and capacity building is to be provided to developing Members and Least Developed Countries (LDCs) to implement the Agreement.
- Special and Differential Treatment** - The dispute settlement will not apply for two years from the date of entry into force of the Agreement on following conditions



- If the member countries prohibit subsidies contributing to IUU fishing and overfished stocks
- If the subsidies of developing and LDC members within their own Exclusive Economic Zone (EEZ).

- Special care provision-** Members are to take special care and exercise due restraint
 - When granting subsidies to vessels not flying their flag
 - When granting subsidies to fishing or fishing related activities regarding stocks the status of which is unknown
- WTO voluntary funding mechanism-** It will be used to assist members in
 - Integrating fisheries sustainability elements into their fisheries subsidies policies and practices
 - Strengthening sustainable fisheries management systems and
 - Improving notifications and transparency, particularly of fisheries related information.

What is India's stand on fisheries subsidies?

- India's stand is that it is one of the lowest fisheries subsidisers despite such a large population and one of the disciplined nations in sustainably harnessing the fisheries resources.
- India does not exploit the resources indiscriminately like other advanced fishing nations and India's fisheries sector primarily depends on several millions of small-scale and traditional fishers.
- The Agreement will eliminate the subsidies granted to fishing vessels or fishing operators engaged in IUU fishing, it will check large-scale IUU fishing which deprives coastal countries like India of fisheries resources, thereby significantly impacting the livelihoods of our fishing communities.
- WTO Members who have provided huge subsidies in the past, and engaged in large-scale industrial fishing, which are responsible for the depletion of fish stocks, should take more obligations to prohibit subsidies based on the 'polluter pay principle' and 'common but differentiated responsibilities' (CBDR).
- India is advocating for the principles of CBDR and respective capabilities, proposing a 25-year transition period for developing countries and addressing livelihood and food security concerns for fishermen.

World Trade Organization

- WTO is the only international organization that deals with the rules of trade between countries.
- Establishment-** It was created in 1995 superseding the 1947 General Agreement on Tariffs and Trade (GATT).
- Marrakesh Agreement-** WTO officially commenced under the Marrakesh Agreement, replacing the General Agreement on Tariffs and Trade (GATT).
- Creation-** It was created by Uruguay round of negotiations and established in 1995.
- Members** - The WTO is run by its 164 members representing 98% of world trade.
- Ministerial Conference-** It is the topmost decision-making body of WTO which usually meets every two years.
- General Council** - It is the WTO's highest-level decision-making body that has representatives from all member governments and meets regularly to carry out the functions of the WTO.

WTO	
Founded in	1995
Headquarters	Geneva, Switzerland
India's membership	India is a member

7. HEALTH

7.1 Mental Health of Military Personnel


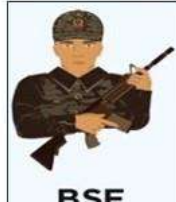





Why in news?

Recently a task force submitted its final draft to Ministry of Home Affairs which was established to investigate the causes of suicides and fratricides within the Central Armed Police Forces (CAPFs).

What is CAPF?

- Central Armed Police Forces (CAPF) is the collective name of central police organisations under the **Ministry of Home Affairs**.
- These are technically paramilitary forces formerly known as the **Central Para-Military Forces**.
- Since 2011, India adopted the term "central armed police forces" to drop the word "paramilitary".

Central Armed Police Forces (CAPF)

 AR The force that binds the North East	 BSF India's first line of defence	 CISF Provides security to the premises, staff, property and establishments	 CRPF Crowd & Riot control, Counter Insurgency, Deal with Left Wing Extremism
 ITBP Deployed along India - Tibet Border	 NSG Conduct anti hijack operations, rescue operations	 SSB Deployed along the borders of Assam and Nepal	

Classification of CAPF	CAPF	Description
Border Guarding Forces	Assam Rifles	<ul style="list-style-type: none"> It is the oldest Central Para Military Force in India. Primary role- To guard <i>Indo-Myanmar border</i>.
	Border Security Force	<ul style="list-style-type: none"> It is the world's largest border guarding force. Mandate- To guard the Indo-Pakistan and Indo-Bangladesh border.
	Indo Tibetan Border Police	<ul style="list-style-type: none"> Primary role- To patrol India-China border from the Karakoram Pass in Ladakh to Diphu La in Arunachal Pradesh. It is the first responder for natural disasters in the Himalayas.
	Sashastra Seema Bal	<ul style="list-style-type: none"> Mandate- To guard the Indo-Nepal and Indo-Bhutan borders. The sole objective is to achieve 'Total security preparedness' in the remote border areas for performing a 'stay-behind' role in the event of a war.
Forces of internal security	Central Industrial Security Force	<ul style="list-style-type: none"> It is the largest industrial security force in the world. It is responsible for providing security and protection to various industrial establishments, government infrastructure projects, and other important installations in India.
	Central Reserve Police Force	<ul style="list-style-type: none"> It is the largest of the Central Armed Police Forces units. Rapid Action Force is an anti-riot force trained to respond to sectarian violence. The Commando Battalion for Resolute Action (COBRA), it is a strong anti-Naxalite and counter insurgency force.
Special Task Force	National Security Guard (NSG)	<ul style="list-style-type: none"> It is a counter-terrorism unit which is commonly known as Black Cats. It was founded in 1984 under the National Security Guard Act, 1986.

What are the key findings of the final draft report?

- **Study-** It covered 642 suicide cases and 51 fratricidal deaths over five years.
- **Major factors-** It identified working conditions, service conditions, and personal/individual issues as the major factors contributing to suicides and fratricides in the CAPFs.
- **Working conditions-** Prolonged deployment in high-risk areas, long separation from families, forced bachelorship, and tough duty hours in inhospitable conditions.
- **Service conditions-** Trauma of being abused, bullying at the workplace, leave-related problems, extended working hours, and inadequate time for rest were cited as significant reasons for service-related stress
- **Gender difference-** The report noted that suicide attempts and committed cases by women personnel were fewer compared to male personnel.
- Male personnel were more hesitant to share their problems due to the fear of being mocked by their peers.
- **Mental health taboos-** Personnel hesitate to share their problems due to fear of being mocked or taunted by colleagues for appearing weak.
- **Suicides after returning from leave-** Over 80% of suicides occurred when personnel returned to work after availing leave, with a majority happening between 7 to 15 days after returning from home.

Fratricide in military refers to a soldier or security personnel killing their own colleagues.

What are the recommendations by the final draft report?

- The recommendations aim to address systemic issues and improve the mental health and well-being of CAPF personnel, acknowledging the importance of both working and service conditions in their overall welfare.

- **Sensitization of immediate bosses-** They should treat newly recruited jawans with dignity, hear their grievances and recognize their services.
- **Treat decently** - Senior officers were advised to refrain from using abusive language and to behave decently with their juniors.
- **Mental health screening-** It should be done for all CAPF personnel returning from leave or other long-term duties through a questionnaire.
- This screening would address common challenges associated with combat zones, such as insomnia, agitation, and nightmares.
- **Address mental health taboos-** The report acknowledged the stigma around mental health issues in both the forces and society.
- It emphasized the need to address this stigma to encourage personnel to open up about their problems without fear of mockery or job loss.

Steps taken by the government to tackle the mental health of military personnel

- **Ministry of Defence-** It has outlined various initiatives aimed at fostering a positive and conducive environment for the Armed Forces, with a particular focus on mental health and overall well-being.
- **Access to mental health-** The measures include the establishment of Military Psychiatry Treatment Centres in Mumbai and the creation of Mental Health Centres in multiple locations such as Mumbai, Visakhapatnam, Kochi, Port Blair, Goa, and Karwar.
- **Routine activities-** Yoga and meditation have been introduced.
- **Mental health helpline-** Both the Army and Airforce have set up a Mansik Sahayata (Mental Health) Helpline for professional counseling.
- **Improved living conditions-** The government has taken steps to improve the quality of ration and uniforms, particularly in conflict zones.
- **Housing projects-** They have been initiated to accommodate more personnel with their families, and defense-aided schools are being constructed to provide quality education at reduced costs for the children of armed forces members.
- **Ministry of Home Affairs-** In addressing mental health concerns within CAPF, the ministry has implemented measures such as transparent transfer policies, an enhanced promotion and financial benefit system, and improved leave policies.
- **Regular interaction-** It is done with senior officers to address grievances, ensuring adequate rest and relief, especially in regulating duty hours, and enhancing living conditions by providing recreational, entertainment, sports, and communication facilities.

7.2 India's Fight against Rare Diseases

Why in news?

February 29 is observed as rare disease day, it aims to raise awareness and support for individuals with rare medical conditions.

What is rare disease?

- According to the World Health Organization (WHO), a rare disease is a debilitating lifelong disease or disorder with a prevalence of 10 or less per 10,000 population.
- **Indicators-**
 1. Disease prevalence
 2. Total number of people with the disease
 3. Availability/non-availability of treatment options.
- **Treatment** - They can be very expensive going up to Rs 1 crore per year.
- **National Organization for Rare Disorders (NPRD)** - It estimates that for a child weighing 10 kg, the annual cost of treatment for some rare diseases may vary from Rs 10 lakh to more than Rs 1 crore per year.

SOME RARE DISEASES
▶ Thalassemia
▶ Sickle cell anaemia
▶ Ataxia
▶ Lysosomal storage disorder
▶ Congenital insensitivity to pain (rarest of rare)
▶ Acquired aplastic anaemia
▶ Muscular dystrophy
▶ Multiple sclerosis
▶ Sweet syndrome
▶ Paediatric cardiomyopathy

Status of rare disease in India

- Rare diseases affect 1 or less per 1,000 population globally, with India accounting for one-third of cases.
- Over 450 identified rare diseases exist in India, affecting approximately 8 crore-10 crore Indians.
- As per an estimate, there are 7,000 known rare diseases with an estimated 300 million patients in the world. Of this, 70 million are in India.
- They include inherited cancers, autoimmune disorders, congenital malformations, Hirschsprung's disease, Gaucher disease, cystic fibrosis, muscular dystrophies and Lysosomal Storage Disorders (LSDs).

What are the challenges present in rare disease?

- **Lack of definition**- India has a significant incidence of rare diseases, with over 450 identified there is no standard definition for rare disease in the country.
- **Late diagnosis**- It takes an *average of 7 years* for rare disease condition to be diagnosed which increases the financial burden for patients and their families.
- **Skill deficit**- Doctors often lack training on interpreting signs and symptoms.
- **Limited treatment options**- Only less than 50% of identified rare diseases in India are treatable and it is done only in few Centres of Excellence (CoEs).
- **Fund deficit**- The funds allocated for rare disease are insufficient and there is a lack of parity in fund utilization among CoEs.
- **Policy paralysis**- National Policy for Rare Disease 2021 has limited funds per patient, creating challenges for lifelong management and therapy.
- **High cost**- The drug prices are too costly which is not affordable for poor people.

What can be done to overcome the challenges in rare disease?

- **Standard definition**- India should establish a standard definition of rare disease.
- **Data collection**- There is a need to enhance data collection and epidemiological assessments for better policymaking.
- **Increase fund allocation**- The government should increase budgetary outlays for rare disease considering the chronic nature of rare disease.
- **Drug discovery**- India should dedicate funds for drug development and therapy.
- **Encourage PPP**- The public-private partnerships should be encouraged for funding, utilizing CSR initiatives.
- **Expand CoEs**- The number of Centres of Excellence should be increased to ensure better coordination among themselves.
- **Social assistance program**- The State governments should introduce social assistance programs.
- **Wider accessibility**- The satellite centres should be developed under CoEs for larger reach of treatment and therapy of rare diseases.
- **Address drug price**- The government should provide incentives for domestic manufacturers, reduce clinical trial requirements, and explore repurposed drugs.
- **Effective policy**- The government should establish policies to ensure sustained and effective management of rare diseases.
- **Multifaceted approach**- Battling rare diseases requires a holistic approach that addresses 4A's namely affordability, availability, awareness, and accessibility.

GST can be withdrawn on life saving drugs.

Steps taken by India to combat rare disease

- **National Policy for Rare Diseases (NPRD), 2021**- It outlines a comprehensive approach to address rare diseases in India.
- **Fund mechanism**- NPRD policy will make use of a crowdfunding mechanism to cover the cost of treatment of rare diseases.

- **Registry-NPRD** outlines a national hospital-based registry of rare diseases to ensure adequate data and comprehensive definitions of rare diseases are compiled properly for research purposes.
- **Exemption from Custom duty** -Medicines and foods needed for the management of 51 rare diseases have been exempt from [custom duty](#).
- **Centres of Excellence (CoEs)** – 8 CoEs have been identified for diagnosis, prevention and treatment under National Policy for Rare Diseases 2021.
- **Financial support** - Up to Rs. 50 lakhs to the patients suffering from any category of the Rare Diseases and for treatment in any of the CoEs.
- **Nidan Kendra** -They have been set up for genetic testing and counselling services.
- **Kerala Against Rare Diseases (KARE)** - It is Kerala’s initiative to devise a comprehensive care strategy to prevent and manage rare diseases, it will go beyond mere care to look at rare diseases in a holistic manner.

7.3 Maternal deaths and stillbirths in India

Why in news?

United Nations has released Maternal Mortality Estimation Inter-Agency Group (MMEIG) 2020 report which provides global estimates of MMR.

What are the key findings of the report?

- **UN MMEIG**- It comprises of
 1. World Health Organisation (WHO),
 2. United Nations Children’s Fund (UNICEF),
 3. United Nations Population Fund (UNFPA),
 4. World Bank Group and
 5. United Nations Department of Economic and Social Affairs, Population Division (UNDESA/Population Division)

Key terms
<p>Maternal Mortality Rate</p> <ul style="list-style-type: none"> • It is defined as the number of maternal deaths during a given time period per 100,000 live births during the same time period.
<p>Still Birth</p> <ul style="list-style-type: none"> • A baby who dies after 28 weeks of pregnancy, but before or during birth, is classified as a stillbirth.

- The report presents internationally comparable global, regional and country-level estimates and trends for maternal mortality between 2000 and 2020.
- **Title**- "Trends in maternal mortality 2000 to 2020"
- **SDG regional groupings**- In 2020 *sub-Saharan Africa* was the only region with a very high MMR – estimated at 545 maternal deaths per 100 000 live births.
- **Nigeria**- It had the highest estimated number of maternal deaths, accounting for **over one quarter** (28.5%) of all estimated global maternal deaths in 2020, with approximately 82 000 maternal deaths.
- **India**-The data on maternal mortality and stillbirth is maintained by the [Ministry of Health and Family Welfare](#).
- [Sample Registration Report](#)- It is released by Registrar General of India (RGI)
 1. **MMR**- It is reduced from 130 in 2014-16 to 97 in 2018-2020.
 2. **Still birth**- It is reduced from 4 in 2016 to 1 in 2020.

MMR	2000	2020	Average annual rate of reduction
Global	339	223	2.07%
India	384	103	6.36%

What are the initiatives taken by India to tackle maternal mortality and still birth?

- **Pradhan Mantri Surakshit Matritva Abhiyan(PMSMA)**- It is launched with an aim to provide fixed-day, free of cost, assured, comprehensive and quality antenatal care on the *9th day of every month*, universally to all pregnant women in their *2nd / 3rd trimesters of pregnancy*.
- **Extended PMSMA strategy**- It was launched to ensure quality Ante Natal Care to pregnant women, especially to high-risk pregnancy (HRP) women and individual HRP tracking till a safe delivery is achieved by means of *financial incentivisation* for the identified high risk pregnant women and accompanying ASHA for extra 3 visits over and above the PMSMA visit.

- **Surakshit Matritva Aashwasan (SUMAN)**- It aims to provide assured, dignified, respectful and quality healthcare at no cost and zero tolerance for denial of services for every woman and newborn visiting the public health facility.
- **Janani Shishu Suraksha Karyakaram**- It entitles every pregnant woman to free delivery including for caesarean section, in public health institutions along with the provision of free transport, diagnostics, medicines, other consumables, diet and blood (if required).
 - Similar entitlements have been put in place for all sick infants accessing public health institutions for treatment.
- **LaQshya (Quality Improvement Initiatives)** - It was launched in 2011 to *improve the quality of care* in labour room and Maternity operation Theatres.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY)** - It is a centrally sponsored *direct benefit transfer* (DBT) scheme that provides support to the mother for safe delivery, address partial compensation for wage loss and immunization of her first living child.
- **PMMVY 2.0**- It is revised in 2022 under *Mission Shakti*, maternity benefit is also provided for 2nd child (only girl child) to discourage pre-birth sex selection and to promote and celebrate the girl child.
- **Mission Saksham Anganwadi and Poshan 2.0**- Supplementary nutrition is provided to pregnant women and lactating mothers with focus on strengthening nutritional content, delivery, outreach and outcomes.
- **Poshan Tracker**- It is a new, robust Information and Communications Technology (ICT) *centralized data system* that is linked with the Reproductive and Child Health (RCH) Portal (Anmol) of the Ministry of Health and Family Welfare.
- **Anaemia Mukht Bharat**- It was launched in 2018 in a **6x6x6 strategy** to reduce anaemia prevalence among children, adolescents and women in reproductive age group.
- **Monthly Village Health, Sanitation and Nutrition Day (VHSND)** - It is an *outreach activity* at Anganwadi centres for provision of maternal and child-care including nutrition in convergence with the ICDS.
- **Outreach camps in rural**- They are also provisioned for improving the reach of health care services especially in tribal and hard to reach areas.
 - This platform is used to increase awareness for the Maternal and Child health services, community mobilization as well as to track high risk pregnancies.
- **Health and wellness centre**- It organizes camps on a periodic basis, reaching the marginalized, support treatment compliance and follow-up pregnant women and new-born etc.,
- **Mother-Child Protection Card (MCP)** - It was launched in 2018 which serves as an entitlement card, a counseling aid, and a family empowerment tool.
 - It is a valuable tool used in routine maternal and child health care
- **Safe Motherhood Booklet**- They are distributed to the pregnant women for educating them on diet, rest, danger signs of pregnancy, benefit schemes and institutional deliveries.
- **IEC/BCC campaigns**-One of the key focus areas of Maternal Health is to generate demand through Information Education & Communication (IEC), Inter-personal Communication (IPC) and Behaviour Change Communication (BCC) activities.

Sustainable Development Goal (SDG 3.1) reduce global MMR to less than 70 maternal deaths per 100 000 live births by 2030

8. BILATERAL ISSUES

8.1 India-France Ties

Why in news?

The French President was the chief guest at India's Republic Day 2024, making it his third visit to India, after his 2018 state visit and G-20 2023 summit hosted by India.

What is the history of India France bilateral relations?

- **Diplomatic relation**- In 1947, both countries established diplomatic relation which upgraded to strategic partnership in 1998.

- **Horizon 2047: Charting the future of India-France Strategic Partnership-** It was signed in 2023 to mark the 25th anniversary of the Indo-French partnership, both countries agree to adopt a [roadmap](#) to set the course for the bilateral relationship up to 2047.

France is the 1st western country with which India signed a strategic partnership agreement

- **Three pillars-** ‘Security, planet and people’ guides the bilateral ties for the next 25 years.
- **International support-** It was the **first P-5 country** to support India’s claim for a permanent seat in an expanded and reformed UN Security Council.

- France’s support was vital in India’s accession to the Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA) & Australia Group.

France has emerged as the 11th largest investor in India

- It continues to support India’s bid for accession to the Nuclear Suppliers Group (NSG).

- **Economic relation-** Bilateral trade reaching an impressive 13.4 billion dollars in 2022-23, marking a significant 7.72% increase from the previous year.

- **Defence cooperation-** Major ongoing defence-related projects include the purchase of Rafale aircrafts and the P-75 Scorpene Project.

1. Annual Defence Dialogue (Defence Minister level)
2. High Committee on Defence Cooperation (Secretary level).

Defence ties	Exercise name
Joint defence exercise	VARUNA
Joint military exercise	FRINJEX-23
Multilateral exercise	La Perouse- Attended by the navies of India, Australia, Japan etc.,
	ORION- The Indian Air Force participated for the first time.

- **India France Defence Industrial Roadmap-** It supports India’s goal of self-reliance in the defence sector and it’s a part of broader strategic partnership between two countries.

- **Trilateral cooperation-** India-France-UAE Trilateral Focal Points meeting was held and the first track 1.5 dialogue comprising parliamentarians, officials, former diplomats and think-tanks was also held.

- **Space cooperation-** Cooperation in the space domain began in the 1960s with French assistance to set up the Indian launch facility at Sriharikota.

- The first India-France Strategic Space Dialogue was held and both concluded a joint declaration for cooperation in future launch vehicle technologies.

- **Smart cities collaboration-** France collaborated with India’s Smart City projects by leveraging its expertise in urban planning and architecture with examples of Chandigarh, Puducherry and Nagpur.

- **Blue Economy** - A roadmap on Blue Economy and Ocean Governance was adopted by France & India in 2022.

- **Green hydrogen** - Indo-French roadmap for decarbonised hydrogen was adopted in 2022.

- **Renewable energy-** As part of their joint efforts on climate change, India and France launched ‘**International Solar Alliance**’ in 2015.

- **Security** - India and France have Cyber Dialogue mechanism to discuss cyber cooperation and related matters.

- India and France have robust cooperation on topics related to countering terrorism in all its forms.

- **Digital cooperation-** France has developed puters for India including the fastest supercomputer Param Siddhi at 4.6 petaflops per second.

Main imports from France	Main exports to France
Aviation products, machine equipment, electrical equipment and chemical products.	Engineering goods including electrical machinery and boilers, petroleum products, pharmaceutical products, electronic equipment and readymade garment

- UPI was launched from the Eiffel Tower, offering secure and convenient transactions for Indian visitors and NRIs.

- **Civil Nuclear Cooperation-** Cooperation on **Jaitapur Nuclear Power Project** and exploration of Small Modular Reactors and Advanced Modular Reactors.

- **Education-** An **Agreement on mutual recognition of degrees** was signed in 2018 to facilitate pursuit of higher education by Indian students in France and vice versa.

- **Migration Mobility Partnership Agreement** was operationalized and **APS-VIE Scheme** (it allows Indian students to stay in France up to 2 yrs. after finishing Masters to look for jobs) was renewed, in 2022.
- **Cultural relation**- Namaste France 2023 was organised in Paris with the support of Ministry of Culture, to celebrate 25 years of strategic partnership.
- **Tourism**- Rajasthan continues to lead among all Indian destinations for French tourists.
- France has an estimated 1,19,000 Indian community largely originating from erstwhile French colonies of Puducherry, Karaikal, Yanam, Mahe and Chandernagore.
- **India France Consular Dialogue** was held and regular cooperation is undertaken.



What lies ahead?

- India and France have been 'Strategic Partners' since 1998, when they signed a joint declaration to enhance their bilateral ties in various fields, such as nuclear, space, and counter-terrorism.
- The Partnership which reflects the maturity and resilience of the two countries is now moving from government domains to commercial and civil spaces, and is expected to grow further in the future.

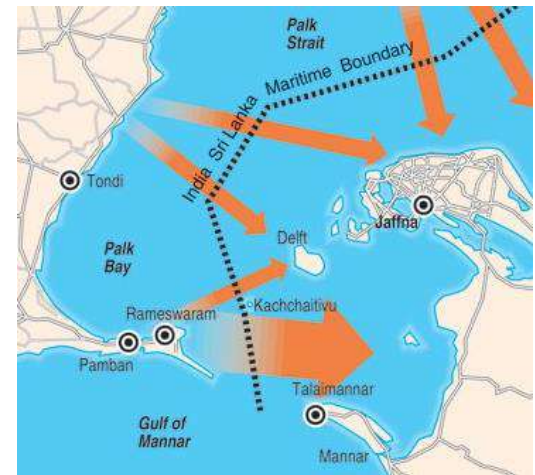
8.2 India-Sri Lanka Fisherman Issue

Why in news?

The ongoing arrests of fishermen from Tamil Nadu and Puducherry by the Sri Lankan Navy in the Palk Bay, along with attacks on them at sea by armed civilians despite diplomatic efforts, are a serious cause for concern.

What is the issue?

- **Fishing ground**- The issue revolves around the fishing activities of both Indian and Sri Lankan fishermen in the Palk Bay area, which lies between the two countries.
- **Maritime boundary agreements**-It was signed in 1974 and 1976 between India and Sri Lanka, they were intended to define the international maritime boundary between the two countries.
- **1974 Agreement** - Each country shall have sovereignty and exclusive jurisdiction and control over the waters, the islands, the continental shelf and the subsoil, falling on its own side of the aforesaid boundary.
- Only navigational rights of the vessels of both Sri Lanka and India over each other's waters have been preserved.



Allowed activities for Indian fisherman in the island	Prohibited activities for Indian fisherman in the island
Resting and net drying Visit the annual St. Anthony's festival without the need of visa	The fishing vessels and fishermen of India shall not engage in fishing in the historic waters, the territorial sea and the Exclusive Economic Zone of Sri Lanka

- **1976 Agreement** - Each Party shall respect rights of navigation through its territorial sea and exclusive economic zone in accordance with its laws and regulations and the rules of international law.
- It marked the international maritime boundary of India and Sri Lanka without consulting the Tamil Nadu State Assembly.
- **Sri Lankan civil war, 1983** - The combats between Indian Tamil fishers and a Sinhala-dominated Lankan navy, leading to the loss of lives.

- **Bottom trawling**- A large number of Indian fishermen rely on trawling, it involves dragging a large fishing net along the seabed, which can cause significant damage to the marine ecosystem.
- **Tamil Nadu Marine Fishing Regulation, 1983**- The mechanized fishing boats can fish only beyond 3 nautical miles from the coast pushing the fishermen to cross the IMBL frequently.
- **Inefficient Joint Working Group (JWG)** - It was started in 2016 that would meet every months to discuss about fishery related issues but it has just held 5 meetings.

***Katchatheevu island** was given by India to Sri Lanka as part of a bilateral gesture in 1974 which delineated the maritime boundary line in the Sethusamudram littoral region between the two neighboring countries.*

How the issue strains the relation between India and Sri Lanka?

Concern	India	Sri Lanka
Poaching	<ul style="list-style-type: none"> • To increase productivity and gains, the Indian government sought to technologically advance fishing practices and promoted mechanized trawlers. • This resulted in the Indian side of the Palk Bay being largely depleted of fish, causing them to venture further into Sri Lankan waters to poach. 	<ul style="list-style-type: none"> • Fishing accounts for a large portion of economic production in the Northern Province of Sri Lanka, which contributes to more than a third of the country's catch. • Indian poaching in Sri Lanka waters results in estimated loss of 40 million dollars for Sri Lanka annually adversely affecting the livelihood of people in coastal towns.
Environmental concern	<ul style="list-style-type: none"> • Indian fishing trawlers and their exploitative fishing practices of bottom trawling severely harm the ecosystem, marine life and fish stocks in the Palk Bay over the long term. • Tamil Nadu Marine Fisheries Regulation Act of 1983 promotes deep-sea fishing but proved ineffective. 	<ul style="list-style-type: none"> • In 2017, Sri Lanka banned all bottom trawling. • This ban was in response to concerns raised by Sri Lankan fishermen whose livelihoods were threatened by encroaching Indian bottom trawlers which depleted marine resources on the Sri Lankan side.
Coastal security	<ul style="list-style-type: none"> • The detained trawlers and Indian fisherman by Sri Lanka are often released to maintain bilateral relations with India 	<ul style="list-style-type: none"> • The Sri Lankan navy has increasingly detained numerous Indian fishermen and trawlers encroaching on national territory since the end of the civil war in 2009.
Cultural factor	<ul style="list-style-type: none"> • Local fishermen in both Sri Lanka and India are Tamil speakers and have shared culture and festivals, owing to centuries of contact and connection through religion, literature, frequent migrations and intermarriages. • It has now been detrimentally affected in recent years by the issues of coastal insecurity and overfishing. 	

What can be done?

- **Holistic approach**- The first step for arriving at an amicable solution is to recognize that in addition to India and Sri Lanka, there are other stakeholders to engage, including the governments of the Northern Province and Tamil Nadu and the fishing communities in both countries.
- **Fisher-level talks**- The people of the two countries in general have common threads of language, culture and religion, all of which can be used purposefully to resolve any dispute.
- **Get on lease**- India could potentially secure a lease for the island of Kachchatheevu, allowing Indian fishermen to operate in the vicinity without Sri Lanka losing its ownership of the island.

It can be modelled in lines with the Tin Bigha case where 1974 India Bangladesh boundary agreement gave India sovereignty over Tin Bigha, but a lease in perpetuity later enabled the Bangladeshis to use it for civilian purposes.

- **Permit licensed fisherman**- Licensed Indian fisherman can be permitted to fish within a designated area of Sri Lankan waters and vice versa.
- This would persuade Sri Lanka to permit licensed Indian fishermen to fish in Sri Lankan waters for five nautical miles from the IMBL.

- **Wadge Bank example-** In 1976 boundary agreement allowed licensed Sri Lankan fishermen to fish in the Wadge Bank which is a fertile fishing ground located near Kanyakumari for a period of three years.
- **Create Palk Bay authority-** For appropriate and informed decision making, it should comprise fisheries experts, marine ecologists, fishermen's representatives, strategic specialists, and government officials.
- **Role of Palk Bay authority-** It could determine the ideal sustainable catch, type of fishing equipment that can be used, and the number of fishing dates for Indian and Sri Lankan fishermen.
- **Diplomatic engagement-** This would help signal the priorities and commitment of the Indian government towards maintaining strong relations with Sri Lanka and advancing sustainable fishing practices.
- **Protect ecology-** The focus should be on the enrichment of marine resources and a qualitative improvement in the lives of coastal people.
- **Bilateral cooperation-** The Tamils on the both side can cooperate on solutions like introduction of multiday boats for deep sea fishing.
- **Effective mechanism-** The Joint Working Group (JWG) which was established to address fisheries related issues should meet every 3 months as mentioned to improve efficiency and enforcement.
- **Focus on research-** The JWG has agreed to have joint research on fisheries, which should be commissioned at the earliest.
- **Regulate fishing activities-** India can regulate fishing activity in the Palk Bay to reduce overfishing and ban the extremely harmful practice of bottom trawling to preserve and restore the ecosystem of the Indian side of the Palk Bay.
- **Buy-back scheme-** The buy-back cost of trawlers could be divided between the Tamil Nadu government and the central government in India to fund the buy-back scheme and can be implemented within 2 years.
- These mechanised trawlers can later be bought by other state governments for use in waters where they do not harm the ecosystem and coastal environments.
- **Alternate livelihood opportunities-** There is a need for the Central and State government to implement the [Pradhan Mantri Matsya Sampada Yojana](#) proactively to cover alternative livelihood measures including seaweed cultivation, open sea cage cultivation, and sea ranching.

What lies ahead?

- The success of diplomacy consists of converting a crisis into an opportunity, Tamil Nadu fishermen must be encouraged to take to deep-sea fishing.
- The Palk Bay is increasingly becoming a conduit for drug traffic and there could be joint naval cooperation for tackling this menace.
- Thus the Palk Bay could be transformed from a contested territory to a common heritage, which it was for several centuries.

8.3 India-UAE Relations

Why in news?

Prime Minister Narendra Modi paid an official visit to the United Arab Emirates (UAE).

What is the history of India-UAE relations?

- **Historical relation-** Both including its precursor emirates, had close relations with ancient trade networks. Sumerians traded with *Meluhha* (Indus Valley), *Magan* (UAE and Oman), and *Dilmun* (Bahrain), connecting through the UAE.
- Maritime routes facilitated Arab trade with India for silk, spices, gold, and porcelain.
- **Diplomatic relations-** It was established in 1972 with UAE opening its embassy in India in 1972 and the Indian Embassy was opened in UAE in 1973.
- **Economic relations-** Bilateral trade grew to 85 billion dollars in 2022-23, making the UAE India's 3rd -largest trading partner and India's 2nd -largest export destination.
- **Multilateral cooperation-** Both countries are currently part of several plurilateral platforms such as [BRICS](#), [I2U2](#) (India-Israel-UAE-USA) and UFI (UAE-France-India) Trilateral, etc.,

UAE is the 4th-largest overall investor in India.

- UAE was invited as a Guest Country to the [G-20 Summit](#) held under India's Presidency in 2023.

- India-Middle East-Europe Economic Corridor (IMEEC)** - It was signed during the G-20 summit, 2023 which aims to connect India to Europe across the Arabian peninsula, and is a potential rival to China's [Belt and Road Initiative](#).

- India-UAE Comprehensive Economic Partnership Agreement**- It was signed in 2022 which aims to increase trade in services to 115 billion dollars in five years.

- Bilateral investment treaty**- It was approved in 2024 which would significantly boost bilateral economic engagement, especially manufacturing and foreign direct investment.

Major export to UAE	Major import from UAE
<ul style="list-style-type: none"> Petroleum Products, Precious Metals, Stones, Gems & Jewellery, Minerals, Food Items (Cereals, Sugar, Fruits & Vegetables, Tea, Meat, and Seafood), Textiles (Garments, Apparel, Synthetic fibre, Cotton, Yarn) and Engineering & Machinery Products and Chemicals. 	<ul style="list-style-type: none"> Petroleum and Petroleum Products, Precious Metals, Stones, Gems & Jewellery, Minerals, Chemicals, Wood & Wood Products.

- NRI remittance**- As per 2020 data, the annual remittances made by the large Indian community in UAE is estimated to be around 3.5 million, which is one of the highest in the world and is 18% of the total remittances to India.

- Fintech relations**- RuPay card, a key component of India's Digital Public Infrastructure (DPI), is accepted in the UAE since 2019, while from 2023, the rupee was being accepted for transactions at Dubai's airports.

- Local Currency Settlement Systems**- Rupee-dirham settlement system was launched in 2023 where the Indian Oil Corporation made a rupee payment to the Abu Dhabi National Oil Company for crude oil imports.

UAE is the 4th largest source for crude oil and 2nd largest source for LNG and LPG for India.

- Energy security**- UAE is the only nation from the region which has strategic oil reserves stored in India.

- Defence relations**- The 1st edition of India-UAE joint military exercise "**Desert Cyclone**" recently held in Rajasthan.

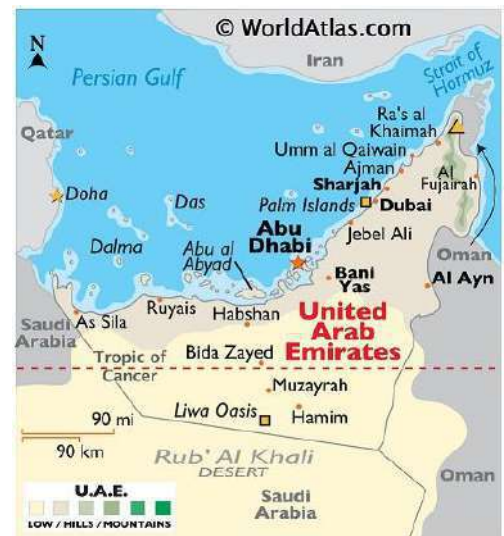
- Air connectivity**- During the Covid-19 pandemic, an *air-bubble agreement* between India and the UAE was signed which continued throughout the pandemic period.

- Education** - The *IIT Delhi-Abu Dhabi Campus* will offer its first program from 2024. Manipal, BITS Pilani and Amity University also have set up their campuses in the UAE.

- Cultural relations**- In 2018, India was the '**Guest of Honour**' country at the Abu Dhabi Festival (ADF), the UAE's annual cultural festival.

- In 2019, Prime Minister of India was conferred the UAE's top civilian honour, the **Order of Zayed** during his official visit.

- Louvre Museum in Abu Dhabi**- It is the only branch of Louvre Museum outside Paris that has a number of artefacts from India as well, including Mughal painting '**The Huntress**' painted in one of the Mughal courts in South India.



- BAPS Mandir**- Bochasanwasi Shri Akshar Purushottam Swaminarayan Sanstha temple to be inaugurated by PM Modi in Abu Dhabi in 2024.

BAPS will be the 2nd big Hindu temple to be inaugurated in the UAE, the first being the Hindu Temple in Dubai, opened in 2022.

- People to people relations**- The Indian expatriate community of approximately 3.5 million is the largest ethnic community in UAE.

- Climate change**-Both India and the UAE co-launched the [Global Green Credit Initiative](#) at COP 28 climate summit which held at UAE.

What lies ahead?

- UAE Centennial Plan 2071** intends to arm the youth of the country with the skills and knowledge needed to succeed and fulfil the country's goal of becoming the best country in the world by 2071.

- This vision coincides very closely with the ***Vision 2047 of India***, which too has set high and ambitious goals for India to achieve in its quest to become a modern and prosperous nation by its centenary of independence in 2047 and cement its place as a vishwa guru (global leader).

9. INTERNATIONAL ISSUES

9.1 Challenges with Interpol Notices

Why in news?

Recently concerns have been raised about the misuse of Interpol's notice system, especially the issuance of blue corner notices, which are less scrutinized than their red corner notices.

International Criminal Police Organisation

- **Launch year**- It is an inter-governmental body founded in 1923. **Headquarters**- Lyon, France.
- **Member countries**- 196 members, India joined in 1949.
- **Role**- It provides investigative support, expertise and training to law enforcement worldwide, focusing on 3 major areas of transnational crime (Terrorism, cybercrime and organized crime).
- **Uniqueness** - Only organization with the mandate and technical infrastructure to share police information globally.
- **National Central Bureau**- It is present in each member country, it links its national police with Interpol's global network.
- **CBI**- Central Bureau of Investigation is the national central bureau of India to liaison with Interpol.
- **Interpol UN Cooperation**- INTERPOL has enjoyed a special role (***Permanent Observer***) at the United Nations since 1996.

What is Interpol notice system?

- **Interpol Notices**- They are international requests for cooperation or alerts allowing police in member countries to share critical crime-related information.

- Most Notices are for police use only and are not available to the public. However, an extract of the Notice can be published on this site if the requesting country wishes to alert the public or seek their help.



- All United Nations Special Notices are public.
- The notices are generally issued by the General Secretariat at the request of
 - A member country's INTERPOL National Central Bureau.
 - International Criminal Tribunals and the [International Criminal Court](#)
 - The United Nations in relation to the implementation of sanctions imposed by the Security Council.

Color Coded Notice	About
Red Notice	To seek the location and arrest of persons wanted for prosecution or to serve a sentence.
Yellow Notice	To help locate missing persons, often minors, or to help identify persons who are unable to identify themselves.
Blue Notice	To collect additional information about a person's identity, location or activities in relation to a criminal investigation.
Black Notice	To seek information on unidentified bodies.
Green Notice	To provide warning about a person's criminal activities, where the person is considered to be a possible threat to public safety.
Orange Notice	To warn of an event, a person, an object or a process representing a serious and imminent threat to public safety.
Purple Notice	To seek or provide information on modus operandi, objects, devices and concealment methods used by criminals.
INTERPOL–United Nations Security Council Special Notice	Issued for entities and individuals who are the targets of UN Security Council Sanctions Committees.

To know about global policing and Interpol click [here](#)

What are the issues with the Interpol?

Red Notice	Blue Notice
It is issued by a member state to arrest a wanted criminal through extradition or other lawful action.	It is an "enquiry notice," it allows member states to share critical crime-related information such as criminal records, location verification, and identity confirmation.
It follows criminal convictions and can lead to arrest while traveling through a member state.	It is issued prior to the filing of criminal charges.
Interpol cannot compel law enforcement authorities in any country to arrest the subject of a red corner notice as the exercise of such powers is entirely discretionary.	Delays or lack of cooperation from certain countries may hinder the effectiveness of Blue Notices.

- **Misuse-** The notice system especially blue notice is susceptible to misuse by targeting political refugees and dissidents.
- **Political character-** Allegations of misuse directed at countries like Russia, China, Iran, Turkey, and Tunisia for targeting political dissidents and opponents.
- **Limited publication** - Turkey criticized Interpol for not publishing certain red notices which hampers police cooperation.
- **Issue with blue notice-** It is less likely to be reviewed before publication which doubled the number over the past decade.

9.2 The Menace of Maritime Piracy

Why in news?

The Indian Navy swiftly responded and stopped two pirate attacks off the Somali coast in a span of less than two days.

What is maritime piracy?

- Any robbery or other violent action, for private ends and without authorization by public authority, committed on the seas or in the air outside the normal jurisdiction of any state.

- The term ‘piracy’ is used to describe a range of crimes from petty theft from ships at sea or anchorage to armed robbery and hijacking of a ship for ransom.
- **Types**-Maritime piracy can take various forms, each requiring different prevention strategies.

Types of maritime piracy	About
Armed robbery	Armed criminals illegally board a ship to steal cargo, equipment, or personal belongings of the crew without harming them.
Hijacking/ Kidnapping	Pirates seize control of a vessel and its crew, often demanding ransom for their release.
Violent assault	Pirates use physical violence against the crew, causing harm or even death, while stealing valuable assets from the ship.
Cargo theft	Pirates target specific cargo or valuable goods, robbing the vessel of its valuable shipmen

- **Hijacking**-It is a greatest concern, since it causes panic in maritime business and leads to the establishment of high-risk areas, and a resultant increase in maritime insurance premiums.
- **Disrupt trade activities**- It also affects the safety of ships and seafarers, and disrupts global supply chain

Why the areas in recent attacks are most affected by piracy?

- **Poor policy**- The seas are very vulnerable to piracy as they lack effective law enforcement.
- **Lack of capacity building**- The countries that borders these waters do not have strong or sufficient naval capabilities to patrol and protect them.
- **Political instability**- Some of these countries are facing internal instability, which further hampers their ability to secure their maritime domain.
- **High shipping traffic**- These areas have high volume of merchant vessels passing through them as they connect major sea lanes such as ***Strait of Hormuz or the Bab el Mandeb Strait.***
- **Narrow passages**- The ships while sailing through these areas, sail close to each other and reduce their speed making them easier target for pirates.
- **Anchored ships**- In Gulf of Aden or the Gulf of Guinea the ships have to wait for days before entering the port, they are often anchored or drifted which exposes them to the risk of being boarded by pirates.
- **Socio-economic issues**- The coastal communities suffer from unemployment, poverty and civil unrest, they rely on piracy as a means to survival or profit.
- **Lack of coordination**- These areas are mostly international waters, international straits, or archipelagic waters that fall within the maritime jurisdiction of several countries, this leads to legal complexities and difficulties in coordination.
- **Lack of legal framework**- The captured pirates escape from prosecution and punishment as there is no effective international legal mechanism for their trial and disposal.

In recent years, waters off the west coast of Africa, Gulf of Aden, Horn of Africa, Bangladesh, and the Strait of Malacca have seen attacks by pirates.

How to prevent maritime piracy?

- **Maritime security training**-Proper training for seafarers and the crew assists in raising awareness about piracy risks and ensures they are equipped to handle potential attacks.
- **Maritime surveillance and Intelligence**-Effective surveillance systems, such as AIS (Automatic Identification System) and radar technologies, can enhance situational awareness, enabling prompt actions against pirates.
- **Technology solutions**- Utilizing advanced technology solutions, such as alarms, CCTV cameras, and access control systems, can deter pirates and provide vital evidence for investigations.
- **Rapid response capability**- A ship with an armed helicopter is the most effective in dealing with the piracy situation, it can direct fire and vector the nearest ship that can render assistance.

- **Marine commandos**- Indian Navy has been practicing Maritime Intervention Operations (MIO) for decades, and has developed extremely high expertise in this niche area of naval operations.
- **Collaborative efforts**-Cooperation among governments, international organizations, and naval forces is crucial for sharing intelligence, coordinating patrols, and conducting joint counter-piracy operations.
- **Piracy risk assessment**- Conducting thorough risk assessments allows ship owners to identify vulnerabilities, strengthen security measures, and develop contingency plans.
- **Adopt best practices**- Adhering to industry best practices, such as Best Management Practices (BMP) guidelines and implementing effective security measures, significantly reduces the risk of piracy incidents.

G.S PAPER III

10. ECONOMY

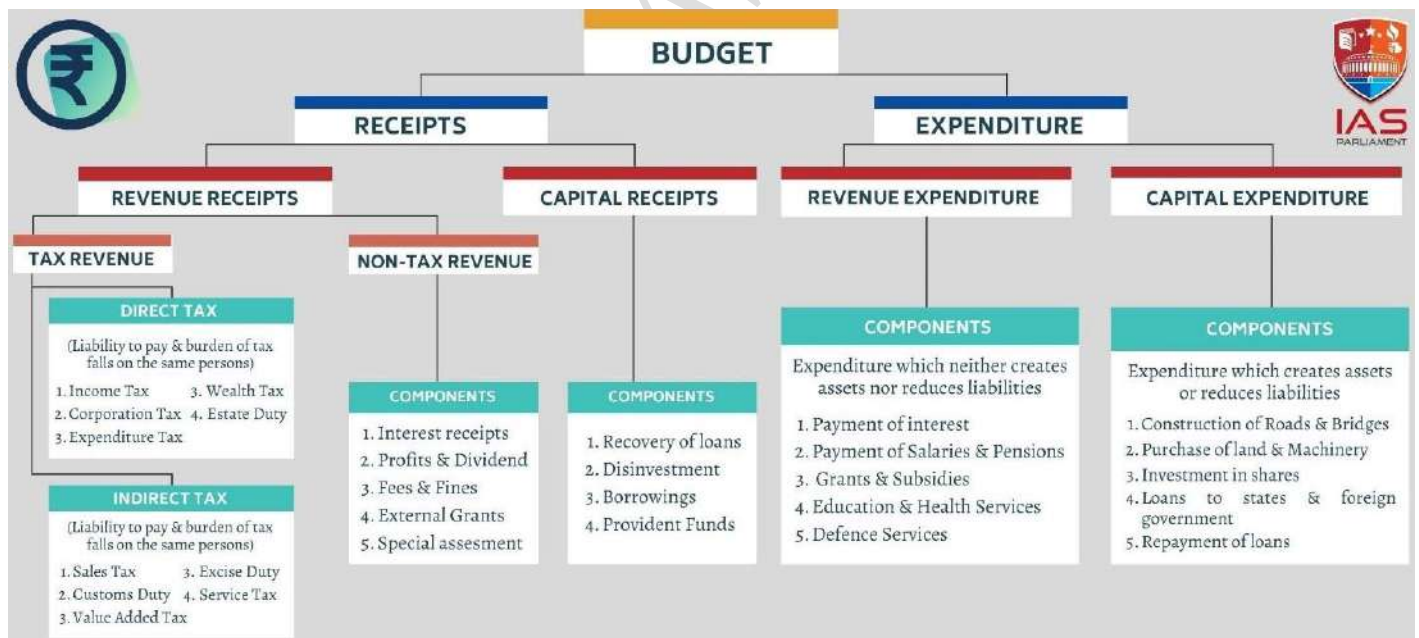
10.1 Importance of Fiscal Consolidation

Why in news?

In the Interim Budget 2024-25 the Centre announced that it would reduce its fiscal deficit to 5.1% of gross domestic product (GDP) in 2024-25.

What is Fiscal Deficit?

- It is the condition where the expenditure of the government exceeds its revenue in a financial year.
- When a government’s expenditure exceeds its revenues, the government will have to borrow money or sell assets to fund the deficit.
- **Fiscal surplus**- It is a condition where revenues exceed expenditure, but mostly governments focus on keeping the fiscal deficit under control rather than on generating a fiscal surplus or on balancing the budget.
- **Fiscal deficit** = Total expenditure – Total receipts excluding borrowings.



- **Positive fiscal deficit**- It indicates that the government is spending more than it is earning through taxes and other sources.
 - This gap is typically financed through borrowings or by drawing down from its cash reserves.
- **Manageable fiscal deficit**- It can be used to finance essential investments in infrastructure, social welfare programs, and economic development.
- The fiscal deficit is generally expressed as a percentage of a country’s GDP since it is believed that the figure shows how easily the government will be able to pay its lenders.

- **National debt-** It is different from fiscal deficit, it is the total amount of money that the government of a country owes its lenders at a particular point in time.
- The national debt is usually the amount of debt that a government has accumulated over many years of running fiscal deficits and borrowing to bridge the deficits.

Fiscal Deficit	National Debt
It focuses on the yearly budgetary gap between revenue and expenditure.	It encompasses the total outstanding debt owed by the government over time.
It is the annual measure.	It is the cumulative borrowing history of the government.
It is the amount by which the expenditure exceeds revenue.	It accumulates over many years due to persistent fiscal deficits when the government spends more than it earns and borrows to cover the gap.

To know about fiscal prudence click [here](#)

How the government fund its fiscal deficit?

- **Government borrowing-** The government borrows funds through the issuance of **government securities** called **G-secs** and **Treasury Bills**.
- This borrowing falls under **capital receipts** in the budget document, it represents the total amount of money that the central government borrows to finance its spending on public services and benefits.
- **Annual borrowing program-** It outlines how much the government plans to borrow during the fiscal year as tax and non-tax revenues fall short of financing the government's spending programs.
- **Open market operations-** The Reserve Bank of India can buy government bonds in the secondary market from private lenders who already hold these bonds.
- When the central bank purchases bond, it creates fresh money potentially lending to increased money supply and higher prices in the broader economy over time.
- **Risk free-** Government bonds are considered as risk free because governments have the ability to create fresh currency through RBI.
- **Monetary policy-** It plays a crucial role in how much it costs governments to borrow money from the market.
- The Centre's efforts to reduce its fiscal deficit may be influenced by changing borrowing conditions through the monetary policy.
- Higher central bank rates makes it more expensive for the governments to borrow money from the market.

For the financial year 2023-24, the Indian government targeted a fiscal deficit of 5.9% of GDP.

Inflation is a rise in prices, which can be translated as the decline of purchasing power over time.

Why fiscal deficit is important?

- **Inflation-** If the government borrows too much money, it can lead to inflation as the government may be forced to print more money to pay its debts.
- **Reduced investments-** If the government is crowding out private investments by borrowing heavily, it can reduce the amount of investment in the economy, which can lead to slower economic growth.
- **Higher interest rates-** When the government borrows money to finance a deficit, it can drive up interest rates for businesses and consumers. This can make it more expensive to borrow money, which can slow down economic growth.
- **Market perception-** The fiscal deficit serves as a signal to the market regarding the government's financial discipline.
- **Confidence in lenders-** When the government relies more on tax revenues and borrows less, it instils confidence in lenders. This will reduce borrowing costs for the governments.
- **Lower fiscal deficit-** It can enhance the credit ratings assigned to the Indian government's bonds.
- **High fiscal deficit-** It can adversely affect the government's ability to manage its overall public debt.

International Monetary Fund warned that India's public debt could exceed 100% of GDP in the medium term due to associated risks.

- **International bond market**- India has shown interest in tapping international bond market, this can provide the government with cheaper credit opportunities.

What lies ahead?

- The Centre aims to reduce fiscal deficit in 2024-25 to 5.1% of GDP despite plans to boost the capital expenditure and other programs.
- The Centre expects tax collection to rise by 11.5% by 2024-25 which is crucial in funding government activities.
- India must adopt a balanced approach in raising tax collection as this would affect investment and consumption.

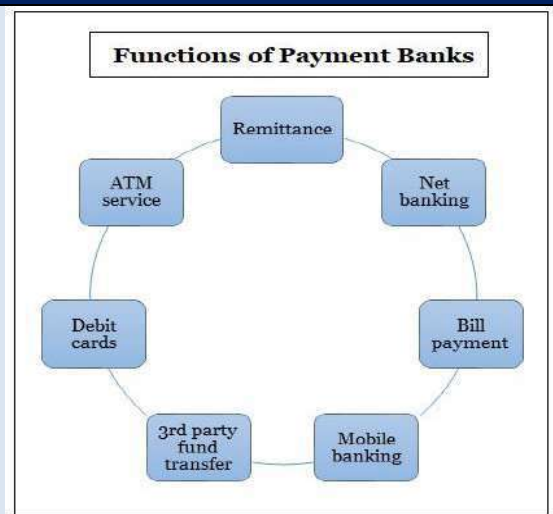
10.2 Paytm Payment Bank Crisis

Why in news?

Recently Reserve Bank of India has ordered Paytm Payment Bank to halt most of its business.

Payment Bank

- A payments bank is a new category of banks *conceptualized by the Reserve Bank of India*, which operates at a smaller scale than an actual bank and doesn't involve any credit risk.
- **Aim**- To provide saving accounts to those who are not able to create a savings account as they are afraid to pay heavy maintenance.
- **Operation**- The bank operate digitally (on mobile phones and other devices using the internet) rather than through physical branches.
- **Provision of credit**- It provides credit to smaller units such as low-income household, migrant labour workforce, small business units and unorganized sectors.
- **Limited services**- These banks cannot carry out lending activities like Advancing loans, Issuance of credit cards etc.,



What is the issue?

- Paytm Payments Bank (PPB) has been facing scrutiny from RBI since 2018, due to concerns on Know Your Customer compliance and Information Technology related issues.
- **Need of regulation**- RBI has found PPB to be in violation of its rules and regulations such as the ceiling on customer deposits, the reporting of suspicious transactions, and the compliance with the Foreign Exchange Management Act.
- RBI has reportedly accused Paytm of financial crimes, including falsifying customer information and money laundering.
- **New guidelines**-RBI has asked Paytm to stop all services offered by its banking division, also known as the wallet service, due to "persistent non-compliance" of its rules.
- It has asked the company to stop accepting deposits into people's Paytm bank accounts, or wallets, from March 1, 2024 although customers would be allowed to continue making payments until the balance in their accounts is exhausted.
- The app can continue to facilitate quick payments between non-Paytm bank accounts as an intermediary but it can't accept direct deposits.
- This would seriously impact the company's wallet business as its wallet offers various services like deposits, make deposits and keep money.
- It affects the customers of Paytm Wallet, Paytm FASTag, and other services offered by Paytm Payments Bank.
- Customers can use their existing balance till it is exhausted, but cannot add any money or conduct credit transactions after February 29, 2024.
- **Alternative**- There are over 20 banks and non-banking entities that offer wallet service. The leading one after PPBL wallet includes Mobikwik, PhonePe, SBI, ICICI Bank, HDFC, Amazon Pay etc.,

How payment banks are regulated by RBI?

- **Scheduled banks-** The payments banks are given the status of scheduled banks under Reserve Bank of India Act, 1934.
- However, the words “Payments Bank” have to be used by the companies in their name in order to differentiate it from other banks.
- **Registration-** They will be registered as a public limited company under the Companies Act, 2013.
- **License provision-** They are licensed under Banking Regulation Act, 1949.
- **Regulation-** It will be governed by the provisions of the Banking Regulation Act, 1949, Reserve Bank of India Act, 1934, Foreign Exchange Management Act, 1999, Payment and Settlement Systems Act, 2007, Deposit Insurance and Credit Guarantee Corporation Act, 1961 and other relevant Statutes and Directives.
- **Guidelines-** RBI issues specific guidelines that outline the eligibility criteria, permissible activities, capital requirements, and other operational aspects for entities seeking to operate as payment banks.
- **Ownership and capital requirements-** The entities intending to establish payment bank must adhere to these regulations to ensure financial stability and the ability to carry out banking operations effectively.
- **Customer protection-** Payment banks are required to implement robust KYC procedures to verify the identity of their customers and prevent money laundering and fraudulent activities.
- **Security standards-** Payment banks are expected to adhere to high technology and security standards to ensure the safety and integrity of financial transactions.
- **Reporting-** Payment banks are required to submit periodic reports to the RBI, providing details about their financial health, operations, and compliance with regulatory norms.
- **Review-** RBI involves in regular inspections, audits, and assessments to ensure that these entities comply with regulatory guidelines and maintain financial stability.

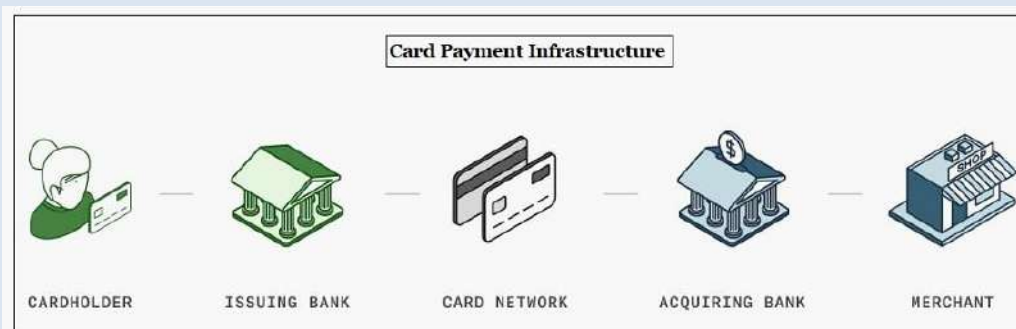
10.3 RBI's restriction on Card Networks

Why in news?

The Reserve Bank of India (RBI) has ordered a certain card network to stop unauthorized payments made using business cards.

Card network

- **Financial intermediary-** They are also known as a payment network or card association that facilitates transactions between merchants and cardholders.
- **Digital payment ecosystem-** It plays a crucial role in enabling electronic payments and ensuring the smooth transfer of funds between different parties involved in a transaction.
- **Role-** They provide the infrastructure and technology that allows credit and debit cards to be used for purchasing goods and services.
- **Authorised card networks in India-** Visa, Mastercard, RuPay, Diners Club, and American Express.
- They were developed to utilise one mode of payment to pay for goods and services at multiple merchants and avoid carrying cash around.



What is the issue?

- RBI said that the card network was allowing businesses to make payments to entities that were not authorised to accept card payments, which was a violation of The *Payment and Settlement Systems (PSS) Act, 2007*.

- **Intermediary arrangement-** A card network had an arrangement that enabled businesses to make card payments through certain intermediaries to entities that did not accept card payments.
- Thus, the intermediary was accepting card payments from corporates for their commercial payments, and was then remitting the funds via IMPS (Immediate Payment Service), RTGS (Real-Time Gross Settlement), or NEFT (National Electronic Fund Transfer) to non-card accepting recipient.
- **Violation of PSS Act-** A “close scrutiny” revealed that such arrangement qualified as a payment system under Section 4 of the PSS Act, such a payment system requires authorisation, which had not been obtained in this case.
- **Undesignated account-**The intermediary in such an arrangement pooled a large amount of funds into an account that was not a designated account under the PSS Act.
- **Non-compliance of KYC norms-**The transactions processed under this arrangement did not comply with the ‘originator and beneficiary information’ requirements, as stipulated under the ‘Master Direction on KYC (Know Your Customer)’ issued by the RBI.
- **Regulation-**RBI has advised the card network to keep all such arrangements in abeyance until further orders.
- There has been no restriction with respect to the normal usage of business credit cards.

The Master Direction on KYC is a set of guidelines issued by the RBI to ensure that the entities regulated by it follow certain customer identification procedures and monitor their transactions to prevent money laundering and terrorist financing.

Key aspect	Payment and Settlement System Act, 2007
About	<ul style="list-style-type: none"> • It provides for the regulation and supervision of payment systems in India and designates the Reserve Bank of India as the authority for that purpose and all related matters.
Definition of payment system	<ul style="list-style-type: none"> • It is a system which enables a payment between a payer and a beneficiary, including clearing, payment, or settlement service, but it does not include a stock exchange.
Designation of payment system	<ul style="list-style-type: none"> • The Act empowers the Reserve Bank of India (RBI) to designate payment systems in India
Regulation	<ul style="list-style-type: none"> • The RBI has the authority to regulate and oversee payment and settlement systems to ensure their efficiency, integrity, and stability.
Consumer protection	<ul style="list-style-type: none"> • The Act outlines the rights and responsibilities of consumers and the obligations of payment system providers to ensure consumer protection.
Offences	<ul style="list-style-type: none"> • It includes unauthorized operation of a payment system, failure to comply with the terms of authorization, failure to produce statements, return information, or documents providing false information, disclosure of prohibited information, violating the provisions of the Act, not acting in compliance of the directions given by the RBI.
Penalty	<ul style="list-style-type: none"> • RBI is empowered to initiate a criminal proceeding against the offender. RBI can even impose fines on the person for contravening certain provisions of the Act.

Immediate Mobile Payment Services (IMPS)

- It is a time period *instant inter-bank funds transfer* system managed by National Payment Corporation of India.
- IMPS is obtainable 24/7 throughout the year together with bank holidays.

RTGS (Real Time Gross Settlement)

- It is a system that allows for the *instantaneous transfer* of money and/or securities between banks.
- It has a minimum transfer limit of Rs. 2 lakh and no maximum transfer limit.

NEFT (National Electronic Fund Transfer)

- It is a one-to-one fund transfer system in India that allows you to transfer money from one bank account to another, within the same or different banks, across the country.
- It has no minimum or maximum transfer limit. However, the transfer limit may vary depending on the specific conditions set by the respective banks.
- NEFT transactions are settled in batches, not in real-time

10.4 Household Consumption Expenditure Survey 2022-23

Why in news?

Ministry of Statistics & Program Implementation has released Household Consumption Expenditure Survey 2022-23.

What are the key highlights of the report?

- **Coverage-** The whole of the Indian Union except a few inaccessible villages in the Andaman and Nicobar Islands.
- **Consumption basket-** It has been divided into three broad categories namely,
 1. Food items,
 2. Consumables and Services items, and
 3. Durable goods.
- **Consumption expenditure-** It has increased by over 2.5 times from 2011-12 levels in current prices, and the growth is faster in rural India than urban India.
- **Estimates of MCEP-** It is based on Modified Mixed Reference Period (MMRP)
- MMRP is based on household consumer expenditure on edible oil, egg, fish and meat, vegetables, fruits, spices, beverages, refreshments, processed food, pan, tobacco and intoxicants for a reference period of the “last 7 days” and for all other items, recorded for the same reference period as in case of MRP.
- MRP refers to household consumer expenditure on
 - clothing and bedding, footwear, education, institutional medical care, and durable goods for a reference period of the “last 365 days”
 - expenditure on all other items for a reference period of the “last 30 days”.
- **MPCE-** India's per capita monthly consumption expenditure was 33-40% higher in 2022-23 than 2011-12.
- The average monthly per capita consumption expenditure (MPCE) of both urban and rural households doubled in the 11-year period with both spending lesser on food items.
- Of this 46% of the expenditure was on food items in rural households and 39% in urban homes in 2022-23.

Household Consumption Expenditure Survey (HCES)

- It is designed to collect information on consumption of goods and services by the households.
- **Conducted by-** National Sample Survey Office under Ministry of Statistics and Program Implementation.
- **Publication-** It is supposed to be held every 5 years.
- **2017-18 survey-** Not released citing data quality issues.
- **Aim-** To generate estimates of household Monthly Per Capita Consumption Expenditure (MPCE) and its distribution for
 1. Rural and urban sectors
 2. States and Union Territories, and
 3. Different socio-economic groups.
- Information collected in HCES is useful for understanding
 1. Consumption and expenditure pattern,
 2. Standard of living and
 3. Well-being of the households.
 4. To update Consumer Price Inflation (Retail inflation) basket.

Key aspect	High/low	State/ UT
Both rural and urban areas	High	Sikkim
	Low	Chhattisgarh
Rural- urban difference in average MPCE	High in States	Meghalaya (83%) Chhattisgarh (82%)
	High in UT	Chandigarh
	Low in UT	Ladakh- In rural areas Lakshadweep- In urban areas

- **Imputed average MPCE data-** NSSO provided another set of MPCE by providing the imputed value of a number of items received free by households through various social welfare programmes.
- **Coverage of imputed average-** It includes
 1. Food items- Rice, wheat, atta, pulses, salt, sugar, edible oil, etc., and
 2. Non-food items- Laptop/ PC, tablet, mobile handset, bicycle, motorcycle/ scooty, clothing (school uniform), footwear (school shoes, etc.).

MPCE is a measure of the average spending of a person in a month on various goods and services such as collection of data in the field for consumption out of home-grown/home-produced stock and gifts, loans, free collection and goods received in exchange of goods and services etc.,

- The MPCE of rural and urban households which includes the imputed value of free food and non-food items is higher compared with the MPCE which does not include the free items.
 - In rural households, the bottom 0-5 per cent of the population got the least to spend in terms of imputed value of free items.
- **Non-imputed average of MPCE data-** It does not include imputed value of items, the urban non-imputed average is higher than rural households.
- It is used to calculate the retail inflation and interest decisions by the Reserve Bank of India.
- **Food expenditure-** The rural households' spending on food has dropped below 50% of their total expenditure for the first time ever.
 - The consumption of high-value items such as eggs, fish, meat, and fruits has increased, especially in rural areas
- **Income disparity-** The richest 20% of the population account for nearly 46.2% of the total consumption expenditure.
 - The bottom 20% account for only 8.8% of the total expenditure.
- **Widening gap-** There is a wide gap between the rich and the poor in both rural and urban India,
 1. The richest 5% spend eight to ten times more than the poorest 5%.
 2. The average MPCE of urban households is much higher than that of rural households.
- **Improved rural income-** The difference between rural and urban MPCE has narrowed substantially over the years, implying successful government policies for improving rural incomes.

Year	2004-05	2011-12	2022-23
Rural MPCE	90%	84%	71%

10.5 India's Refinery Sector

Why in news?

India can become a global refining hub by turning its disadvantage of inadequate oil and gas production into an advantage.

What is the history of India's refinery sector?

- **Pre-Independence-** The first oil refinery in India was established in Digboi, Assam, in 1901.
- **Focus-** It was primarily on meeting local demand for kerosene and lubricants.
- **Post-Independence-** In 1947, the government took steps to establish more refineries to meet the growing demand for petroleum products.
- **Indian Oil Corporation-** It was formed in 1958 marking the nationalization of refining sector.
- **Additional refineries-** It was established in Mumbai, Barauni and Visakhapatnam.
- **Oil crisis-** The oil crisis of 1970's prompted India to focus on achieving self-sufficiency in the oil and gas sector.
- **New Economic Policy, 1991-** Opened up the refining sector to private investment and foreign collaborations.
- **Energy demand-** It is expected to grow at about 3% per annum by 2040, compared to the global rate of 1%.

Status of India's refinery sector

- **Self-sufficient**-India from a deficit scenario in 2001, achieved self-sufficiency in refining and today it is a major exporter of Quality Petroleum Products.
- **Global refining hub**- India is 4th largest in the world after the United States, China and Russia.
- In 2020-21, India was the largest exporter of petroleum products in Asia.
- **Target**- India is planning to double its oil refining capacity to 450-500 million tonnes by 2030.
- **Foreign Direct Investment- 100% FDI** is allowed in automatic route for strategic disinvestment, exploration of all oil and natural gas fields, infrastructure related to marketing of petroleum products and natural gas.
- **Energy consumer**- India is the 3rd largest energy and oil consumer in the World and 4th largest importer of liquefied natural gas (LNG).

Oil and Natural Gas Company (ONGC), a Maharatna company, is the biggest crude oil and natural gas name in India, contributing around 75% to Indian domestic production.

What is the significance of refinery sector?

- **Energy security**- Refineries play a crucial role in ensuring energy security by processing crude oil to produce various petroleum products such as petrol, diesel, kerosene, and LPG, it helps to meet the growing energy demands of the country.
- **Employment generation**- Refinery sector generates employment opportunities, both directly and indirectly, through the entire value chain, from exploration and production to refining, distribution, and retail.
- **Infrastructure development**- The establishment of refineries involves infra development, including pipelines, storage facilities, and transportation networks.
- It contributes to the overall economic development of the regions where refineries are located.
- **Reduce import bill**- It will reduce India's dependence on importing refined petroleum products, helping to save foreign exchange.



- It allows the country to process crude oil domestically, meeting a substantial portion of its demand for refined products.
- **Industrial growth-** The refinery sector serves as a foundation for the growth of downstream industries, such as petrochemicals, fertilizers, and various manufacturing sectors.
- **Technological advancements-** Continuous improvements and investments in technology contribute to the production of cleaner fuels, compliance with environmental regulations, and the adoption of sustainable practices.
- **Strategic importance-** A diverse and well-distributed refinery network helps mitigate risks associated with supply chain disruptions, ensuring a stable and secure energy supply.
- **Improve exports-** It allows the country to produce high-quality fuels, comply with international standards, and participate in the global energy market.

What are the challenges present in the refinery sector?

- **Crude oil price volatility-** sudden and unpredictable changes in prices can affect the profitability of refineries and their ability to offer competitive prices for refined products.
- **Infrastructure deficit-** Inadequate infrastructure, such as pipelines, storage facilities, and transportation networks, can lead to logistical challenges in the supply chain.
- **Environmental compliance-** Stringent environmental regulations require refineries to invest in advanced technologies to reduce greenhouse gas emissions and produce cleaner fuels.
- **Geopolitical risks-** Global issues like *COVID-19*, [Russia-Ukraine war](#) has affected the global oil market and the refining industry, by creating supply shortages, price volatility, and capacity reductions.
- **Capital-intensive-** Obtaining funding for new projects, expansions, and modernization can be challenging, especially for smaller players in the industry.
- **Policy paralysis-** Frequent changes in government policies and regulations can create uncertainty for the refinery sector. Regulatory stability is crucial for long-term planning and investments, and uncertainties can affect decision-making and project implementation.
- **Demand fluctuations-** Economic uncertainties, global events, and changes in consumer behavior can lead to fluctuations in the demand for refined products.
- **Supply chain disruption-** The private refineries in particular have benefitted from high global product prices and increase in prices and increased their exports.

*Indian government has imposed a **windfall tax** on fuel exports to prevent domestic refiners from selling their products abroad at higher prices, instead of meeting the local demand.*

11. AGRICULTURE

11.1 Nano DAP Fertilizers

Why in news?

During Interim Budget 2024 the Central government announced the expansion of the application of Nano DAP on various crops in all agro climatic zones.

What is the difference between Nano DAP and conventional DAP?

Key aspects	Conventional DAP	Nano DAP
About	Di-Ammonium Phosphate is high in phosphorus (P) that stimulates root establishment and development, it is applied just before or at the time of sowing.	Indian Farmers Fertiliser Cooperative's (IFFCO's) Nano DAP contains 8% Nitrogen and 16% Phosphorus by volume.
Usage	It is the second most commonly used fertiliser in India after urea.	IFFCO's Nano DAP is the only Nano fertilizer approved by the Ministry of Agriculture and included in the Fertilizer Control Order.

Formation	It comes in granular form.	It comes in liquid form, it has an advantage in terms of surface area to volume, as its particle size is less than 100 Nanometre (nm).
Efficiency	It is less efficient than Nano DAP.	Nano DAP (liquid) can offer benefits in terms of surface area to volume as the particle size is less than 100 nanometres.
Cost effective	50 kg of DAP is Rs 1350 which is more than twice the amount of Nano DAP.	500 ml of Nano DAP is equivalent to 50 kg bag of conventional DAP priced at only Rs 600.
Logistics	It is less convenient to store and use when compared with Nano DAP.	It is pocket friendly, easier to store, transport and use than DAP.

What is the significance of Nano DAP?

- **Alternative-** In 2021 IFFCO, launched [Nano urea](#) in liquid form as an alternative to conventional urea.
- **Sustainable solution-** In the agriculture sector, Nano DAP is a sustainable option for farmers towards smart agriculture and to combat climate change.
- **Efficiency-** Nano tiny particle enables fertiliser to enter easily inside the seed surface or through stomata and other plant openings.
- **Better assimilation-** Nano clusters are functionalized with bio-polymers and other excipients which leads to higher seed vigour, more chlorophyll, and photosynthetic efficiency.
- **Increase in quality-** Nano DAP will provide much better quality, reduces input cost and increase in crop yields.
- **Precision farming-** Nano DAP through targeted application can help fulfill the nutritional requirement of crops without harming the environment.
- **Impact on soil-** It has reduced impact on soil and improve the fertility of the land, the farmers can increase the number of earthworms on the land.
- **Subsidy burden-** It will lead to a reduction in imports as well as the government's fertiliser subsidy bill.

In 2023 IFFCO launched liquid nano di-ammonia phosphate (DAP), the first in the world.

Indian Farmers Fertiliser Cooperative

- It is a **multi-state cooperative society** which is wholly owned by Cooperative Societies of India.
- **Established-** 1967.
- **Headquarters-** New Delhi.
- **Liquid nano urea-** IFFCO commissioned the Kalol liquid nano urea plant at Gujarat, the country's first in 2021.
- **Nano DAP-** It is the first in world launched in 2023.

11.2 State of Farmers in India

Why in news?

Recent rounds of farmer protests demands for a legal guarantee of [Minimum Support Price](#) (MSP).

What is the state of Indian farmers?

- **Large workforce-** The agriculture's share in the national income has declined drastically, while the majority of the population still depends on it for livelihood.
- **Land fragmentation-** This resulted in the raising proportion of farm labourers as against cultivators.
 1. It shows the growing infeasibility of farming.
 2. By 2011, most people engaged on India's farms were essentially wage labourers.
- **High level of debt-** A plot smaller than 0.63 hectare does not provide enough income to stay above the poverty line. Almost half of small and marginal land holding farmers are trapped in debt.

Census	% of workforce	Contribution to the economy
1951	69.7 %	54%
2011	54.6%	18%

As per a report around 70% of all agricultural households have a land holding size of less than 1 hectare and around 88% have a land holding size of less than 2 hectares.

- **Low income-** This contributes to the vicious cycle of poverty.

1. **Andhra Pradesh and Telangana-** They had a very high proportion of farm households that were indebted even though average income levels were similar to India's average.
2. **West Bengal and Odisha-** They were poorly placed on both parameters as they had significantly lower levels of farm incomes while having average or above-average proportion of indebted farm households.

Cultivators

- If he or she is engaged in cultivation of land owned or held from government or held from private persons or institutions for payment in money, kind or share.

Agricultural labourers

- A person who works on another person's land for wages in money or kind or share

- **Terms of Trade (ToT) is against farmers-** ToT is a measure of how much farmers earn from their produce relative to how much they spend on their inputs, a higher ToT means farmers are better off, while a lower ToT means they are worse off.
 - ToT for farmers have fluctuated over the years, since 2010-11 it has declined and remained below 100 implying that the farmers have been losing out in terms of their income and profitability.
- **Low producer protection-** OECD collects data on producer production, which is a measure of how much support farmers receive from the government and the market for their produce. A higher value means farmers are better off, while a lower value means they are worse off.
 - As per OECD data, the producer protection in India has been consistently low and negative, meaning that Indian farmers have been receiving prices that are below the international market levels.
- **Low agriculture support-** Agriculture support, an indicator of OECD, measures how much money is transferred to the agri sector from the consumers and taxpayers as a result of government policies.
 - In 2018-20, the agricultural support was estimated at 0.3% of the GDP, compared to the OECD average of 0.9%.

Around 60% of the Indian population works in agriculture, contributing about 17% of India's GDP.

What can be done to improve the lives of Indian farmers?

- **Reduce dependency-** It can be done by encouraging processing and building value chains which would help create nonfarm jobs in rural areas.
- **Agri-entrepreneurship-** It needs to be provided as a boost to cater to the emerging needs of the sector and enhance the agribusiness potential,
 - Agriclincs and Agribusiness was started in the year 2002 with the financial support of NABARD to promote agri-entrepreneurship.
- **Contract farming-** Ensure the right, title and interest (RTI) of the landowner in his property is not compromised in any way.
 - States can adopt Model Contract Farming and Services Act, 2018 which was proposed by Niti Aayog.
- **Enhance crop intensity-** There is a need to recognize land and farm manpower as the two most potent assets of the farm family and enable full utilization of these both through enhancing cropping intensity and promoting secondary agriculture.
- **Income led growth-** All policies and strategies must adopt 'Fork to Farm' approach, reversing the 'Farm to Fork' approach.
- **Price deficiency payment approach-** While MSP may still be used for need-based procurement, the remainder of the produce may be covered under price deficiency payment as this would help prevent unwanted stocks and spread price incentives to producers in all the regions.
- **High value agriculture-** Institutional arrangements such as contract farming, producers' organizations, and cooperatives will provide farmers easy access to markets and reduce marketing and transaction costs.

11.3 Hike in FRP for Sugarcane

Why in news?

Recently the Centre announced a hike in the Fair and Remunerative Price (FRP) of sugarcane to Rs 340 per quintal for Sugar Season 2024-25 (October-September) from the existing Rs 315 per quintal.

What is Fair and Remunerative Price (FRP)?

- FRP is the price declared by the government, which mills are legally bound to pay to farmers for the cane procured from them.
- **Regulation-** It is governed The Sugarcane Control order, 1966 which mandates payment within 14 days of the date of delivery of the cane.
- **Agreement-** Mills have the option of signing an agreement with farmers, which would allow them to pay the FRP in installments.
- **Delays in payment-** It can attract an interest up to 15% per annum, and the sugar commissioner can recover unpaid FRP as dues in revenue recovery by attaching properties of mills.
- **Sugar recovery-**The FRP is based on the recovery of sugar from the cane, it is the ratio between sugar produced versus cane crushed expressed as a percentage.
- The higher the recovery, the higher is the FRP, and higher is the sugar produced.
- **CACP-** The cane price announced by the central government is decided on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP) in consultation with the state governments and after taking feedback from associations of sugar industry.



Key aspects	Fair and Remunerative Price	Minimum Selling Price
About	<ul style="list-style-type: none"> • It is the minimum price that <i>sugar mills have to pay to farmers</i> for sugarcane. 	<ul style="list-style-type: none"> • It is the minimum price at which <i>sugar mills can sell</i> sugar to the market.
Origin	<ul style="list-style-type: none"> • With the amendment of the <i>Sugarcane (Control) Order, 1966</i> in 2009 the Statutory Minimum Price (SMP) of sugarcane was replaced with FRP of sugarcane. 	<ul style="list-style-type: none"> • It was introduced by the Centre under the <i>Sugar Price (Control) Order, 2018.</i>
Need	<ul style="list-style-type: none"> • It provides a guaranteed minimum price to sugarcane farmers, offering them income security. 	<ul style="list-style-type: none"> • It is introduced to ensure that the industry gets at least the minimum cost of production of sugar.
Factors considered	<ul style="list-style-type: none"> • Cost of production of sugarcane, • Recovery of sugar from sugarcane, • Price at which sugar is sold, • Profit from sale of sugar by-products like molasses, bagasse and press mud, • Margin for sugarcane growers, • Return to growers from alternative crops. 	<ul style="list-style-type: none"> • It is determined by taking FRP and adding minimum conversion cost incurred by sugar mills running at highest efficiency <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Punjab, Haryana, Uttar Pradesh and Uttarakhand announces SAP which is normally higher than FRP.</i></p> </div>
MSP for sugarcane	<ul style="list-style-type: none"> • Sugarcane has a very short shelf life, the responsibility of procurement of cane is on the sugar mills that are mandatorily expected to pay the FRP on purchase upfront. • Minimum Selling Price for the sugarcane would help mills generate enough revenue to pay their farmers the FRP. 	<ul style="list-style-type: none"> • It is announced to arrest the constant slide of sugar and to keep the demand and supply ratio to a safe limit. • The Centre had also fixed mill-wise sales quota. • The mills breaching either of the conditions were liable for action under the <i>Essential Commodities Act, 1955.</i>

What are the challenges with the hike in FRP?

- **Mismatch** - The Centre has repeatedly hiked FRP from Rs 255/quintal of sugarcane in 2017-18 to Rs 340/quintal, it has not changed MSP from Rs 3100/quintal of sugar fixed in 2018-19.

- **Outstanding dues-** The mills claim that the MSP being stagnant despite food inflation has exposed the industry to ‘cash losses’, raising challenges to pay FRP to farmers.
- **Delhi chalo protest-** The farmers have been protesting for high FRP, clearance of dues from sugar mills and revision of MSP which has been stagnant since 2018-19.
- **Burden on States-** State governments, facing pressure from farmers seeking higher prices, have sometimes fixed procurement prices (State Advised Price) above the FRP fixed by the central government.
- This places a financial burden on state-owned or private sugar mills, as they are obligated to pay higher prices for sugarcane, while the Minimum Support Price (MSP) for domestic sugar consumers is kept at a lower rate.

Judiciary’s viewpoint on SAP

- **Supreme Court** - The Constitutional Bench in 2020 affirmed the power of both central and state governments to fix sugarcane prices.
- The court ruled that as long as the State Advised Price (SAP) is higher than the minimum price fixed by the Centre, it is valid. If lower, the Centre’s price prevails.
- **Madras High Court-** In 2023 the court supported the notion that the FRP fixed by the Centre might not reflect the fair market price.
- It suggested that small and marginal farmers could survive only if state governments mandated a much higher ‘advised price’.

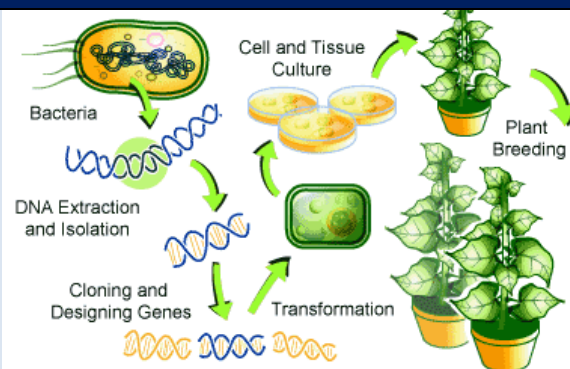
11.4 Challenges of GMO

Why in news?

Hybrid Bt cotton, the only commercialized Genetically Modified crop in India has shown evidence of impact on human and animal health.

Genetically Modified Crops

- **GMO-** A genetically modified organism (GMO) is any living organism whose genetic material has been modified to include certain desirable techniques.
- **GM crops-** In crops, genetic modification involves the manipulation of DNA instead of using controlled pollination (conventional method to improve crops) to alter certain characteristics of the crop.
- **Examples-** Soyabean, maize, cotton, and canola with herbicide tolerance and insect resistance are the most widely grown GM crops around the world.



GM crops in India

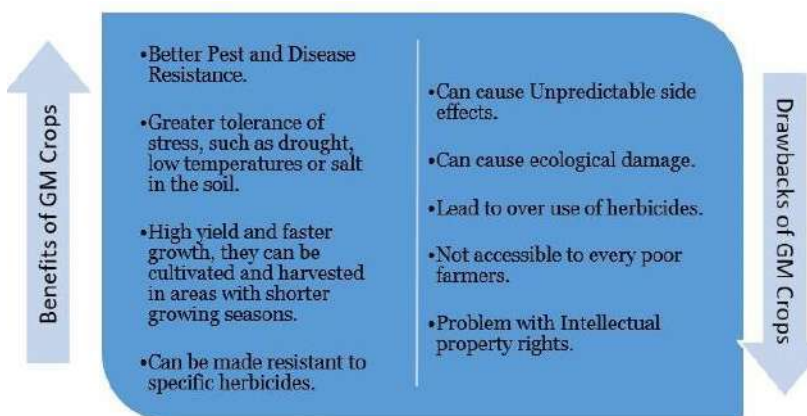
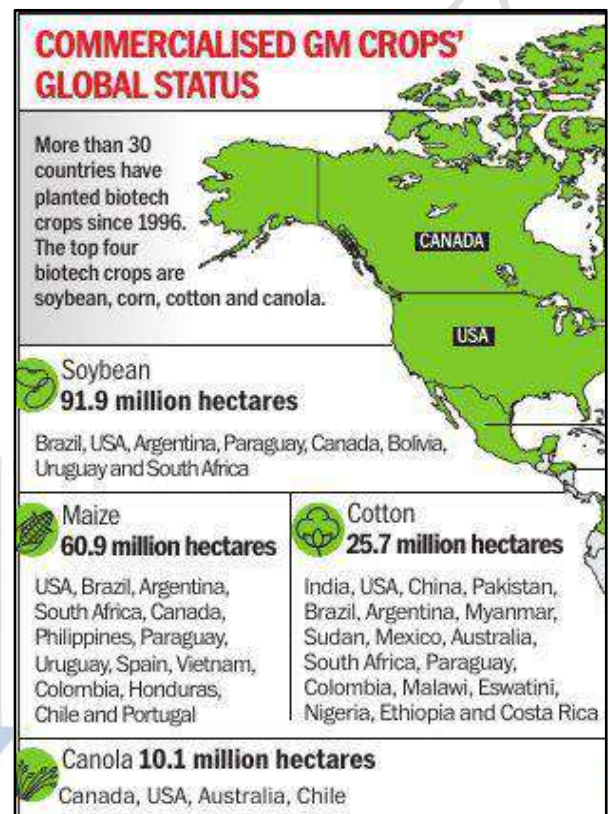
GM crop	About
Bt Cotton	• It was introduced in 2002 and remains the <i>only GM crop</i> that is allowed in India.
Ht Bt cotton	• It is the Herbicide Tolerant Bt cotton, it has unapproved genes hence <i>not permitted in India</i> .
DMH-11 mustard	• It is the <i>first GM food crop</i> that India has permitted for commercial release, it confers tolerance to <i>glufosinate ammonium</i> , an herbicide that kills weeds.
Bt Brinjal	• Genetic Engineering Commercial Appraisal (GEAC) recommended for its commercial release but it was blocked in 2010.

- **Characteristics-** Herbicide resistant, insect resistant, virus resistance, drought resistance and fruit and tuber quality.

- **Procedure**-To genetically modify a crop, the gene of interest is identified and isolated from the host organism, it is then incorporated into the DNA of the crop to be grown.

What are the challenges present in GM crops?

- **Unnatural**- GMOs does not use traditional breeding and selection, they may produce unintended effects as the impacts are not immediately visible.
- **Against Rules of 1989**- It describes GMOs as hazardous.
 - **Rules of 1989** is the Rules for the Manufacture/Use/Import/Export and Storage of Hazardous Microorganisms/ Genetically Engineered Organisms or Cells, 1989” under the Environment (Protection) Act, 1986
- **Environmental contamination**- It is caused by cross-transfer of pollen by bees to wild or other domestic crop varieties.
- **Impact on biological diversity**- India is one of the 17 listed international hotspots of diversity which includes mustard, Brinjal and rice, with commercialized GM crop contamination is unavoidable.
- Convention on Biological Diversity underscores the need to consider the impacts on biological diversity, and this concern is particularly relevant for India as a signatory.



Concerns of Bt Cotton

- **Value capture mechanism**- It prevents farmers from saving seeds and increases their costs of buying seeds and paying royalties to the developers.
- **High cost**- There was also a phenomenal three-fold increase in labour costs in hybrid cotton cultivation, there are adverse effects on farmer revenues leading to increased distress and suicides among farming community.
- **Ecological impact**- It requires more water, fertiliser, and insecticide, and is vulnerable to pests and diseases.
- **Low yield**- It also has a long season and low density that reduces yield potential and increases pest pressure.
- **Monopoly**- Bt Cotton seeds have become unaffordable to farmers due to high royalties charged by Monsanto company which has a near monopoly on Bt cotton seeds which led to market failure.
- **Hinders research**- It has hindered the development of non-GM high-density short-season varieties that could perform better in rainfed conditions.
- **Ineffective**- Hybrid Bt cotton has lost its effectiveness against the pink bollworm, the main target pest leading to increased usage, induced secondary pests and crop failure.
- **Introduction of other GM crops**- The regulators have ignored the failure of hybrid Bt cotton and tried to introduce other GM crops, such as hybrid Bt brinjal and hybrid HT mustard, which pose similar risks.

Concerns with Bt Brinjal

- **Toxicity**- Bt Brinjal contains a toxic gene from a soil bacterium, which has been confirmed by several experts.
- **Regulatory issues**- GEAC and the developer did not follow the proper safety protocols and transparency norms, as ordered by the Supreme Court in 2007.

- **Lack of surveillance**-Bt brinjal was the first GM vegetable food crop in the world to be approved for commercialisation, without adequate oversight and scrutiny by the international scientific community.
- **Outdated studies mechanism**- Bt Brinjal was found to have serious flaws and deficiencies in its safety studies, testing methods and environmental risk assessment.
- **Narrow scope of risk assessment**- Bt Brinjal has a narrow scope set by GEAC, leading to an inadequate evaluation of potential environmental risks.

India is the centre of the world's biological diversity in brinjal, with over 2,500 varieties grown in the country and as many as 29 wild species.

Concerns with DMH-11 Mustard

- **Unproven yield enhancement**- Both HT and Bt crops account for most of the GM crops planted worldwide, but neither has a trait for yield enhancement.
- **Lack of transparency**-The details of DMH-11 mustard has not been made public, raising concerns about transparency and compliance with Supreme Court orders.
- **Invalid field trials**- The field trials for non-GMO mustard were not conducted in accordance with norms, and DMH 11 was out-yielded by non-GMO varieties and hybrids by more than the specified norm of 10%.
- **Harmful chemical**- Glufosinate ammonium is a harmful chemical that causes birth defects, damages plants and aquatic life and contaminates water and food.
- **Non-selective herbicide**- It affects the whole plant, kills all kinds of plants, and does not discriminate between weeds and crops which also induces resistance in weeds, making them harder to control.
- **Impact on Non-GMO Mustard**- Introduction of GM HT mustard could contaminate non-GMO mustard varieties, impacting Indian mustard agriculture, which is predominantly non-GMO.
- **Experts' recommendation**- The Technical Expert Committee (TEC) recommends a double bar on GM Mustard, citing its status as an HT crop and its presence in a center of mustard diversification and/or origin.

Glufosinate ammonium is not permitted in crop plants in India under the Insecticides Act, 1968.

As per National Bureau of Plant Genetic Resources India is a secondary centre of origin of rape-seed mustard.

11.5 Farmer Protest 2.0

Why in news?

Delhi Chalo march is spearheaded where farmers from Punjab, Haryana, and Uttar Pradesh are protesting over many demands such as legalising Minimum Support Prices (MSPs).

Major demands of the protest- 12 point agenda of farmers

- Legalise MSP for all crops and to fix MSPs at least 50% higher than the cost of production of any crop based on Dr M.S.Swaminathan Commission report.
- India should withdraw from the [World Trade Organization](#) (WTO) and freeze all free trade agreements.
- Full debt waiver and pension for farmers and farm labourers.
- 200 (instead of 100) days employment under [MGNREGA](#) per year, daily wage of Rs 700, and scheme should be linked with farming;
- Implementation of the Land Acquisition Act of 2013, with provisions for written consent from farmers before acquisition, and compensation at four times the collector rate
- National commission for spices such as chili and turmeric
- Ensure rights of indigenous peoples over water, forests, and land.
- Scrap [Electricity Amendment Bill 2020](#).
- Strict penalties and fines on companies producing fake seeds, pesticides, fertilisers; improvements in seed quality.
- Compensation for the farmers who died during the 2020-2021 protests.

To know about the state of farmers in India click [here](#)

What is the response of the government?

- The Centre held negotiations with the protesting farmers and said that government agencies would buy pulses, maize and cotton at the MSP for 5 years after entering into an agreement with farmers.
- However, the farmers' union rejected the proposal.

What is MSP?

- The MSP is the cost at which the government purchases crops from farmers, provides farmers with an assured income for their produce amid market uncertainties.
- **Coverage – 22 crops** (Kharif, Rabi and commercial crops). It includes cereals (7), pulses (5), oilseeds (7), raw cotton, raw jute and copra.
- **Announcement** – At the *beginning of the sowing season*.
- **Price value** – Based on the basis of the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**
- It is approved by **Cabinet Committee on Economic Affairs (CCEA)**, chaired by Prime Minister of India.

MSP Crops		
Kharif Crops	Rabi Crops	Other Crops
1. Paddy		
2. Jowar		
1. Bajra	1. Wheat	
2. Maize	2. Barley	
3. Ragi	3. Gram	
4. Tur (Arhar)	4. Masur (Lentil)	1. Jute
5. Moong	5. Rapeseed and Mustard	2. De-Husked Coconut
6. Urad	6. Safflower	3. Copra
7. Cotton	7. Toria	
8. Groundnut		
9. Sunflower Seed		
10. Soyabean		
11. Sesamum		
12. Nigerseed		

*MSP for Toria and De-husked coconut are fixed on the basis of MSPs of rapeseed & mustard and copra respectively


Benefits of MSP	Issues with MSP
<ul style="list-style-type: none"> • Provides Income Security • Ensures Price Stability • Boosts Production • Ensures Food Security 	<ul style="list-style-type: none"> • Distorted cropping patterns in Punjab • Destruction of biodiversity • Environmental and ecological problems such as groundwater depletion and soil degradation, smog in north India

- **Factors considered before fixing the price**
 1. Demand and supply of a commodity
 2. Cost of production
 3. Market price trends (both domestic and international)
 4. Inter-crop price parity
 5. Terms of trade between agriculture and non-agriculture (ratio of prices of farm inputs and farm outputs)
 6. A minimum of 50% as the margin over the cost of production
 7. Likely implications of an MSP on consumers.
- **Cost provided** – The National Commission on Farmers, formed in 2004 under the chairmanship of Dr.M.S.Swaminathan had recommended C2+50% but the government is providing **A2+FL+50%**.

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP)

• When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid. The CACP considers the following costs:

1 A2	2 A2+FL	3 C2
Covers all cash and in kind expenses incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, etc	Actual costs plus an imputed value of unpaid family labour	Includes 'A2+FL' along with revenues forgone on owned land (rent) and fixed capital assets (interest)



What is the need for legalising MSPs?

- Legalising MSP would give farmers the legal right to sell their crops at the minimum price guaranteed by the government, thus protecting their interests and ensuring **fair remuneration**.
- Legalising MSP would ensure that all farmers have equal access to government procurement at MSP rates, thereby enhancing their **income security**.

What are the implications in legalising MSPs?

- **Constraints in procurement & storage**- The government will face challenges in procuring, storing and marketing large quantities of crops, especially during times of surplus production and low demand.
- At present, even with the limited procurement, FCI is left with a massive surplus of coarse grains.
- **Economic impact**- The high costs of procurement by the government agencies makes it difficult to guarantee MSP for all crops and farmers.
- **Quality issues** - If MSP is made mandatory, there will be difficulties regarding the quality of the crop, as the government will have to decide which quality will be procured at MSP, what will be the rate for the poor quality, and who will buy it.
- **Resistance from private traders**- Private traders oppose legalising MSP as they benefit from purchasing crops at lower prices during peak arrivals.
 - The government's attempt to enforce MSP through penalties in Maharashtra in 2018 was met with a boycott and had to be withdrawn.
- **Inflation issues** - If the Union government makes MSP a legal mandate to ensure that private players or government agencies buy the crops at least at the fixed price anywhere in the country, there will be a price rise and increased inflation in general.
- **Crop diversity**- A guaranteed MSP policy would distort the cropping patterns and create imbalances between rainfed and irrigated regions.
- It may also undervalue crops with low yields if MSP is given for all crops.

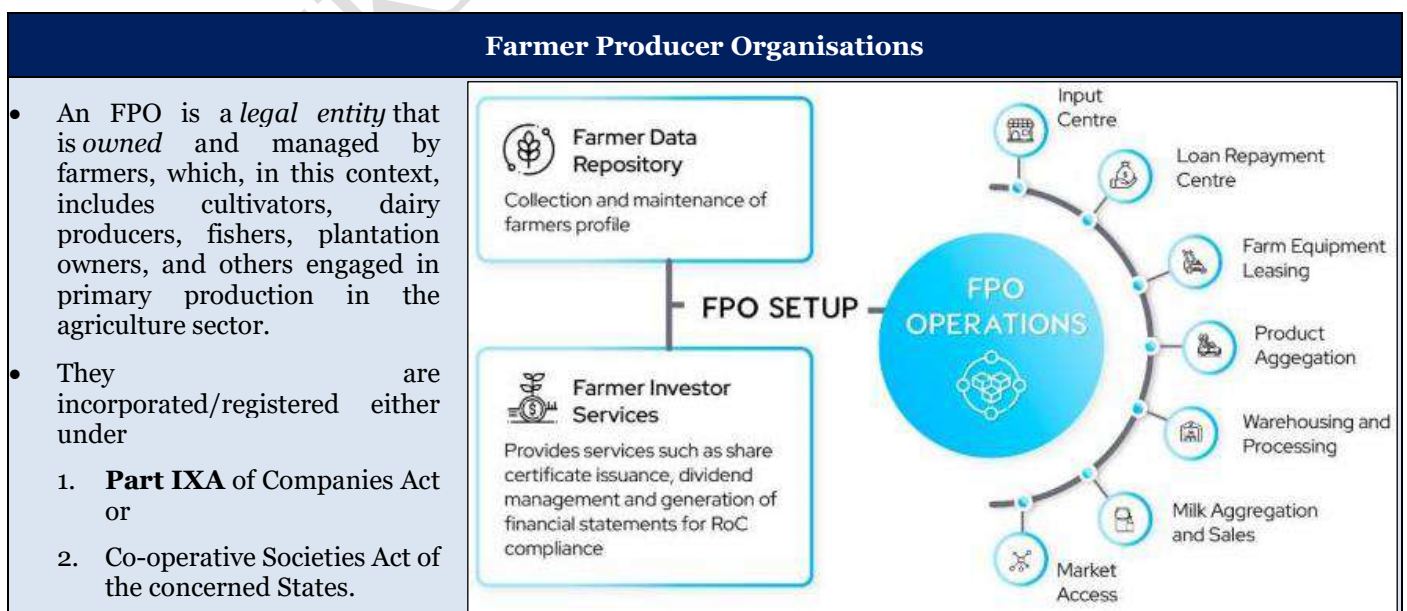
What lies ahead?

- The MSP system needs to be fine-tuned and aligned with the market realities and consumer preferences.
- The government needs to balance the interests of the farmers and the consumers, while ensuring food security and fiscal prudence.
- Direct assistance to small and marginalized farmers through income policies or diversification packages like [PM-KISAN](#) is more efficient and beneficial approach for economically disadvantaged farmers.
- The effectiveness of direct assistance can be enhanced by integrating it with ecologically friendly farming practices such as mitigating methane emissions and minimizing [stubble burning](#) in paddy fields.

11.6 Women led FPOs

Why in news?

[Farmer Producer Organisations \(FPOs\)](#) have gained recognition as a vital tool to mobilise women farmers, supported by development agencies and policymakers.



- **SFAC-** Small Farmers' Agribusiness Consortium (SFAC) provides support for FPOs promotion.
- FPO is a generic name, which includes farmer producers' organization incorporated for the purpose of leveraging collectives through economies of scale in production and marketing of agricultural and allied sector.
- **Example-** Lokhit Bahuuddeshiya Krishi Producer Company is a women-led FPO that cultivates organic cotton and sells it to global brands.

What is the significance of women led FPOs?

- **Financial independence-** Women in FPOs exhibit greater independence, with fewer needing to borrow from their households to pay FPO share capital.
- **High cropping intensity-** Women farmers in FPOs have significantly higher cropping intensity (210%) and cultivate a greater diversity of high value crops.
- **Social inclusion-** Rural women with prior experience in SHGs actively participate in women led FPOs, upholds democratic governance principles and fosters comprehensive inclusive development.
- **Financial involvement-** Women led FPOs tend to have a higher average share capital which reflect active financial involvement.
- **Strong savers-** Research has shown that women have lower rate of non-performing loans (2.9%) than men (4.2%).
- **Risk management-** They adopt a cautious low risk approach which result in steady revenues and business sustainability.
- **Focussed approach-** Women exhibits less political orientation compared to male counterparts, this allows for a more focussed approach to organizational goals.

In India several of the women's collectives promoted by civil society organisations and the National Rural Livelihoods Mission (NRLM) have also demonstrated strong management and financial management skills.

What are the challenges faced by women led FPOs?

- **Gender inequality-** Women often have limited access to information, control over time, mobility and financial resources which puts them in disadvantaged position than men.
- **Lack of data-** There is no publicly available gender segregated data on FPOs, major promoters of FPOs like NABARD, SFAC etc., do not provide publicly available data on the number of women-centric FPOs.
- **Underrepresentation-** Women constitute 75% of the full-time farm workforce but their participation in FPOs remains disproportionately low.
- **Policy paralysis-** The guidelines for setting up 10,000 new FPOs in India by 2024 fails to address the gender disparities within the agricultural sector as they do not specifically account for their unique constraints and opportunity.
- **Lack of capacity development-** Lack of education and training opportunities for women in agriculture can impede their ability to adopt modern technology.
- **Technological divide-** The gender gap in access to and use of technology can be a significant challenge to women as they may have limited access to information and communication.

Estimates suggest that only small % of existing FPOs are women FPOs.

What lies ahead?

- There is a need to collect gender segregated data on existing FPOs. The government should provide larger equity grants and infrastructure support for women led FPOs.
- The government should propose a policy adjustment mandating at least 50% representation of women on the Boards of Directors of FPOs to foster inclusivity in agriculture sector.
- FPOs with strong female leadership can have a positive ripple effect in rural communities, promoting gender equality, and encouraging young women to pursue careers in agriculture and entrepreneurship.

Steps taken by government to promote FPOs

- **Formation & promotion of new 10,000 FPOs** - It is a Central Sector Scheme launched in 2020 to provided financial assistance up to Rs 18 lakh per FPO for a period of 3 years

- **FPO Credit in the Priority Sector-** FPOs receive preferential treatment in terms of loans or financial support within the priority sector, it includes activities that are crucial for economic development such as agriculture.
- **Five-Year Tax Breaks-** FPOs are eligible for tax breaks (reductions in taxes they need to pay) for a period of five years, this incentivizes FPOs to operate efficiently and invest in their activities.
- **Honey FPO Programme-** Agriculture Ministry launched [5 FPOs](#) for producing honey that would be set up with the help of National Agriculture Cooperative Marketing Federation of India (NAFED).
- **Deendayal Antyodaya Yojana- National Rural Livelihood Mission (DAY-NRLM)-** Promotes FPOs by mobilizing farmers, building market linkages through a value chain development approach.
- **Venture Capital Assistance program-** It is launched by SFAC, it works for the betterment of farmer-entrepreneur to evolve their agri-based business.
- **Mission for Integrated Development of Horticulture (MIDH) -** A centrally sponsored scheme that aims to encourage the aggregation of farmers into groups such as FPOs to facilitate the economy of scale and scope.
- **FPO cell-** A dedicated FPO cell was launched by Ministry of Agriculture to meet the objectives of FPOs.
- **One Nation One District Product-** It is included in the "PM Formalization of Micro food processing Enterprises (PMFME) Scheme", it provides support to FPOs, SHGs and producer cooperatives.
- **Lakhpati didi scheme -** It is a Rajasthan initiative to support economically disadvantaged women, providing them with a loan of INR 5 lakh without interest, this will provide support to women led FPOs.

12. ENVIRONMENT

12.1 Man-Elephant Conflict in Kerala

Why in news?

Recently in Wayanad, an elderly man lost his life after being attacked by a radio collared wild elephant.

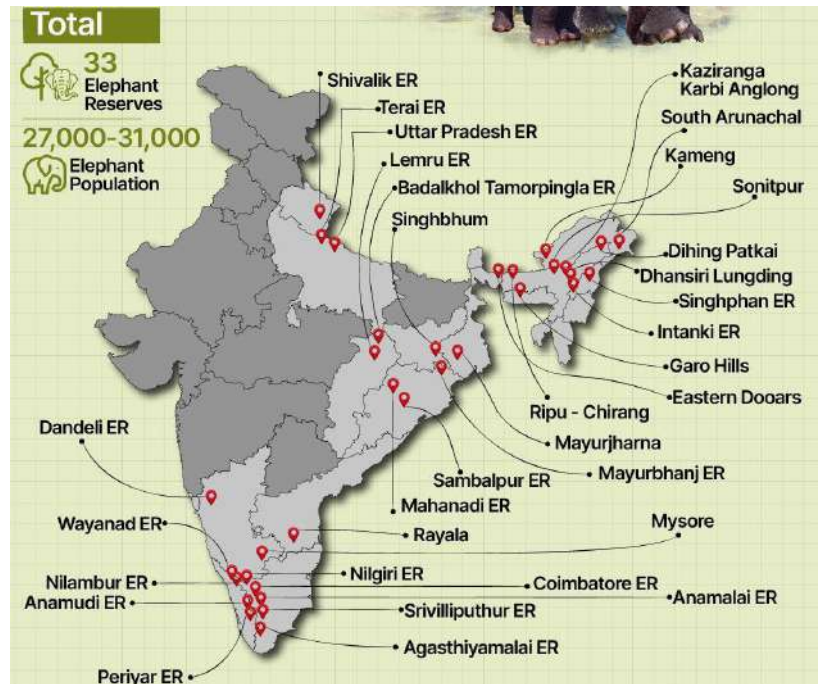
Kerala- Hotspot of human animal conflict

- **Forest coverage-** Around 30% of the State's geographical area is forest.
- **Small State-** Kerala is relatively a small State with an average width of just around 70km and a population more than 3.46 crore.
- **Dense population-** The human settlements are located close to protected forest regions.
- **Agriculture-** A large number of agricultural plantations too lie near wildlife habitats. This is especially true in the case of hilly reaches, which includes most of the heavily forested eastern part of the State.
- **Worst hit districts-** Wayanad, Kannur, Palakkad and Idukki.
- **Wayanad-** It has a forest cover of 36.48%, has lost 41 lives to elephant attacks and 7 to tiger attacks over the last decade majorly due to its geographical location.
- **Forest areas in Wayanad-** It comprises of Nagarhole Tiger Reserve, Bandipur National Park, and Biligiri Ranganatha Swamy Temple Tiger Reserve in Karnataka, and Mudumalai Tiger Reserve and Sathyamangalam Forest in Tamil Nadu.
- Wild animals, especially elephants and tigers, traverse state borders in search for food.
- **Government data for 2022-23-** It recorded 8,873 wild animal attacks, of which, 4193 were by wild elephants, 1524 by wild boars, 193 by tigers, 244 by leopards, and 32 by bison. Of 98 reported deaths, 27 were due to elephant attacks.
- **Impact on agriculture sector-** Beyond posing risk to humans, these attacks also devastated Kerala's agriculture sector.
- From 2017 to 2023, there were 20,957 incidents of crop loss due to wild animal raids which also killed 1,559 domestic animals, mainly cattle.

What are the reasons for man animal conflict?

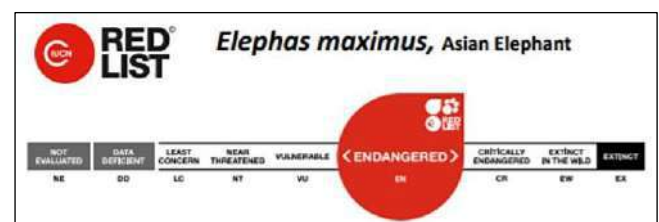
- **Impact of alien plants**- Due to cultivation of alien plants like acacia, mangium and eucalyptus in forest tracts for commercial purposes led to decline in the quality of forest habitats.
- **Deprive natural habitat**-The animals are deprived of their natural habitat and food sources due to cultivation of alien plants, these water-guzzling species also strain the forest's natural water resources. Elephants are among the worst affected species due to this.
- **Impact of invasive species**- Species like lantana, milkania and senna planted by forest department over decades, have also hindered growth of natural vegetation in forests.
- **Slow eco-restoration process**- The State has banned the cultivation of acacia and eucalyptus in forest tracts in 2018, the process of regenerating natural forests, such that animals do not face shortage of food and water will take time.
- **Changed agriculture practices**- Practices such as leaving farmland unattended and growing crops like bananas and pineapples, have lured animals out of forests.
- **Target domesticated animals**- The increase in wildlife attacks has also pushed people to safer settlements, leaving more farms vulnerable to raids by tigers and other carnivores especially older animals less capable of hunting in the wild.
- **Anthropogenic activities**- Waste disposal near forested areas, fragmentation of animal habitats due to wanton construction, and increased human presence in and around animal habitat.
- **Increase in bull elephants**- It is due to recovery of the sex-ratio after the ivory poaching in the past and degradation of the forest habitats by invasive weeds.

ELEPHANT RESERVES IN INDIA



What are the steps taken by Kerala to tackle human animal conflict?

- **Physical barriers**- Construction of elephant proof trenches, elephant proof stone walls and solar powered electric fencing, is implemented to prevent wild animals from entering human settlements.
- **Land acquisition scheme**- It pays farmers to relocate from their farms near the forest areas and convert them into forest land.
- **Eco-restoration measures**- Kerala forest department is aiming to plant suitable indigenous plants like wild mango, wild gooseberry, and wild jackfruit in the forest to ensure wild animals' food security and dissuade them from entering agricultural lands.
- **Rapid Response Teams** -It has established by Kerala in areas that see the highest incidence of human-animal conflict, they are supposed to deal with wildlife attacks and rescue operations in a timely and effective manner.



13. SCIENCE & TECHNOLOGY

13.1 Role of CSIR in Nation Building

Why in news?

The Council of Scientific and Industrial Research (CSIR) is committed to make India 'Atmanirbhar' by developing indigenous technologies

Council of Scientific and Industrial Research (CSIR)

- **Established-** 1942; **Headquarters-** New Delhi
- **Founders-** Arcot Ramasamy Mudaliar and Shanti Swarup Bhatnagar
- CSIR is operated under ***Societies Registration Act, 1860***.
- **President-** Prime Minister of India; **Vice President-** Ministry of Science and Technology
- **Mission-** To provide scientific industrial research and development that maximizes the economic, environmental and societal benefits for the people of India.
- **CSIR@2030 vision-** To enhance quality of life of the citizens of India through innovative Science and Technology, globally competitive R&D, by developing sustainable solutions and capacity building to fulfil dream of Atmanirbhar Bharat.
- **Journals-** ***Science Reporter*** in English, Hindi and Urdu.
- **Self-sufficiency-** CSIR, through its 37 laboratories across the country, are involved in all aspects of their research and development which can bring 'Atmanirbharta'.
- **Shanti Swarup Bhatnagar Prize-** It was established by CSIR in 1958, the purpose of the award is to recognise outstanding Indian work in science and technology.
- **Scimago Institutions Ranking World Report 2021-** CSIR is ranked 37th among 1587 government institutions worldwide and is the only Indian organization among the top 100 global government institutions.
- **Significance-** CSIR holds the 7th rank in Asia and leads the country at the first position.

What are the key initiatives taken by CSIR to make India Atmanirbhar?

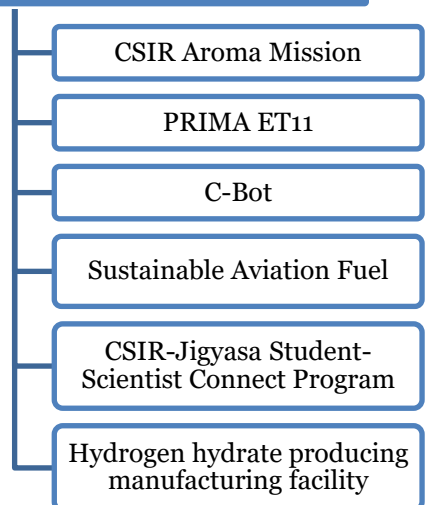
CSIR Aroma Mission

- **Launch year-** 2016
- **Aim-** To increase the income of farmers through cultivation of high value and high demand aromatic crops by about Rs. 30,000 to 60,000 per hectare per year.
- It provides planting materials, distillation units and training in extraction.
- **Purple revolution-** CSIR developed an elite variety of lavender suitable for cultivation in the temperate regions of J&K which provided end-to-end agro-technologies to farmers.
- It has started from Jammu and Kashmir and transformed the lives of farmers who are able to grow lavender, make lucrative profit and improve their lives.
- **Lemongrass oil-** India, which had been importing lemongrass oil for years, became an exporting country by 2023, it exported 600 million tons of lemongrass oil.
- **Agri-startups-** CSIR actively supports over 300 agri-startups in Jammu and Kashmir, demonstrating a commitment to the region's progress.

PRIMA ET11

- **Launch year-** 2023
- **Women friendly-** It is India's first women friendly, compact, Electric Tractor indigenously developed by CSIR, under agro-mechanical technology.
- **Indigenization-** The entire tractor has been designed and manufactured with indigenous components and technologies.
- **Net zero target-** India has the target to achieve Net Zero carbon emission by 2070 pledged at COP 26 Glasgow summit.
- **Global leader-** This development will trigger to lead India in the global tractor industry with revolutionary vision of "Make for the World".

Key initiatives of CSIR



Hydrogen hydrate producing manufacturing facility

- **Launch year-** 2022
- **Commercial production-** It produces around 10,000 tonnes per annum-manufacturing plant.
- **Applications-** Chemical industries, processing industries, and several other chemistry-related and pharmacy-related industries.

Sustainable Aviation Fuel

- It is a type of jet fuel produced from sustainable feedstocks that reduces carbon emissions over the lifecycle of the fuel.
- Airbus and CSIR-Indian Institute of Petroleum sign Memorandum of Understanding to develop indigenous Sustainable Aviation Fuel (SAF) in India.
- The collaboration aims to support SAF production and commercialization using a new HEFA technology pathway and locally sourced feed.
- The partnership will address decarbonisation goals and make India a global SAF production hub.

C-Bot

- It is an underwater unmanned vehicle indigenously developed by the National Institute of Oceanography.
- It can carry a number of equipment, sensors and gadgets to 200 metres deep into the water, which will help the scientists study the undersea ecosystem.
- C-Bot will aid scientists in studying the undersea ecosystem, collecting samples, and exploring climate-related topics across the vast Indian Ocean.

National Institute of Oceanography

- **Established-** 1966
- One of the important outcomes of International Indian Ocean Expedition was the establishment of Indian Ocean Biology Centre which was transformed into NIO.
- **Headquarters-** Goa
- **Regional office-** Kochi, Mumbai and Visakhapatnam
- **Mission-** To improve our understanding of the seas around us and to translate this knowledge to benefit all.
- **Research vessels-** RV Sindhu Sankalp and RV Sindhu Sadhana

CSIR-Jigyasa Student-Scientist Connect Program

- It is an initiative of CSIR to promote scientific temper through student scientist connect program.
- **Aim-** To focus on school and college students along with teachers to inculcate the culture of inquisitiveness on one hand and scientific temper on the other.
- The program will also enable the students and teachers to practically live the theoretical concepts taught in science by visiting CSIR laboratories and using the knowledge to take up small projects, compete in quiz and also apply to their knowledge for the betterment of society.

13.2 Hybrid Vehicle vs Electric Vehicle

Why in news?

The HSBC Global Research report suggests that hybrid vehicles are a practical medium-term solution for India's decarbonisation drive as the country moves toward eventual electrification.

What is the difference between hybrid vehicles and electric vehicles?

Key aspects	Hybrid vehicle	Electric vehicle
Power source	It use a combination of an internal combustion engine (ICE) and an electric motor.	It is powered a solely by electricity from battery.
Energy source	Electricity and fossil fuels like petrol and diesel are used as the source of energy to drive the vehicle.	Electricity stored in batteries is the main source of energy to drive the car.
Fuel efficiency	They are generally more fuel-efficient than traditional gasoline-powered vehicles but not as efficient as EVs	They can be driven for longer distances on single charge.

Emissions	They emit fewer pollutants and greenhouse gases compared to traditional gasoline-powered vehicles but still emit some emissions from ICE.	They produce zero tailpipe emissions and are considered one of the cleanest forms of transportation.
Recharging	They do not need to be recharged as they use gasoline to power the battery. The electric battery in hybrid vehicle can be recharged through regenerative braking.	They must be plugged in for recharging.
Maintenance	They require regular maintenance, including oil changes and other routine maintenance tasks associated with internal combustion engines	They have fewer moving parts and generally require less maintenance.
Cost	They are generally more affordable than electric vehicles	The cost is decreasing as technology improves and production increases.

What are the major findings of the report?

- **Less polluting-** The total carbon emission from Well to Wheel from an EV is currently 158 g/km and 133 g/km for hybrid. Hybrid vehicles are 16% less polluting than EVs.
- **Emissions-** In the case of EVs, only the power generation emissions have been incorporated and not coal production emissions, which would have skewed the equation further in favour of hybrids.
- By 2030, even if India's share of non-fossil fuel is 40%, hybrids will release 8% fewer emissions than EVs, down from 16% today.
- It may take **7-10 years** for EV and hybrid emissions to converge hence India needs to embrace hybrids over the next 5-10 years as a credible and practical roadmap to full electrification.

Total emissions include both vehicle emissions- tank to wheel (TTW) and crude mining/refining emissions and power generation emissions -- well to tank.

What are the issues with battery electric vehicles?

- **Upfront subsidy-** India's subsidies and tax breaks are targeted at the high-end EV segment, which is dominated by affluent buyers who can afford the upfront cost of EVs without much financial support
- **Charging network-** Norway and China have invested heavily in public charging stations, while India lags behind with only 2,000 stations for over 1 million EVs.
- **Unique challenge-** India requires different charging standards and voltages for two, three and four wheelers.
- **Electricity source-** Norway has 99% hydroelectric power but in India, the grid is still fed largely by coal-fired thermal plants.
- **Value chain-** India's demand for [Li-ion batteries](#) is expected to grow rapidly, but the country lacks domestic sources of lithium and other critical metals.

World Bank analysis shows that charging infrastructure is more effective than purchase subsidies in boosting EV demand.

To know about the problems of battery electric vehicles, click [here](#)

Steps taken to promote EVs
<ul style="list-style-type: none"> • National Electric Mobility Mission Plan (NEMMP) 2020- It aims to achieve national fuel security by promoting hybrid and electric vehicles in the country. • There is an ambitious target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards. • GST- Goods and Services Tax on the electric vehicles and the chargers/ charging stations has been reduced from 12% to 5% and from 18% to 5%, respectively. • Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme- Launched in 2015, it aims to promote electric mobility through financial incentives for enhancing electric transportation infrastructure. • FAME 2 – It is launched in 2019 with an outlay of 10,000 crores to incentivize demand for Electric Vehicles (EVs) by providing upfront subsidies and creating EV charging infrastructure.

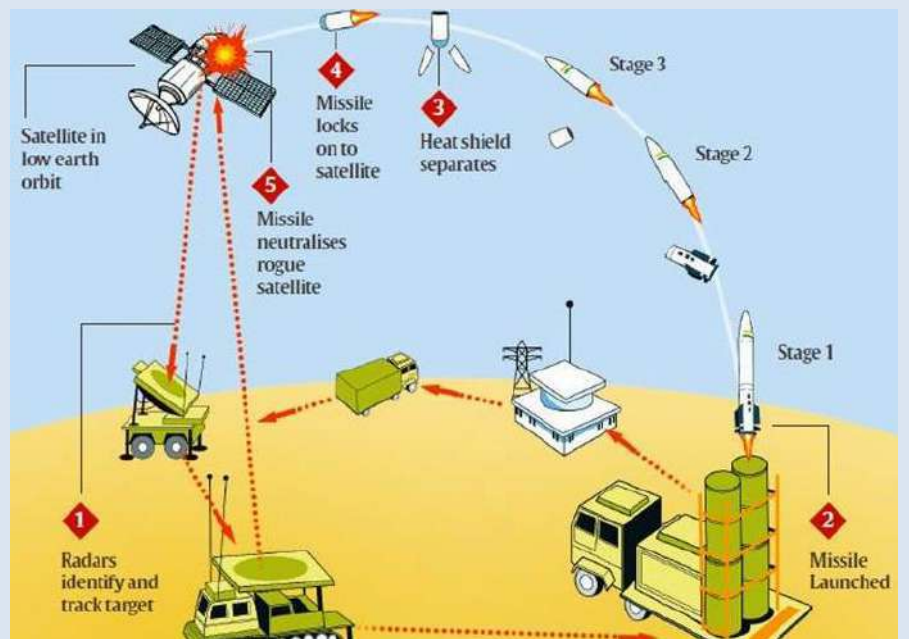
13.3 Anti-Satellite Weapon

Why in news?

Recently US accused Russia of developing a space based nuclear weapon that could destroy or damage other satellites in the orbit.

Anti-Satellite Weapon

- Anti-satellite weapons are designed to debilitate and/or destroy satellites that are already in orbit and operational.
- **Kinetic anti-satellite weapon**- These are usually launched from the ground or from the wings of an airplane and destroy satellites by running into them at high speeds.
- **Co-orbital anti-satellite weapons**- They are first launched into orbit and then change direction to collide with the targeted satellite from space.
- **Non-kinetic anti-satellite weapon**- They use technology like lasers to disrupt satellites without physically colliding with them.
- **Anti-satellite weapon capability**- US, Russia, China and India have demonstrated the ability to attack satellites in orbit that support services like GPS, communication and weather forecasting.
- **Mission Shakti**- It is India's anti-satellite missile launched from the Dr A P J Abdul Kalam Island launch complex near Balasore in Odisha in 2019.
- Anti-Satellite weapons violates certain provisions of **Outer Space Treaty, 1967**.



What are the key provisions of Outer Space Treaty (OST), 1967?

- It is formally known as the “Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.”
- **Adoption**- By United Nations General Assembly in 1967.
- **India**- It signed the treaty in 1967 and ratified in 1982.
- The provisions of the treaty are **binding on** the signatories.
- **Peaceful use of outer space**- Outer space shall be used for peaceful purposes, and the exploration of outer space shall be carried out for the benefit of all.
- **Prohibition of sovereignty**- Outer space including the **Moon** and other celestial bodies, is not subject to national appropriation by any means.
- **International cooperation**- States are encouraged to conduct international cooperation in the exploration and use of outer space, including the exchange of information and assistance in case of emergencies.
- **Prohibition of weapons of mass destruction**- The Moon and other celestial bodies shall be used exclusively for peaceful purposes. The stationing of weapons of mass destruction and military bases on celestial bodies is prohibited.

Outer Space Treaty, 1967 is often called as the magna carta of space law.



- **Freedom of exploration-** The exploration and use of outer space shall be carried out for the benefit of all countries, and there shall be free access to all areas of celestial bodies.
- **Liability for space activities-** States are internationally liable for any damage caused by their space activities to other states or their space objects.
- **Limit non-governmental activities-**The private entities and other non-government organizations are required to avoid harmful contamination of outer space and celestial bodies.
- **Registration of space objects-** States are obligated to register space objects launched into outer space with the UN Registry of Objects Launched into Outer Space.
- **Protect astronauts-** States are obligated to render assistance to astronauts in distress and to return them safely to Earth.
- **Avoidance of harmful contamination-**States shall avoid harmful contamination of space and celestial bodies, it emphasizes environmental protection and the prevention of the spread of harmful substances in outer space.
- **Notify harmful activities-** States are encouraged to inform the international community in advance about any space activities that could cause harmful interference with the activities of other states.
- **Coordination-** States are encouraged to consult with each other and coordinate their activities in outer space to prevent harmful interference.

The Act is against nuclear weapons, but it does not prohibit nuclear-powered satellites in space.

How will nuclear weapon impact satellites?

- **Electromagnetic pulse-** A burst of electromagnetic radiation will be created which would damage or disrupt electronic devices and systems.
- **Creation of radiation belt-** A nuclear explosion in space can create or enhance these belts, which can harm satellites and astronauts. Starfish Prime by US caused the formation of radiation belts around the Earth.
- **Kessler syndrome-** A scenario where the density of space debris in low-earth orbit is high enough to cause frequent collisions, which in turn create more debris and make space activities and exploration more difficult or impossible.
- **Space-based laser-** A weapon that uses a laser beam to target and destroy other satellites, it could also be powered by a nuclear reactor or a nuclear explosion.

Radiation belt is the zone of energetic charged particles trapped by the earth's magnetic field.

13.4 Application of AI in Financial Institutions

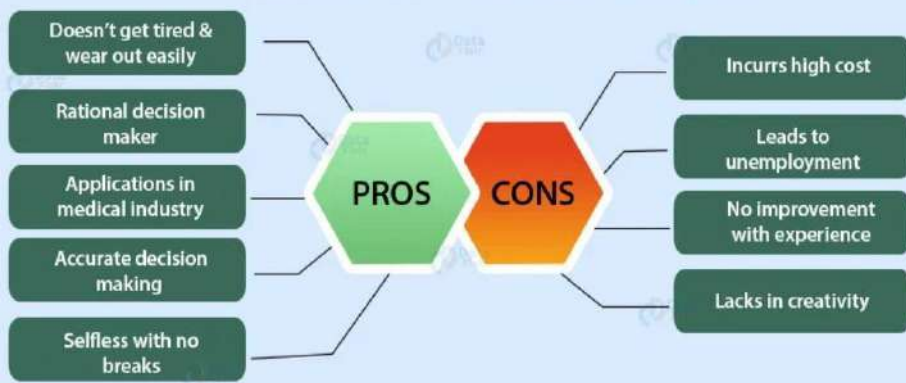
Why in news?

The evolving expectations of consumers in the banking and financial services industry, highlights the need for traditional institutions to adapt to a digital-first approach.

Artificial Intelligence (AI)

Pros and Cons of Artificial Intelligence

- AI refers to the development of computer systems of performing tasks that require human intelligence.
- It aids in processing amounts of data identifying patterns and making decisions based on the collected information.
- **Techniques-** Machine Learning, Natural Language Processing, Computer Vision and Robotics.
- **Range of abilities-** It includes learning, reasoning, perception, problem solving, data analysis and language comprehension.



How banks can use technology to transform customer experience?

Technology	About	Significance
Embedded finance	It refers to integration of financial services into nonfinancial platforms, such as e-commerce, social media or business software.	It can offer convenience, choice and personalization to customers, as well as new revenue streams for platform providers and financial institutions.
Platform based models	These are business models that rely on digital platforms to connect different types of users, such as producers, consumers and service providers.	It can enable faster and cheaper transactions, greater network effects, and more data-driven insights
Exponential technologies	These are technologies that have the potential to create exponential growth and impact in various domains, such as artificial intelligence, big data, cloud computing, biotechnology, and nanotechnology	It can help banks improve their efficiency, agility, scalability, and innovation
Virtual enterprise	These are organizations that operate primarily through digital channels and networks, rather than physical locations and assets.	It can leverage advanced data science and emerging technologies to accelerate innovation and collaboration, as well as create more relevant and personalized customer experiences
Generative AI	It refers to a category of AI, that is designed to generate new content, information, or responses based on patterns learned from existing data	It enhances customer engagement, fraud detection and provide conversational interfaces like chatbot, voice assistant etc.,

What is the significance of using Generative AI in financial institutions?

- **Reduction in identity fraud-** It can be used to analyse and authenticate customer documents submitted during the digital Know Your Customer (KYC) process.
- **Data summary-** Natural Language Processing (NLP) process and summarize a variety of textual data, including call- center interactions, documents, financial reports, analyst articles, emails, news and media trends.
- **Conversational knowledge-** Generative AI can be employed to develop conversational knowledge based on customer reviews, existing knowledge bases, product descriptions, and other relevant data sources.
- **Personalized content creation-** It can assist in creating various types of content, including personas, user stories, synthetic data, images, personalized user interfaces (UI), and marketing communications.
- **Personalized wealth management-** It delivers a highly personalized and tailored financial experience for users, optimizing investment decisions and payment processes based on individual preferences and financial goals.

To know about AI in healthcare click [here](#)

	 ChatGPT	 Google Bard	 Claude AI	 Bing Chat	 OORT AI
Release date	Nov. 2022	Mar. 2023	Mar. 2023	Mar. 2023	Sept. 2023
Key feature	Creativity and human-like conversation	Google ecosystem assistant	Safety and ethics response	Web-based contextual response	Privacy and customization
Language model	GPT-3.4/GPT-4	Gemini (successor to LaMDA and PaLM)	Claude	GPT-4	Enhanced vicuna

What are the challenges in use of AI in financial institutions?

- **Data privacy-** Financial institutions deal with sensitive customer information, AI requires large datasets raising concerns about the privacy and security of customer data.

- **Poor data quality**- AI algorithm may unintentionally perpetuate biases present in historical data, this can result in discriminatory outcomes, impacting decisions related to lending, credit scoring, and other financial processes.
- **Cybersecurity risks**- AI systems are vulnerable to cyberattacks that can compromise their integrity, availability, or confidentiality which is vulnerable to attack from hackers.
- **Lack of standardized framework**- The absence of clear standards can hinder collaboration, interoperability and the establishment of best practices.
- **Digital financial exclusion**- The increasing complexity of emerging technologies introduces risks that users may not be fully aware of, leading to potential digital financial exclusion for a significant portion of the population.
- **Skill deficit**- There is a shortage of skilled workforce in the field of data science, machine learning and AI which impede the development and deployment of AI solutions.

What lies ahead?

- The technological innovations like generative AI, advanced analytics, foundation models signify AI's remarkable progress over the past decade, allowing for scalability and customer satisfaction like never before in the financial services domain.
- Generative AI can unlock business and human potential at scale when properly tailored to suit the business needs of financial institutions.
- The financial regulators, especially central banks, should focus on responsible use, data security, privacy, legal compliance, and ethical considerations when adopting new technologies in the financial sector.

To know about AI Safety Summit 2023 click [here](#)

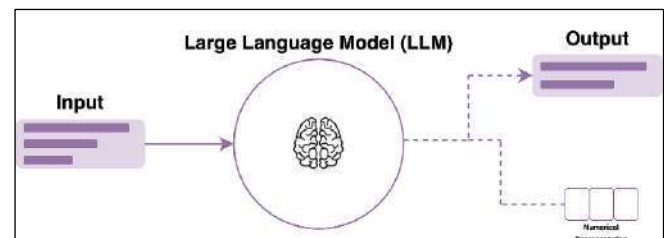
13.5 Large Language Model

Why in news?

The ability of Generative AI models to converse with humans and predict the next word or sentence is due to LLMs.

What is Large Language Model?

- They are large general-purpose language models that can be pre-trained and then fine-tuned for specific purposes.
- These models are trained to *solve common language problems* such as text classification, question answering, text generation across industries, document summarization, etc.
- **Deep learning techniques**- It involves the training of artificial neural networks, which are mathematical models which are believed to be inspired by the structure and functions of the human brain.
- The neural network learns to predict the probability of a word or sequence of words given the previous words in a sentence.
- **Next word prediction engines**- Once trained, an LLM can predict the most likely next word or sequence of words based on inputs also known as prompts.
- **Features**- LLMs has primary features like large, parameter and general purpose
- **Large**- This means
 1. The enormous size of training data
 2. **High parameter count**- It encode the knowledge and memories the model acquires during training.
- **General purpose**- It means the model is sufficient to solve general problems that are based on the commonality of human language regardless of specific tasks, and resource restrictions.



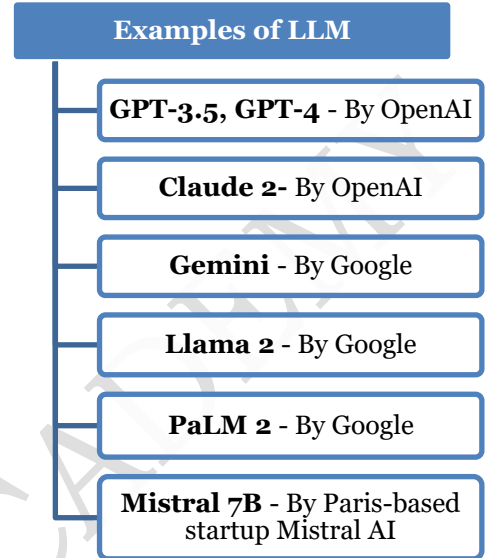
Types of LLMs

- **Autoregressive model**- GPT 3 is an example of this model as they predict the next word in a sequence based on previous words.
- **Transformer model**- LaMDA or Gemini are based on this as they use specific type of neural network architecture for language processing.
- **Encoder-decoder model**- It encode input text into a representation and then decode it into another language or format.

- **Parameter-** It play a crucial role in determining the model’s performance, it defines the model’s ability to solve specific task.

What are the application of LLMs?

- **Natural Language Understanding (NLU)** - LLMs power advanced chat bots capable of engaging in natural conversations, they can be used to create intelligent virtual assistants for tasks like scheduling, reminders, and information retrieval.
- **Content generation-** Creating human-like text for various purposes, including content creation, creative writing, and storytelling.
- **Language translation-** They can aid in translating text between different languages with improved accuracy and fluency.
- **Text summarization-** Generate concise summaries of longer texts or articles.
- **Sentiment analysis-** It helps in analysing and understanding sentiments expressed in social media posts, reviews, and comments.
- **Legal document analysis-** It can be applied in the legal domain for document analysis, contract review, and legal research, improving efficiency in legal processes.
- **Education-** It can be integrated into educational tools for tasks such as automated grading, generating educational content, and providing language learning support.
- **Code Generation-** LLMs have been utilized for generating code snippets and assisting developers in writing software by understanding and interpreting programming languages.
- **Question answering systems-** LLMs can be trained to provide accurate and contextually relevant answers to user queries, making them valuable for information retrieval applications.
- **Accessibility features-** It enhance accessibility by providing text-to-speech or speech-to-text capabilities, helping individuals with visual or hearing impairments.
- **Medical information-** It can assist in extracting relevant information from medical literature, aiding researchers and healthcare professionals in staying updated with the latest advancements.
- **Conversational AI-** It can serve as the backbone for chatbots and virtual assistants, providing natural and contextually aware interactions in support, information retrieval, and other conversational interfaces.



Advantages	Disadvantages
<ul style="list-style-type: none"> • Zero shot learning- LLMs can generalize to tasks they were not explicitly trained for, showcasing adaptability to new applications 	<ul style="list-style-type: none"> • High cost- Setting up the computing power for large models requires significant investment.
<ul style="list-style-type: none"> • Efficient data handling- It can process vast amounts of data, making them suitable for tasks like language translation and document summarization. 	<ul style="list-style-type: none"> • Data availability- Obtaining a large, high-quality text corpus can be challenging
<ul style="list-style-type: none"> • Fine tuning- LLMs can be fine-tuned on specific datasets or domains, enabling continuous learning and adaptation. 	<ul style="list-style-type: none"> • Bias- Many large data sets used for training LLMs contain biases and prejudices leading to biased or discriminatory content.
<ul style="list-style-type: none"> • Smooth training- LLMs streamline training by leveraging unlabeled data, and accelerates the process which saves time and resource 	<ul style="list-style-type: none"> • Time consuming- It takes months of training and human fine-tuning are necessary for optimal performance.
<ul style="list-style-type: none"> • Automation- They can automate language-related tasks, freeing human resources for more strategic aspects of projects. 	<ul style="list-style-type: none"> • Environmental impact- Training LLMs contributes to carbon emissions.

<ul style="list-style-type: none"> • Performance- It provide fast responses, improving overall business efficiency and productivity, their high-performance capabilities enhance language-related tasks and content delivery 	<ul style="list-style-type: none"> • Hallucination- LLMs may generate incorrect content without relying on learned data, this may lead to lack of accuracy or validity.
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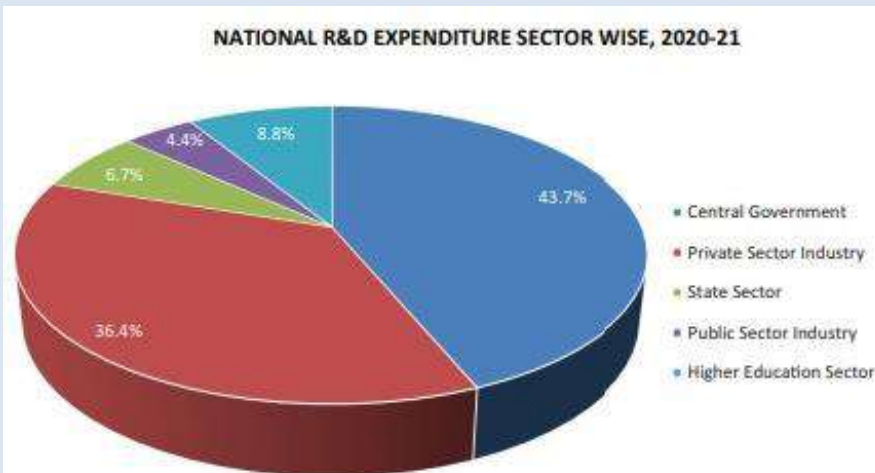
13.6 Status of India's R&D

Why in news?

Sustainable funding for science and research is crucial for India's journey towards becoming a science power by 2047.

Status of India's R&D

- The UNESCO defines R&D as any creative systematic activity undertaken in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this knowledge to devise new applications’.
- **National Science Day-** The theme for 2024 is “Science for Sustainable Development”, the country aims to become a developed nation by 2047 through science and technology.
- In India, the government undertakes 60% of expenditure on R&D, unlike other nations where private enterprise takes the lead.
- The [India Innovation Index 2021](#) has found that the overall spending on R&D by India has been relatively low across the country.
- India's R&D expense has dropped to the current 0.64% of GDP from 0.8% in 2008-2009 and 0.7% in 2017-2018, whereas the world average stands at around 1.8%.
- Most developed countries (US and UK) allocate between 2% and 4% of their GDP for R&D.
- In 2021, OECD member countries on average invested 2.7% of their GDP in R&D.



Sector	Percentage
Central Government	43.7%
Private Sector Industry	36.4%
State Sector	5.7%
Public Sector Industry	4.4%
Higher Education Sector	8.8%

What are the issues with India's R&D?

- **Low R&D spending-** India's R&D spending is among the lowest globally, inadequate funding hinders the country's ambitious science and technology goals.
- **Low private participation-** The overreliance on public fund signals an immature financing system and a weak domestic market, it is due to low private sector contribution due to concerns about regulation, intellectual property rights etc.,
- **Fund deficit-** [Anusandhan National Research Foundation](#) (ANRF) has faced delays in implementation as the strategies for raising private sector fund remain unclear.
 - ANRF has been established under ANRF Act 2023 Act which aims to seed, grow and promote research and development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.
- **Underutilization of budget-** Ministries, such as the Department of Biotechnology and Department of Science and Technology, consistently under-utilize their allocated budgets.
- **Patent ownership-** Majority of the patents filed by India are owned by MNCs with less than 10% owned by Indian companies, it indicates a potential gap in indigenous innovation and technology development.
- **Lack of collaboration-** There is a weak linkage between academia and private industry in India.
- **Diverse education standards-** The Indian education system is diverse in standards, impacting the quality of research produced by universities.

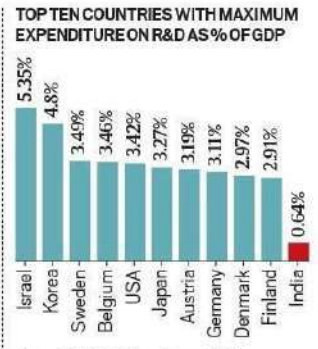
- **Skewed focus-** Indian research is primarily skewed towards basic research and lacks application-oriented R&D.
- **Weak enforcement of IPR-** Inadequate enforcement of Intellectual Property Rights in some areas despite improvements in IPR regime.
- **Non-Competitive global R&D-** Despite a growing talent pool, Indian R&D remains globally non-competitive.

What can be done?

- **Increase funding-** India should aim for at least 3% of GDP annually until 2047 for meaningful impact on development.
- **Political will-** It is important to prioritize and increase R&D expenditure.
- **Capacity building-** There is a need to enhance bureaucratic capacity for evaluating science projects.
- **Regular inspection-** There is a need to regularly monitor and evaluate the project utilization to prevent it from under-utilization.
- **Provide incentives-** The government can explore mechanisms to attract private investments by providing tax incentives.
- **Diversify funding sources-** Encourage private sector participation through incentives like tax rebates and foreign direct investments.
- **Simplify regulatory mechanisms-** To build investor confidence streamline approval process as this would make India an attractive FDI destination in R&D.
- **Prioritize R&D-** The Ministry of Finance should recognize R&D as core element of India's growth journey.
- **Public sensitization-** The government should increase awareness among the public about the importance of sustainable funding for science.

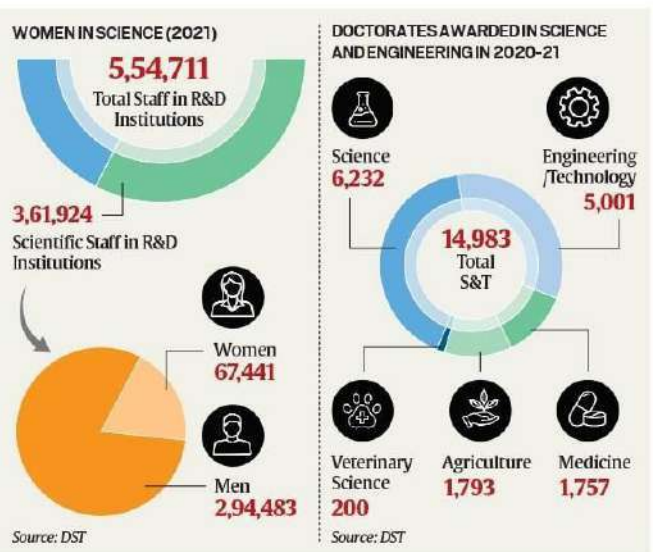
Key indicators: How India compares with others

India compares unfavourably with the world's best on R&D expenditure as percentage of GDP – and the number has trended downward over the past decade. India has far fewer researchers per million population compared with China, Brazil, or the US



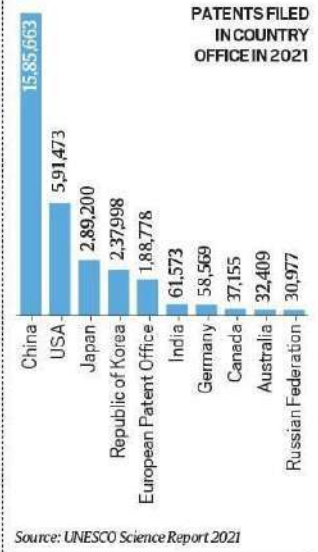
Source: Department of Science and Technology (DST)

Source: UNESCO Science Report 2021

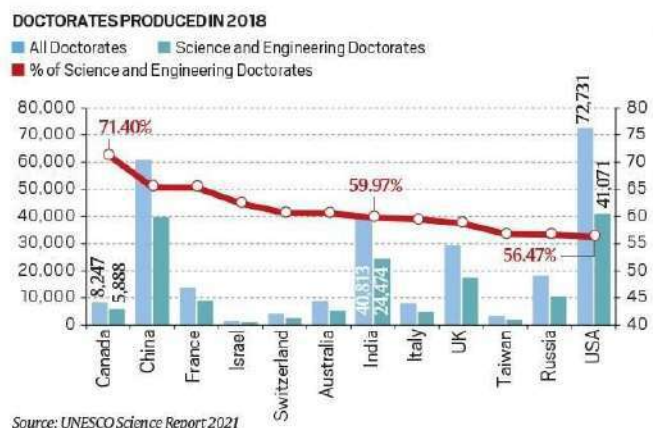


Source: DST

Source: DST



Source: UNESCO Science Report 2021



Source: UNESCO Science Report 2021



























Source: UNESCO Science Report 2021

13.7 Snakebites in India

Why in news?

Recently Indian Institute of Science (IISc) has developed a synthetic human antibody to neutralise lethal snakebite toxin.

Status of snakebite in India

<ul style="list-style-type: none">Snakebites are a significant public health concern in India, as the country is home to a variety of venomous snake species.India accounts for more than half of all snakebite deaths in the world with an average of 58,000 deaths from snakebites annually.The chance of an Indian dying from snakebite is about 1 in 250.World Health Organisation- It states that around 90% of snakebites in India are caused by the 'big four' among the crawlers - common krait, Indian cobra, Russell's viper and saw scaled viper.WHO recognised snakebite as a <i>neglected tropical disease</i> and set a target to halve the global burden of snakebite by 2030.Meeting the global target is possible only if India performs better, considering more than half of all snakebite deaths are reported from India.	<p>A significant number of snake bites in India are attributed to the widely distributed 'Big Four' species.</p> <p>As of 2023, India only has polyvalent antivenom to neutralise venoms of the Big Four.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="text-align: center; padding: 5px;">Indian cobra (<i>Naja naja</i>)</td><td style="text-align: center; padding: 5px;">Saw-scaled viper (<i>Echis carinatus</i>)</td><td style="text-align: center; padding: 5px;">Russell's viper (<i>Daboia russelii</i>)</td><td style="text-align: center; padding: 5px;">Common krait (<i>Bungarus caeruleus</i>)</td></tr><tr><td style="text-align: center;"></td><td style="text-align: center;"></td><td style="text-align: center;"></td><td style="text-align: center;"></td></tr><tr><td style="text-align: center; font-size: small; padding: 5px;">Found in forests, grasslands, and agricultural lands; Mainly diurnal.</td><td style="text-align: center; font-size: small; padding: 5px;">Found in both desert areas and dense grassland; Mainly nocturnal.</td><td style="text-align: center; font-size: small; padding: 5px;">Found in large variety of habitats, often in urbanized areas; Mainly nocturnal.</td><td style="text-align: center; font-size: small; padding: 5px;">Usually seen in scrub jungle and sandy areas; Mainly nocturnal.</td></tr><tr><td style="text-align: center;"></td><td style="text-align: center;"></td><td style="text-align: center;"></td><td style="text-align: center;"></td></tr></table>	Indian cobra (<i>Naja naja</i>)	Saw-scaled viper (<i>Echis carinatus</i>)	Russell's viper (<i>Daboia russelii</i>)	Common krait (<i>Bungarus caeruleus</i>)					Found in forests, grasslands, and agricultural lands; Mainly diurnal.	Found in both desert areas and dense grassland; Mainly nocturnal.	Found in large variety of habitats, often in urbanized areas; Mainly nocturnal.	Usually seen in scrub jungle and sandy areas; Mainly nocturnal.					
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What are the steps taken by India to address the snakebite?

- National programme for prevention and control of snakebites-** It was launched by the Ministry of Health and Family Welfare in 2021, with the aim of *reducing snakebite deaths and disabilities by 50% by 2030*.
- ICMR - Indian Council of Medical Research (ICMR)** set up a task force in 2022 to conduct a comprehensive study on the epidemiology, clinical management, and socio-economic impact of snakebites in India.
- Nationwide survey-** The survey by ICMR covers 14 states that account for 90% of the snakebite cases in the country and is expected to provide reliable data on the burden and distribution of snakebites, the effectiveness and availability of antivenoms, and the gaps and challenges in the health system.
- Indian polyvalent antivenom-** It is the scientifically proven antidote against the toxic effects of the 'big four' snakes, it is not effective against other venomous snakes, such as the hump-nosed pit viper, the king cobra, and the sea snakes, which also cause significant morbidity and mortality.
- Synthetic antivenom-** IISc have developed a human-derived antibody that can neutralise a neurotoxin produced by elapid snakes, such as cobras and mambas, they can bind to 99 variants of the toxin from different elapid snakes around the world, suggesting a broad spectrum of protection.
- Community health workers -** Accredited Social Health Activists (ASHAs), are trained volunteers who play a vital role in preventing and managing snakebites, by educating the people about snake identification, first aid, and referral to the nearest health facility.
- Nodal officers-** They are designated officials in each state who are responsible for coordinating and monitoring the implementation of the national programme for snakebite prevention and control.
- MOEFCC guidelines on human-wildlife conflict-** The Ministry of Environment, Forests and Climate Change (MOEFCC) released *10-species-specific guidelines* in 2021 to address human-wildlife conflict, where snake is featured as an animal in conflict.
- The guidelines provide standard operating procedures for the prevention, mitigation, and compensation of snakebite incidents.

What are the challenges in addressing snakebite in India?

- **Lack of standard-** The Central Drug Standards and Control Organisation (CDSCO) is the national regulatory authority for drugs and cosmetics in India, but it does not have a prescribed standard for potency for antivenom.
- **Limited insurance coverage-** [Pradhan Mantri Jan Arogya Yojana](#) (PM-JAY) scheme covers only the snakebite that requires ventilator support which are less than 10% of the total cases.
- **Venomous snakes-** India is the home to around 300-odd species of snakes, out of which 52 are venomous, but all their poisons are different which makes it a challenge to produce Antivenom.
- **Lack of single window clearance-** Anti Snake Venom manufactures requires a series of forest department permissions, which puts constraints in the manufacturers.
- **Lack of awareness-** Insufficient education and awareness about snakebite first aid and proper medical care can result in delays in seeking treatment.
- **Cultural beliefs-** The myths and misconceptions surrounding snakebites may influence people to resort to traditional remedies rather than seeking professional medical assistance.
- **Geographical barriers-** Rural areas often face challenges in terms of geographical remoteness, making it difficult for individuals to access healthcare facilities promptly.
- **Infrastructural deficit-** Insufficient healthcare infrastructure, including a lack of well-equipped medical facilities and trained healthcare professionals, can impede the timely treatment of snakebites.

PM-JAY is a national public health insurance scheme that aims to provide free access to health insurance coverage for low-income families.

What can be done?

- **Awareness measures-** Educating communities about snake behavior, safety precautions, and the importance of snake conservation can minimize conflicts.
- **Multi-stakeholder approach-** Effective collaboration among government agencies, NGOs, researchers, and local communities can lead to effective conflict mitigation.
- **Snake-venom collection-** Proper protocols must be addressed for the well-being of humans and snakes.
- **Widen insurance scheme-** PM-JAY must be extended to cover all snakebite case, regardless of the severity, to reduce the financial burden on the patients and their families.

14. DISASTER MANAGEMENT

14.1 Disaster Management Plan

Why in news?

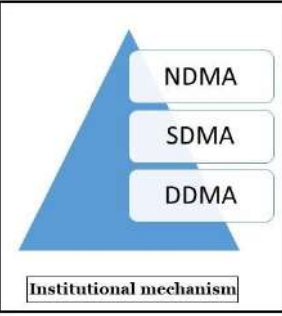
A multi-dimensional Disaster Management Plan has been introduced to build a disaster resilient India.

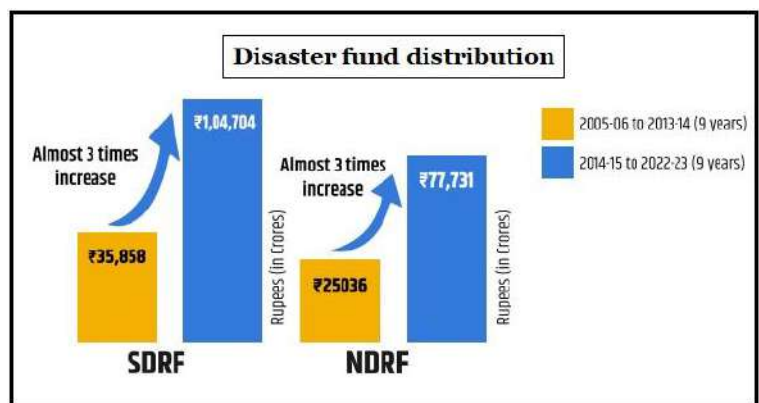
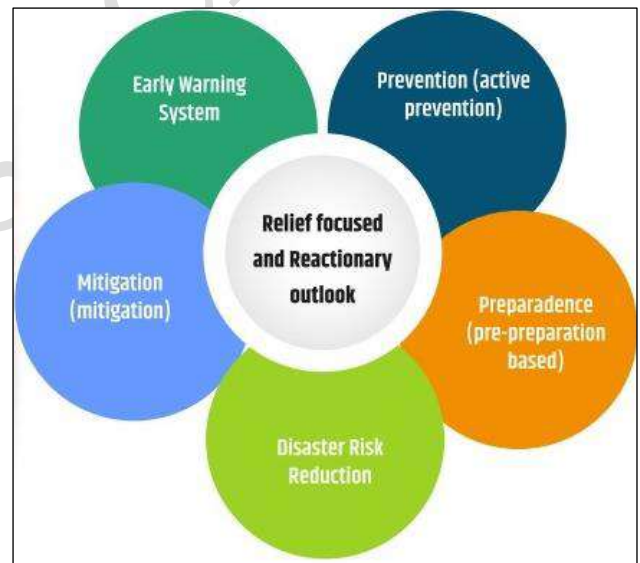
Disaster Management Plan

- **Holistic approach-** The plan consists of Awareness, Vigilance, Relief, Rescue and Rehabilitation.
- **Mission Zero Casualty-** It is a comprehensive strategy with slogan “**No person to be left behind**” that integrates early warning systems, prompt response forces, and community preparedness.
- **Focus-** To strengthen the early warning systems, enhancing the capabilities of response teams, and fostering a culture of preparedness among the citizenry.
- **Fund-** The government has invested in state-of-the-art technology for early detection and monitoring of potential disasters.
- **Training-** The millions of youth across the nation have been trained in disaster management, creating a vast network of first responders.
- **Cyclone Biparjoy-** It was monitored meticulously which resulted in only 2 fatalities, a testament to the effectiveness of the prepared measures.

What are the key initiatives taken under disaster management plan?

- National Disaster Management Plan-** It was launched in 2016 which is the horizontal and vertical integration among all agencies and departments related to disaster management.
- India Disaster Resource Network-**A nationwide electronic catalogue for managing the inventory of equipments, skilled human resources and critical supplies for emergency response, this has been updated for reliable and valid data.
- National Disaster Response Reserve-** It was created in 2014 with a corpus of Rs.250 crore as Revolving Fund to meet the immediate requirement of relief material/equipment after a disaster.
- Active availability of NDRF-** National Disaster Response Force has been pre-positioned during impending disasters like floods and cyclones as a pro-active measure to save the “Golden Hours” for protecting the lives of victims.
- Aapda Mitra Scheme-** It was launched in 2016 to empower community volunteers in disaster response who act as first responders, leveraging local knowledge, rapid action, and trust to enhance disaster preparedness and long-term resilience.
- NDRF academy-** National Disaster Response Force (NDRF) academy has been created by merging two premier Institutions i.e. National Civil Defence College (NCDC) and National Fire Service College (NFSC) at Nagpur.
- It shall be the premier Institute for Disaster Response Training not only for the NDRF but for all important stakeholders across the nation as well as for foreign countries.
- Scientific distribution of disaster funds-** National Disaster Mitigation Fund has been formed in 2021, the Central government has advised all the State Governments to set up State Disaster Mitigation Funds (SDMFs).
- Common Alerting Protocol (CAP) -** It is a pan-India Integrated Alert System launched in 2021 to provide geographically based instant alerts through mobile phones regarding emergencies/ disasters.
- National Disaster Management Information System (NIDMS) Portal-** It has been launched for collection of sector wise data on disaster losses and development of comprehensive online module to monitor progress on various indicators under [Sendai framework](#).
- Subhash Chandra Bose Disaster Management Award-** It was given to recognize the contribution and selfless service of individual and institutions in the field of disaster management.
- Emergency Response Support System- ‘Dial 122’** is an initiative to strengthen **proactive community policing** that would end confusion

Institutional Mechanism	Authority	Head
	National Disaster Management Authority (NDMA)	Prime Minister
	State Disaster Management Authority (SDMA)	Respective Chief Ministers
	District Disaster Management Authority (DDMA)	Either District Magistrate or District Collector



CAP is implemented by NDMA in partnership with Department of Telecommunications and Centre for Development of Telematics (C-DOT).

amongst distress callers, who at times end up dialing 100 in fire or medical emergency cases.

- **India Universities and Institutions Network for Disaster Risk Reduction (IUIN-DRR- NIDM)-** It has been established by National Institute of Disaster Management to address the commitment of India and keeping the importance of Universities and Institutions in disaster risk management.

Mobile App	About
Weather	Daily weather information, cyclone forecasts & warning, heatwaves etc., for general public.
Meghdoot	Weather based agricultural management by farmers.
Damini	Lighting warning is available in 5 languages

What are the international cooperation initiatives taken by India in disaster management?

- **Asian Ministerial Conference on Disaster Risk Reduction-** In 2016 India announced a [10 point agenda](#) on Disaster Risk Reduction in New Delhi.
- **Coalition for Disaster Resilient Infrastructure-** It is an international climate initiative by India in 2019 to promote *resilient climate-proof* critical infrastructure in member countries.
- **Standardization-** NDRF is striving to get global recognition from *INSARG (International Search and Advisory Group)* which will enable the force to carry out search and rescue operations on United Nations mandated standards.
- **Turkey earthquake-** India has sent 3 teams of NDRF personnel to Turkey in 2023 with all necessary equipment for search and rescue operations in the affected areas of Turkey devastated by massive earthquake.

What lies ahead?

- With '**Mission Zero Casualty**', India is not just responding to disasters; it's pre-emptively striking against the inevitable challenges posed by nature.
- As India continues to refine its disaster management strategies, the world watches and learns, witnessing a nation that transforms its vulnerabilities into strengths.
