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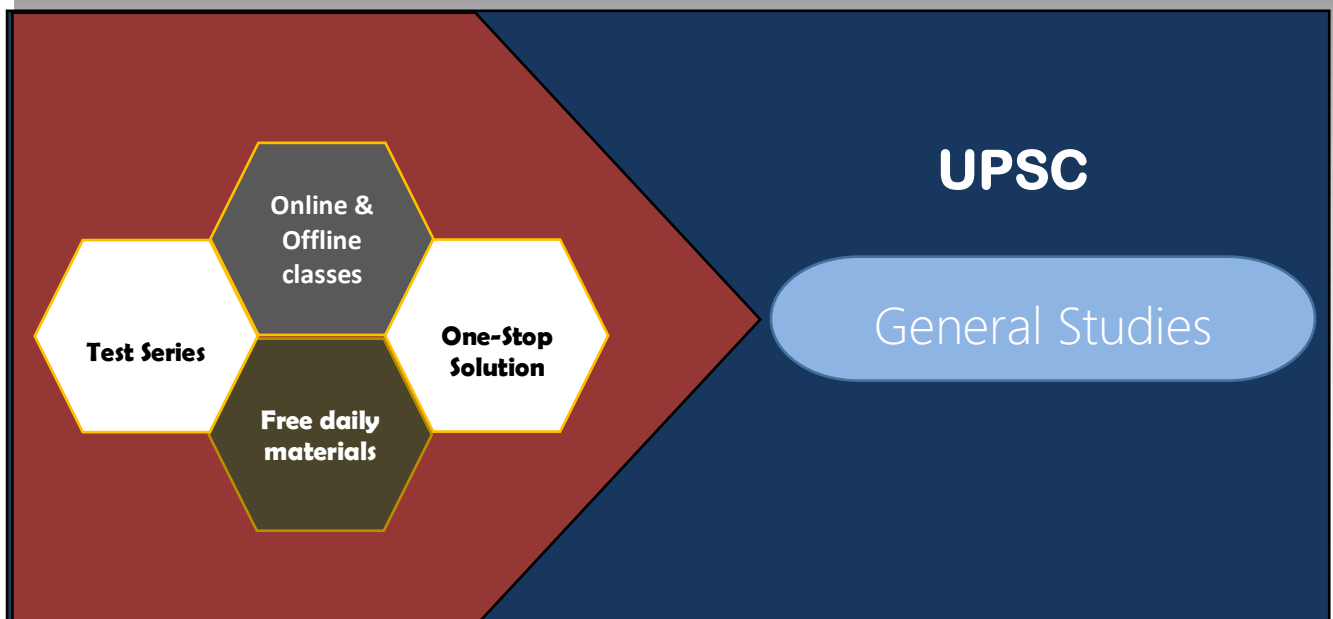
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**Articles of the day
THE HINDU & INDIAN EXPRESS**



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GS 2 : Polity, Governance, International Relations

1. Enter the peace process

Heart of Asia-Istanbul Process (HoA-IP)

- It was founded in 2011 in Istanbul, Turkey.
- It provides a platform for sincere and results-oriented regional cooperation by placing Afghanistan at its centre.
- It was established to address the shared challenges and interests of Afghanistan and its neighbours and regional partners.
- The Heart of Asia is comprised of 15 participating countries, 17 supporting countries, and 12 supporting regional and international organizations.

Context

- At the Heart of Asia Ministerial Conference, Union Minister S Jaishankar said peaceful Afghanistan is the basis for peace and progress in the region.

Dealing with the Taliban

- In the 1990s and 2000s, India was vocal in its opposition to the Taliban regime.
- But its position seems to have evolved over the years. In 2018, when Russia hosted Afghan and Taliban talks, India had sent a diplomatic delegation to Moscow.
- In 2020, at the intra-Afghan peace talks in Doha, India reaffirmed the long-held Indian position that any peace process should be Afghan-led, Afghan-owned and Afghan-controlled.
- In the latest move at the Heart of Asia conference, India has been supportive of all efforts being made to “accelerate the dialogue” between the Afghan government and the Taliban.

Biden’s Afghanistan plan

The Biden plan includes two key proposals –

- A unity transition government

- This would enable the Kabul government and the Taliban to push discussions around developing the country's future constitution, government and the terms of a ceasefire.
- The agreement includes a political roadmap for the creation of a transitional peace government, which shall exist temporarily until a new constitution and permanent government are formed.
- A UN-led multilateral conference
 - This would include a meeting between foreign ministers of countries (including Russia, China, Pakistan, Iran, India and the US) to discuss a common approach towards supporting peace.
 - This is an important move that will ensure that all the regional countries (and the US) are on the same page towards charting their respective political, economic and developmental contributions towards Afghanistan.

India has supported the UN-led process, in an apparent climb-down from its earlier position, and now shown willingness to deal with the Taliban.

The evolution of India's position is in sync with the evolution of the reality in Afghanistan.

The Taliban is no longer an untouchable force and controls much of Afghanistan's rural territories.

- The U.S. has already signed a deal with the Taliban, wherein American troops are scheduled to pull back from Afghanistan.
- China had long ago reached out to the Taliban.
- Russia has hosted talks between the two sides.
- European powers have also shown interest in sponsoring talks.
- So, India has to be more flexible and adapt to the new strategic reality.

India's Strategy in Afghanistan

- Ever since the Government has controlled significant regions in Afghanistan and the country has witnessed a drop in the influence of the Taliban, India managed to increase its clout in the region by deepening the ties with the Afghan people and the government, with investments in multiple projects dealing with education, power generation, irrigation and other infrastructure development.
- Some of the initiatives include:
 - The first batch of vaccines Afghanistan got was from India.
 - India signed an agreement to build the Shahtoot dam near Kabul.

Inference

- Thus, its economic, strategic and security ties could be disrupted if the Taliban were to take over.
- The question that bothers India and other stakeholders in the region is how to help Afghanistan end the violence without total submission to the Taliban.

Way forward

- Afghanistan Government which is currently negotiating on weaker terms may get a stronger backing if India is actively engaged in talks.
- Therefore, India must use its regional influence as well as its deep ties with both the U.S. and Russia, strive for what Mr. Jaishankar called “double peace”, both inside Afghanistan and in the region.

2. Still no recognition of the third tier

Context

- The article critically analyses the recommendations of the Fifteenth Finance Commission with regard to local governments.

Primary task of the Union Finance Commission

- The Finance Commission is constituted by the President under Article 280 of the Constitution, mainly to give its recommendations on the distribution of tax revenues between the Union and the States and amongst the States themselves.
- After the passing of the 73rd and 74th Constitutional Amendments, the Finance Commission has allocated resources from the central divisive tax pool to local governments.

Recommendations of the Fifteenth Finance Commission

Higher vertical devolution

- The vertical devolution recommended to local governments is raised remarkably high. From a meagre share of 0.78% of the divisible pool with an absolute sum of ₹10,000 crore by the Eleventh Commission, the Fifteenth Finance Commission raised it to 4.23% with a reasonably estimated amount of ₹4,36,361 crore.
- Compared with the Fourteenth Finance Commission there is a 52% increase in the vertical share.

The 15th Finance Commission has recommended two types of grants – basic and tied

- Basic grants are untied and can be used by the local bodies for location-specific felt needs except for salary or other establishment expenditure.
- The tied grants can be used for the basic services of (a) sanitation and maintenance of open defecation free (ODF) status and (b) supply of drinking water, rainwater harvesting and water recycling.
 - Previously the finance commissions like the 11th FC have tied specific items of expenditure to local grants and now the Fifteenth Finance Commission has raised this share to 60% and linked them to drinking water, rainwater harvesting, sanitation and other national priorities in the spirit of cooperative federalism.
 - However, it reduced the performance-based grant to just ₹8,000 crore – and that too for building new cities, leaving out the Panchayati Raj Institutions (PRIs) altogether.

Performance-Based Grants (PBGs)

13th FC

- Performance-Based Grants (PBGs) link performance in pre-determined areas with access to and size of funding, applying clear and transparent allocation formulas.
- The performance-based grants which were introduced by the Thirteenth Finance Commission **earmarked 35% of local grants** specifying six conditions for panchayats and nine for urban local governments and covered a wide range of reforms: from the establishment of an independent ombudsman to notifying standards for service sectors such as drinking water and solid waste management.

14th FC

- The Fourteenth Finance Commission, however, cut the **performance grant share to 10% for gram panchayats** and 20% to municipalities with the conditionality that all local governments will have to show improvements in own source revenue.
- Municipalities are additionally required to publish service level benchmarks for basic services.

15th FC

- An important recommendation of the Fifteenth Finance Commission is the entry-level criterion to avail the union local grant (except health grant) by local governments which is performance-linked.

- For panchayats, the condition is online submission of annual accounts for the previous year and audited accounts for the year before.
- For urban local governments, two more conditions are specified: after 2021-22, fixation of the minimum floor for property tax rates by the relevant State followed by consistent improvement in the collection of property taxes in tandem with the State's own Gross State Domestic Product.

Entry-level criteria a significant move

- The Eleventh to the Fourteenth finance commissions had recommended measures to standardize the accounting system and update the auditing of accounts, but there was limited progress.
- Therefore, the entry-level criteria of the Fifteenth Finance Commission are timely.

Will it bring substantial change in the system?

- The Eleventh Finance Commission published the fiscal data of all tiers of panchayats and municipalities in its report. But the data proved defective.
- The Twelfth Finance Commission did not publish any local fiscal data.
- The Thirteenth Finance Commission published data online and some researchers did use them.
- Unlike the previous commissions, the Fourteenth Finance Commission conducted a sample survey covering 15% gram panchayats, 30% block panchayats and all the district panchayats besides 30% municipalities, presumably to ensure quality in canvassing data. The results too were not published.

Concerns

- The Fifteenth Finance Commission nor the earlier finance commissions have examined how and where the financial reporting system has failed.
 - Without reliable data ensuring good governance would not be successful.
- The Fifteenth Finance Commission claims that it seeks to achieve the "desirable objective of evenly balancing the union and the states".
 - Recognition is not awarded to the third tier in this balancing act.
- Although the Fifteenth Finance Commission outlines nine guiding principles as the basis of its recommendation to local governments, there is no integrated approach (in contrast to the recommendations of the Thirteenth Finance Commission). It is forgotten that public finance is an integrated whole.

- The Fifteenth Finance Commission though stresses the need to implement the equalisation principle, it is virtually silent when it comes to the local governments.
- Efficiency Compromised: In the criteria used by the Fifteenth Finance Commission for determining the distribution of grants to States for local governments, it employed population (2011 Census) 90% and area 10% weightage, the same criteria followed by the Fourteenth Finance Commission.
 - While this ensures continuity, equity and efficiency criteria are sidelined.

Conclusion

- If decentralization is meant to empower local people, the primary task is to fiscally empower local governments to deliver territorial equity.

3. Plea in SC against uniform civil law on divorce and alimony

Context:

A petition has been filed in the Supreme Court against a uniform civil law for divorce, maintenance and alimony.

- The petition calls Uniform Civil Code (UCC) a blatant attempt to take away the fundamental right of Muslim women to practise their religion, in the guise of providing a uniform law across all faiths.

Uniform Civil Code Debate

Historical perspective - The debate for a uniform civil code dates back to the colonial period in India.

- **Pre-Independence (colonial era)**
 - The Lex Loci Report of October 1840- It stressed the importance and necessity of uniformity in the codification of Indian law, relating to crimes, evidence and contract. But, it also recommended that personal laws of Hindus and Muslims should be kept outside such codification.
 - The Queen's 1859 Proclamation- It promised absolute non-interference in religious matters.

So while criminal laws were codified and became common for the whole country, personal laws continue to be governed by separate codes for different communities.

- **Post-Colonial era (1947-1985)**

- During the drafting of the constitution, prominent leaders like Jawaharlal Nehru and Dr B.R Ambedkar pushed for a uniform civil code. However, they included the UCC in the Directive Principles of State Policy (DPSP, Article 44) mainly due to opposition from religious fundamentalists and a lack of awareness among the masses during the time.

Some of the reforms of this period were:-

The Hindu code bill -The bill was drafted by Dr.B R Ambedkar to reform Hindu laws, which legalized divorce, opposed polygamy, gave rights of inheritance to daughters. Amidst intense opposition of the code, a diluted version was passed via four different laws.

Succession Act-The Hindu Succession Act, 1956, originally did not give daughters inheritance rights in ancestral property. They could only ask for a right to sustenance from a joint Hindu family. But this disparity was removed by an amendment to the Act on September 9, 2005

The Hindu Marriage Act

Minority and Guardianship Act

Adoptions and Maintenance Act

Special Marriage Act:

- It was enacted in 1954 which provided for civil marriages outside of any religious personal law.
- Judicial interventions:

Shah Bano case (1985):-

A 73-year-old woman called Shah Bano was divorced by her husband using triple talaq (saying “I divorce thee” three times) and was denied maintenance. She approached the courts and the District Court and the High Court ruled in her favour. This led to her husband appealing to the Supreme Court saying that he had fulfilled all his obligations under Islamic law.

The Supreme Court ruled in her favour in 1985 under the “maintenance of wives, children and parents” provision (Section 125) of the All India Criminal Code, which applied to all citizens irrespective of religion. Further, It recommended that a uniform civil code be set up.

Facts about the case:

- Under Muslim personal law, maintenance was to be paid only till the period of iddat. (three lunar months-roughly 90 days).
- Section 125 of CrPC (criminal procedure code) that applied to all citizens, provided for maintenance of the wife.

Impact - After this historic decision, nationwide discussions, meetings and agitations were held. The then government under pressure passed The Muslim Women's (Right to protection on divorce) Act (MWA) in 1986, which made Section 125 of the Criminal Procedure Code inapplicable to Muslim women.

Uniform Civil Code and Arguments For & Against

Arguments in favour of the Uniform Civil Code:

- It will Integrate India- India is a country with many religions, customs and practices. A uniform civil code will help in integrating India more than it has ever been since independence. It will help in bringing every Indian, despite his caste, religion or tribe, under one national civil code of conduct.
- Will Help in Reducing Vote Bank Politics- A UCC will also help in reducing vote bank politics that most political parties indulge in during every election.
- Personal Laws Are a Loophole- By allowing personal laws we have constituted an alternate judicial system that still operates on thousands of years old values. A uniform civil code would change that.
- Sign of a modern progressive nation- It is a sign that the nation has moved away from caste and religious politics. While our economic growth has been significant, our social growth has lagged behind. A UCC will help society move forward and take India towards its goal of becoming a truly developed nation.
- It will Give More Rights to Women- Religious personal laws are misogynistic in nature and by allowing old religious rules to continue to govern the family life we are condemning all Indian women to subjugation and mistreatment. A uniform civil code will also help in improving the condition of women in India.
- All Indians Should be Treated the Same- All the laws related to marriage, inheritance, family, land etc. should be equal for all Indians. UCC is the only way to ensure that all Indians are treated the same.
- It Promotes Real Secularism- A uniform civil code doesn't mean that it will limit the freedom of people to follow their religion, it just means that every person will be treated the same and all citizens of India have to follow the same laws regardless of any religion.

- Change has been the law of nature-A minority of people should not be allowed to pick and choose the laws they want to be administered under. These personal laws were formulated in a specific spatiotemporal context and should not stand still in a changed time and context.
- Many provisions of specific personal laws are in violation of human rights.
- Article 25 and Article 26 guarantee the freedom of religion and UCC is not opposed to secularism.
- The codification and unification of the variegated personal laws will produce a more coherent legal system. This will reduce the existing confusion and enable easier and more efficient administration of laws by the judiciary.

The Way Forward for UCC: Gradual Change

India has a unique blend of codified personal laws of Hindus, Muslims, Christians, Parsis. There exists no uniform family-related law in a single statute book for all Indians which is acceptable to all religious communities who co-exist in India. However, a majority of them believe that UCC is definitely desirable and would go a long way in strengthening and consolidating the Indian nationhood. The differences of opinion are on its timing and the manner in which it should be realized.

Instead of using it as an emotive issue to gain political advantage, political and intellectual leaders should try to evolve a consensus. The question is not of minority protection, or even of national unity, it is simply one of treating each human person with dignity, something which personal laws have so far failed to do.

4. An Act of colourable legislation

The doctrine of casus omissus

Background

- A “Statute” is the will of the sovereign legislature according to which the governments function.
- The executive must act and the judiciary in the course of administration of justice must apply the law as laid down by the said legislative will.
- Very often occasions will arise where the courts will be called upon to interpret the words, phrases and expressions used in the statute. In the course of such interpretation, the courts have, over the centuries, laid down certain guidelines which have come to be known as “Rules of Interpretation of Statutes”.

Interpretation and construction

- **Interpretation** is the method by which the true sense or the meaning of the word is understood.
- According to Cooley, “interpretation differs from construction in that the former is the art of finding out the true sense of any form of words; **construction**, on the other hand, is the drawing of conclusions respecting the subjects that are beyond the direct expression of the text”.
- The term ‘construction’ has been explained in **CWT vs. Hashmatunnisa Begum** to mean that something more is being got out in the elucidation of the subject matter than can be got by the strict interpretation of the words used. Judges have set themselves in this branch of the law to try to frame the law as they would like to have it.

Meaning

- The term ‘omissus’ means “cases of omission”.
- Omission in a statute cannot be supplied by construction.
- A matter which should have been provided in a statute cannot be supplied by the courts.
- A casus omissus cannot be supplied by courts by judicial interpretative process except in the case of clear necessity and when the reason for it’s found in the four corners of the statute itself.
- The first and primary rule of the construction is that the intention of the legislature must be found in the word used by the legislature itself.

Inference

- There is no scope for importing into the statute words which are not there. Such importation would be, not to construe, but to amend the statute. Even if there be a casus omissus, the defect can be remedied only by legislation and not by judicial interpretation.
- It is certainly not the duty of the court to stretch the words used by the legislature to fill the gaps or omissions in the provisions of an Act, as given in *Hiradevi v District Board*.

5. Three more Rafale jets arrive in India

What’s in News?

The fourth batch of three Rafales landed in India. This takes the number of Rafales in service to 14.

Rafale:

The Dassault Rafale Jet is a multirole fighter jet designed and built by Dassault Aviation, a French aircraft manufacturer.

What was the need of Rafale for India?

- The IAF has historically been one of the best-equipped forces in the region, but has seen its advantage, particularly quantitative, against China and Pakistan narrow dramatically over the past two-odd decades.
- The IAF is today faced with the **twin tasks of having to acquire technological superiority** over its two adversaries, as well as mustering **enough aircraft to head off any collusive misadventures**.
- So to withstand the pressure from Pakistan and China in case of breakout of war and to increase the number of Jets in operation this was a necessity.

Origin of Rafale

- Rafale is a French word meaning “gust of wind” and is a **French-origin Delta winged, twin-engine multirole fighter aircraft** manufactured and designed by Dassault Aviation.
- Rafale is a **Medium Multi-Role Combat Aircraft (MMRCA)** that is said to boost India’s air dominance exponentially, currently safeguarded by fighter jets like Russia made Sukhoi Su-30MKI and MiG 29, along with French Mirage-2000 and indigenously built HAL Tejas
- The initial bidders were Lockheed Martin’s F-16s, Boeing’s F/A-18s, Eurofighter Typhoon, Russia’s MiG-35, Sweden’s Saab’s Gripen and Dassault’s Rafale.
- All aircraft were tested by the IAF and after careful analysis on the bids, two of them – Eurofighter and Rafale – were shortlisted.
- Dassault bagged the contract to provide 126 fighter jets as it was the lowest bidder and the aircraft was said to be easy to maintain. After Rafale won the contract, the Indian side and Dassault started negotiations in 2012.

Specifications

- The Rafale is a modern fighter jet known for its agility, speed, weapon holding capacity and attack capability. The Dassault Rafale has a **delta wing design and is capable of g-forces** as high as 11g (in case of emergency). The Rafale is available in both single and dual seating cabin (India ordered 28 single and 8 dual seater Rafale).
- The Rafale is powered by two SNECMA M88 engines, each capable of providing up to 50 kilonewtons (11,000 pounds-force) of dry thrust and 75 kN (17,000 pounds-force) with afterburners. The engines push the Rafale to attain

a high speed of 1.8 Mach (1912 kmph) and a range of more than 3700 km with 3 drop tanks.

- Dassault has also loaded the Rafale with a Martin-Baker Mark 16F “**zero-zero**” **ejection seat**, capable of operation at zero speed and zero altitude.
- In terms of weapons, the Rafale can be equipped with air-to-air missiles, air-to-ground missiles, and air-to-surface missiles along with Nuclear weapons. For avionics, the Rafale is also equipped with AESA radar, SPECTRA Electronic Warfare System andIRST System.
- The Rafale jets will come with various India-specific modifications, including Israeli helmet-mounted displays, radar warning receivers, low band jammers, 10-hour flight data recording, infra-red search and tracking systems among others.
- The Indian government is paying top dollar to Dassault to not only modify and certify the aircraft to an exacting specification but also to **stand by its reliability in service – something that has never been done with a fighter aircraft in Indian service to date.**

Countries that are operating Rafale

- The French Air Force first operational Rafale squadron, EC 1/7 “Provence”, was stationed at Saint-Dizier airbase in 2006.
- Along with the French Military including Air Force and Navy, countries like **Egypt and Qatar** are the current operators of the Rafale MMRCA

Where will they be deployed?

- The aircraft is capable of carrying a range of potent weapons and missiles and the first squadron of the aircraft will be positioned at **Ambala air force station**, considered one of the most strategically located bases of the IAF. The Indo-Pak border is around 220 km from there.
- The second squadron of Rafale will be stationed at **Hasimara base in West Bengal.**

Key Challenges

- Unfortunately, air power is an expensive business, and in a scenario **where manpower and running costs consume the lion’s share of the budget**, the principal impediment to a comprehensive renewal of the IAF is a financial one.
- As such, lower capital costs and lower sustainment costs have to go hand in hand – it is **simply not enough to argue that expensive western aircraft make up for their high upfront costs over lifetime sustainment.**

- Enter the **indigenous option – HAL’s Tejas Light Combat Aircraft**. Domestically produced and paid for mostly in rupees, it is not only fiscally attractive but also certainly good enough to replace the IAF’s ageing MiG-21 and MiG-27 fleet as it stands.
 - However, non-compliance with a 1980s Air Staff Requirement and low production rates continue to raise questions about the type’s future.
 - As reported by the Comptroller and Auditor General of India in May 2015, the Tejas Mark-I has over **53 shortfalls that reduce its operational capability**.
 - Tejas failed to meet operational requirements in various areas including the power to weight ratio, sustained turning rate, maximum speeds at low altitudes, AoA range, and weapon delivery profiles.
- Notwithstanding these concerns, the **IAF has committed to a large number of an upgraded evolution of the type incorporating a range of modern improvements** such as an active array radar as well as fixes to problems identified early on, such as lack of a self-protection jammer.
 - If this variant can be delivered cheaply and quickly, it will arrest the dramatic hollowing out of the IAF that is anticipated to take place around 2024-25, by which time some 100 aircraft could be withdrawn from service.

Budgetary support

- In the middle of the French import and the domestic LCA sits a fledgling tender for a third type of fighter – a **foreign design to be made in India under the controversial Chapter 7 of the 2016 Defence Procurement Procedure (DPP)**.
- Where the **budgetary support for a programme of 114 modern fighters**, and indeed the ability of the country to establish and **sustain two fighter manufacturers, will come from is not clear**.
- Defence budgets have remained effectively flat for a long time, and with the **economy flagging, an increase in capital outlay is not likely**.
- Procurement funding will also necessarily have to compete with **funding for research and development** for upcoming domestic projects such as the redesigned LCA Mk.2 and fifth-generation Advanced Medium Combat Aircraft (AMCA).
- Finally, even if all near-term procurements proceed to plan, there is still a ‘ramp up’ period to contend with – the **training of air and ground crew, building of infrastructure and actually operationalising** new types will pose their own challenges that will slow the effective rate of force accretion.

In the neighbourhood

Meanwhile, the **Pakistan Air Force (PAF)** and **China's People's Liberation Army Air Force (PLAAF)** are not standing still.

- The **PAF** is saddled with a number of legacy issues that are similar to the IAF. However, with the **Sino-Pak JF-17** available cheaply and in numbers, along with access to a wide range of Chinese weaponry developed for the type, Pakistan is well placed to recapitalise a significant proportion of its air force with a relatively modern aircraft.
 - Development and production of the **JF-17 can be extended to replace the PAF's Mirage fleet** at short notice as well, if so required. And as **China ramps up its fifth-generation aircraft programmes** and unit costs drop, there is little doubt these platforms will also find their way to Pakistan.
- The **PLAAF's** growth has been well documented. And **in addition to a fourth and fifth generation** re-equipment programme, the service benefits from a large number of force multipliers, including tankers, surveillance and control aircraft, and long-range bombers.
 - While primarily oriented toward taking on the U.S. military in the Pacific and beyond, China's formidable **aerial arsenal cannot be ignored in New Delhi.**

Conclusion

- So as the IAF gets ready to welcome its new acquisitions, it should be clear about the challenges it faces at a time when India's strategic and operational environment is undergoing a dramatic transformation.
- Ad hocism should give way to strategic thinking if these challenges are to be effectively met.

6. Stop the Ambassadorships for sale

Spoils System

- The Spoils System, also called the Patronage System, is a practice in which a political party, after winning an election, rewards its campaign workers, friends (cronyism), relatives (nepotism) and other active supporters by appointment to government posts.
- The Spoils System promotes the firing of political enemies and the hiring of political friends which is a lucrative push used by a political party to attract and lure supporters so that they can keep working for the party.
- It is opposed to the merit system, where offices are awarded on the basis of some measure of merit, independent of political activity.

- A permanent civil service appointed through a competitive examination is an example of the Merit System.
- This is a common practice of selection in the United States of America.

Issues with the spoils system

- The Presidents of the United States appoint ambassadors out of those who have paid big financial contributions to the party.

The appointments have the solid backing of the U.S. Constitution

Article II

- The executive power shall be vested in a President of the United States of America.
- Article II, Section 2, of the Constitution provides that the President shall appoint officers of the United States “by and with the Advice and Consent of the Senate.”
- It means that the President enjoys wide latitude in selecting a nominee and the Senate is comparably free to choose whether to advise and consent.
- The onus for the quality and integrity of the nominees rests on the President, but the Senate has the right to hold back confirmation of any nominee, including career diplomats.

Complicated process

- The path to ambassadorships for donors is not at all smooth.
- The Senate largely through committee investigations and hearings examines the qualifications of nominees and any potential conflicts of interest.
 - The Senators can also influence policy through the confirmation process, either by rejecting nominees or by extracting promises from nominees before granting consent.
- Therefore the Senate confirmation is quite a complicated process in which the investigating agencies examine their entire past to see whether they have ever been guilty of any misdemeanour, which disqualifies them for the high appointment.
- Anything adverse that comes to the notice of the agencies will be conveyed to the nominee concerned. It is then up to him to decide whether to face the charges or quietly withdraw his candidature.

The Indian way

- India has a more sophisticated system of appointing “political” ambassadors, not for donation to political parties, but as an avenue to recognise and reward talent.
- In the early years, Maharajas were appointed to several posts.
- And later, politicians were sent abroad when they had to be kept away from the country.
- The Government apparently has the discretion of appointing political ambassadors in up to 30% of the posts. But now, the number of political ambassadors is small, if at all, and the senior posts are open to career diplomats.

Example

India has had some very distinguished and successful political ambassadors.

- Examples are, three political ambassadors in Moscow (Dr. K.S. Shelvankar, D.P. Dhar and I.K. Gujral) and one in Washington (Naresh Chandra); all of them fulfilled certain criteria set by the Government, which included greater acceptability of political ambassadors in major capitals.
- The most celebrated political ambassador was Kushok Bakula Rinpoche, a Buddhist monk from Ladakh, who was appointed to Mongolia. He is credited with reviving Buddhism in Mongolia.
 - The Head of State himself used to pay obeisance to him as the Mongolians followed the same Mahayana Buddhism practised in Ladakh.
 - Even after he completed his diplomatic assignment, Kushok Bakula Rinpoche retained strong ties with Mongolia till he died in his eighties.

Merit System in India

- The Union Public Service Commission (UPSC) has done a commendable job over the years by insulating recruitments from political patronage and selecting the best and the brightest through open competition and transparent procedures.

Conclusion

- There are many countries that continue to believe that long careers in the Foreign Service are not necessary for people to be effective ambassadors.
- This is a false notion as career ambassadors work to protect their home country’s citizens, repair relationships between nations, and create lasting bonds that help them shape foreign policy which comes with experience and long years of Leadership, Negotiation Skills and Cross-Cultural Awareness. Therefore, it should be less political and more merit-oriented.

7. A missing science pillar in the COVID response

Context

- The rising trajectory of daily new Covid-19 cases.

Reasons why coronavirus cases are rising

1. Mutations

- The evolution of coronavirus is among the major reasons for the second wave. Scientists have detected numerous mutations in the SARS-CoV-2.
- A resumption of global travel meant that spread of variants into India was inevitable.

2. Increased Testing

- Increased testing is another reason why India is detecting more cases in the second wave of the Covid-19 pandemic.
- The sero-surveys have shown that India had greater Covid-19 exposure than revealed through confirmed cases of coronavirus infection on the basis of laboratory tests.

3. Multiple super spreader events happening in schools, colleges, offices, public transport.

- From attending large weddings and crowded public functions to heedless crowding in malls and marketplaces, the general public has been quite lax about adhering to basic safety protocols.

Way Forward

India needs to increase the quantity, quality and public availability of actual data to guide decision-making.

- **First**, collection of anonymized demographic (patient information) and risk details (age, sex, travel history, contact with other COVID-19 patients, existing chronic conditions, current smoking) on all positive cases on a central website in each State remains a priority.
- **Second**, greatly expanded sequencing of the viral genome is the need.
 - Genome sequences play a critical role in our understanding of viral evolution, disease epidemiology, surveillance, diagnosis, and countermeasure development.

- It can be achieved by re-programming sequencing capacity in Indian academic and commercial laboratories.
- **Third**, far better reporting of COVID-19 deaths is needed.
 - Daily or weekly reporting of the total death counts by age and sex by each municipality would help track if there is a spike in presumed COVID-19 deaths.
- **Fourth**, the Indian Council of Medical Research's national serosurvey had design limitations such that it probably underestimated the true national prevalence.
 - A far larger and better set of serial surveys is required.
- **Fifth**, the rich, influential and urban classes, are receiving their vaccination on time but the poor and the rural masses are left far behind.
 - Vaccination campaigns need to reach the poor adults over age 45, without having to prove anything other than approximate age.
 - Follow-up studies among the vaccinated can establish the durability of protection, and, ideally, reduction in transmission.
- **Sixth**, we need to understand better why some populations are not affected.
 - For example, COVID-19 infection and death levels in Thailand and Vietnam are remarkably low, and cannot be assigned to their stronger testing and tracing programmes.
 - Widespread existing immunity, perhaps from direct exposure to bat coronaviruses might be one explanation.
 - Rapidly assembled comparative studies across parts of India and Asia are a priority.
- **Finally**, the government can formulate an adult vaccination plan.
 - COVID-19 could well turn into a seasonal challenge and thus, the central government should actively consider launching a national adult vaccination programme that matches India's commitment and success in expanding universal childhood vaccination.
 - Adult and child vaccination programmes are essential to prepare for future pandemics.

Conclusion

- The resurgence of COVID-19 presents a major challenge for governments.
- Therefore, it should expand the epidemiological evidence, share it with the public and build confidence that the vaccination programme will benefit all Indians.

8. Disquiet over policy for rare diseases

Context:

Caregivers to patients with 'rare diseases' and affiliated organisations are dissatisfied with the National Policy for Rare Diseases, 2021.

Rare Disease:

- A rare disease is a health condition of particularly low prevalence that affects a small number of people compared with other prevalent diseases.
- Haemophilia, Thalassemia, sickle-cell anaemia, primary immunodeficiency in children, auto-immune diseases, Lysosomal storage disorders such as Pompe disease, Hirschsprung disease, Gaucher's disease, Cystic Fibrosis, Hemangiomas and certain types of muscular dystrophies are the most common types of rare diseases recorded in India.

National Policy for Rare Diseases, 2021:

- The National Policy for Rare Diseases, 2021 was notified on the 31st of March 2021.
- The policy comes over three years after the health ministry formulated a National Policy for Treatment of Rare Diseases in July 2017 but kept it in abeyance.
- India plans to create a national registry for a database on rare diseases, classify known rare diseases in three groups.
- In the new policy, 'rare diseases' have not been defined but classified into three groups based on expert opinion.
 - Group 1 has disorders controllable by one-time curative treatment, including osteopetrosis and Fanconi anaemia.
 - Group 2 has diseases requiring long-term or lifelong treatment with a relatively lower cost of treatment and benefit has been documented in literature, including galactosemia, severe food protein allergy, and homocystinuria.
 - Group 3 has diseases for which definitive treatment is available, but challenges are to make optimal patient selection for benefit, and very high cost and lifelong therapy, covering diseases such as spinal muscular atrophy (SMA), Pompe disease, and Hunter syndrome.
- The policy says the government would provide financial assistance of up to Rs 20 lakh to poor patients and those covered under Ayushman Bharat for diseases under Group 1.
- The state governments would be asked to undertake treatment of diseases covered under Group 2, which largely include disorders managed with special dietary formulae or food for special medical purposes (FSMP) and disorders that are manageable to other forms of therapy.
- For diseases classified under Group 3, which require life-long expensive treatments, the government would create a digital platform to bring together

Centres for Excellence, patients undergoing treatment and corporate donors or prospective voluntary individuals who could help fund treatment.

- The government has identified eight Centres of Excellence for the treatment of rare diseases.

Details:

- Though the document specifies increasing the government support for treating patients with a rare disease from 15 lakh to 20 lakh – caregivers say this doesn't reflect the actual costs of treatment.
- It is argued that the new policy offers no support to patients awaiting treatment since the earlier National Policy for Treatment of Rare Diseases 2017 was kept in abeyance.
- Concerns have been raised about the new policy not considering Group 3 patients, who require lifelong treatment support.
- It has been demanded that at least two centres in every state need to be identified as a centre of excellence to help the patients avoid the time and cost of moving out.

9. How Asian desert dust enhances Indian summer monsoon

Context:

- Study on the **role played by dust in influencing Indian summer Monsoon.**

Background:

Critical role played by dust:

- Dust plays a very important role in influencing climatic events. Dust swarms can **influence moisture transport, increase precipitation and rainfall**. Dust is known to influence monsoons, and hurricanes.
- Dust are known to even **fertilize rainforests** and help in vegetation growth.

Relationship between desert and monsoon rainfall:

- Deserts across the globe play important roles in monsoons.
 - The dust aerosols from **deserts in West China such as the Taklamakan desert and the Gobi Desert** can be transported eastward to eastern China and can influence the East Asia summer monsoon.
 - The small **deserts in southwest United States** are known to influence the North African monsoon.

Details:

- The new study details how dust coming from the deserts in the West, Central and East Asia plays an important role in the Indian Summer Monsoon.
- The new study notes that it is not just the dust from the Middle East [West Asia], but the **Iranian Plateau also influences the Indian Summer Monsoon**. The hot air over the Iranian Plateau can heat the atmosphere over the plateau, strengthen the circulation over the deserts of the Arabian Peninsula and increase dust emission from the Middle East [West Asia].

Impact of dust on rainfall pattern:

- Dust swarms from the desert when lifted by strong winds can **absorb solar radiation and become hot. This can cause heating of the atmosphere**, change the air pressure, wind circulation patterns, influence moisture transport and increase precipitation and rainfall.

Reverse effect:

- The **Indian Summer Monsoon also has a reverse effect and can increase the winds in West Asia to produce yet more dust**.
- A strong monsoon can also transport air to West Asia and again pick up a lot of dust, which the researchers have termed as a positive feedback loop.

Anthropogenic aerosols:

- With respect to the impact of anthropogenic dust from vehicles, mining, construction on monsoons, while some studies have found that the anthropogenic aerosols emitted from the Indian subcontinent can decrease summer monsoon precipitation, other studies have found that absorbing aerosols such as dust can strengthen the monsoon circulation.
- The concerned study used the carbon model to simulate the impact of anthropogenic aerosols on India and the results showed that **anthropogenic aerosol can strengthen Indian summer monsoon rainfall**.

Significance of studying dust:

- Many studies have shown that the dust emission scheme is extremely sensitive to climate change and the understanding of the concerned mechanisms and effects of dust will help understand the monsoon systems in the face of global climate change.

Way forward:

Need to study minor components:

- Different deserts have different chemical compositions and this can influence the dust's properties.
 - **Dust from the Middle East [West Asia] has more absorbing ability of solar radiation than dust from North Africa** and this difference in absorbing ability might influence monsoon systems.
- Given the emerging evidence of the unique characteristics of dust from different deserts as against the previous understanding that dust from deserts across the globe have the same components, there is the need to study the minor components of desert dust aerosols.
- This would involve the use of high spatial resolution remote sensing to identify source regions and create a better dust emission map.

Understanding the impact of anthropogenic activity:

- There is the need to study **new drying lakes** and understand how dust from them can play a role in the monsoons.

10. A road map for tolerance

Context:

- March 21 marks the **International Day for the Elimination of Racial Discrimination**.

Background:

Forms of racism:

- Current forms of racism and discrimination are **complex and often covert**.
- The anonymity of the Internet has allowed **racist stereotypes and inaccurate information to spread online**. At the onset of the pandemic, traffic to hate sites and specific posts against Asians grew by 200% in the U.S. In India and in Sri Lanka, social media groups and messaging platforms were used to call for social and economic boycotts of religious minorities, amid false information accusing them of spreading the virus.
- **Structural forms of discrimination**, including micro-aggressions and everyday indignities, remain widespread.
- The use of new technologies and artificial intelligence in security has raised the spectre of '**techno-racism**'.

Consequences of racism:

- Racial discrimination, beyond being a **breach of human rights**, has **harmful effects on human health and well-being**, and risks **wider disruptions to social cohesion**.
- Prejudiced attitudes and discriminatory acts, whether subtle or overt, **aggravate existing inequalities in societies**.
- A study published by The Lancet drew attention to the social dimension of the COVID-19 pandemic and the greater vulnerability of ethnic minorities, who have been disproportionately affected.
- The World Health Organization has cautioned on the dangers of profiling and stigmatising communities that can lead to fear and the subsequent concealment of cases and delays in detection.
- Racial discrimination deepens and fuels inequality in our societies.

UNESCO's role in anti-racism movement:

- UNESCO has been playing a critical role in the anti-racism movement through its actions against racism through **education, the sciences, culture, and communication**. It has been promoting intercultural dialogue and learning.
- UNESCO's headquarters in Paris recently hosted a **Global Forum against Racism and Discrimination**. The Forum gathered policymakers, academics, and partners to initiate a new multi-stakeholder partnership on anti-racism.

Way forward:

- The new manifestations of racism and discrimination call for renewed commitments to mobilise for equality.
- Racism will not be overcome with mere professions of good faith but must be combatted with **anti-racist action**.
- There is a need for a **multisectoral effort** to tackle the root causes of racism through anti-racist laws, policies and programmes.
- A global culture of tolerance, equality and anti-discrimination needs to be cultivated. There is the need to **eradicate harmful stereotypes and foster tolerance**.

Quote:

- Former UN Secretary-General Kofi Annan: "Our mission is to confront ignorance with knowledge, bigotry with tolerance, and isolation with the outstretched hand of generosity. Racism can, will, and must be defeated."

11. A good start

Context:

- The recent notification of the **National Policy for Rare Diseases, 2021**.

Background:

Rare diseases:

- Rare diseases are broadly defined as diseases that infrequently occur in a population, and **three markers** are used – **the total number of people with the disease, its prevalence, and the availability/non-availability of treatment options**. WHO defines a rare disease as having a frequency of less than 6.5-10 per 10,000 people.
- As per an estimate, there are 7,000 known rare diseases with an estimated 300 million patients in the world; **70 million are in India**.
- Rare Diseases include inherited cancers, autoimmune disorders, congenital malformations, Hirschsprung's disease, Gaucher disease, cystic fibrosis, muscular dystrophies and Lysosomal Storage Disorders (LSDs).

Significance:

- The National Policy on Rare Diseases is a good step forward based on the following aspects.

Principle of inclusion:

- The National Policy for Rare Diseases 2021 is pegged on the principle of inclusion of every single citizen.
 - It is **binding on a welfare state to secure the wellbeing of every single citizen**, particularly those unable to help themselves, irrespective of whether they constitute a critical mass or not.

Financial support:

- The policy offers **financial support for the one-time treatment of up to Rs. 20 lakh and also introduces a crowdfunding mechanism**.
- Up until now, it was mainly patient support groups that used to work towards drumming up funding assistance for the treatment of rare diseases.

Early detection:

- The policy provides for early detection. Early detection is critical for management of the rare diseases.

Concerns:

- As per the Policy, **diseases such as LSD** for which definitive treatment is available, but costs are prohibitive, have been categorised lower and hence would qualify for **lower support from the government**.
- No funding has been allocated for the immediate and lifelong treatment needs, for therapies already approved by the Drugs Controller General of India.

Way forward:

Fund support:

- The Centre can set aside a substantial corpus to fund life-saving treatments, even as it rolls out the policy. **Fund support from the government is vital for the continual treatment of those with rare diseases.**
- The central government can extend the **cost-sharing agreements** that it has worked out with Kerala, Tamil Nadu and Karnataka, with other States too, which will help it reduce its costs by half.

Medical efforts:

- There is a need to **support the development of and commercialisation of drugs for treatment, and improve funding for research on rare diseases.**

12. The Kerala Model at the crossroads

Context:

- The article evaluates the Kerala Model of economic development.

Background:

Kerala Model of economic development:

- The 'Kerala Model' is based on the **redistributive principle of growth** where there is a **marked emphasis on development over growth**. The state interventions which rely on widespread **participation of people** are aimed at improving the people's material conditions of living.

Concerns:

- Some economists have argued that the slow-growing State would not have the money to continue financing its welfare programmes.
 - Economic stagnation in the 1970s and 1980s led many observers to predict the collapse of the Kerala model.

Counter arguments:

Significant economic growth:

- As against the popular misconception that Kerala has not had much economic growth, the author argues that Kerala has witnessed observable growth.
- The author points out a significant growth in agricultural incomes, services sector, secondary sector (which includes manufacturing, construction, etc.). While Kerala's per capita income was almost 10% lower than the all-India figure in 1989-90, it was 65% higher than the all-India figure in 2019-20.

Social development:

- All along, Kerala's education and health indicators have continued to improve, and its social security programmes have continued to expand.
- **Kerala has registered impressive achievements in human development in the area of health and education.**

Investments in infrastructure:

- There have been major investments by the state in infrastructure development.
- Apart from schools and hospitals, KIIFB funding is being used to build economic infrastructure such as roads, bridges, industrial parks, the massive **public sector Internet project K-FON, or the Kerala Fibre Optic Network, and TransGrid 2.0 – a project to improve the power transmission network in the State.**

Kerala Infrastructure Investment Fund Board (KIIFB):

- Kerala has been investing in infrastructure development through the **Kerala Infrastructure Investment Fund Board (KIIFB)**. The KIIFB has been a major funding arm of the Kerala government.
- The KIIFB raised funds from the financial market and made them available to the government to finance infrastructure projects. Repayment of the loans is ensured by the government legally committing to pay a portion of its revenue from the motor vehicle tax and the petroleum cess to the KIIFB every year.

Better prepared:

- The real risks to the state's economy are likely to be associated with **shocks to the economy** – such as natural disasters (floods), pandemic-induced worldwide recession, job losses in the West Asian countries where a lot of

Keralites work, or contractionary fiscal policy by the central government – which could adversely impact economic growth.

- Even then, Kerala will be better prepared to face the eventualities as it has better infrastructure, and a better-educated, more highly skilled and healthier workforce.

Conclusion:

- **The role of planning and social oversight in the economic development of the State holds significance** and it needs to expand further.

13. U.S. and China need each other

Context:

- **U.S.-China Foreign Ministers' meeting** in March at Alaska.

Background:

Increasing clout of China:

- China will surpass the U.S. as the world's largest economy, has established a worldwide network of economic ties and **set up multilateral and financial institutions** like the Shanghai Cooperation Organisation, New Development Bank and Asian Infrastructure Investment Bank to compete with the West-dominated International Monetary Fund and World Bank.
- It has been successful in countering American increases in military funding by **expanding its own military power**.
- China has extended its influence globally. Some of the U.S.'s formal allies have re-shaped their foreign and economic relations with China deepening their own bilateral relationship with China.

Confrontation and competition between U.S. and China:

- The rising U.S.-China tension may be attributed to China's rise that is transforming power settings and the U.S.'s attempts to constrict China before it becomes a peer competitor.
- Former U.S. President Donald Trump had **accused China of unfair trade practices** and pursued a dual policy of offering deals and threatening sanctions.
- The current U.S. President, Joe Biden has **censured China for human rights abuses in Hong Kong and Xinjiang, aggression in the South and East China Seas, intimidation of Taiwan, intellectual property theft, currency manipulation, and cyberattacks**.

- The U.S. and Europe have imposed sanctions against China and others.

Details:

- The beginning of the Alaska meeting between the foreign ministers was marked by a war of words between the representatives of the two countries.
 - The U.S. Secretary of State, Antony Blinken, blamed China for attacks on global values; posing threats to a rules-based order that maintains global stability and economic coercion against U.S. allies.
 - China countered by strongly opposing U.S.'s interference in China's internal affairs, and asked the U.S. to introspect on its own track record of the poor treatment of minorities, and **criticised U.S. policies seeking military and financial hegemony.**

Interdependency:

- Confrontation and competition between the U.S. and China will dominate this century.
- Despite the constant war of words between the U.S. and China, interdependence between the two superpowers makes the war of words confined to rhetoric.

Economic interdependency:

- Both countries need each other for **economic growth, supply chains, jobs, services, investments and market access.**

Strategic dependency:

- Despite the confrontation and competition between the two countries, the Americans require the Chinese to work together on **issues like climate change, COVID-19, Asia-Pacific Economic Cooperation and G-20, health, cyber-security, the Iran nuclear issue, Afghanistan, Korea and Myanmar.**

14. Free and unhindered justice

Context:

- The article argues for the continuation of the **virtual hearing in the Supreme Court.**

Background:

Virtual hearing during the pandemic:

- With the pandemic necessitating social distancing and the need to keep access to the judiciary open, the Supreme Court had allowed for virtual hearings.

Location of Supreme Court:

- Geographical access to the Supreme Court has been flagged as a concern even during the constituent assembly debates. However, the Drafting Committee was of the view that the Court must have a specified place of sitting to ensure that the litigants know where to go for an appeal.
- The framers of the Constitution also agreed that the volume of litigation from different parts of the country may require the Supreme Court to increase its reach and hold court elsewhere. Accordingly, in recognition of the same, the **Constitution empowered the Chief Justice to hold sittings of the Supreme Court through Circuit Benches in places other than Delhi as well.**
- However, despite an increasing caseload and repeated pleas by litigants and governments, successive Chief Justices have refused to invoke this constitutional power.
- More than one **Law Commission and Parliamentary Committee have recommended Circuit Benches of the Supreme Court to be set up around the country.**

Concerns associated with the Supreme Court assembling exclusively in Delhi:

Limited access to Supreme Court:

- In India, given the **unified, single-pyramidal structure of the judicial system**, all types of cases can potentially make their way to the Supreme Court, irrespective of the place or forum of the original institution.
- The right to fair and equal access to the Supreme Court for all citizens of India is curtailed by the Supreme Court assembling exclusively in Delhi.
 - Several studies have pointed out the fact that a disproportionately high number of cases filed in the Supreme Court originated in High Courts closer to Delhi pointing out to geographical constraints posed by the location of the Supreme Court.

Cost of access:

- Geographical constraints have also meant that appearing before the Supreme Court has inescapably become the domain of a select few lawyers in and around Delhi.
- Such implied exclusivity consequently translates into steep and often **prohibitive monetary costs for litigants.**

- The litigants are forced to choose from what the Bar in Delhi offers, both in terms of quality and costs.

Significance of virtual hearing:

- The virtual hearing provision opened new vistas for litigants and lawyers across India to approach, through technology, the country's highest court with relative ease. **Access to the Supreme Court has been made easier with virtual hearings.**
- The virtual hearings provision has helped **open up avenues for advocates from all over India.**
- Litigants now have the option to engage a local lawyer of their own choice and convenience, including the same lawyer who argued their case before the lower court.

Conclusion:

- There have been demands for a return to physical hearings by the Bar in Delhi even as there have been calls for virtual access to the Supreme Court to continue.
- Although virtual hearings may not be the perfect alternative, the imperfections associated with virtual hearings must be preferred over denial of the right to access justice itself. It is very important to acknowledge the **significance of fair and equal access to the Supreme Court for all citizens of India.**

15. Talks begin to revive Iran nuclear deal

Context:

Indirect talks aimed at reviving the 2015 nuclear deal will begin as Iran and world powers will meet to discuss how the United States would lift sanctions and Iran return to its obligations.

Details:

- Two expert-level groups have been given the task of marrying lists of sanctions that the U.S. could lift with nuclear obligations Iran should meet.

Background:

Joint Comprehensive Plan of Action:

- The Joint Comprehensive Plan of Action (JCPOA, or the Iran nuclear deal) was the result of negotiations from 2013 and 2015 **between Iran and P5+1** (China, France, Germany, Russia, the United Kingdom, the United States and the European Union, or the EU).
- The deal was hailed as a diplomatic success given that Iran was then estimated to be months away from accumulating enough highly enriched uranium to produce one nuclear device.
- The JCPOA **obliged Iran to accept constraints on its enrichment programme in return for a partial lifting of economic sanctions.** The Iranian nuclear programme would be verified by an **inspection regime under the International Atomic Energy Agency (IAEA).**

U.S. policy reversal:

- The U.S. administration under Mr. Trump pulled out of the deal in May 2018 and embarked on a **policy of 'maximum pressure'** to coerce Iran back to the negotiating table.
- The U.S. pushed ahead with its sanctions, widening their scope to cover nearly all Iranian banks, industries and even important individuals.

E-3 stance:

- The U.S. decision was criticised by all other parties to the JCPOA (including the European allies) because Iran was in compliance with its obligations under the nuclear deal.
- The **E-3 (France, Germany, the U.K.) and the EU promised to find ways to mitigate the U.S. decision.**

Policy under new U.S. administration:

- Biden has consistently advocated a return to the JCPOA provided Iran returns to full compliance.
- Joe Biden has been a strident critic of the U.S. withdrawal from the nuclear agreement with Iran. He had promised during his presidential election campaign that subject to Iran's compliance with its obligations, the U.S. would re-enter the agreement.

Concerns:

- The Nuclear deal is complicated and time is running out as both Iran and the U.S. struggle to overcome the current impasse.

Tehran's strategy of 'maximum resistance':

- Tehran's 'strategic patience' has been wearing out as the anticipated economic relief from the E-3/EU failed to materialise. As the U.S. sanctions began to hurt, **Tehran shifted to a strategy of 'maximum resistance'**.
- Iran has been moving away from JCPOA's constraints incrementally by expanding its nuclear capabilities.
 - A recent IAEA report has confirmed that **20% enrichment had begun** as had production of uranium metal at Isfahan.
- Following the drone strike on Islamic Revolutionary Guard Corps commander Gen. Qasem Soleiman, Tehran announced that it would no longer observe the JCPOA's restraints, though its cooperation with the IAEA would continue.

Failed promises of relief:

- The E-3's promised relief **Instrument in Support of Trade Exchanges (INSTEX)**, created in 2019 to facilitate limited trade with Iran has been a disappointment.
- The first transaction under INSTEX took place only in March 2020.
- EU-Iran trade fell from €18 billion in 2018 to less than a third in 2019 and dropped further last year.

Events in Iran:

- **COVID-19 pandemic has had a detrimental impact on the Iranian economy** which was already contracting due to the U.S. sanctions.
- Iran has also been witness to a series of unexplained fires and blasts at a number of sensitive sites including one at the Natanz nuclear facility and another at Khojir, a missile fuel fabrication unit. Recently, Mohsen Fakhrizadeh, a senior nuclear scientist and head of the Research and Innovation Organisation in the Iranian Defence Ministry was killed outside Tehran amid rumours of external intelligence agencies' involvement. The above events have **hardened the stance of the conservatives in Iran**.
- Iranian Parliament, dominated by the conservatives, passed a bill seeking enrichment to be raised to 20% and suspending implementation of some of the special inspection provisions with the IAEA within two months if sanctions relief was not forthcoming.
- There seems to be **little appetite for more negotiations in Iran**. Mr. Trump's policy failed to bring Iran back to the negotiating table and only strengthened the hardliners in Iran.

Elections in Iran:

- Iranian elections are due in June 2021 and it is likely that President Hassan Rouhani's successor may not be from the 'moderate' camp. This would only make negotiations tougher.

Threat of breakdown in talks:

- If the U.S. waits for Iran to return to full compliance before lifting sanctions or Iran waits for the U.S. to restore sanctions relief before returning to full compliance, it can only lead to one outcome – the **collapse of the JCPOA with Iran going nuclear like North Korea**. Such an outcome would have major reverberations in the region and beyond.

Way forward:

Creating a conducive atmosphere for talks:

- Positive steps along multiple tracks are necessary for creating a conducive atmosphere.
 - Iran should consider releasing European and American nationals currently in custody in Iran.
 - The U.S. should **support Iran's applications to the International Monetary Fund for COVID-19 relief and for supply of vaccines under the international COVAX facility**.
 - The U.S. could consider removing sanctions on Iranian political leaders.

Role of regional nations:

- **Oman, Qatar and Kuwait need to play a diplomatic role in facilitating talks between the U.S. and Iran, with help from the EU and the UN.**

E-3/EU's role:

- The E-3/EU need to fast track deals worth several hundred million euros stuck in the INSTEX pipeline.
- The **EU should pursue a more independent foreign policy in this issue by taking the lead in future negotiations.**

Iran's actions:

- Iran needs to **refrain from any further nuclear brinkmanship**. The IAEA and the E-3/EU should work on a parallel reversal of steps taken by Iran to ensure full compliance with the JCPOA.

16. The start of a more authoritarian era

Context:

Recently, China's legislature formally approved sweeping changes to Hong Kong's electoral system.

Details:

- The changes were passed by the 167 members of the National People's Congress (NPC) Standing Committee.
- China's President signed orders to promulgate the amended annexes to Hong Kong's Basic Law, the constitution that has governed the SAR under the "one country, two systems" model since its return to China in 1997.

What has changed?

- The amendments mark the biggest changes to Hong Kong's political system since the handover, and reduce the share of directly elected representatives in its Legislative Council (LegCo).
- While previously, 35 of its 70 members were directly elected, that number has been reduced by 15.
- Now, Hongkongers will only be able to directly vote for 20 representatives while the size of LegCo has been expanded to 90, thereby drastically reducing the share of elected representatives.
- The 70 others will be broadly chosen from pro-establishment bodies.
- The other big change is the setting up of a Candidate Eligibility Review Committee "for reviewing and confirming the eligibility of candidates".
- Also, a Committee for Safeguarding National Security will be set up that will make findings as to whether a candidate for Election Committee member or for the office of Chief Executive meets the legal requirements.
- There will be no scope for legally challenging the findings.
- District Councillors, who are directly elected, will no longer have a place either in the Election Committee or in LegCo.

Concerns-Erosion of autonomy:

- Pro-democracy figures in Hong Kong have seen the political changes, as well as national security law that punishes subversion as the most significant changes in the "one country, two systems" model and as dramatically eroding the autonomy enjoyed by the SAR previously.
- The National Security Law allows Beijing to draft national security laws for Hong Kong and also operate its national security organs in the Special Administrative Region (SAR).

“One country, two systems”:

- Since the return to China in 1997, Hong Kong, a former British colony, has been governed by the Basic Law, which allows the territory “to enjoy executive, legislative and independent judicial power, including that of final adjudication”, barring matters of defence and foreign affairs.
- Article 23 of the Basic Law requires Hong Kong to pass national security legislation, but past attempts to do so were shelved amid protests.

17. Justice Ramana will be next CJI

Context:

In exercise of the powers conferred by clause (2) of Article 124 of the Constitution, President Ram Nath Kovind appointed Justice N.V. Ramana as the 48th Chief Justice of India with effect from April 24, 2021.

Appointment of the Chief Justice of India:

- The Constitution of India does not have any provision for criteria and procedure for appointing the CJI.
- Article 124(1) of the Indian Constitution says there “shall be a Supreme Court of India consisting of a Chief Justice of India”.
- The closest mention is in Article 126, which deals with the appointment of an acting CJI.
- In the absence of a constitutional provision, the procedure relies on custom and convention.

What is the convention?

- When the incumbent CJI retires (all Supreme Court judges retire at the age of 65), the senior-most judge in the SC becomes the CJI.
- Seniority, here, is not defined by age, but by the number of years an individual has been serving as a judge of the apex court.
- In an instance where two judges have served for the exact same time, because they were appointed as SC judges on the same day, other factors are considered to determine the seniority of the judges, like which judge has more years of experience in the high court and if either of them were nominated from the bar directly.
- A similar situation had arisen ahead of the appointment of Dipak Misra, as both Justice Misra and Justice Chelameswar were sworn in on the same day as judges of the SC on October 10, 2011. Despite being four months younger, Justice Misra was anointed as the CJI in August 2017.

What is the procedure?

The procedure to appoint the next CJI is laid out in the Memorandum of Procedure (MoP) between the government and the judiciary:

- The procedure is initiated by the Law Minister seeking the recommendation of the outgoing CJI at the 'appropriate time', which is near to the date of retirement of the incumbent CJI.
- The CJI sends his recommendation to the Law Ministry; and in the case of any qualms, the CJI can consult the collegium regarding the fitness of an SC judge to be elevated to the post.
- After receiving recommendation from the CJI, the law minister forwards it to the Prime Minister who then advises the President on the same.
- The President administers the oath of office to the new CJI.

Does the government get a say?

- Except for the law minister seeking the recommendation from the incumbent CJI, and forwarding it to the Prime Minister, the government has no say in the appointment of the CJI.
- Vis-à-vis the appointment of the CJI and the appointment of SC judges, the key difference is that in the former, the government cannot send the recommendation of the CJI (or the collegium) back to them for reconsideration; while in the latter, the government can do so.
- However, if the collegium reiterates those names, then the government cannot object any further.
- The Memorandum of Procedure does not have any provision for the eventuality of the government disagreeing with the incumbent CJI's recommendation on the new one.

Have there been exceptions to the aforementioned procedure?

- Since the establishment of the Supreme Court in 1950, there have been 46 CJIs.
- In all cases, the convention and the procedure were duly followed, except for two – Justice AN Ray and Justice MH Beg. Both exceptions took place when Indira Gandhi was the Prime Minister.
- Justice AN Ray was appointed as CJI in 1973 despite being fourth in terms of seniority after Justices JM Shelat, KL Hegde and AN Grover.
- The reason was the involvement of these three judges in the landmark Kesavananda Bharati case, which had held that Parliament cannot make amendments to the Constitution that would alter its "basic structure".

- Similarly, Justice MH Beg was appointed as the CJI in 1977 despite Justice HR Khanna being senior. This was because of Justice Khanna's minority judgment in the ADM Jabalpur case.
- Justice Khanna had pronounced that he did not agree with the government's argument that detention of persons during the Emergency cannot be questioned, even if mala fide and without the authority of law.

18. For Lok Adalats, speed overrides quality

Context:

- The first National Lok Adalat (NLA) of 2021 will be held on April 10.

Background:

Evolution of Lok Adalats:

- Lok Adalats had existed even before they received explicit statutory recognition. In 1949, Harivallabh Parikh, a disciple of Mahatma Gandhi, popularised Lok Adalats in Rangpur, Gujarat.
- **The Constitution (42nd Amendment) Act, 1976, inserted Article 39A to ensure "equal justice and free legal aid".**
- **The Legal Services Authorities Act, 1987, was enacted by Parliament and it came into force in 1995 "to provide free and competent legal services to weaker sections of the society" and to "organise Lok Adalats to secure that the operation of the legal system promotes justice on a basis of equal opportunity".**

Functioning:

- The Lok Adalats function as an **alternative dispute resolution tool**.
- Motor-accident claims, disputes related to public-utility services, cases related to the dishonour of cheques, and land, labour and matrimonial disputes (except divorce) are usually taken up by Lok Adalats.
- They are regularly organised to help parties reach a compromise.

Significance:

Easing the case burden of judiciary:

- **The Indian judicial system is plagued by endemic delays and excessive backlogs.** Justice delayed is justice denied.

- As per the National Judicial Data Grid, 16.9% of all cases in district and taluka courts are three to five years old; for High Courts, 20.4% of all cases are five to 10 years old, and over 17% are 10-20 years old.
- Over 66,000 cases are pending before the Supreme Court, over 57 lakh cases before various HCs, and over **3 crore cases are pending before various district and subordinate courts.**
- Data from the National Legal Services Authority (NALSA) show that Lok Adalats organised across the country from 2016 to 2020 disposed of 52,46,415 cases. Similarly, National Lok Adalats (NLAs) organised under the aegis of NALSA settle a huge number of cases across the country in a single day. From 2016 to 2020, NLAs have disposed of a total of 2,93,19,675 cases.
- Hence Lok Adalats, as a forum, have been able to address the problems of high backlog cases in the judiciary.

Ease of dispute settlement:

Speed of settlement:

- When compared to litigation, and even other dispute resolution devices, such as arbitration and mediation, Lok Adalats offer parties speed of settlement, as **cases are disposed of in a single day.**

Part driven process:

- Lok Adalats involves mainly a party-driven process, allowing the parties involved to reach an amicable settlement.

Procedural flexibility:

- Under the Lok Adalat system, there is **no strict application of procedural laws** such as the Code of Civil Procedure, 1908, and the Indian Evidence Act, 1872, etc.

Economic affordability:

- There are **no court fees** for placing matters before the Lok Adalats.

Finality of awards:

- **The order by the Lok Adalats are final and binding and no further appeal is allowed against such orders.** This prevents delays in the settlement of disputes.
 - The award issued by a Lok Adalat, after the filing of a joint compromise petition, has the status of a civil court decree.

Increased access to justice:

- Access to justice for the poor is a constitutional mandate to ensure fair treatment under our legal system.
- Lok Adalats have been successful in making justice accessible and affordable to all.

Concerns:

- The **discontinuance of the subject matter-specific NLAs** from 2017 has led to a significant drop in the number of cases settled.
- The **e-Lok Adalats** organized to overcome the challenges posed by the COVID-19 pandemic **have been less efficient than the physical National Lok Adalats** organised in 2017, 2018, and 2019.
- There is a growing concern with Lok Adalats that **in the endeavour for speedy disposal of cases, Lok Adalats undermines the idea of justice**. The system seems to be trading justice off for high settlement numbers and speed, ignoring the old dictum that **justice hurried is justice buried**.
 - In a majority of cases, litigants are pitted against entities with deep pockets, such as insurance companies, banks, electricity boards, among others. In many cases, compromises are imposed on the poor who often have no choice but to accept them.
 - Similarly, poor women under the so-called 'harmony ideology' of the state are virtually dictated by family courts to compromise matrimonial disputes.
- The Lok Adalat system instead of empowering the poor may be coercing them to accept unjust compromises.
- The Lok Adalat system seems to have given rise to a **dual system of justice dispensation**, where the formal legal system, i.e., the court, is meant only for the rich and powerful and the poor given the ease of procedure often resort to dispute resolution under the Lok Adalat system. This view has been expressed by even former Chief Justice of India Ranjan Gogoi.

Conclusion:

- The system must look beyond the swift disposal of cases and focus on just and fair outcomes. A **just outcome of a legal process is far more important than expeditious disposal**. Besides efficiency and speed, Lok Adalats should also **focus on the quality of justice delivered**.
- The Judiciary must take concrete and innovative steps in improving the quality of justice rendered by National Lok Adalats.

19. Abortion is a woman's right to decide

Context:

- Medical Termination of Pregnancy (Amendment) Act 2021.

Background:

Medical Termination of Pregnancy Act, 1971:

- **The Medical Termination of Pregnancy Act, 1971 (MTP)** was a progressive act at that time considering that concerning provisions in the Indian Penal Code were traditional in their outlook. Abortions were a crime and the woman concerned and her doctor would invariably land up in jail.
- The Medical Termination of Pregnancy Act, 1971 (MTP) **allows for legal abortions in India with some restrictions.**
- Section 3 of the Medical Termination of Pregnancy Act, 1971 put an **outer limit of 20 weeks** on the length of the pregnancy and required two doctors to certify that the continuation of the pregnancy would involve a risk to the life of the woman or grave injury to her physical or mental health or that there was a substantial risk that the child born would suffer from such physical or mental abnormalities as to be seriously handicapped.
 - Rape cases, pregnancies occurring as a result of the failure of contraception have also been considered as valid reasons for abortion over the years.
- **Section 5 created an exception to the 20-week limit** whenever such an abortion was immediately necessary to save the life of the pregnant woman.

Concerns:

- The Medical Termination of Pregnancy (Amendment) Act 2021 even though extends the time period within which an abortion can be carried out, fails miserably on the following counts.

Undermining women's rights:

- The amendment to the abortion laws is based on the traditional notion that the state can and must intervene and decide for women as to when and in what circumstances abortions may be carried out **undermining a woman's absolute right over her reproductive choices.**
- This also undermines a woman's right over her own body.

Unsafe abortions:

- The regulation of abortions in India seems to have pushed women seeking abortions underground where terminations are carried out in unhygienic

settings. Even today about 800,000 illegal and unsafe abortions are performed every year in India, many of them resulting in morbidities and death.

Limit not based on scientific advancement:

- 24 weeks is not a rational limit given today's technology.
- The **phenomenal improvement in technology and processes** render it possible to carry out abortions safely right up to full term. Thus the excuse of "safety of the woman" is no longer tenable to be used for restricting women's rights.

State regulation:

- Even though the limit has been pushed back from 20 to 24 weeks, this comes with the **same state conditionalities as before**.
- Indigent women in difficult circumstances trying to have abortions have been stonewalled by government officials and prosecutors.

Medical boards as obstacles:

- Section 3(2B) of the Act requires the pregnant woman to approach a medical board in cases of substantial foetal abnormalities and where she has crossed the 24-week limit.
- These boards impose insurmountable obstacles to the woman seeking late abortions.
 - The proposed provision of a board of a minimum of three doctors seems unnecessary and marks a **breach of privacy** of the concerned woman.
 - The Act provides in Section 3(2C) for a **single board for a State**. Given the millions of abortions taking place in India past the deadline, it is impossible for one board to handle all cases.
 - No State has **the finances or the human resources to maintain the operation and functioning of these boards**.

Conclusion:

- Keeping in line with the trend worldwide, pregnant women seeking an abortion should be left alone to consult their gynaecologist in late-term pregnancies and carry out their abortion under the certificate of their own gynaecologist that the abortion can be performed safely.
- This would mark a significant step forward towards **women's emancipation**.

20. Explaining Pakistan's flip-flop on trade with India

Background

- Pakistan has suspended trade ties with India after India revoked the special status of Jammu and Kashmir in 2019.
- As a result, cotton and yarn imports are allowed from all countries except India.

Context

- Low yield of cotton bales in Pakistan had created problems for the domestic cotton sector in Pakistan, which allowed them to think of import from India.
- Pakistan's Economic Coordination Council (ECC) had taken a decision to allow the import of cotton and cotton yarn from India.
 - The decision was taken as it would provide relief to Pakistan's textile sector resulting in import of raw materials at a lower cost.
- Following this decision, the Cabinet headed by Prime Minister Imran Khan rejected the proposal of a high-powered committee to import cotton from India.

The textile industry has voiced its disappointment

- Pakistan's textile industry has not taken the cabinet's decision kindly; for them, importing cotton yarn from India is an immediate need; else, it would impact their export potential.

A look at Stats

- According to the latest Pakistan Economic Survey, 2019-20, though the agriculture sector witnessed a growth of 2.67% (with an increase in rice and maize production), cotton and sugarcane production declined by 6.9% and 0.4%, respectively.
- **Sugar exports** came down substantially in 2020, by over 50% in 2019-20, when compared to 2018-19.
- Yarn, cotton cloth, knitwear, bedwear and readymade garments form the core of **Pakistan's textile basket in the export sector**.
 - By February 2020, there was a steep decline in the textile sector due to disruptions in supply and domestic production.
 - When compared to the last fiscal year (2019-20), there has been a 30% decline (2020-21) in cotton production.

Cotton production and yield

- Cotton growing area has shrunk drastically
 - According to State Bank of Pakistan's quarterly report, the decline in cotton production is due to **fewer areas** (the lowest since 1982) of cotton cultivation.
 - By the end of 2020, there was a sharp decline (around 40%) in cotton production.
- Shrinking cotton output
 - Besides the decline in the area of cotton cultivation, there was also a **decline in yield per acre**.
 - The ginning industry estimates that in 2021, it would receive less than half of what was projected.
 - In 2019-20, Pakistan produced around nine billion bales; in 2020-21, the ginning industry estimates only around seven million bales.

Impact

- This would mean, Pakistan's cotton export would reduce, creating a domino effect on what goes into Pakistan's garment industry. ★
- Pakistan is the fifth-largest exporter of cotton globally, and the cotton-related products (raw and value-added) earn close to half of the country's foreign exchange. The foreign exchange could take a major hit.

Sugar industry in Pakistan is in crisis

- The sugar industry in Pakistan has prioritised exports over local distribution.
- Increased government subsidies, cheap bank loans, a few administrative decisions, manipulation and greed, especially by the sugar mill owners, mean high cost paid by the consumers.
- By early 2019, the sugar prices started increasing, and in 2020, there was a crisis due to shortage and cost.

As a result, importing sugar from India would be cheaper for the consumer market in Pakistan. It would not only be cheaper but also help Pakistan's exports. This is also imperative for Pakistan to earn foreign exchange.

Takeaways

- Clearly, the crises in cotton and sugar industries played a role in the ECC's decision to import cotton, yarn and sugar from India.
 - It was based on Pakistan's immediate economic needs and not designed as a political confidence-building measure to normalize relations with India.

- The U-turns and vacillating between choices show the supremacy of politics over trade and economy, even if the latter is beneficial to the importing country.
 - For the cabinet, the interests of its own business community and its export potential have become secondary.
- The third takeaway is the emphasis on Jammu and Kashmir by Pakistan to make any meaningful start in bilateral relations. This goes against what it has been telling the rest of the world that India should begin dialogue with Pakistan.

Conclusion

- Pakistan has been saying that the onus is on India to normalize the process. India should tell Pakistan that it is willing, but without any preconditions, and to start the process with trade.

21. 'All options open on South China Sea'

Context:

The Philippines defence department said that it was keeping its options open as a diplomatic row with Beijing grows over hundreds of Chinese vessels in the contested South China Sea.

Details:

- Tensions over the resource-rich waters have spiked in after over 200 Chinese boats were detected at Whitsun Reef in the Spratly Islands.
- Both China and the Philippines have rival claims in the Spratly Islands.
- While Manila says that the Chinese boats unlawfully entered its exclusive economic zone, China has refused repeated appeals by the Philippines to withdraw the vessels.
- In this backdrop, the Philippines said that it has kept its options open in managing the situation, including leveraging its partnerships with other nations such as the United States.
 - Recently, the United States reminded China of Washington's treaty obligations to the Philippines in the event of an attack in the waters.
- The decades-old military agreement between Manila and Washington states that each country would come to the defence of the other in case of an attack by a foreign country.
- It was signed on August 30, 1951.

Issue:

- China claims almost the entirety of the sea.
- Many of the boats detected at Whitsun Reef in early March 2021 have since scattered across the Spratly archipelago.
- The Spratly Islands is also claimed in whole or in part by Brunei, Malaysia, Taiwan and Vietnam.
- Beijing often invokes the so-called nine-dash line to justify its apparent historic rights over most of the South China Sea.
- It has ignored a 2016 international tribunal decision that declared this assertion to be without basis.
 - The arbitral tribunal recognized Manila's sovereign rights in its exclusive economic zone that Beijing contests.
 - The tribunal also ruled that China's activities involving island-building on several reefs in the Kalayaan Island Group constitute violations of the United Nations Convention on the Law of the Sea (UNCLOS) and have caused damage to the marine environment.

22. People are free to choose religion: SC

Context:

The Supreme Court said that the people are free to choose their religion.

Background:

- A public interest petition filed claimed that there is mass religious conversion happening across the country.
- It alleged that the court should direct the Centre and the States to control black magic, superstition and religious conversion being done through threats, intimidation or bribes.
- "Incidents are reported every week throughout the country where conversion is done by intimidating, threatening, luring through gifts and monetary benefits," the petition alleged.

Details:

- The bench, led by Justice Rohinton F. Nariman, said people have a right under the Constitution to profess, practise and propagate religion.
- It lashed out at a "very, very harmful kind" of public interest petition.
- Justice Nariman said every person is the final judge of his/her choice of religion or who their life partner should be. Courts cannot sit in judgment of a person's choice of religion or life partner.
- Religious faith is a part of the fundamental right to privacy.

- And a Constitution Bench in its judgment had upheld the inviolability of the right to privacy, equating it with the rights to life, of dignity and liberty.

Article 25

- Fundamental right under Article 25 of the Constitution guarantees the freedom of conscience and free profession, practice and propagation of religion, subject to public order, morality and health.
- It further provides that this article shall not affect any existing law and shall not prevent the state from making any law relating to:
 - Regulation or restriction of any economic, financial, political, or any secular activity associated with religious practice.
 - Providing social welfare and reform.
 - Opening of Hindu religious institutions of public character for all the classes and sections of the Hindus. (The term 'Hindus' includes individuals who profess Sikh, Jain or Buddhist religion).

23. US Restores Aid to Palestinians

Why in News

The United States, in a significant reversal to the earlier policy, has announced the restoration of at least USD 235 million in **financial assistance to the Palestinians**.

- The US administration had **already announced USD 15 million in coronavirus relief to the Palestinians**.

Key Points

- **Financial Aid:**
 - The financial aid includes USD 75 million economic help for the **West Bank & Gaza**, USD 10 million for **'peacebuilding' programmes** of the **US Agency for International Development (USAID)** and USD 150 million in humanitarian assistance to the **UN Relief and Works Agency (UNRWA)**.
 - The UNRWA funds would include educational assistance for at least 5,00,000 Palestinian children living in West Asia.
 - The **Trump administration (former administration) had almost ended all funding** to the organisation in 2018.
 - The **UN welcomed the move**, hoping it would attract more funds to the body. There were a number of countries that had greatly reduced or halted contributions to UNRWA after the US stopped the aid.

- The **Prime Minister of Palestine welcomed the move** and called it a new political path that meets the rights and aspirations of the Palestinian people based on international law and UN resolutions.
 - However, **Israel**, which has **accused UNRWA of anti-Semitism** (hostility to, prejudice, or discrimination against Jews), **objected to the funding plans**.
- **Israel - Palestine Issues:**
 - The decades-long conflict between Israelis and Palestinians is rooted in **competing claims to the Holy Land**, and includes **disputes over borders, Jerusalem, security, and Palestinian refugees**.
 - The **Israel-Palestine Conflict** can be traced back to 1917.
 - Holy Land is a Middle Eastern region with great religious and historical significance to Christians, Jews, and Muslims.
 - **Mideast War, 1967** was a major turning point. It is also known as the **six-day war or Third Arab-Israeli war**.
 - Israel captured the West Bank, east Jerusalem and Gaza Strip in the war. In the decades since, Israel has built settlements in the West Bank and east Jerusalem that now house a million Israelis.
- **US Recent Policy:**
 - US President Donald Trump's decision in 2017, to **relocate the US Embassy to Jerusalem**, was criticized for being heavily tilted towards Israel.
 - **Mideast Plan or Middle East Peace Plan:** It was unveiled by the then US government in January, 2020.
 - Under it, the Palestinians would have a limited statehood contingent on a list of stringent requirements while **Israel would annex some 30% of the West Bank**.
 - The Palestinians rejected the plan and threatened to withdraw from key provisions of the **Oslo Peace Accords**, which are a series of agreements between Israel and the Palestinians signed in the 1990s.
 - Present US President Joe Biden has reaffirmed the United States' commitment to a **two-state solution**.
- **India's Stand:**
 - India **recognised Israel in 1950** but it is also the **first non-Arab country to recognise Palestine Liberation Organisation (PLO)** as the sole representative of the Palestinian.
 - India is also one of the first countries to recognise the **statehood of Palestine in 1988**.
 - In 2014, India favored **UNHRC's** resolution to probe Israel's human rights violations in Gaza. Despite supporting the probe, India abstained from voting against Israel in UNHRC in 2015.

- As a part of **Link West Policy**, India has **de-hyphenated its relationship** with Israel and Palestine in 2018 to **treat both the countries mutually independent and exclusive**.
- In June 2019, India voted in favor of a decision introduced by Israel in the **UN Economic and Social Council (ECOSOC)** that objected to granting consultative status to a Palestinian non-governmental organization.
- So far India has **tried to maintain the image of its historical moral supporter for Palestinian self-determination**, and at the same time to engage in the military, economic, and other strategic relations with Israel.

The Territorial Puzzle

- **West Bank:** The West Bank is **sandwiched between Israel and Jordan**. One of its major cities is Ramallah, the de facto administrative capital of Palestine.
 - Israel took control of it in the 1967 war and has over the years established settlements there.
- **Gaza:** The Gaza Strip located **between Israel and Egypt**. Israel occupied the strip after 1967, but relinquished control of Gaza City and day-to-day administration in most of the territory during the **Oslo peace process**.
 - In 2005, Israel unilaterally removed Jewish settlements from the territory, though it continues to control international access to it.
- **Golan Heights:** The Golan Heights is a **strategic plateau that Israel captured from Syria** in the 1967 war. Israel effectively annexed the territory in 1981.
 - The US has officially recognized Jerusalem and Golan Heights as part of Israel.
- **Fatah:** Founded by the late Yasir Arafat in the 1950s, Fatah is the largest Palestinian political faction.
 - Unlike Hamas, Fatah is a secular movement, has nominally recognized Israel, and has actively participated in the peace process.
- **Hamas:** Hamas is regarded as a terrorist organization by the US government. In 2006, Hamas won the Palestinian Authority's legislative elections.
 - It ejected Fatah from Gaza in 2007, splitting the Palestinian movement geographically, as well.

Way Forward

- **Balanced Approach Towards the Israel-Palestine:** The world at large needs to come together for a **peaceful solution** but the reluctance of the Israeli government and other involved parties have aggravated the issue more.
 - Thus a balanced approach would help to maintain favorable relations with Arab countries as well as Israel.

- **Abraham Accords, a Positive Step:** The recent normalization agreements between **Israel and the UAE, Bahrain, Sudan, and Morocco**, known as the **Abraham Accords**, are the steps in the right direction.
 - All regional powers should envisage peace between the two countries on line of Abraham Accords.

24. The abolition of FCAT

Context:

- The **Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021**, issued by the Ministry of Law and Justice.

Background:

Film certification:

- Films meant for distribution in theatres require to be certified as 'U' (unrestricted public exhibition), 'UA' (unrestricted public exhibition subject to parental guidance for children below the age of 12), 'A' (restricted to adult audiences) or 'S' (restricted to specialised audiences such as doctors or scientists) by the **Central Board of Film Certification (CBFC)**.

Concerns with the process:

- According to observers, the CBFC was increasingly getting stacked with people close to the ruling dispensation. Of late, the body has been headed by chairpersons who have ruled with a **heavy hand and ordered cuts to films critical of the government**.
- The clash between the film fraternity and the certification body became more pronounced over the years. Such moves have been criticized for being **against the constitutional right of freedom of express**

Film Certificate Appellate Tribunal:

- The Film Certificate Appellate Tribunal (FCAT) was established in 1983 as a **statutory body under The Cinematograph Act**.
- FCAT had been set up to hear appeals of filmmakers against decisions of the Central Board of Film Certification.

Significance:

- The FCAT has been envisaged as a **buffer for filmmakers**. Before the FCAT, filmmakers had no option but to approach the court to seek redressal against CBFC certifications or suggested cuts.
- The FCAT has often stepped in to **sort out disputes between the CBFC and the filmmakers**.
- Though the decisions taken by the FCAT were not beyond reproach, the FCAT could be credited with **taking quick decisions**.
- Among other objectives, the rationale for setting up the FCAT was to **reduce the burden on courts by functioning as an appellate body**.

Details:

- The ordinance scraps the Film Certification Appellate Tribunal (FCAT), a statutory body that had been set up to hear appeals of filmmakers against decisions of the Central Board of Film Certification (CBFC), and transfers its function to other existing judicial bodies.
 - The ordinance has amended **The Cinematograph Act, 1952**, and replaced the word 'Tribunal' with 'High Court'.
- **Eight other appellate authorities have also been disbanded** with immediate effect.

Reasons for the ordinance:

- The move to abolish the FCAT along with other tribunals follows a **Supreme Court order in Madras Bar Association vs. Union of India**.
- The two-member Bench had directed the government to constitute a **National Tribunals Commission**.
 - The National Tribunals Commission was envisaged to act as an **independent body** to supervise the appointments and functioning of Tribunals, as well as to conduct disciplinary proceedings against members of Tribunals and to take care of administrative and infrastructural needs of the Tribunals, in an appropriate manner.
- The Supreme Court's recommendations were intended to **strengthen the functioning of the tribunals by addressing the issue of dependence of tribunals on the executive for administrative requirements**.

Concerns:

Against expert committee recommendations:

- The move to abolish the FCAT is surprising as it comes in the backdrop of the recommendations of two influential panels – the Mudgal Committee and the Benegal Committee – both of which suggested an expansion of the body's jurisdiction.

- Neither the **Mukul Mudgal committee** nor the **Shyam Benegal committee** had recommended that the FCAT be scrapped.
 - The Justice Mukul Mudgal Committee had examined the certification process and suggested recommendations.

Over burdening the judiciary:

- With the disbanding of the FCAT, it will be left to the already overburdened courts to adjudicate on appeals against the CBFC orders.
- The role played by the FCAT will now have to be performed by courts.
- With the government tightening its control on over-the-top (OTT) content and ordering players in this area to set up a grievance redressal body to address the concerns of the viewers, many observers point out that the courts will have to play a greater role as an avenue of appeal.

Impact on the filmmakers:

- The recent ordinance will impact filmmakers seeking redressal on certification and cuts.
- The expected delays in the appeal process would only **dis-incentivize the filmmaking fraternity to take up emotive or controversial topics as film subjects**, thus placing an **indirect restriction on right of freedom of expression**.

25. SC hears plea to decriminalise begging

Context:

- The Supreme Court has asked the Centre and four States to file their response on a plea seeking a direction to repeal the provisions criminalising begging.

Plea in the Supreme Court:

- A plea was filed in the Supreme Court against the provisions of the statute criminalising begging.
- The Supreme Court in February 2021 had sought a response from the Centre, and five States on the plea.
- Despite the notice issued to Maharashtra, Gujarat, Punjab, Haryana and Bihar on the plea, only Bihar had so far filed its response.

Arguments by the petitioner:

Provisions violative of constitutional rights:

- The plea claimed that the sections of the statute criminalising begging were violative of constitutional rights.
- The criminalising of begging had put people in a situation to make an unreasonable choice between committing a crime or not committing one and starving, which goes against the very spirit of the Constitution and violates **Article 21 i.e. Right to Life**.
 - As per the 2011 Census 2011, the total number of beggars in India is 4,13,670 and the current number would have only increased from the last census.
- The plea argues that a person, who is compelled to beg due to certain circumstances, cannot be faulted for his actions.

Against socialistic principles:

- The government has the mandate to provide **social security** to everyone and ensure that all had basic facilities, as embedded in the **Directive Principles of State Policy** in the Constitution. The presence of beggars is indicative of the failure of the state to provide basic facilities to all its citizens.
- Criminalising the act of beggary goes against the approach of a **socialist nation as embedded in the preamble of the Indian Constitution**.

Judicial precedent:

- The plea had referred to the August 2018 verdict of the Delhi High Court which had decriminalised begging in the national capital holding that provisions of the **Bombay Prevention of Begging Act, 1959**, which treats begging as an offence cannot sustain constitutional scrutiny.

26. 'Reduce health inequities to tackle pandemic challenges'

Context:

- A study by the Jaipur-based **Indian Institute of Health Management Research (IIHMR)**, on the public health situation during the COVID-19 pandemic.

Background:

- The rapid spread of the pandemic in the country had led to the loss of livelihood and productivity, increase in poverty and decline in nutrition levels.

Details:

Social determinants of health:

- The study identifying some primary aspects of inequities had noted that **around 40% of the health outcomes could be measured through social determinants.**
- The **lack of accessibility and affordability, poverty, lack of education, inequitable distribution of income and lack of proper nutrition** were the gaps which had caused major concerns in the health sector during the pandemic.

Recommendations:

- There is the need for urgent action for **reducing health inequities in India.** The transformation of public health could only be achieved through equity.
- India needs to adopt an **integrated approach** to address the various determinants at the individual, community and the health system levels. The integrated approach may require the state to work on **aspects such as nutrition and sanitation along with improved access to healthcare facilities.** Along with the bridging of gaps caused by inequities, a larger picture of health should be highlighted through **Sustainable Development Goals** with the focus on **universal health coverage.**
- There is the need for **enhanced global collaboration.** The global health leadership should work together and act beyond borders by sharing resources such as testing kits, treatment drugs and vaccinations with the low-income countries.

27. 'India, U.S. differ on rules-based order'

Context:

- S.'s freedom of navigation operation in India's Exclusive Economic Zone near Lakshadweep.

Background:

UNCLOS:

- Under the **UNCLOS (UN Convention on the Law of the Sea)** there is a 12 nautical mile **territorial sea**, an additional 24 nautical miles as a **contiguous zone** where a country can have some law and order, policing etc., and a 200 nautical mile **Exclusive Economic Zone (EEZ)** which a country is free to exploit the natural resources like fisheries or sea-bed mining but cannot exercise territorial rights.

FONOP controversy:

- The U.S. has conducted a patrol in the Indian Ocean in India's exclusive economic zone (EEZ) near Lakshadweep.
- While India protested against the U.S. move, the U.S has argued that it conducted the "**freedom of navigation operation**" (FONOP) to challenge what it has termed as India's excessive maritime claims.

Points of differences:

Prior notification:

- Military ships of other countries can go through even territorial waters of claimant countries on what is called innocent passage.
- However, **India insists on prior notification for passage of military ships not only for its territorial waters but even in its EEZ.**

Straight baseline issue:

- In Lakshadweep, there is another complicated issue called **Straight Baselines, which allows countries to claim a larger area of water around an island group.**
- UNCLOS does not permit continental states like India to claim Straight Baselines, but only archipelago states like Indonesia or the Philippines.
- The U.S. has challenged the use of straight baselines by India in the Lakshadweep islands.

The U.S's hypocrisy:

- **The S. has itself not ratified UNCLOS.**

Implications:

On bilateral relations:

- The India U.S. bilateral relations have been on the upswing in recent times, especially in the defence domain.
- The change in the Presidentship of the U.S. which was expected to alter India and U.S. bilateral dynamism has not happened. There have been high level visits from the U.S. administration to India.
- However, the recent event may become an **irritant in the India- U.S. relationship.**

On Quad grouping:

- The recent development does not augur well for the Quad grouping.
- **The Quad advocates a rules-based order for the region.** The latest FONOP controversy underlines the fact that both countries have huge differences when it comes to what a “rules-based order” means for the region.
- The difference in understanding of the UNCLOS provisions among the Quad member states of India and India might lead to weakening of the Quad grouping.

Encourage similar moves by other countries:

- The other future scenario to consider is that other countries like the Pakistan may consider similar moves by sending a ship through India’s EEZ, or the Chinese and Pakistanis may carry out a joint exercise there.
 - Notably, in a recent development, a Chinese surveillance which came near the Andamans, was allegedly chased away by the Indian Navy.

28. As cases surge, panel approves Russia’s Sputnik V vaccine

Context:

Russia’s COVID-19 vaccine – Sputnik V has been recommended for emergency use authorisation in India following a meeting of the Subject Expert Committee (SEC).

Details:

- If approved by the Drug Controller General of India (DCGI), Sputnik V would be the third vaccine to be made available in India after the Serum Institute of India’s Covishield and Bharat Biotech’s Covaxin.
- It adds that the vaccine supplies for the global market will be produced by the Russian Direct Investment Fund (RDIF) international partners in India, Brazil, China, South Korea and other countries.
- The freeze-dried form of the Sputnik V vaccine can be stored at a temperature of +2 to +8 degrees Celsius, which allows for easy distribution worldwide, including hard-to-reach regions.

What is Emergency Use Authorisation?

- Vaccines and medicines, and even diagnostic tests and medical devices, require the approval of a regulatory authority before they can be administered.
- In India, the regulatory authority is the Central Drugs Standard Control Organisation (CDSCO).
 - Drugs Controller General of India is the head of department of the Central Drugs Standard Control Organization.

- For vaccines and medicines, approval is granted after an assessment of their safety and effectiveness, based on data from trials. Approval from the regulator is required at every stage of these trials which is a long process, designed to ensure that a medicine or vaccine is absolutely safe and effective.
- The fastest approval for any vaccine until now was for the mumps vaccine in the 1960s which took about four-and-a-half years after it was developed.
- In emergency situations, like the current one (COVID-19 pandemic), regulatory authorities around the world have developed mechanisms to grant interim approvals if there is sufficient evidence to suggest a medical product is safe and effective.
- Final approval is granted only after completion of the trials and analysis of full data; until then, emergency use authorisation (EUA) allows the medicine or the vaccine to be used on the public.

The circumstances that allow health regulators to issue accelerated approvals under EUA are:

- Rare Diseases
- Massive disease outbreak
- No proven vaccine or drug available
- Evidence of a drug or vaccine that is tested in a country and has yielded desired results
- A country neither has the financial resources nor the personnel to conduct solid clinical trials to a drug/vaccine that has undergone thorough clinical trials in another country

Note:

- There is no explicit mention of EUA in India, however, there is a provision under the New Drugs and Clinical Trials, 2019.
- New Drugs and Clinical Trials, 2019 mentions an 'accelerated approval process', depending on the severity, urgency and lack of alternatives.
- In the event of the above-mentioned grounds, the regulator can overrule the need to have local clinical trials if the drug has been approved elsewhere.

29. China extends \$500 mn loan to Lanka

Context:

China signed a \$500 million loan agreement with Sri Lanka.

Details:

- Chinese President has assured Sri Lanka of as much assistance as China's capacity allows.
- This is the second instalment of the \$1 billion loan sought by Sri Lanka in 2020.
 - The first was released in March 2020, just as the pandemic hit Sri Lanka.
- The approval comes a month after Sri Lanka obtained a currency swap facility from China for \$1.5 billion.
- Beijing-based Asian Infrastructure Investment Bank (AIIB) also sanctioned Sri Lanka's request for a \$180 million loan.
- Sri Lanka already owes more than \$ 5 billion to China from past loans.

Sri Lanka's Economic Crisis:

- Like many pandemic-hit countries, Sri Lanka is facing an acute economic crisis for over a year now.
- Its rupee plummeted to nearly 203 against the U.S. dollar.
- The country's foreign reserves dropped to \$ 4.05 billion in March 2021 after its exports and tourism sector earnings, and foreign remittances dropped considerably in the last 12 months.
- Sri Lanka is due to repay some \$ 4.5 billion of its outstanding debt this year.
- Colombo hopes that the loan would boost its foreign reserves that are under severe strain since the pandemic struck.

Assistance by India:

- India extended a \$400 million swap facility through the Reserve Bank of India, and provided a three-month rollover, but the facility was not further extended.
- The Central Bank of Sri Lanka settled the swap in February 2021.
- Meanwhile, Colombo is awaiting New Delhi's response to two requests made in 2020 by the government.
 - While PM Mahinda Rajapaksa sought a debt moratorium on the debt Sri Lanka owes to India, President Gotabaya Rajapaksa requested Prime Minister Modi for a \$ 1 billion currency swap last year. Neither request has been cleared as yet.

30. 'Northeast citizens faced bias amid pandemic'

Context:

A study was commissioned by the Indian Council of Social Science Research (ICSSR) on racial discrimination and hate crimes against people from the northeastern States.

Details:

- The study found that 78% of the people from the region who were interviewed believed that physical appearance was the most important reason for prejudice.
- Amid the COVID-19 outbreak, people from the region faced an increased number of acts of hate and prejudices against them.
- A series of attacks were reported in various parts of the country, where people from the region were harassed, abused, traumatised and were disparagingly called coronavirus, the study said.
- The study quoted a 2020 report from the Right and Risks Analysis Group (RRAG) that found a significant upsurge in acts of racial discrimination against people from the northeastern region.
- The risk of being victimised in racial hatred remains subtle yet deeply entrenched.

Safeguarding the vulnerable migrants:

- In 2014, the Government of India set up the Bezbaruah Committee to look into concerns of the persons hailing from the North-Eastern states who are living in different parts of the country, especially the metropolitan areas, and to suggest suitable remedial measures which could be taken by the Government.
- The M.P. Bezbaruah Committee recommended amendments to the IPC by creating new offences under Section 153C and 509A to deal with comments, gestures and acts intended to insult a member of a particular racial group.
- It also suggested making such offences 'gender-neutral', 'cognizable' and 'non-bailable' with imprisonment extendable up to three years or five years with fine, respectively.

31. Iran blames Israel for nuclear plant outage, pledges revenge

- **Context:**
- Iran blamed Israel for a sabotage attack on its underground Natanz nuclear facility that damaged its centrifuges and vowed it would take revenge.

Details:

- Iran described the blackout as an act of nuclear terrorism, raising regional tensions.
- Multiple Israeli media outlets reported that an Israeli cyberattack caused the blackout.
 - Israeli media maintains a close relationship with the country's intelligence agencies.
- Public broadcaster Kan said the Mossad (the national intelligence agency of Israel) was behind the attack.
- The head of the Atomic Energy Organization of Iran emphasised the need for a confrontation by the international bodies and the International Atomic Energy Agency against the act.

Concerns:

- If Israel caused the blackout, it further heightens tensions between the two nations, already engaged in a shadow conflict across the wider West Asia.
- The latest incident comes amid negotiations over the crumbling atomic accord with world powers.
- The developments also complicate the efforts by the U.S., Israel's main security partner, to re-enter the atomic accord aimed at limiting Tehran's nuclear programme.

Note:

- Natanz was built largely underground to withstand enemy airstrikes.
- It became a flashpoint for Western fears about Iran's nuclear plan in 2002 when satellite photos showed Iran building its underground centrifuges facility at the site.

32. Save the deal

Context:

- **Vienna talks** as part of the efforts to revive the **Joint Comprehensive Plan of Action (JCPOA)**.

Details:

- The Vienna talks between China, Russia, the U.K., France, Germany and Iran, have raised hopes for the revival of the agreement.
- The participation of an American delegation is a significant development in this regard.

U.S.'s outreach:

- The Biden administration has displayed flexibility in its approach towards Iran. The President appointed a special envoy, ended the U.S.'s support for Saudi Arabia's war against the Houthis, Iran-backed militants, in Yemen and promised to lift sanctions if Tehran returns to the JCPOA terms.
- The U.S. administration has also reportedly made an offer to Iran to release \$1 billion of Iranian money frozen in South Korea as part of the sanctions in exchange for ending its 20% uranium enrichment.

Challenges:

- Though all parties agree that bringing the deal back on track is ideal, there are several challenges that need to be addressed first.

Iran's enhanced nuclear programme:

- Iran has lately unveiled some **latest developments in domestic centrifuge technology** which could enable it to enrich larger quantities of uranium at much higher speeds. This development could disrupt the ongoing negotiations.

American sanctions:

- Notably, though the new U.S. administration under President Joe Biden has signalled its willingness to return to a nuclear deal with Iran, it **has continued to enforce the sanctions imposed by the previous U.S. President Donald Trump.**
- This has not been taken well by the Iranians.

Deadlock in negotiations:

- The U.S. wants Iran to end its uranium enrichment and centrifuge development programmes and return to the 2015 agreement, while Tehran has demanded the U.S. to first lift all sanctions imposed on it.

Domestic pressures:

- Iran holds its **presidential polls in June 2021.**
- The best possibility of reviving the JCPOA is before the presidential election in Iran given the possibility of the election of a more conservative candidate for the Iranian Presidentship. The current President Mr. Rouhani who is considered a moderate is more likely to agree to a negotiated revival of the nuclear agreement.

External dangers:

- Iran-backed Shia militias in Iraq continue to target U.S. forces and bases in Iraq.
- The Israel-Iran shadow conflict is now being fought inside Syria and on the seas.
- If **security tensions** rise in the region involving Iran and its proxies, it could derail the diplomatic efforts.

Conclusion:

- **The U.S.'s best chance to address Iran's nuclear programme is through the revival of the JCPOA.**
- The U.S. and Iran should exercise restraint, stay focused on talks and rebuild the lost trust, and take measures to get the deal back on track to resolve the nuclear crisis before time runs out.

33. India's South Asian opportunity

Context:

- **The thaw in the relationship between India and Pakistan.**

Details:

- The recent thaw in the bilateral relationship between the two neighbours India and Pakistan seems to indicate a growing, but unstated, realisation that **an atmosphere of peace and tranquillity is of mutual interest to both countries.**
- The Kashmir issue seems to have taken a back seat between the two countries.

Implications of India - Pakistan rivalry:

- **India-Pakistan animosity hurts regionalism and South Asian growth.**
- **SAARC has remained a victim of India-Pakistan rivalry.** Pakistan has been blocking trade and connectivity and people-to-people ties. The repeated boycotting of the SAARC summits is an indication of the impairment of the organization.
- South Asia with a population of slightly over 1.9 billion and a GDP (PPP) of \$12 trillion, **performs badly when compared with the Association of South East Asian Nations (ASEAN) member countries** which have registered impressive economic growth and development.

Potential of a vibrant bilateral relationship:

Regional integration:

- A fair peace between India and Pakistan is not just good for the two states but for all the nations constituting the **South Asian Association for Regional Cooperation (SAARC)**.

Economic potential:

- Reports from World Bank, Asian Development Bank and the European Union have noted the immense potential hidden in the South Asian economic integration.
- **An economically transformed and integrated South Asian region** could advantageously link up with China's Belt and Road Initiative and even join the Regional Comprehensive Economic Partnership, unleashing great economic potential

Way forward:

India's role:

- India should seize the moment and **become more South Asia-concerned and much less Pakistan-obsessed**.
- Given its size and heft, **India should take the lead in transforming the South Asian region**.
- India enjoys an overwhelming 'size imbalance' in South Asia. The shares of India in the total land area, population, and real GDP of South Asia in 2016 are 62%, 75%, and 83%, respectively. The two other big countries in South Asia are Pakistan and Bangladesh with shares in regional GDP of only 7.6% and 5.6%, respectively.
- India needs to view peace with Pakistan not as a bilateral matter, to be arrived at leisurely, but as essential and urgent, viewing it as a chance to dramatically transform South Asia for the better.

Larger agenda for the region:

- There should be a more focussed approach on **issues plaguing the entire subcontinent like poverty and malnutrition**. Co-operation and collaboration in these aspects would benefit both India and Pakistan.

34. Navigation with permission

Context:

- The U.S.'s freedom of navigation operation in India's Exclusive Economic Zone near Lakshadweep.

Background:

FONOP exercise:

- On April 7, the U.S.'s 7th Fleet Destroyer, the USS John Paul Jones, conducted a '**Freedom of Navigation Operation**' 130 nautical miles west of the Lakshadweep Islands inside India's Exclusive Economic Zone (EEZ).
- This exercise was conducted **without requesting India's consent as required by Indian laws.**

Differing stands:

- The two countries have expressed two different positions on the issue.
- While the U.S. has asserted that India's requirement of prior consent is "inconsistent with international law", India has asserted that the UN Convention on the Law of the Sea (UNCLOS) "does not authorize other States to carry out in the Exclusive Economic Zone and on the continental shelf, military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal state".

Details:

- The article evaluates the legal position of the stand taken by the two countries.

UNCLOS law:

- UNCLOS binds all its signatories and customary international law binds all states, subject to exceptions like the doctrine of persistent objector.
- As per the UNCLOS, **EEZ is an area adjacent to the territorial waters of a coastal state where the sovereign coastal state has rights and duties** relating to the management of natural resources; establishment and use of artificial islands, installations and structures; marine scientific research; and protection of the marine environment.

Freedom of navigation:

- **Article 58 (1)** provides that in the EEZ, all States enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in Article 87 of navigation and overflight and of the laying of submarine cables and pipelines as well as other internationally lawful uses of the sea.

- **Article 87 provides for freedom of the high seas under which all states have the freedom of navigation.**

Regulation:

- Despite the freedoms conferred by Article 87 of UNCLOS, it is to be noted that the freedom of navigation is subject to the conditions laid down under the UNCLOS and other rules of international law.
- Notably, Article 58 (3) notes that “In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the **laws and regulations adopted by the coastal State...**”

India’s 1995 declaration:

- **The Indian law - Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones of India Act, 1976** under Section 7 sub-section 9 recognises the freedom of navigation of the ships of all States but makes them subject to the exercise of rights by India within the zone.
- **India in its declaration in 1995** noted that its understanding of the provisions of the Convention is that it does not authorize other States to carry out in the exclusive economic zone and on the continental shelf military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal State.
- It is important to note the legal effect of such declarations. **Article 310 of the UNCLOS does permit states to make declarations in order to explain the relationship between the Convention and their own laws**, but such declarations should not “purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State”.

Conclusion:

- A conjoint reading of Articles 58, 87 and 310 of the UNCLOS, makes it clear that freedom of navigation cannot be read in an absolute and isolated manner.
- Also given that **non-consensual military activities hinder the lawful enjoyment of EEZ rights of the concerned country** and that military exercises and manoeuvres pose a risk to its coastal communities, its installations or artificial islands, as well as the marine environment, any state which wishes to conduct such exercises must do so only in consultation with the coastal state.
- Any state which wishes to conduct military exercises in an exclusive economic zone must first consult the coastal state.

35. State obliged to facilitate access to education: SC

What's in News?

In a judgement, the Supreme Court has said that **access to professional education is not government largesse (charity).**

Issue:

- Two students from Ladakh were nominated by the Union Territory administration for MBBS studies. They were allocated seats in the prestigious Lady Hardinge and Maulana Azad Medical Colleges. However, they were not admitted.
 - It was government policy to allot one seat each at Lady Hardinge and Maulana Azad medical colleges from the Central pool.
- The students moved the SC for justice, saying their fundamental right to education was at the whims and fancies of the government authorities.
- The court ordered that the students be admitted within a week.
- SC further recommended the appointment of a nodal officer to ensure that students duly nominated under the Central pool seats were admitted in their chosen course of study.

Verdict:

- The court said the State has an **affirmative obligation to facilitate access to education at all levels.** “This obligation assumes far greater importance for students whose background (by virtue of such characteristics as caste, class, gender, religion, disability and geographical region) imposes formidable obstacles on their path to accessing quality education.
- The bench highlighted that while the **right to pursue higher (professional) education has not been spelt out as a fundamental right in Part III of the Constitution**, it bears emphasis that access to professional education is not a governmental largesse.

Details:

- The court referred to the vision envisaged by the **Committee on Economic, Social and Cultural Rights.**
- One of the Committee's clauses states “As an empowerment right, education is the primary vehicle by which economically and socially marginalised adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities”.
- The court noted that **India was a signatory to the United Nations International Covenant on Economic, Social and Cultural Rights.**

- The court noted “Pursuant to these obligations, which India has undertaken by being a signatory to the covenant, the Union shall ensure proper coordination so that students allocated colleges under the Central pool seats are not put to hardship in enrolling once they have been duly allocated their seats,”.

36. It's time to enact a Siras Act

Context:

- The article argues for an ex post facto pardon to those who were convicted under Section 377 of the Indian Penal Code (IPC).

Background:

Section 377 of the IPC:

- **Section 377 dealing with unnatural offences** notes that whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal, shall be punished with imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine.
- While the statute criminalises all anal sex and oral sex, including between opposite-sex couples, it largely affected same-sex relationships.

Naz Foundation case:

- The Delhi High Court's verdict in Naz Foundation v. Govt. of NCT of Delhi (2009) resulted in the **decriminalisation of homosexual acts involving consenting adults**.
- The Court held that Section 377 offended the guarantee of equality enshrined in **Article 14 of the Constitution** because it creates an unreasonable classification and targets homosexuals as a class.

Supreme Court's stand:

Suresh Kumar Koushal case:

- The Supreme Court, in Suresh Kumar Koushal vs. Naz Foundation (2013), **reinstated Section 377 in the IPC**.

Navtej Singh Johar case:

- The SC's judgment in *Navtej Singh Johar & Ors. v. Union of India* (2018) is a landmark decision of the Supreme Court of India that **decriminalised all consensual sex among adults, including homosexual sex**. The Supreme Court of India ruled that the application of Section 377 of the IPC to consensual homosexual behaviour between adults was "unconstitutional, irrational, indefensible and manifestly arbitrary". The verdict was hailed as a landmark decision for LGBT rights in India.
 - Elements of Section 377 relating to sex with minors, non-consensual sexual acts such as rape, and bestiality remain in force.

Details:

- The article argues for an **ex post facto pardon to those who were convicted under Section 377 of the Indian Penal Code (IPC)**. The author argues that such an enabling law would help do justice to those convicted in the LGBTQ+ community under Section 377 of the IPC.
- Also notably such a law would be in line with international practice in some countries like the U.K which has enacted the Alan Turing law.
 - The **U.K.'s Alan Turing law** grants amnesty and pardon to those convicted of consensual same-sex relationships. The Alan Turing law provides not only a posthumous pardon but also an automatic formal pardon for living people.
- The Indian state could enact a 'Siras Act' on the lines of the Alan Turing law. Ex post facto pardon may be a novel concept in India, but it would do justice, even though delayed, to the prisoners of sexual conscience.

37. Why less may be more for India and China

Context:

- **Track-II dialogue** held between India and China in early April.

Background:

- India and China have witnessed a **troubled relationship** in the recent past.
- The Galwan valley clash marked the worst violence on the border since 1967. The border crisis has led to a tense relationship between the two neighbours.

Details:

- The Track-II dialogue brought together former ambassadors and military officials from both countries.
 - Track II diplomacy or "backchannel diplomacy" is the practice of "non-governmental, informal and unofficial contacts and activities between

private citizens or groups of individuals, sometimes called ‘non-state actors’.

- It contrasts with the track I diplomacy, which is official, governmental diplomacy that occurs inside official government channels.
- It is possibly the first of its kind to be held after the border crisis between India and China.

Core issues for resolution:

- The shared view during the recent dialogue was that the key to arriving at a new, more realistic state of relations will be managing **three issues – the boundary question, trade, and the increasing impact of third-party and multilateral engagements** on the two-way relationship.
- The dialogue emphasized the need to **focus on limited goals** which may end up paying rich dividends.

Boundary dispute:

- Despite the progress seen in terms of **disengagement on the north and south banks of Pangong Lake**, there has been an apparent stalemate even after the eleventh round of talks between Corps Commanders.
- The Chinese behaviour seems to be suggestive of a lack of appetite in China at the moment for a final settlement of the boundary question. That is also the view of most Chinese experts, who suggest the boundary question to be left for later ages to be negotiated.
- Though this may mean a prolonged period of **continued uncertainty on the borders due to the unclarified LAC**, it is significant to note that the absence of a permanent peace need not necessarily mean a conflict.
- There is a need to take small steps to restore the shattered trust between the two neighbours.
- If delineation of the LAC is not possible at the present moment, the two countries should at least, **clarify the most sensitive spots, and arrive at understandings, such as coordinated patrolling either by time or area**. These are small steps that have, in the past, helped cool down the temperatures.

Trade:

- The tension along the LAC has resulted in **growing calls for “decoupling” of the economic relations between the two countries**.
- Though the unresolved political problems do not seem to support the idea of economic partnership with China, the calls for complete disengagement on the trade front too are unrealistic.

- Despite the biggest border crisis in decades between the two countries in 2020, **trade reached \$87.6 billion between India and China.**
 - **China was India's largest trading partner**, with India importing \$66.7 billion worth of machinery and medical equipment.
 - India exported a record \$20 billion to China, mostly ores to China's industries.
- Given the fact that jettisoning all activity with China is neither realistic nor prudent, there is the need for recognizing possible areas of cooperation that would not have any associated security concerns. **Infrastructure development, clean energy may be some of the potential areas for cooperation.**

Third country and external engagements:

- Both India and China need to have a clear conversation on how **third parties and external engagement are an increasing factor in bilateral relations.**
 - **China is viewing relations with India through the prism of its relations with the United States.** China has been unequivocal over its concerns over the U.S. backed **Quad** and India's participation in it.
 - India has its own concerns with **China's increasing support to Pakistan** and its growing influence in South Asia and the Indian Ocean littoral countries.
- Instead of letting their engagements with third countries impact their bilateral relations, India and China would be better served by having an open conversation about what could be the red lines in such third country engagements.
- Also as relations stabilise, India and China could start **injecting more energy into their own shared platforms such as BRICS.** They could also revive their bilateral cooperation in Afghanistan.

Conclusion:

- Given the fact that the chequered history of India-China relations is rife with examples of how misplaced expectations have burdened the relationship, there is the need to restrain the temptation of high expectation and aim for modest goals.
- A conversation driven by hard talk and finding shared interests, even if modest ones, may be more rewarding in restoring the strained bilateral relationship between India and China.

38. 'NATO to exit Afghanistan along with U.S.'

Context:

Foreign troops under NATO command will withdraw from Afghanistan in coordination with a U.S. pull-out by September 11, 2021.

- **September 11** is a **highly symbolic date** as it will be **20 years since Al-Qaeda attacked the U.S.** with hijacked airliners, **triggering military intervention in Afghanistan.**

Background:

- President Joe Biden announced, “It’s time to end America’s longest war with the unconditional withdrawal of troops from Afghanistan, where they have spent two decades in a bloody, largely fruitless battle against the Taliban”.
- He said the **U.S. will begin its final withdrawal from Afghanistan on May 1, 2021.**

Details:

- Around **7,000 non-U.S. forces from mainly NATO countries**, also from Australia, New Zealand and Georgia, outnumber the **2,500 U.S. troops in Afghanistan.**
- A **key reason for a coordinated withdrawal** is the fact that **NATO relies on U.S. airlift capabilities** and shipping to move valuable equipment in and out of landlocked Afghanistan.
- After withdrawing, the U.S. and NATO aim to rely on Afghan military and police forces, which they have developed with billions of dollars in funding, to maintain security though peace talks are struggling and the insurgency is resilient.

Resolute Support:

- An integral part of NATO’s current mission, **Resolute Support**, is to **train and equip Afghan security forces fighting the Islamist Taliban.**
 - **Taliban was ousted from power** by a U.S. invasion in late **2001** and has since **waged an insurgency.**
- With non-U.S. troop numbers reaching as high as 40,000 in 2008, Europe, Canada and Australia have moved in tandem with the U.S., also providing long-term funding to rebuild Afghanistan despite the resurgence of Taliban-led violence and endemic official corruption in the country.

39. A multipolarity, scripted by the middle powers

Context:

- The article analyzes the critical role that the middle powers- Japan, Iran, Turkey and India could play in the **evolving global geopolitical scenario**.

Background:

U.S. China Cold War like situation:

- S. views China as its principal adversary on the world stage.
- The new Cold War like situation between China and the U.S. gained a concrete shape during the Trump presidency. The U.S. has been trying to build an alliance of likeminded countries **to try and curb China's growth, reduce its influence in international institutions**.
- The U.S. has been trying to use the **Quad to challenge China in the Indo-Pacific**, possibly as part of a "new Cold War".

U.S. Russia hostility:

- Russia's war with Ukraine and the **occupation of Crimea in 2014**, followed by allegations of **Russian cyber-interference in the U.S. presidential elections of 2016** has raised the hostility between U.S. and Russia.

China-Russia partnership:

- S. animosity has encouraged China and Russia to solidify their relations.
- Besides significantly expanding their bilateral ties, the two countries have agreed to harmonise their visions under the **Eurasian Economic Union sponsored by Russia and China's Belt and Road Initiative (BRI)**. This idea has now been subsumed under the 'Greater Eurasian Partnership' to which both the countries are committed.
- The new Cold War is now being reflected in a **new geopolitical binary – the Indo-Pacific versus Eurasia**.

Details:

- The article analyzes the relation between China, Russia and U.S. with the **middle power nations of India, Iran, Turkey and Japan**.

Evolving alignments:

- The alignments between the rival power groups and the middle powers seem to be crystallizing.

- **Japan and India are deeply entrenched in the Quad** and have substantial security ties with the U.S.
- **Iran**, facing a sanction regime from western powers led by the U.S. has found **strategic comfort with the Sino-Russian alliance**. Iran and China recently concluded an economic pact.
- **Turkey, a NATO member**, has found its interests better-served by Russia and China rather than the U.S. and its European allies.

The role of middle powers:

- Japan, Iran, Turkey and India are well set to shape the emerging world order. The “middle powers”, have the capacity to **project power regionally, build alliances**, and support (or disrupt) the strategies of international powers pursuing their interests in the region.

Reluctant allies:

- Despite the allure of joining the rival super power groupings led by the U.S. or China and Russia, the four nations are not yet prepared to join the power alliances.

Japan:

- Though, Japan has an ongoing territorial dispute with China relating to the **Senkaku islands in the East China Sea**, **Japan has a strong economic linkage with China**.
 - In 2019, 24% of Japanese imports came from China, while 19% of its exports went to China.
- **Japan’s \$200 billion ‘Partnership for Quality Infrastructure’ initiative** that funds infrastructure projects in Asia and Africa, is willing to work on BRI projects on a selective basis.
- Japan has the security treaty of 1951 with the U.S. making it dependant on the U.S. for much of its security concerns.
 - Notably, Japan has been trying to reduce its security-dependence on the U.S. and pursue an independent role in the Indo-Pacific.

India:

- As the threats from China at the border and intrusions in its South Asian neighbourhood and the Indian Ocean became sharper, India has moved closer to the U.S. India- U.S. relationship has been on the upswing, marked by **expanding defence ties with the U.S.**, including **defence purchases and agreements on inter-operability and intelligence-sharing and frequent military exercises**.

- Through the border stand-off at Ladakh, China is perhaps indicating to India that its security interests demand close engagement with China rather than a deepening alignment with the U.S.
- The recent Freedom of navigation exercise carried out by the U.S. in India's EEZ without its consent would undermine India U.S. bilateral relationship
- India will need to manage its ties with China largely through its own efforts, while retaining Russia as its defence partner.

Iran:

- Given the strategic culture of Iran that eschews long-term security alignments, it is very likely that the Islamic Republic of Iran will seek to redefine its strategic space and exercise independent options rather than joining either power groups.

Turkey:

- Turkey has been witnessing a steady distancing from its western partners and increasing geopolitical, military and economic alignment with Russia and China.
- However, Turkey still wishes to keep its ties with the U.S. intact, and retain the freedom to make choices. Its **"New Asia" initiative**, involves strengthening of east-west logistical and economic connectivity backed by western powers and China.

Conclusion:

- The four middle powers, seem to be vying for **"strategic autonomy" – defined by flexible partnerships, with freedom to shape alliances to suit specific interests at different times.**
- These four middle powers will thus make **multipolarity**, rather than a new Cold War, the **defining characteristic of the emerging global order.**

40. U.S. imposes new sanctions on Russia

Context:

The **United States** has announced fresh sanctions against Russia.

Details:

- In an executive order, Mr. Biden widened restrictions on U.S. banks trading in Russian government debt, expelled 10 diplomats who include alleged spies, and blacklisted 32 individuals accused of meddling in the 2020 presidential election.
- The sanctions were announced in retaliation for Kremlin's U.S. election interference, a massive cyberattack and other hostile activity.
 - Cyberattack refers to the massive so-called SolarWinds hack of U.S. government computer systems.
- The order sends a signal that the U.S. will impose costs in a strategic and economically impactful manner on Russia if it continues or escalates its destabilising international action.
- Department of Treasury, together with the EU, Australia, Britain and Canada, sanctioned eight individuals and entities associated with Russia's occupation of Crimea in Ukraine.

Concerns:

- The development comes in the same week as President Joe Biden offered to meet President Vladimir Putin for **their first summit**.
 - Sanctions would not help build momentum for a summit.
- The latest tension comes amid worries both in the U.S. and its European allies over **Russia's recent troop build-up on the border of Ukraine**.
- **Russia** swiftly denounced the actions and **warned of retaliation**.
- The sanctions are certain to further deteriorate an already tense relationship between the U.S. and Russia.

Note:

- The actions represent **second major round of sanctions** imposed by the Biden administration against Russia.
- Earlier, **the U.S. sanctioned seven Russian officials**, along with more than a dozen government entities, over Russia's attempts to **kill opposition figure Alexey Navalny with a nerve agent** and his **subsequent jailing**.

GS 3 : Economy, Science and Technology, Environment

1. An obituary for the IP Appellate Board

Context:

- The **Tribunal Reforms (Rationalisation and Conditions of Service) Ordinance, 2021**, has resulted in shutting down the Intellectual Property Appellate Board (IPAB).

Intellectual Property Appellate Board:

- The **Intellectual Property Appellate Board (IPAB)** was India's specialist tribunal for determining disputes relating to intellectual property (IP) rights.
- Historically, appeals from the Intellectual Property Office (IPO), rectification and revocation applications were heard by the various High Courts. However, the **Patents (Amendment) Act of 2002** divested these powers from the High Courts and extended them to the IPAB.
- The IPAB was initially established under the Trade Marks Act of 1999, later its jurisdiction was extended to hear patent cases after the Patents (Amendment) Act of 2002.

Lacunae with respect to the functioning of IPAB:

- The IPAB has been plagued by challenges ever since its inception.

Understaffed:

- It has remained perennially understaffed.
- It has functioned **without a full-time head** for almost two years.
- The appointment of the **technical member** for patents, who brings the much-needed technical expertise that patent cases usually demand, was delayed.

Poorly funded:

- Not only was the IPAB understaffed, with its administrative staff often being on deputation, it was also grossly underfunded, which resulted in **very poor infrastructure for it**.
- The IPAB had sittings in five different cities, with just one chairperson who had to fly between them at times.

Less emphasis on patent side functions:

- The IPAB's jurisdiction of cases was split between trademarks, patents, copyright, and geographical indication, where the predominant business pertained to trademarks.
- The **IPAB has not been performing its adjudicatory function on the patent side regularly** due to administrative reasons.

- Though the patents side of the IPAB existed in theory since 2002, the Central government notified its functioning only in April 2007 after a rebuke from the Madras High Court.

Poor disposal rate:

- The disposal rate for patents at the IPAB was very poor.
- **The patents bench saw a paltry disposal rate of about 20 patent cases a year.** Nearly 70% of the patent cases filed were either pending at some stage or yet to be taken up for hearing. Going by this disposal rate, it would have taken another decade to dispose of the pending applications, leave alone the new ones.
- Notably, the tribunals were established with the primary aim of speedy disposal of cases by specialised experts.

Other issues:

- The IPAB has been the subject matter of judicial review before the various High Courts. These cases include a **challenge to the constitutionality of the IPAB.**
- One of the former chairpersons had publicly raised concerns regarding the **judicial and institutional independence of the IPAB.**

Concerns:

Impact on the innovation ecosystem:

- The functioning of the IPAB is critical for the innovation ecosystem.
- Every patent granted by the Patent Office is a potential subject matter in appeal before the IPAB. An unjustified patent grant at the Patent Office, by error or oversight, can only be corrected in appeal.
- Thus the shutting down of the IPAB adversely impacts the innovation ecosystem in India.

Missed opportunity:

- India has done relatively well with respect to legislation regarding patents. It has offered the world a host of **TRIPS-compliant flexibilities** in its statute.
- **Retraction of product patents** for pharmaceuticals and chemicals.
- **Anti-evergreening** provisions.
- Robust **compulsory licensing regime.**
- The tenure of the IPAB will be remembered as a missed opportunity to develop the home-grown **jurisprudence on patent law**– case laws from the highest courts on how these provisions will be worked.

2. Normal is good

Context:

- The India Meteorological Department (IMD) has forecast a **'normal' monsoon for the current year.**

Details:

- As per the IMD's norms, a normal monsoon implies that **India will get 96% to 104% of the 88 cm** that it gets from June-September.
 - 88 cm is the **Long Period Average (LPA)**, which is a mean of monsoon rainfall from 1961-2010.
 - The months of July and August account for around two-thirds of the monsoon rains and are the most important months for sowing in India.
- Notably, there is a good chance of 'above normal' rain in central and southern India.
- The 'normal' monsoon forecast for the current year is primarily predicated on **'neutral' surface temperatures in the Central Equatorial Pacific.**
 - A warming **El Niño** is unlikely.
 - **El Niño is the warm phase of the El Niño-Southern Oscillation (ENSO)** and is associated with a band of warm ocean water that develops in the central and east-central equatorial Pacific. The ENSO is the cycle of warm and cold sea surface temperature (SST) of the tropical central and eastern Pacific Ocean. El Niño is accompanied by high air pressure in the western Pacific and low air pressure in the eastern Pacific. **El Niño adversely impacts monsoon rainfall over the Indian subcontinent.**
 - The **Indian Ocean Dipole** is expected to be unfavourable for excess rains.
 - The Indian Ocean Dipole (IOD) is an irregular oscillation of sea surface temperatures in which the western Indian Ocean becomes alternately warmer (positive phase) and then colder (negative phase) than the eastern part of the ocean. The IOD affects the strength of monsoons over the Indian subcontinent.

Changes in IMD's forecasting:

Dynamic model:

- There has been the IMD's increasing reliance on **dynamical monsoon models**.
- Unlike the traditional statistical models, which are based on a fixed set of meteorological variables that have historically been correlated with variations in monsoon rainfall, the dynamical models **generate forecasts based on evolving weather patterns**.

More forecasts:

- Up until now, the IMD used to follow a two-stage monsoon forecast system, wherein after the prognosis in April, it used to give an updated estimate in late May or early June.
- This year onwards **there will be forecasts for June and September too**, to be given in May and August, respectively. Historically, predicting rain for June and September is challenging as it **corresponds to the monsoon's entry and exit**.

Forecasts for monsoon core zone:

- The IMD forecasts used to include an estimate of how much rain is likely in: northwest India, northeast India, central India and the southern peninsula.
- Now onwards, there will also be forecasts for what is called the monsoon core zone, which represents most of the rainfed agriculture region in the country.

Way forward:

- The forecasts apart from their emphasis on the agricultural sector should now **get urban-focused too** because of the natural disasters that accompany even 'normal' monsoons in Indian cities. The forecast should form a critical aspect of **India's disaster preparedness**.
- There should be more focus on incorporating the IMD forecasts down to municipal and block-level planning.
- The IMD must continue to widen its focus to aid business and services sectors that are in need of weather products.

3. Bustard poaching in Pakistan shocks activists

Context:

- The recent shooting of two Great Indian Bustards (GIBs) in Pakistan's Cholistan desert.

Background:

Great Indian Bustard:

- The **Great Indian Bustard (Ardeotis nigriceps)** is found on the Indian subcontinent.
- The great Indian bustard bird is **among the heaviest of the flying birds**. It is also the largest land bird in its native range.
- It is the **State bird of Rajasthan**.

Habitat:

- It's habitat is characterized by large expanses of arid and semi-arid grasslands, open country with thorn scrub, tall grass interspersed with cultivation. It **avoids irrigated areas**.
- This species was formerly widespread in India and Pakistan.
 - In India, the bird was historically found in Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Rajasthan, Gujarat, Maharashtra, Karnataka and Tamil Nadu. Today the bustard is restricted to **isolated pockets in Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Madhya Pradesh and Rajasthan**.
 - The **Desert National Park** is one of the Great Indian Bustard's last remnant wild habitat. The GIB's population of fewer than 100 in Rajasthan accounts for 95% of its total world population.
 - A few birds have also been detected in **Cholistan Desert in Pakistan**.
 - The grassland habitat with grass cover in the Cholistan desert is similar to the habitat in Rajasthan's Desert National Park.

The major areas where they are known to breed are in **central and western India and eastern Pakistan**.

These birds are often found associated in the same habitat as blackbuck.

Threat:

- The GIB was once common on the dry plains of the Indian subcontinent. But, today there **habitat has reduced drastically**.
- The International Union for Conservation of Nature and Natural Resources (IUCN), a global authority on species survival, which categorised the GIBs as "endangered" in 1994, was forced to upgrade the species to the status of "**critically endangered**" in 2011 because of continued threats faced by this species. In fact it is **considered India's most critically endangered bird**.
- The main threats are **hunting and habitat loss**.
 - This species has been heavily hunted for their meat and for sport.
 - In some places, such as Rajasthan, increased irrigation by the **Indira Gandhi canal** has led to increased agriculture and the altered habitat has led to the disappearance of the species from these regions. The migrating population into Pakistan face pressure due to hunting.

- Other critical threats to the species include the development of **linear infrastructure intrusions such as roads and electric power lines** in the desert that lead to collision-related mortality.

Conservation:

- It is protected under **Wildlife Protection Act 1972** of India.
- The state of **Rajasthan initiated “Project Great Indian Bustard”**, aimed at conservation efforts for the Great Indian Bustard.

Details:

- A group of hunters, allegedly led by a retired Major of the Pakistan Army, shot down two GIBs in a protected area of southern Punjab’s Cholistan game reserve in Pakistan.
- This event has left wildlife activists in Rajasthan outraged.

Concerns:

- There is an ongoing captive breeding of GIB in the DNP through a project executed by the **Wildlife Institute of India**.
 - The project is being supported by the **Houbara Breeding Centre of UAE**.

As Rajasthan shares the international border with Pakistan’s Sindh and Punjab provinces, it is suspected that Indian-bred GIBs will fly across to Pakistan’s desert and may fall prey to the poachers there.

4. ARIES facility will host the support centre for Aditya-L1

Background:

Aditya-L1 mission:

Mission objective:

- The Indian programme Aditya-L1 aims to **study the Sun and the region between the Sun and the Earth**. It is due to be launched in 2022.
- Initially Aditya-1 was meant to observe only the solar corona.
 - The **outer layers of the Sun, extending to thousands of km above the disc (photosphere) is termed as the corona**. It has a temperature of more than a million degree Kelvin which is much higher than the solar disc temperature of around 6000K. How the corona gets heated to such high temperatures is still an unanswered question in solar physics.

However, later the scope of the project was enhanced and the satellite now carries additional six payloads with enhanced science scope and objectives.

- Aditya-L1 with additional experiments can now provide observations of **Sun's Corona, Chromosphere and photosphere.**

In addition, **particle payloads** will study the particle flux emanating from the Sun and reaching the L1 orbit, and the **magnetometer** payload will measure the variation in magnetic field strength at the halo orbit around L1.

Satellite placement:

- The Satellite would be placed in the halo orbit around the **Lagrangian point 1 (L1) of the Sun-Earth system**, which is 1.5 million km from the Earth. The major advantage of such a placement is that it would allow the satellite to **continuously view the Sun without any occultation/ eclipses.**

Significance:

- Aditya-L1 mission provides an opportunity to solar scientists from multiple institutions within the country to participate in **space based instrumentation and observations.**
- The enhanced Aditya-L1 project will enable a **comprehensive understanding of the dynamical processes of the sun.** It will enable the understanding of the long-term evolution of the dynamic processes and underlying physical mechanisms responsible for them.
- The Mission will enable the availability of a detailed compendium of the location and duration of different features on the solar surface such as **coronal holes, prominences, flares, Coronal Mass Ejection (CMEs) and sunspots.** Continuous monitoring of the location and duration of these features will help in monitoring the Earth directed CMEs and thereby, the **space weather.**

Details:

- The **ARIES facility (short for Aryabhata Research Institute for observational Sciences)**, situated near Nainital, will provide the ground support centre to monitor and coordinate the work on the various payloads of the Aditya-L1 mission.

Significance:

- ARIES plans to allow every interested individual to be able to perform scientific analysis of the data procured by the Aditya-L1 mission.
 - Researchers who may not even be associated with core Aditya-L1 team will be able to book a specific payload to conduct observations for a particular time. This will enable every researcher in India perform analysis over scientific data obtained from Aditya-L1.

The Aditya-L1 Support Centre (ASC) will also provide training through regular workshops for the guest users.

The collaboration with ARIES will not only expand the visibility of Aditya-L1 within India, it will also ensure the reach of Aditya-L1 reaches beyond India at the international level.

5. Bond yield spikes as RBI's purchase disappoints

Context:

The **benchmark 10-year bond yield elevated to its highest level (6.20 per cent)** in a week as the outcome of the first tranche of the Reserve Bank of India's bond-purchase programme disappointed traders while inflation concerns also weighed.

Background:

- The Reserve Bank of India recently announced the introduction of the **G-sec Acquisition Programme (G-SAP 1.0)**.

Why is a rise in bond yields a concern for everyone?

- A **rise in bond yields** denotes **higher interest rates** in the economy.
 - Higher interest rates **push up the cost of loans** taken by companies and makes it harder for them to borrow additional money to invest.
 - This ultimately affects their profits and hence the returns of shareholders.
- **Rising bond yields** imply a **rise in the risk-free interest rate** and hence **lower equity valuations**.

Way Forward:

- RBI has tried very hard to keep the **yields below 6 per cent** in this fiscal (2021-22) to **enable the government to borrow cheaply**.
- The **implications of a bond market strike** can be quite **negative for the economy**.
- **RBI intervention in the debt markets** could **bring down bond yields** and return stocks to their bullish trajectory.

6. Lessons from the first wave

Context:

- **Second wave of the COVID-19 pandemic**.
 - Given the fact that India's second COVID-19 wave is more virulent than the first, many States have restarted enforcing shutdowns of various scales.

Details:

- The article analyzes the social and economic impact of the first wave of the pandemic and the subsequent lockdown that were imposed. It also suggests suitable actions to be taken in the face of the ongoing second wave of the pandemic.

Socio-economic impact of the pandemic:

Uneven impact and recovery:

- Even though India's overall economic trajectory had been on the upswing after the first phase of the pandemic, **the growth during these times has not been inclusive.**
 - While sectors, including the **technological, pharmaceutical and healthcare sectors, saw record growth**, sectors including **travel and tourism and wellness and hospitality receded to historic lows.** While the wealth of India's billionaires increased by 35% even during COVID-19 times, the pandemic decimated the informal and MSME sector and **pushed 75 million Indians into poverty.**
 - While the migrant workers faced innumerable miseries during the lockdown workers in white collar sectors like IT, consulting and financial services, were minimally affected. COVID-19 has affected the least affluent the most.
- The economic experts have noted that India's revival from the COVID-19-induced downturn would be a '**K-shaped**' curve where only a segment of our population recovers.

Concerns with regard to new lockdown:

- Introducing even partial lockdowns again will constrain the movement of goods and labourers. It will significantly bring down our industrial productivity and create avenues that will **widen our economic and social inequalities.**

Recommendations:

Regulation:

- Stringent **health and safety regulations** should be formulated and implemented. Non-essential gatherings should be restricted or banned.

Ensuring economic activity:

- Industries should be allowed to function at maximum possible capacity in multiple shifts.

Preventing distress:

- Given the fact that demand contraction has been the biggest contributor towards the economic downturn during the pandemic, governments can focus on ensuring **cash stimulus packages at both individual and institutional levels**. This will boost consumption and investments. Government must emphasize **direct cash transfer and employment guarantee schemes**.
- The government will have to focus on industries and sectors most affected by the pandemic.

Vaccine roll-out:

- India will have to accelerate vaccine production, procurement and distribution. Vaccination should be opened up for all age groups.

Conclusion:

- Given the fact that introducing even partial lockdowns again will widen economic and social inequalities, **India should work towards saving lives without compromising on our population's livelihood**, or without letting people fall into poverty.

7. Depreciation in Rupee

Why in News

Recently, the **Indian Rupee depreciated to a nine-month low** of 75.4 against the USD, it is **one of the biggest losers among the emerging market currencies**.

- Over the last three weeks **since 22nd March 2021**, Rupee has **lost 4.2%** against the USD.

Key Points

- **Reasons for the Decline:**
 - **Rising Covid Cases:**
 - Rising **Covid-19** cases have emerged as a key concern. As several states are now considering more stringent **lockdown** measures, market participants are **concerned over delay in the recovery of the economy**, which was hit hard in 2020-21 by the **pandemic**.

- **Strengthening of USD:**
 - The strengthening of USD in line with expectations of **better growth in the US economy**, has also put pressure on the Rupee.
- **Reserve Bank of India's (RBI's) G-SAP:**
 - **RBI's** announcement of **Government Securities Acquisition Programme (G-SAP)** programme to infuse liquidity has also put additional pressure on the Rupee.
 - This is being read as a sort of **quantitative easing policy** the global central banks had followed, in which the RBI will **support the government's elevated borrowing programme** through infusion of liquidity.
- **Decreasing FPI Investments:**
 - Another factor that is putting additional pressure is the **decreasing support of the Foreign Portfolio Investors (FPIs)**, who pumped huge inflows into Indian equity markets between October 2020 and February 2021.
 - While the FPIs invested a net of **Rs. 1.94 lakh crore between October 2020 and February 2021** (in the Indian markets), in the month of **April 2021 they have pulled out a net of Rs 2,263 crore** (till date).
- **Impact of Depreciating Rupee:**
 - **Losers:**
 - People **Importing** from outside.
 - People seeking **foreign education**.
 - People **travelling abroad**.
 - People **investing abroad**.
 - People seeking **medical treatment abroad** etc.
 - **Gainers:**
 - People **exporting** from India.
 - People receiving **remittances from Non Resident Indian (NRI)**.
 - Foreign tourists as **travel to India** gets cheaper.

Currency Depreciation

- Currency depreciation is a **fall in the value of a currency** in a **floating exchange rate system**.
 - In a floating exchange rate system, **market forces (based on demand and supply of a currency) determine the value of a currency**.
- Rupee depreciation means that **rupee has become less valuable** with respect to dollar.
 - It means that the rupee is now weaker than what it used to be earlier.

- **For example:** USD 1 used to equal to Rs. 70, now USD 1 is equal to Rs. 76, implying that the rupee has depreciated relative to the dollar i.e. it takes more rupees to purchase a dollar.
- Some of the factors that influence the value of a currency:
 - **Inflation**
 - Interest rates
 - **Trade deficit**
 - Macroeconomic policies
 - **Equity market**
- Currency **depreciation increases a country's export activity** as its products and services become cheaper to buy.
- The **RBI intervenes** in the currency market **to support the rupee as a weak domestic unit can increase a country's import bill.**
- There are a **variety of methods** by which RBI intervenes:
 - It can intervene **directly in the currency market by buying and selling dollars.**
 - If the RBI wishes to increase the rupee value, then it can sell dollars and when it needs to bring down rupee value, it can buy dollars.
 - The central bank can also **influence the value of rupee** by the way of **monetary policy.**
 - RBI can adjust the **repo rate** (the rate at which RBI lends to banks) and the **liquidity ratio** (the portion of money banks are required to invest in government bonds) to control rupee.

8. 'India's public debt level among highest in emerging economies'

Context:

Moody's Investors Service has said that India's public debt level is among the highest in emerging economies with a quantitative easing programme underway, while its debt affordability is among the weakest.

Details:

- India's debt affordability rated **Baa3 negative** is among the weakest.

Public Debt:

- Government debt or public debt is the **total amount of debt owed** at a point in time by a **government to lenders**. Government debt can be owed to **lenders within the country** or owed to **foreign lenders**.

- Government debt contrasts to the annual government budget deficit, which is a flow variable that equals the difference between government receipts and spending in a single year.
- Public debt is **the total liabilities of the central government contracted against the Consolidated Fund of India.**
- It excludes liabilities contracted against Public Account.

Public Debt Management:

- It is the process of establishing and executing a **strategy for managing the government's debt** in order to raise the required amount of funding, achieve its risk and cost objectives, and to meet any other debt management goals of the government.
- The governments should seek to ensure that both the **level and rate of growth** in their public debt is **fundamentally sustainable**, and can be **serviced** under a wide range of circumstances while meeting cost and risk objectives.

Why is Public Debt Management important?

- **Poorly structured debt** in terms of maturity, currency, or interest rate composition and large and unfunded contingent liabilities have **induced economic crises** in many countries.
 - The European debt crisis was a result of excessive debt piled up on government books which became unsustainable.
- This highlights the importance of **sound debt management practices** and the need for an efficient and sound capital market.

Debt-to-GDP Ratio:

- The debt-to-GDP ratio indicates **how likely the country can pay off its debt.**
- Investors often look at the debt-to-GDP metric to **assess the government's ability to finance its debt.**
- The NK Singh Committee on FRBM had envisaged a debt-to-GDP ratio of **40 per cent for the central government and 20 per cent for states** aiming for a total of 60 per cent general government debt-to-GDP.

9. Scaling up vaccine production

Context:

- The **second wave of COVID-19 infections in India** and the **reports of the scarcity of COVID-19 vaccines and drugs in India.**

Details:

- According to the Observer Research Foundation, till the end of March, India had produced 316 million doses of Covishield and Covaxin – the two COVID-19 vaccines in use in India.
- The issue of vaccine shortage may not be due to low vaccine production potential. Perhaps, the **problem has more to do with centralised procurement, distribution, and coordination with different state governments and local authorities.**
- As India aims to inoculate more and more people, it is **imperative to ramp up vaccine production.** Serum Institute of India (SII), which manufactures Covishield, has said that it can produce 100 million doses a month, up from the 50 million doses, provided it can scale up its manufacturing capacity.

Means to ramp up vaccine production:

- There are **several legal means** that the government should employ to scale up the production of COVID-19 vaccines.
- These legal means can be divided into the **non-intellectual property-(IP)-based and IP-based options.**

Non-IP-based solutions:

- The government can direct pharmaceutical companies to loan their manufacturing capacity to the existing COVID-19 manufacturers like the SII and Bharat Biotech to boost their manufacturing capability so that more COVID-19 vaccine vials can be produced.

Supporting legal provisions:

- Section 2 of the **Epidemic Diseases Act of 1897** empowers the government to take measures that it may deem necessary to prevent the outbreak or its spread.
- Section 26B of the **Drugs and Cosmetics Act, 1940**, empowers the Central government to regulate the sale, manufacture, and distribution of a drug that is essential to meet the requirements of an emergency arising due to an epidemic.

IP-based solutions:

- The Central government can **licence specific companies to manufacture the COVID-19 vaccines.**

- Another option available to the government is to ensure that all COVID-19 vaccine projects that are funded by the taxpayer's money should not claim IP rights in the first place or if patents are granted, they should not be enforced.

Supporting legal provisions:

- Under Section 100 of the **Patents Act, 1970**, the Central government has the power to authorise anyone to use any patents or patent applications for the "purposes of government".
- Section 92 of the Patents Act allows the Central government to issue a **compulsory licence (a licence issued to manufacture the patented product without the consent of the patent holder)** in circumstances of national emergency or extreme urgency or in case of public non-commercial use.

Using public sector companies:

- The government needs to explore the production capabilities of the pharmaceutical companies in the public sector to build India's manufacturing competence.

10. The 'armed struggle' that goes nowhere

Context:

- The Maoist's recently conducted an ambush and killed more than 20 paramilitary personnel in the Tarrem area in the Bijapur-Sukma district border in southern Chhattisgarh

Background:

Formation of CPI (Maoist):

- The **CPI (Maoist) came into being after the merger of two of the strongest Naxalite groups – the Peoples' War Group (PWG) and the Maoist Communist Centre – in 2004.**
 - The PWG was formed in 1980 by Kondapalli Seetharamaiah from the splinter groups that had broken away from the Communist Party of India (Marxist-Leninist), led by general secretary Charu Mazumdar in the early 1970s.
 - The MCC was founded by Kanai Chatterjee in 1975 and had strongholds in the Jharkhand forests.

Modus Operandi:

- The PWG had a sizeable following in the 1980s and 90s in undivided Andhra Pradesh as it had led mass agitations on various issues, including peasant wages and land struggles. The PWG graduated into a military force by forming guerrilla zones in northern Telangana, extending up to the Nallamalla forests.
- Anticipating state actions, a group from the PWG had already moved to present-day Chhattisgarh in the early 1990s and had formed **mass organisations like the Dandakaranya Adivasi Kisan Mazdoor Sangathan (DAKMS)** in the tribal areas in the southern part of Chhattisgarh. The armed cadres of the PWG also used the difficult terrain to build **guerrilla zones**.
- The Indian Maoists have sought refuge in remote forested areas which offer them the camouflage and difficult terrain to engage in guerrilla warfare and to seek support from tribal people living in areas that are either under-developed or have limited access to the institutions of the Indian state.
- The Maoists claim to have set up “**janathana sarkars**” – local government units in places such as the Abujmarh forested areas in southern Chhattisgarh.

Governmental measures:

- The Indian government has launched a **military campaign** against the guerrillas, while taking steps to cut their popular support in remote villages through **developmental work and infrastructure building**.

Pressure on the Maoists:

- The Maoists have been dealt a severe blow by incarcerations and “encounter” killings of senior leaders.
- The Maoists have been facing desertions due to surrenders by cadres to security forces in various States.
- The Maoists have also been at the end of strong attacks by paramilitary and police forces in areas such as the Andhra-Odisha border that is close to south Chhattisgarh, in Gadchiroli in Maharashtra and even as far as the western ghat forests in the tri-state junction between Kerala, Tamil Nadu and Karnataka.
- The constant pressure on the Maoists has not allowed them to build a workable organisation in new areas, and are being hemmed into what seems to be their last stronghold – South Bastar.

Concerns:

Evolution as a military force:

- The CPI(Maoist) has evolved into a military force. By 2010, the Indian government already identified the Maoists as the “**single biggest internal security challenge**”.

Attacks on security personnel:

- Maoist insurgents, despite facing desertions and counter-attacks, stick to armed struggle, continuing to target security personnel. The recent attack has raised the number of security forces killed in the Bastar region to more than 175 since the killing of 76 CRPF personnel in the Chintalnar attack in April 2010.

Ideology:

- The Indian Maoists have steadfastly held that **violent armed struggle** is a must in its aims to achieve a socialist revolution in India. The CPI (Maoist) **rejects Indian democracy and electoral politics**.
- The Maoists have refused to change their understanding of the nature of the Indian state and continue to insist on an armed struggle.
- The Maoists remain committed to militant insurgency even as they reject any call for recourse to peaceful agitations or to enter the democratic process to further their goal.
- The Maoist movement in India seems headed in the same direction that several violent and failed insurgencies, inspired by the Chinese revolution, went – from the Shining Path in Peru to the Communist Party of the Philippines.

Tribals caught in the crossfire:

- The Indian government’s recourse to counter-mobilize tribals into armed resistance groups such as Salwa Judum was met by militant backlash by the Maoists that severely affected the tribal population.
- The **Tribals have had to face both severe state repression as well as Maoist violence in the last decade**.

11. Indus and Ganges river dolphins are two different species

Context:

- Study of the Indus and Ganges river dolphins.

Background:

- The **South Asian river dolphin (Platanista gangetica)** is an endangered **freshwater or river dolphin** found in the region of the Indian subcontinent, which is split into two subspecies, the Ganges river dolphin (*P. g. gangetica*) and the Indus river dolphin (*P. g. minor*).
- The Ganges river dolphin is primarily found in the Ganges and Brahmaputra rivers and their tributaries in India, Bangladesh, and Nepal, while the Indus river dolphin is now found only in the main channel of the Indus River in Pakistan and in the River Beas (a tributary of the Indus) in Punjab in India.

Details:

- Detailed analysis of South Asian river dolphins has revealed that the **Indus and Ganges River dolphins are not one, but two separate species**.
- The research team studied body growth, skull morphology, tooth counts, colouration and **genetic makeup**. The researchers studied ancient DNA that they got out of skulls and skeletons which were 20 to 30 to even 150 years old.
- The study estimates that Indus and Ganges river dolphins may have diverged around 550,000 years ago.

Ganges Dolphin:

- The Ganges river dolphin **can only live in freshwater** and is essentially blind. They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind.
- The Ganges river dolphin has been recognized by the government of India as its **national aquatic animal**.

Conservation status:

- The Ganges dolphin is a **Schedule I animal under the Indian Wildlife (Protection) Act 1972**, and has been included in **Annexure - I of Convention on International Trade in Endangered Species (CITES)**.
- The Ganges River dolphin is classified as **‘Endangered’ species by the International Union for Conservation of Nature (IUCN)**.

Threats:

- Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. But the species is extinct from most of its early distribution ranges.

Declining river flow:

- The fast declining river flow due to diversion through the barrages has adversely affected the dolphin habitats.

Accidental deaths:

- Previously fishermen used to hunt dolphins and use their oil as bait, though that practice of directed killing has stopped they still end up as accidental catches. The increasingly mechanized boat fleet being used for fishing increase the chances of accidental injury to the dolphins.

River Pollution:

- The point and non-point source of pollution in the Ganges River is severely affecting the dolphin habitat.

Reduced gene flow:

- The **physical barriers such as dams and barrages** created across the river have reduced the gene flow to a great extent making the species vulnerable.

12. Production of Poppy Straw

The Central government has decided to rope in the private sector to commence production of concentrated poppy straw from India's opium crop.

What is the move?

- The move aims to boost the yield of alkaloids, used for medical purposes and exported to several countries.
- Among the few countries permitted to cultivate the opium poppy crop for export and extraction of alkaloids, India currently only extracts alkaloids from opium gum at facilities controlled by the Revenue Department.
- This entails farmers extracting gum by manually lancing the opium pods and selling the gum to government factories.
- The Ministry has now decided to switch to new technologies after trial cultivation reports submitted last year by two private firms showed higher extraction of alkaloids using the concentrated poppy straw (CPS).

Opium Poppy

- The milky fluid that seeps from cuts in the unripe poppy seed pod has, since ancient times, been scraped off and air-dried to produce what is known as opium.
- The seedpod is first incised with a multi-bladed tool.
- This lets the opium “gum” ooze out.
- The semi-dried “gum” is harvested with a curved spatula and then dried in open wooden boxes.
- The dried opium resin is placed in bags or rolled into balls for sale.

Why such a move?

- India’s opium crop acreage has been steadily declining over the years.
- The CPS extraction method is expected to help cut the occasional dependence on imports of products like codeine (extracted from opium) for medical uses.

Amendments to NDPS Act

- Uttar Pradesh, Rajasthan and Madhya Pradesh are the three traditionally opium-growing States, where poppy crop cultivation is allowed based on licences issued annually by the Central Bureau of Narcotics.
- While roping in private players in producing CPS and extracting alkaloids from it is likely to require amendments to the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985.
- The Revenue Department has decided to appoint a consultant to help frame the bidding parameters and concession agreements for the same.

13. B.1.617: Indian Double Mutant Strain

Why in News

The ‘**double mutant**’ virus that is having a bearing on the spread of the pandemic in India, has been formally classified as **B.1.617**.

- **Mutation** is an alteration in the genetic material (the genome) of a cell of a living organism or of a virus that is more or less permanent and that can be transmitted to the cell’s or the virus’s descendants.

Key Points

- **Double Mutant (B.1.617):**

- Earlier Genome sequencing of a section of virus samples by the **Indian SARS-CoV-2 Consortium on Genomics (INSACOG)**, revealed the presence of two mutations, **E484Q and L452R**.
 - Though these mutations have individually been found in several countries, the **presence of both these mutations together** have been first found in coronavirus genomes from India.
- This double mutant from India has been scientifically named as **B.1.167**. However, it is yet to be classified as 'Variant of Concern'.
- Till now only three global 'Variants of Concern' have been identified: the **U.K. variant (B.1.1.7)**, the **South African (B.1.351)** and the **Brazilian (P.1) lineage**.
- **Spread of B.1.167:** According to the INSACOG, sequencing a sample of genomes from coronavirus patients in India, **B.1.167 was first detected in India** in December, 2020.
 - Today, nearly **70% of the genome sequences** with the mutations characterising **B.1.167 are from India**.
 - This is followed by the **United Kingdom (23%)**, **Singapore (2%)** and **Australia (1%)**.

Variant of Concern

- These are variants for which there is evidence of an increase in transmissibility, more severe disease (increased hospitalizations or deaths), significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, or diagnostic detection failures.
- **Issues Associated with Mutants:**
 - Mutant virus is **associated with large spikes** of Covid-19 cases in some countries.
 - It enables **viruses to become more infectious** as well as **evade antibodies**.
 - It has also been associated with a **reduction in vaccine efficacy**. International studies have shown reduced efficacy of vaccines particularly those by Pfizer, Moderna and Novavax to certain variants.
 - However, the vaccines continue to be significantly protective in spite of this.
- **Another Mutation:**
 - According to INSACOG, there is also a **third significant mutation, P614R** other than the two mutations (E484Q and L452R).
 - All three concerning **mutations are on the spike protein**. The spike protein is the part of the virus that it uses to penetrate human cells.

- Virus' spike protein may increase the risks and allow the virus to escape the immune system.
- **Resistant to T cells:**
 - **L452R** could even make the coronavirus resistant to T cells, that is the class of cells necessary to target and destroy virus-infected cells.
 - T cells are different from antibodies that are useful in blocking coronavirus particles and preventing it from proliferating.

T Cells

- A type of white blood cell that is of **key importance to the immune system** and is at **the core of adaptive immunity**.
- It creates the body's immune response to specific pathogens.
- The T cells are like soldiers who search out and destroy the targeted invader.

Indian SARS-CoV-2 Consortium on Genomics

- Indian SARS-CoV-2 Consortium on Genomics (INSACOG) is a **multi-laboratory, multi-agency, pan-India network to monitor genomic variations in the SARS-CoV-2**.
- It helps in the understanding of how the virus spreads and evolves.
- Genomic surveillance can generate a rich source of information for tracking pathogen transmission and evolution on both national and international levels.

14. Plough to plate, hand held by the Indian state

Introduction

- In the last four decades, there is a general presumption that a progressively **reduced role of the state** would automatically deliver greater economic growth and welfare to the people.
- Contrary to this popular opinion evidence indicates that it is the state that has played the leading role in provisioning the most critical aspects of life: water, sanitation, education, health, food and nutrition.
- As a result with unique characteristics attributed to Indian agriculture and the share of employment it offers in India taking the socio-historical context, the Indian state must continue to intervene in multiple markets, and make critical investments, to ensure the welfare of both farmers and consumers.

Specificities of agriculture

- Due to a variety of limiting factors, from uncertainties of the weather to soil fertility and water availability, increasing returns to scale are very difficult to achieve in farming. This underscores the need for the right kind of public investment in agriculture.
- The economies of scale allow producers in the industry to make profits by cutting unit costs, even as prices fall, but in agriculture generating such profits similar to the industrial sector is hard.
- Again, production processes in agriculture cannot be organised in an assembly line; they need to begin at the appropriate phase of the climatic annual cycle.
 - This means that all farmers harvest their crop at the very same time; 86% of India's farmers are 'small and marginal', too poor to afford warehousing facilities and are, therefore, compelled to bring their harvest to the market at around the same time.

Concerns

- During a bumper crop, prices fall. It is expected that consumers will be benefitted. But the food grains are hoarded by the traders resulting in loss to the farmers and customers have to buy very expensive commodities.
- In the credit market, usurious interest rates (often as high as 60%-120% per annum) create a debt where it becomes virtually impossible for the farmer to escape from the debt cycle.
 - The repayments due are 'adjusted' through exploitative practices in the input, output, labour and land-lease markets.
 - This is further exacerbated by the oppressive caste system, with the poorer, 'lower' caste farmers, facing a cumulative and cascading spiral of expropriation.
- There is growing evidence of a steady decline in water tables and water quality.
- The yield response to the application of increasingly **expensive chemical inputs** is falling, which has meant higher costs of cultivation, without a corresponding rise in output.
- Around 90% of India's water is consumed in farming, and of this, 80% is used up by rice, wheat and sugarcane. Farmers continue to grow these water-intensive crops even in water-short regions primarily because of an **assured market – for rice and wheat in the form of public procurement**, which still covers only a very low proportion of India's crops, regions and farmers.

All the above reasons provide a strong case for state intervention in multiple agricultural markets.

India's food security system

- The Food Corporation of India and the Agricultural Prices Commission (Commission for Agricultural Costs and Prices, or CACP since 1985) were set up in 1965.
- The idea was that as **farm output** rises with the Green Revolution, farmers are assured that their surplus would be bought by the government at a price high enough to leave them a margin.
- The crops procured were then made available to **consumers** at subsidised rates through the Public Distribution System (PDS).
- Thus, government intervention protected farmers during bumper crops and dipped into the buffer stock to protect consumers during droughts.

This is how India got its much-vaunted food security over the past several decades.

Way forward

- We need to expand the basket of public procurement to **include more crops, more regions and more farmers**.
- Procurement must be local and follow the logic of regional agro-ecology.
 - The locally procured crops should then be incorporated into Anganwadi supplementary nutrition and school mid-day meal programmes.
 - This would mean a large and steady market for farmers, while also making a huge contribution to tackling India's twin syndemic of malnutrition and diabetes.
- To incentivise farmers to make this change, governments must include them in procurement operations.
- Huge volumes of water could be saved if cropping patterns are diversified to include a variety of millets (rightly called 'nutri-cereals' now), pulses and oilseeds.
 - Public investment in specific infrastructure required for millets and pulses, especially those grown through natural farming, would also help expand their cultivation.
- India has a network of 2,477 mandis and 4,843 sub-mandis to safeguard farmers from exploitation by large retailers.
 - This network needs to be greatly expanded as today, only 17% of farm produce passes through mandis. To provide farmers access within a radius of five kilometres, India needs 42,000 mandis, which are also in need of urgent reform.

Rural India will be the focal point.

- Ever since the Second Five Year Plan was initiated in 1956, the primary focus was to move people from the rural heartland to industry and urban areas.

- The idea may be good but meeting the objective looks like a daunting task. According to United Nations estimates, in the year 2050, around 800 million people will continue to live in rural India.
- Given this unique Indian demographic transition, agriculture will need to be greatly strengthened, especially bearing in mind the complexities in the urban areas and the limited administrative initiatives to provide basic amenities.
- In a context characterised by growing inequalities, skewed balance of power, no reform can succeed that does not strengthen the weak and the excluded.

Conclusion

- Therefore the government should reduce the regulatory ambiguity and economic uncertainty by bringing new reforms which will improve the agriculture sector.

15. Biden will restore credibility on climate change, says U.S. envoy

Context:

U.S. special envoy asserted that the Biden administration is trying to restore the U.S.'s credibility on climate change issues that the Trump administration damaged by pulling out of the Paris Agreement (UNFCCC) on climate change in 2017.

Details:

- The U.S. envoy pushed for more ambitious targets on cutting emissions promising that decisive actions would be taken.
- He promised to fulfil Washington's earlier commitments towards developing countries, including a \$3 billion contribution to the Green Climate Fund.
- Biden had campaigned on a pledge to reach net-zero emissions across the economy before 2050, and to eliminate fossil fuel pollution from the electricity sector by 2035.
- The Green Climate Fund (GCF) is a fund established within the framework of the UNFCCC as an operating entity of the Financial Mechanism to assist developing countries in adaptation and mitigation practices to counter climate change.

Note:

Prime Minister Modi and the special envoy Kerry agreed to collaborate on a 2030 agenda with a focus on a clean and green agenda through enhancing the availability

of climate finance, building resilient infrastructure, energy storage and green hydrogen.

16. Deconstructing declarations of carbon-neutrality

Context:

- There has been a growing international chorus, led by global civil society organisations urging all countries to make explicit declarations with respect to carbon neutrality.
- An increasing number of countries are declaring in some documented form or other, their proposed intention to achieve carbon-neutral status by around mid-century.
 - As per Energy and Climate Intelligence Unit (ECIU), by April 2021, **about 32 countries had declared their proposed intention to achieve carbon-neutral status.** Of these, only eight have any firm status, the rest being in the form of proposed legislation or mentions in policy documents.

Background:

Temperature goal:

- The declaration of intent of the Paris Agreement, as stated in **Article 2 of the Paris climate deal**, aims to limit temperature rise to well below 2°C and further pursuing efforts to restrict it to 1.5°C above pre-industrial levels.

Carbon neutrality:

- **Article 4.1 of the Paris Agreement** urges nations to reach global peaking of greenhouse gas emissions as soon as possible, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.

Concerns with respect to carbon neutrality calls:

- The authors of the article argue against the increasing demand from developed countries and global civil society organizations urging all countries including developing countries like India to declare carbon neutrality goals.

Against principles of equity:

- Notably while urging the nations to seek carbon neutrality at the earliest, Article 4.1 of the Paris agreement also recognizes the fact that peaking will take longer for developing country Parties which are also required to work towards the eradication of poverty. It recognizes the **principles of equity** while emphasizing the importance of sustainable development.
- Article 2.2 declares that the Paris Agreement “will be implemented to reflect equity and the **principle of common but differentiated responsibilities and respective capabilities**, in the light of different national circumstances”.

Global and not individual goals:

- As against the notion being created by the developed country governments and civil society outfits of carbon neutrality being an individual commitment by all countries, a correct understanding of the stated provisions of the Paris climate agreement makes it clear that the balance of emissions and removal of greenhouse gases is not sought on a country-wise basis but for the world as a whole.
- The text of the Paris Agreement clearly indicates, based on considerations of equity and differentiation, that carbon neutrality is a global goal wherein the developed world will have to take higher responsibility based on considerations of equity and differentiation.

Insufficient climate action:

- The growing popularity of carbon neutrality seems to ignore the fact that **the achievement of carbon neutrality is not compatible with achieving the 1.5°C goal.**
- The mid-century carbon neutrality goals of developed countries will not be sufficient to meet the temperature goals set out by the Paris climate agreement.
- According to The Intergovernmental Panel on Climate Change Special Report on Global Warming, of 1.5° warming what remains of the global carbon budget from 2018 onwards, for a 50% probability of restricting temperature rise to less than 1.5°C, is 480 Giga-tonnes (billion tonnes) of carbon dioxide equivalent (GtCO₂eq). At the current rate of emissions of about 42 GtCO₂eq per year, this budget would be consumed in 12 years. **To keep within the 480 Gt budget, at a steady linear rate of decline, global carbon neutrality must be reached by 2039.**
 - The global carbon budget indicates the limits on global cumulative emissions, from the pre-industrial era to the time when net emissions cease, that correspond to definite levels of global temperature rise.

Emissions in the West:

- The hollowness of nation-level carbon neutrality declarations by developed countries is brought out by a detailed understanding of the emission data.
 - Emissions in the U.S. (not considering land use and land use change and forest-related emissions) (LULUCF), peaked in 2005 and have declined at an average rate of 1.1% from then till 2017, with a maximum annual reduction of 6.3% in 2009. Even if it did reach net-zero by 2050 at a steady linear rate of reduction, which is unprecedented, its cumulative emissions between 2018 and 2050 would be 106 GtCO₂, which is 22% of the total remaining carbon budget for the whole world. If the U.S. has to stay within its fair share of the remaining carbon budget, **it would have to reach net-zero emissions (with linear reduction) by 2025.**
 - Similarly, the European Union, to keep to its fair share of the remaining carbon budget **would have to reach net-zero by 2033**, with a constant annual reduction in emissions. If the EU reaches net-zero only by 2050 it would consume at least 71 GtCO₂, well above its fair share.

Arguments against India declaring carbon neutrality goal:

- The authors argue against India committing to carbon neutrality declarations, based on the following reasons.
 - Given the **high number of poor** in the country, India has to stay focused on economic growth.
 - India continues to have a **low per capita carbon footprint.**
 - India **does not owe a carbon debt** to the world. India's emissions (non-LULUCF) are no more than 3.5% of global cumulative emissions prior to 1990 and about 5% since till 2018.
 - India's mitigation efforts are quite compatible with a 2°C target.
 - India's current annual emissions are low enough to not seriously dent the emissions gap between what the world needs and the current level of mitigation effort.
 - Any self-sacrificial declaration of carbon neutrality today in the current international scenario would be a wasted gesture reducing the burden of the developed world and transferring it to the backs of the Indian people.

Recommendations:

- The following aspects would require greater attention going forward to ensure effective climate action.
 - Adoption of **green growth strategy**

- Low-carbon technologies and processes
- **Adaptation to climate** impacts
- Research into the science of **carbon capture**

Conclusion:

- The hard scientific reality is that **three-way compatibility between temperature goals, carbon neutrality, and equity would be very hard to achieve.**
- India should not join the growing calls for carbon neutrality as it has to stay focused on development as its immediate need and aspirational goal. India must reject any attempt to restrict its options and be led into a **low-development trap.**
- India's approach to eventual net-zero emissions must be contingent on deep first world emissions reductions and an adequate and unambiguous global carbon budget.

17. Incentives for solar energy sector

Context:

The Union Cabinet has approved two production-linked incentive schemes.

1. White goods (air-conditioners and LED lights).
2. High-efficiency solar photovoltaic modules.

Details:

- ₹6,238-crore has been approved for the PLI scheme for air-conditioners and LEDs.
- The scheme would extend an incentive of 4% to 6% on incremental sales of goods made in India for five years.
- The Cabinet also approved a proposal of the Ministry of New and Renewable Energy for a PLI scheme for high-efficiency solar PV modules with an outlay of ₹4,500 crore.
- Solar capacity addition presently depends largely upon imported solar PV cells and modules as the domestic manufacturing industry has limited operational capacities of solar PV cells and modules.
- The National Programme on High Efficiency Solar PV Modules will reduce import dependence in a strategic sector like electricity.

National Programme on High Efficiency Solar PV Modules:

- The programme aims to achieve manufacturing capacity in the Giga Watt scale in high-efficiency solar PV modules.
- The Solar Photo Voltaic manufacturers are to be selected through a transparent competitive bidding process.
- The scheme will reward manufacturers with higher efficiencies of solar Photo Voltaic modules.
- Also, they will be incentivised for sourcing their material from the domestic markets.

Significance:

- The prime objective of the PLI scheme is to make manufacturing in India globally competitive by removing sectoral disabilities, creating economies of scale and ensuring efficiencies.
- It is designed to create a complete component ecosystem in India and make India an integral part of the global supply chains.
- Also, this is another step towards the vision of “Atmanirbhar Bharat” (self-reliant India).
- The scheme is estimated to lead to incremental investment, an increase in production as well as the creation of jobs.

18. RBI extends fresh support of ₹50,000 cr. to NABARD, others

Context:

The RBI has said it would extend fresh support of ₹50,000 crore to the All India Financial Institutions for new lending in FY22.

Details:

- NABARD will be provided with a special liquidity facility (SLF) of ₹25,000 crore for one year to support agriculture and allied activities, the rural non-farm sector and non-banking financial companies-micro finance institutions.
- An SLF of ₹10,000 crore will be extended to the National Housing Bank for one year to support the housing sector.
- SIDBI will be provided ₹15,000 crore under this facility for up to one year for funding of micro, small and medium enterprises (MSMEs).
- All three facilities will be available at the prevailing policy repo rate.
- The move is aimed to help mitigate the impact of the pandemic and aid economic revival.

Note:

Asset Reconstruction Companies:

- The RBI said that, while ARCs had grown in number and size, their potential for resolving stressed assets was yet to be realised fully.
- It signalled the importance of Asset Reconstruction Companies (ARCs) to deal with bad loans.
- RBI said that it would constitute a committee to undertake a comprehensive review of the working of ARCs in the financial sector ecosystem and recommend suitable measures for enabling such entities to meet the growing requirements of the financial sector.

Priority Sector Lending Classification for Lending to NBFCs:

- A six-month extension has been approved to September 30 for Priority Sector Lending (PSL) classification for lending by banks to NBFCs for 'on-lending' to sectors that contribute significantly to the economy in terms of export and employment.
- This would provide an impetus to NBFCs providing credit at the bottom of the pyramid.

19. Reworking net-zero for climate justice

Issue:

- Global transformation is affecting the planet. However, there is no uniform transformation across the world.
- The global temperature increased sharply only after 1981 with little contribution from the developing countries.
 - Their industrialisation and urbanisation was yet to begin.

India's Concern:

- When the Sustainable Development Agenda 2030 was adopted at the Paris Conference, the Prime Minister of India stressed a reframing of climate change to climate justice.
- He argued that just when countries such as India were becoming major industrial and middle-class nations, they should not pay the price for the pollution caused by the West.
- The Paris Agreement, explicitly recognises that peaking will take longer for such countries and is to be achieved in the context of sustainable development and efforts to eradicate poverty.
- This balance is now being upset for a common target and timetable.

Treaty's inequity:

The pressure arises from the way the agenda has been set.

- First, inequity is built into the Climate Treaty.
 - Annual emissions make India the fourth largest emitter, even though climate is impacted by cumulative emissions, with India contributing a mere 3% compared with 26% for the United States and 13% for China.
 - According to the United Nations, while the richest 1% of the global population emits more than two times the emissions of the bottom 50%, India has just half its population in the middle class and per capita emissions are an eighth of those in the U.S. and less than a third of those of China.
- The diplomatic history of climate negotiations shows that longer-term goals without the strategy to achieve them solve a political problem and not the problem itself. Eg: As in the case of finance and technology transfer.
 - The current framework considers symptoms, emissions of carbon dioxide, and was forced onto developing countries to keep the discussion away from the causes of the problem – the earlier excessive use of energy for high levels of well-being.
- Models on which global policy recommendations for developing countries are based consider achieving ‘reasonable’, not ‘comparable’ levels of well-being to show that early capping of energy use will not affect their growth ignoring costs on the poor.
 - The rising prosperity of the world’s poor does not endanger the planet. The challenge is to change wasteful behaviour in the West.

Role of infrastructure:

- Infrastructure has a defining role because of the services it provides outside the market and the way it shapes demand distinct from production and consumption.
- The vaguely worded ‘net zero’ emissions, balancing emissions and removals, could be disastrous for development latecomers like India.
 - It fails to recognise that more than half the global cumulative emissions arose from infrastructure, essential for urban well-being.
- For developed countries, the peaking of emissions came some 20 years after infrastructure saturation levels were reached and net-zero emissions are being considered some two decades even later to take advantage of ageing populations and technology.
- Because of its young population and late development, much of the future emissions in India will come from infrastructure, buildings and industry, and the trajectory cannot be shifted to reach comparable levels of well-being with major economies.

Way Forward:

New framework:

- A global goal-shaping national strategy requires a new understanding.
- India must highlight unique national circumstances with respect to the food, energy and transportation systems that have to change.
 - Eg: consumption of meat contributes to a third of global emissions. Indians consume much less meat a year compared with European Union and the U.S.
- Transport emissions account for a quarter of global emissions, are the fastest-growing emissions worldwide and have surpassed emissions from the generation of electricity in the U.S., but are not on the global agenda.

Coal use:

- Coal accounts for a quarter of global energy use.
- Rising Asia uses three-quarters of it as coal drives industry and supports the renewable energy push into cities.
- India with abundant reserves and per-capita electricity use that is a tenth that of the U.S. is under pressure to stop using coal, even though the U.S. currently uses more coal.
- India wants to eliminate the use of oil instead with renewable energy and hydrogen as a fuel for electrification, whose acceleration requires international cooperation around technology development and transfer.

Conclusion:

- In the Paris Agreement, climate justice was downgraded to the preamble as a political, not policy, statement.
- There is a need for a reframing of the global concern in terms of sustainable development for countries with per capita emissions below the global average, in line with the Paris Agreement.
- The verifiable measure should be well-being within ecological limits.
- International cooperation should centre on sharing technology of electric vehicles and hydrogen as a fuel, as they are the most effective response to climate change.

20. Redefining combatants

The article talks about how recent cyberattacks point to the need to rethink what constitutes a force and what a justified response can be.

Context:

- A report in The New York Times on the breakdown of the Mumbai power distribution system pointed a finger at Chinese cyber hackers.
- This gives rise to a few questions, as the definition of combat and combatants undergoes fast mutation.
 - Under what conditions, would a non-kinetic strike be considered an attack on the state?
 - Under international rules of self-defence, what response would be considered legal?
 - Would only a cyber counter-attack be justifiable or a kinetic response also be acceptable?
 - Would a pre-emptive strike be allowed?

Changing definitions:

- The universally accepted Lieber Code of 1863 defines a combatant. It says, soon as a man is armed by a sovereign and takes the soldier's oath of fidelity, he is a belligerent; all others are non-combatants.
- The 1899 Hague Convention brings in further clarity of what constitutes a regular force.
 - The force should be commanded by a person responsible for his subordinates.
 - It must have a distinctive emblem recognisable at a distance.
 - It must carry arms openly.
 - It must conduct operations in accordance with laws and customs of war.

Need to redefine combatant:

- Those who conducted the (yet unproven) Mumbai 'cyberattack' or the 2007 attack on Estonia's banking system did not meet any of the four conditions of being called combatants, but still wreaked havoc.
- A combatant needs to be redefined due to three reasons.
 - A cyber army need not be uniformed and may consist of civilians.
 - Cyber 'warriors' do not carry arms openly. Their arms are malicious software that is invisible.
 - And finally, the source of the attack could be a lone software nerd who does not have a leader and is up to dirty tricks for money, blackmail or simply some fun.

Issue:

- None of these meets the requirements of The Hague Convention but the actions of these non-combatants fall squarely in the realm of national security.

- This raises two very basic inquiries that need deliberation.
 - Would the nation employing civilians in computer network attacks not be in violation of the laws of war?
 - If these people are considered as combatants, would the target country have the right to respond in self-defence?
- A response would be reactive after the attacker has conducted his operation; hence, as a right of self-defence, would an act of pre-emption be in order?
 - This argument may appear far-fetched now but needs to be examined as India seems to have a new view on the concept of the right to self-defence.

Way Forward:

- Cyberattacks done by faceless persons who are non-combatants as per international law opens up an avenue that requires careful examination; cyberattacks may not kill directly but the downstream effects can cause great destruction.
- International actions against hackers have been generally limited to sanctioning of foreign nationals by target nations.
- In 2014, for the first time, a nation (the U.S.) initiated criminal actions against foreign nationals (five Chinese operatives of Unit 61398 of the People's Liberation Army) for computer hacking and economic espionage.
- India seems to have made its intentions clear at the UN meet, but, if not regulated globally, it could lead to a wild-west situation.

21. The pillars of an equitable post-COVID India

Context:

- Impact of the pandemic on the existing **inequalities in India**.

Details:

Economic shock of the pandemic:

- The economic shock due to the pandemic has been much more severe for India for two reasons. First, **pre-COVID-19, the economy was already slowing down**, compounding existing problems of unemployment, low incomes, rural distress, malnutrition, and widespread inequality. Second, **India's large informal sector** is particularly vulnerable.

Impact of the pandemic on economic inequality:

- India has been witnessing growing inequalities and the COVID-19 pandemic has only accelerated the trend.
- The share of wages declined as compared to that of profits implying the increasing profits being cornered by the investors as compared to wages being earned by the workers.
 - The big companies and a large part of the corporate sector were able to manage the pandemic. The quarterly net profit of the BSE200 companies reached a record high of Rs. 1.67 trillion in the third quarter of FY21 and was up by 57% year-on-year.
 - The **informal sector and workers have suffered a lot with the loss of incomes and employment** in the last year.
 - **Women lost more jobs** and many are out of the workforce. Inequalities have increased in the health care and education sectors too.
- The **economic recovery has been more k-shaped** with rising inequalities.
- Many economic experts and reports have pointed out the uneven impact of the pandemic.
 - International organisations like the World Bank, the International Monetary Fund and the International Labour Organization have warned about rising inequalities in several countries including India due to the pandemic.
 - The **Pew Research Report** shows that India's middle class may have shrunk by a third, while the number of poor people earning less than Rs. 150 per day more than doubled due to the novel coronavirus pandemic.

Need to address the issue of inequality:

- Reduction in inequalities is important for its own sake and for **improving demand** which can raise private investment, consumption and exports for higher and **sustainable economic growth**.
- In the post-COVID-19 world, addressing inequality is important for higher and sustainable economic growth and the **well-being of the population**.

Way forward:

- The author suggests the following approach for reducing inequalities.

Employment and wages:

- The creation of quality and well-paying employment is central to the **inclusive growth approach**.

- This would necessitate the **need to improve the investment rate in the economy.**
- The investment rate declined from 39% in 2011-12 to 31.7% in 2018-19.
- **Investment in infrastructure** including construction can create employment. The central government's move to focus on capital expenditure for infrastructure in the recent budget is a step in the right direction.
- The main challenges with respect to employment generation which would have to be addressed include the following:
 - Creating productive jobs for seven to eight million per year
 - Correcting the **mismatch between demand and supply of labour** – only 2.3% of India's workforce has formal skill training
 - **Structural change challenge** – While the service sector continues to expand and contribute an ever-increasing share in the GDP matrix, ideally, manufacturing should be the engine of growth. Labour-intensive exports need to be promoted
 - Need to balance the objective of promoting growth of micro, small & medium enterprises and informal sectors by improving ease of doing business even while upholding the rights of workers
 - Need to be well prepared for **automation and technology revolution**
 - Need to ensure social security and decent working conditions for all
 - Work towards raising real wages of rural and urban workers and guaranteeing **minimum wages**

Focussing on human development:

- The state should focus on creating equality of opportunity by improving human development through **increased public expenditure on health and education.**
- Education and health achievements are essential for reducing inequality of opportunities.
- India should move towards universal health care and **spend 2%-3% of GDP on health.**
- The main concerns associated with the health and education sector are as follows:
 - Public expenditure on health is only 1.5% of GDP.
 - In education, there are islands of excellence that can compete internationally even as a vast majority of masses of children are churned out with **poor learning achievement.** The pandemic also brought to light the **digital gap in education.**

Social security net:

- An important intervention in addressing the inequalities would involve **providing a quasi-universal basic income and other safety nets to the most vulnerable sections of the population.**
 - This could include providing a minimum income for the poor and the vulnerable based on cash transfers; expanding the number of days provided under the Mahatma Gandhi National Rural Employment Guarantee Act and a national employment guarantee scheme for urban areas.
 - Schemes and interventions in the agri sector aimed at doubling the income of the farmers would play a critical role in reducing inequalities.
- These measures would help **provide income support to the needy.**

Addressing the financial aspects:

- Enhancing tax and non-tax revenues of the government is needed to spend on the above-discussed priorities.
- **The tax/GDP ratio has to be raised, with a wider tax base. Richer sections have to pay more taxes.**
- **The inequalities between the Centre and States in finances should be reduced.** State budgets must be strengthened to improve capital expenditures on physical infrastructure and spending on health, education and social safety nets.

Non-economic factors:

- Unequal distribution of development is rooted in the inequalities of political, social and economic power.
- Apart from economic factors, non-economic factors such as **deepening democracy and decentralisation** can help in reducing inequalities.

22. Another batch of Rafale jets to fly in by mid-May

Context:

- India will receive another 8 to 9 Rafale jets from France by mid-May 2021 completing the first squadron of the fighters in the Indian Air Force (IAF).

What was the need of Rafale for India?

- The IAF has historically been one of the best-equipped forces in the region, but has seen its advantage, particularly quantitative, against China and Pakistan narrow dramatically over the past two-odd decades.
- The IAF is today faced with the **twin tasks of having to acquire technological superiority** over its two adversaries, as well as **mustering enough aircraft to head off any collusive misadventures**.
- So to withstand the pressure from Pakistan and China in case of breakout of war and to increase the number of Jets in operation this was a necessity.

Origin of Rafale

- Rafale is a French word meaning “gust of wind” and is a **French-origin Delta winged, twin-engine multirole fighter aircraft** manufactured and designed by Dassault Aviation.
- Rafale is a **Medium Multi-Role Combat Aircraft (MMRCA)** that is said to boost India’s air dominance exponentially, currently safeguarded by fighter jets like Russia made Sukhoi Su-30MKI and MiG 29, along with French Mirage-2000 and indigenously built HAL Tejas
- The initial bidders were Lockheed Martin’s F-16s, Boeing’s F/A-18s, Eurofighter Typhoon, Russia’s MiG-35, Sweden’s Saab’s Gripen and Dassault’s Rafale.
- All aircraft were tested by the IAF and after careful analysis on the bids, two of them – Eurofighter and Rafale – were shortlisted.
- Dassault bagged the contract to provide 126 fighter jets as it was the lowest bidder and the aircraft was said to be easy to maintain. After Rafale won the contract, the Indian side and Dassault started negotiations in 2012.

Specifications

- The Rafale is a modern fighter jet known for its agility, speed, weapon holding capacity and attack capability. The Dassault Rafale has a **delta wing design and is capable of g-forces** as high as 11g (in case of emergency). The Rafale is available in both single and dual seating cabin (India ordered 28 single and 8 dual seater Rafale).
- The Rafale is powered by two SNECMA M88 engines, each capable of providing up to 50 kilonewtons (11,000 pounds-force) of dry thrust and 75 kN (17,000 pounds-force) with afterburners. The engines push the Rafale to attain a high speed of 1.8 Mach (1912 kmph) and a range of more than 3700 km with 3 drop tanks.
- Dassault has also loaded the Rafale with a Martin-Baker Mark 16F “**zero-zero**” **ejection seat**, capable of operation at zero speed and zero altitude.
- In terms of weapons, the Rafale can be equipped with air-to-air missiles, air-to-ground missiles, and air-to-surface missiles along with Nuclear weapons.

For avionics, the Rafale is also equipped with AESA radar, SPECTRA Electronic Warfare System andIRST System.

- The Rafale jets will come with various India-specific modifications, including Israeli helmet-mounted displays, radar warning receivers, low band jammers, 10-hour flight data recording, infra-red search and tracking systems among others.
- The Indian government is paying top dollar to Dassault to not only modify and certify the aircraft to an exacting specification but also to **stand by its reliability in service – something that has never been done with a fighter aircraft in Indian service to date.**

Countries that are operating Rafale

- The French Air Force first operational Rafale squadron, EC 1/7 “Provence”, was stationed at Saint-Dizier airbase in 2006.
- Along with the French Military including Air Force and Navy, countries like **Egypt and Qatar** are the current operators of the Rafale MMRCA

Where will they be deployed?

- The aircraft is capable of carrying a range of potent weapons and missiles and the first squadron of the aircraft will be positioned at **Ambala air force station**, considered one of the most strategically located bases of the IAF. The Indo-Pak border is around 220 km from there.
- The second squadron of Rafale will be stationed at **Hasimara base in West Bengal.**

Key Challenges

- Unfortunately, air power is an expensive business, and in a scenario **where manpower and running costs consume the lion’s share of the budget**, the principal impediment to a comprehensive renewal of the IAF is a financial one.
- As such, lower capital costs and lower sustainment costs have to go hand in hand – it is **simply not enough to argue that expensive western aircraft make up for their high upfront costs over lifetime sustainment.**
- Enter the **indigenous option – HAL’s Tejas Light Combat Aircraft.** Domestically produced and paid for mostly in rupees, it is not only fiscally attractive but also certainly good enough to replace the IAF’s ageing MiG-21 and MiG-27 fleet as it stands.
 - However, non-compliance with a 1980s Air Staff Requirement and low production rates continue to raise questions about the type’s future.

- As reported by the Comptroller and Auditor General of India in May 2015, the Tejas Mark-I has over **53 shortfalls that reduce its operational capability**.
- Tejas failed to meet operational requirements in various areas including the power to weight ratio, sustained turning rate, maximum speeds at low altitudes, AoA range, and weapon delivery profiles.
- Notwithstanding these concerns, the **IAF has committed to a large number of an upgraded evolution of the type incorporating a range of modern improvements** such as an active array radar as well as fixes to problems identified early on, such as lack of a self-protection jammer.
 - If this variant can be delivered cheaply and quickly, it will arrest the dramatic hollowing out of the IAF that is anticipated to take place around 2024-25, by which time some 100 aircraft could be withdrawn from service.

Budgetary support

- In the middle of the French import and the domestic LCA sits a fledgling tender for a third type of fighter – a **foreign design to be made in India under the controversial Chapter 7 of the 2016 Defence Procurement Procedure (DPP)**.
- Where the **budgetary support for a programme of 114 modern fighters**, and indeed the ability of the country to establish and **sustain two fighter manufacturers, will come from is not clear**.
- Defence budgets have remained effectively flat for a long time, and with the **economy flagging, an increase in capital outlay is not likely**.
- Procurement funding will also necessarily have to compete with **funding for research and development** for upcoming domestic projects such as the redesigned LCA Mk.2 and fifth-generation Advanced Medium Combat Aircraft (AMCA).
- Finally, even if all near-term procurements proceed to plan, there is still a 'ramp up' period to contend with – the **training of air and ground crew, building of infrastructure and actually operationalising** new types will pose their own challenges that will slow the effective rate of force accretion.

In the neighbourhood

Meanwhile, the **Pakistan Air Force (PAF)** and **China's People's Liberation Army Air Force (PLAAF)** are not standing still.

- The **PAF** is saddled with a number of legacy issues that are similar to the IAF. However, with the **Sino-Pak JF-17** available cheaply and in numbers, along with access to a wide range of Chinese weaponry developed for the type,

Pakistan is well placed to recapitalise a significant proportion of its air force with a relatively modern aircraft.

- Development and production of the **JF-17 can be extended to replace the PAF's Mirage fleet** at short notice as well, if so required. And as **China ramps up its fifth-generation aircraft programmes** and unit costs drop, there is little doubt these platforms will also find their way to Pakistan.
- The **PLAAF's** growth has been well documented. And **in addition to a fourth and fifth generation** re-equipment programme, the service benefits from a large number of force multipliers, including tankers, surveillance and control aircraft, and long-range bombers.
 - While primarily oriented toward taking on the U.S. military in the Pacific and beyond, China's formidable **aerial arsenal cannot be ignored in New Delhi.**

Conclusion

- So as the IAF gets ready to welcome its new acquisitions, it should be clear about the challenges it faces at a time when India's strategic and operational environment is undergoing a dramatic transformation.
- Ad hocism should give way to strategic thinking if these challenges are to be effectively met.

23. Over 41 dead in Indonesia flash floods

Context:

According to Indonesia's disaster relief agency, landslips and flash floods from torrential rain in eastern Indonesia has killed at least 41 people and displaced thousands.

What are Flash Floods?

- A flash flood is a rapid flooding of low-lying areas: washes, rivers, dry lakes and depressions.
- It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or meltwater from ice or snow flowing over ice sheets or snowfields.
- Flash floods may also occur after the collapse of a natural ice or debris dam, or a human structure such as a man-made dam.

- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.

Concerns:

- Flash floods induce severe impacts in both the built and the natural environment. Especially within urban areas, the effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.
- There is a general lack of flash flood warning capabilities and capacities of the nations across the world.
- In 2020, India launched Flash Flood Guidance services for South Asian countries – India, Bangladesh, Bhutan, Nepal and Sri Lanka – to issue impact-based forecasting of floods, which are very sudden and of short duration, at watershed and also city level.
- The Flash Flood Guidance is a robust system designed to provide the necessary products in real-time to support the development of warnings for flash floods about 6- 12 hours in advance at the watershed level with a resolution of 4kmx4km for the Flash Flood prone South Asian countries.
- The guidance for flash floods in the form of threats (6 hours in advance) and risks (24 hours in advance) will be provided by the Regional Centre to the National Meteorological and Hydrological Services, National and State Disaster Management Authorities and all other stakeholders for taking necessary mitigation measures to reduce the loss of life and property.

24. Maintaining the inflation target at 4%

Context:

- The Finance Ministry's announcement that the **inflation target for the five years between April 2021 and March 2026 will remain unchanged at 4%**, with an upper tolerance level of 6% and a lower tolerance level of 2%.

Background:

Inflation targeting monetary policy framework:

- India had switched to an inflation target-based monetary policy framework in 2015, with the 4% target kicking in from 2016-17.

Inflation concerns:

- Moody's Analytics had recently termed **India's inflation trends "worrisome"**. It noted that the volatile food prices and rising oil prices had driven **India's consumer price index (CPI)-based inflation past the 6% tolerance threshold several times in 2020** and that core inflation trends were rising again.
- Though retail inflation has remained below 6% since December 2020, it accelerated from 4.1% in January 2021 to 5% in February.

Details:

- With inflation headwinds remaining a concern, especially with oil prices staying high, there was some speculation that the Central government, whose topmost priority now is to revive growth in the COVID-19 pandemic-battered economy, may ease up on the inflation target by a percentage point or two thus **allowing the Reserve Bank of India (RBI) to cut interest rates even if inflation was a tad higher with an aim to revive growth**.
- However, the government has desisted from increasing the retail inflation target and has left the inflation target untouched.
- The set retail inflation target will drive the country's monetary policy framework and influence its decision to raise, hold or lower interest rates.

Significance:

- **The inflation targeting monetary policy framework has worked reasonably well** in keeping inflation in check over the last five years. Experts have attributed the few recent instances when the upper target was breached to the exceptional nature of the COVID-19 shock.
- The RBI has also previously sought a continuance of the 4% target with the flexible tolerance limits of 2%. **The Central bank has asserted that accepting inflation levels beyond 6% would hurt the country's growth prospects.**
- The inflation target **helps ensure consumer friendly policies** given that appropriate measures would be taken to keep retail prices within acceptable levels.
- The move marks a continuance of the policy adopted by many developed countries which have adopted an inflation-rate focus as an anchor for policy formulation for interest rates rather than past fixations with metrics like the currency exchange rate or controlling money supply growth. Emerging economies have also been gradually adopting this approach.

25. Prudence prevails

Context

- The Union government has decided to retain India's inflation target at 4 per cent with a band of 2 per cent on either side for another five-year period, ending March 2026.

Inflation Targeting:

Background

- India adopted a flexible inflation targeting framework as a formal legal mandate of the RBI in 2016.
- The RBI Act, 1934, amended through the Finance Act of 2016, established a modern monetary policy framework with a clear objective of achieving price stability while keeping in mind the objective of growth.
 - One of the sections of the amended law requires that the inflation target, set in terms of the year-on-year change in the headline Consumer Price Index, is to be determined by the central government in consultation with the Reserve Bank of India, once every five years.
- To control the price rise, the government in 2016 gave a mandate to the RBI to keep the retail inflation at 4 per cent with a margin of 2 per cent on either side for a five-year period ending March 31, 2021.

How does it work?

- Central banks with inflation targeting regimes define their target in terms of
 - point target
 - point target with tolerance bands
 - A range.
- Countries often start with a range, and after achieving a steady state of inflation, switch to a point target or a point target with a range.

What has India adopted?

- India has adopted a point target with a range.
- These have the advantage of being precise and giving a clear signal about the central bank's objective.
 - They are also symmetric, which conveys the central bank's intention of avoiding deflation as effectively as it would avoid inflation.
- While a range provides some flexibility in the conduct of monetary policy, it also conveys that the central bank may have imprecise control over the inflation target.

Significance of Government's move to retain inflation target at 4 plus/minus 2 per cent

- In recent months, there has been a debate about revising the inflation target to allow the central bank greater leeway to cut interest rates and focus on growth in the pandemic-struck economy.
- In addition to revising the target, many commentators had suggested modifying the inflation targeting framework. There have been calls to abandon it.
- The Economic Survey argued for changing the inflation metric from headline inflation to core inflation, and thus excluding food and fuel prices which are transitory and mainly supply side factors that monetary policy cannot influence.

Despite pressures to alter the framework, the Central government announced its decision not to alter the framework.

- Changing the inflation targeting framework may have sounded like an attractive proposition but it would have created considerable uncertainty over the stance of monetary policy.
- It would have also indicated a lack of fidelity to the objective of maintaining price stability in the economy.
- The inflation targeting that India has adopted gives enough flexibility to the RBI to focus on growth without losing sight of its inflation-control objective.
- One of the features of the inflation-targeting framework is the “anchoring” of inflation expectations, any change that would have signalled greater tolerance by the interest rate-setting committee for higher levels of inflation, would have led to an increase in the volatility of prices, thereby destabilising inflationary expectations. These in turn would have a bearing on the long-term consumption and investment decisions taken by economic agents.

Conclusion

- The move will certainly reassure investors and savers that inflation remains a central concern for all policymakers.

26. 'About 52% adults not clear on defences against cybercrime'

Context:

Survey conducted by online security solutions provider **on cybercrime**.

Key Findings:

- About **52%** of adults do not know how to protect themselves from **cybercrime**.
- **59%** of the adults in India had become victims of cybercrime in the past 12 months.
- **Cybercrime victims** collectively spent **1.3 billion hours** trying to resolve these issues.
- Many fell victim to **identity theft** in the past 12 months and most are concerned about **data privacy**.
- 70% believe that **remote work has made it much easier for hackers and cybercriminals** to take advantage of people.

Cyber Security:

- Cyber security refers to **preventing any form of unauthorized and malafide access to any of the electronic digital device**.
- Cyber espionage, cyber attack, cyber terrorism and cyber warfare are various forms of Cyber-Crimes.

Cyber Volunteer Scheme

- It is the plan of the Ministry of Home Affairs to rope in around 500 persons to flag unlawful content on the Internet for “improvement in the cybercrime ecosystem of India”.
- Its aim is to make **citizens contribute to the fight against cybercrime in the country**.
- It was launched by the **Indian Cyber Crime Coordination Centre (I4C)**.
- **I4C** was established in 2018 under the Ministry of Home Affairs to act as a **nodal point at the national level in the fight against cybercrime**.
- I4C has **seven key components**.
 - National Cyber Crime **Threat Analytics** Unit,
 - National Cyber Crime **Reporting** Portal,
 - National Cyber Crime **Training** Centre,
 - Cyber Crime **Ecosystem Management** Unit,
 - National Cyber Crime **Research and Innovation** Centre,
 - National Cyber Crime **Forensic Laboratory Ecosystem** and
 - Platform for **Joint Cyber Crime Investigation**

27. Protecting children in the age of AI

The article talks about the **need for protecting the rights, privacy, and well-being of children** in a world increasingly powered by virtual reality and artificial intelligence (AI).

Details:

- AI is **shaping behaviours, preferences, perceptions** of the world and much more.
- This has led to double imperatives of **getting all children online** and **creating child-safe digital spaces**.

Significance of AI:

- AI can offer **playful and creative opportunities for children**, that promote **enhanced literacy, social skills** and **language development**.
- In the field of education, **AI can and is being used to tailor learning materials and pedagogical approaches** to the child's needs.
 - Intelligent tutoring systems, tailored curriculum plans, and imaginative virtual reality instruction offer rich and engaging interactive learning experiences that can **improve educational outcomes**.

Concerns:

Bridging the digital divide:

- **Not everyone can tap into the opportunities** offered by this transformation.
 - According to UNICEF and the International Telecommunication Union (ITU), as many as **two-thirds of the world's children do not have access to the Internet** at home.

Unsafe virtual playgrounds:

- While **video gaming and chat forums** offer an online space for children to socialise with their friends, multiple reports identify such virtual playgrounds as **honeypots for child predators**.

Digital addiction:

- As an **ancillary consequence of the underlying business model**, AI systems driving many video games and social networks are designed to **keep children hooked** through algorithms and gimmicks.
- Children, from a tender age through adolescence, are becoming **digitally addicted**.

Post Truth discourse:

- Right when children and youth are **forming their initial views of the world**, **they are being sucked into virtual deep space**, including the universe of fake news, conspiracy theories, hype, hubris, online bullying, hate speech and the likes.

Classification through AI:

- While it is important for children to understand and appreciate different perspectives, preferences, beliefs and customs, to build bridges of understanding and empathy and goodwill, **AI is sorting them into tribes, and feeding them customised information.**
- Unless the **educational and performance data on children** is kept confidential and anonymous, it **can inadvertently typecast or brand children**, harming their future opportunities.

How to balance the tremendous good AI can do for children, while mitigating inadvertent harm and misuse?

Way Forward:

- Most countries **do not yet have the legal framework** in place. There is a need to **encourage and support the tremendous good AI can do** for children's growth and development, while **simultaneously mitigating the harm.**
- The next phase of the fourth Industrial Revolution must include an overwhelming push to extend Internet access to all children.
- There is a need for norms and standards to protect children online, similar to the **evolved norms and standards to protect children in the physical world.**
- There is a need for a multi-pronged action plan with **legal and technological safeguards**, greater awareness of how AI works behind the scenes.
- Children and young people **must be equipped with the knowledge, tools and awareness** to protect themselves, considering their unique vulnerabilities.
 - Tools like **trustworthy certification and rating systems** are needed to enable sound choices on safe AI apps.
 - **Anonymous accounts must be banned.**
 - **Enforceable ethical principles** of non-discrimination and fairness embedded in the policy and design of AI systems are needed.

Conclusion:

In short, a **safe online space for children, without algorithmic manipulation and with restricted profiling and data collection is the need of the hour.** Online tools that help prevent addiction, promote attention-building skills, expands children's horizons, understanding and appreciation for diverse perspectives, and help build their social-emotional learning capabilities are important.

28. National Climate Vulnerability Assessment Report

Why in News

The Department of Science and Technology has released a report titled 'The Report Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework'.

Key Points

- **About the Report:**
 - It identifies the most vulnerable states and districts in India with respect to current climate risk and key drivers of vulnerability.
 - It aids in prioritizing adaptation investment, developing and implementing adaptation programs.
 - The assessment is unique as it uses a common framework across the states & union territory to make them comparable thereby **empowering the decision-making capabilities** at the policy and administrative levels.
 - Some **key indicators** for the assessment include percentage of population living below the poverty line; income share from natural resources; the proportion of marginal and small landholdings, women's participation in the workforce; density of healthcare workers etc.
 - It is **part of the capacity building programme** under the two missions of the **National Action Plan on Climate Change** (total 8 missions).
 - National Mission on Sustaining the Himalayan Ecosystem (NMSHE)
 - National Mission on Strategic Knowledge for Climate Change (NMSKCC).
- **Key Findings of the Report:**
 - **Highly Vulnerable States:** It identified Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal as states highly vulnerable to climate change.
 - **Lower-middle Vulnerable States:** Himachal Pradesh, Telangana, Sikkim and Punjab.
 - **Low Vulnerable States:** Uttarakhand, Haryana, Tamil Nadu, Kerala, Nagaland, Goa and Maharashtra.
 - **Highly Vulnerable Districts:** Among all states, **Assam, Bihar, and Jharkhand have over 60% districts** in the category of **highly vulnerable districts**.
 - Vulnerability scores in all the districts of India lies in a very small range. It shows that **all districts & states are somewhat vulnerable with respect to current climate risk in India.**
- **Significance of the Findings:**
 - The assessments can be used for India's reporting on the **Nationally Determined Contributions (NDCs)** under the **Paris Agreement**.

- NDCs embody efforts by each country **to reduce national emissions and adapt to the impacts of climate change.**
- These assessments will help support India's National Action Plan on Climate Change.
- It will contribute to the development of more targeted climate change projects and will support the implementation of the **State Action Plans on Climate Change.**
- It will help in developing adaptation projects for the Green Climate Fund, **Adaptation Fund and funds from multilateral and bilateral agencies.**
- It will **also benefit climate-vulnerable communities** across India through development of better-designed climate change adaptation projects.

Climate Risk

- **Climate-related extremes, such as heat waves, droughts, floods, cyclones, and wildfires,** reveal significant vulnerability and exposure of some ecosystems and many human systems to current climate variability.
- Differences in vulnerability and exposure **arise from non-climatic factors and from multidimensional inequalities** often produced by uneven development processes. These differences shape differential risks from climate change.
- According to **The Germanwatch Global Climate Risk Index-2019, India was ranked 5th out of 181 countries,** implying an extremely high exposure and vulnerability.

29. NASA's Ingenuity Mars Helicopter

Why in News

Recently, NASA's miniature **robot helicopter Ingenuity** performed a successful takeoff and landing on **Mars**. It was the **first powered, controlled flight on another planet.**

- The **first powered flight on Earth** was achieved by the **Wright brothers in 1903** in Kitty Hawk, North Carolina.

Key Points

- **About Ingenuity:**
 - Ingenuity is the **first helicopter to fly on Mars.**
 - It was carried by **NASA's rover called Perseverance** that was launched in July 2020.

- Ingenuity is able to fly using counter-rotating blades that spin at about 2,400 rpm (Rotations Per Minute).
- It has a **wireless communication system**, and is equipped with computers, navigation sensors, and two cameras.
- It is **solar-powered**, able to charge on its own.
- **Mission of the Helicopter:**
 - The helicopter's mission is experimental in nature and completely independent of the rover's science mission.
 - It will help collect samples from the surface from locations where the rover cannot reach.
- **Importance of this Flight:**
 - Its performance during these experimental test flights will **help inform decisions about small helicopters for future Mars missions** – where they can perform a support role as **robotic scouts, surveying terrain from above**, or as full standalone science craft carrying instrument payloads.
- **NASA's Perseverance Rover:**
 - Perseverance landed at the **Jezero Crater (an ancient river delta that has rocks and minerals that could only form in water)** of Mars in February 2021.
 - It will remain on the Red Planet for about two years and look for **finding past signs of life**.
 - The rover is designed to study signs of **ancient life, collect samples that might be sent back to Earth during future missions** and test new technology that might benefit future robotic and human missions to the planet.

Mars

- **Size and Distance:**
 - It is the **fourth planet from the Sun** and the **second-smallest planet** in the Solar System. It is also called '**Red Planet**'.
 - Mars is about half the size of Earth.
- **Similarity to the Earth (Orbit and Rotation):**
 - As Mars orbits the Sun, it completes one rotation every 24.6 hours, which is very similar to one day on Earth (23.9 hours).
 - Mars' axis of rotation is tilted 25 degrees with respect to the plane of its orbit around the Sun. This is similar with Earth, which has an axial tilt of 23.4 degrees.
 - Like Earth, Mars has distinct seasons, but they last longer than seasons on Earth since Mars takes longer to orbit the Sun (because it's farther away).
 - Martian days are called sols – short for 'solar day'.

- Mars has two small moons, **Phobos and Deimos**, that may be captured asteroids.
- **India's Mars Orbiter Mission (MOM) or Mangalyaan:**
 - It was launched from the Satish Dhawan Space Centre in Andhra Pradesh by **Indian Space Research Organisation** in November 2013.
 - It was launched on board a PSLV C-25 rocket with aim of studying Martian surface and mineral composition as well as scan its atmosphere for methane (an indicator of life on Mars).

30. U.S. currency watchlist an intrusion into policy: official

Context:

- Indian Commerce Secretary's statement on the **U.S. government's decision to put India on the watchlist for currency manipulators** as being an intrusion into the policy space of the central bank.

Background:

- The United States has retained India among many other countries on its currency manipulation watchlist.
 - India was added to the list for a second time in December 2020. It was first added to the list in December 2018 and later removed in 2019.

Reasons for retaining India on the watchlist:

High dollar purchases:

- The Reserve Bank of India (RBI) has purchased dollars' worth close to 5% of India's gross domestic product.

Trade surplus:

- **India enjoys a trade surplus** of \$20 billion or more with the U.S.
- India's trade surplus with the U.S. grew by about \$5 billion to **\$23 billion in 2020-21**, from around \$18 billion in the previous fiscal year, as imports fell more sharply than exports in the COVID-affected year.

India's stand:

- The RBI has been only taking necessary steps to **maintain stability in the financial markets** and not accumulating forex reserves like China did in the past.

- The central bank's activity in the foreign exchange market has been perfectly balanced and completely legitimate within the accepted monetary policy mandate of central banks across the world.
 - It is a **mandate of the central bank to provide stability in the currency** as a result of which central banks buy and sell foreign currency.
- The U.S. move to list India on the currency manipulator watchlist amounts to an **intrusion into the policy space of central banks.**

31. The long battle against the Maoists

Context:

- The recent **encounter between security forces and the Maoists** in Sukma, a Maoist stronghold in Chhattisgarh in which 22 jawans were killed.

Concerns:

- The article discusses some of the major concerns associated with the Maoist movement and the governmental efforts to counter the movement.

Determination:

- Despite several reversals in the recent past, Maoists have time and again targeted security forces at will.
- They have been able to strike at security forces and indulge in indiscriminate killing from time to time.

Objectives:

- The demands made by the Maoists apart from a call for the formation of a 'people's government', also includes an armed struggle to overthrow the popularly elected governments. These are **secessionist in nature, which no constitutionally elected establishment will ever concede to.**

Tactics:

- The Maoists continue to operate from their forest hideouts, periodically targeting security forces. They also indulge in intoxicating the local populace with **anti-establishment propaganda.**

Assistance being received by Maoists:

- The Maoists continue to **receive assistance in terms of weaponry** from various sources.

Lack of an all-out approach:

- What has worked to the Maoists' advantage is the fact that many states cannot give undivided attention to the task of eradicating extremism. All that the Central and State governments often do to step up their operations is to deploy more policemen and pour in more money and improve technology, but this has an impact only for a short span of time.
- This focus seems to dissipate over time with an element of fatigue arising in the government's efforts.

Way forward:

Developmental push:

- Many experts have put forward the argument that **rapid economic development** of a region can help lure people away from extremist ideology and also help cut the popular support that the extremists receive from the local population.

Need for dedicated leadership at local levels:

- **Andhra Pradesh, especially the Srikakulam district**, is an apt example where a developmental push has helped address the challenge posed by Naxals. A dedicated leadership at the district and grassroots levels had played a vital role in the district and there is a need to ensure a similar approach in other Naxal affected areas as well.

Inducting locals into security forces:

- Inducting local youth into the security forces would help in fighting the extremists.
 - The **Greyhounds, raised in Andhra Pradesh in 1989**, is a successful example of the induction of local youth into security forces to help counter the Naxalites.
- This would not only help the states reduce their over-dependence on Central forces but will also offer the forces some operative advantage given the locals' awareness of the local topography.

32. A low-carbon future through sector-led change

Context:

- The upcoming '**Leaders' Climate Summit**' being organised by the **United States** has led to a lot of conversation around a '**net-zero**' emissions target for all countries including developing countries like India.

Background:

- **The Intergovernmental Panel on Climate Change (IPCC) 1.5°C report called for global carbon emissions to reach net-zero by 2050.** This has led to a rising call for all countries to announce 2050 as the net-zero target year.

India's dilemma:

Developmental needs and climate justice:

- Given the historic emissions by developed countries and the fact that they have taken up a disproportionate share of the carbon space, it is fair enough to expect them to take greater ambitious targets when it comes to climate action.
- The higher targets by the more financially and technologically able developed countries will enable the developing countries to have some additional time for climate action while in the meantime they can focus on their developmental needs.
- **India should not lose sight of its own developmental needs** while taking up GHG mitigation measures. India continues to **face a significant development deficit** – India's per-capita carbon emissions are less than half the world average.

Climate vulnerability of India:

- **India is one of the most climate-vulnerable countries** and this necessitates India to up its climate action and climate ambitions.

Way forward for India:

- Given that India can neither limit itself to only modest steps until richer countries do more given the context of a global climate crisis, **nor can India go ahead and announce a 2050 net-zero commitment** taking a much heavier burden of decarbonisation than many wealthier countries, and seriously compromising India's development needs, there is the need for a more **balanced approach when it comes to climate action.**
- India should adopt a **sector-led, action-based approach** that could provide the framework to drive the **low-carbon transformation of India.**

Short term:

- India should initially focus more on near-term sectoral transformations through the **adoption of the latest technologies** that are within reach.
- India should **avoid high carbon lock-ins**.
- There is a need to focus on sectoral low-carbon development pathways that **combine competitiveness, job-creation, distributional justice and low pollution**.
- Such an approach would be directionally consistent with India moving towards net-zero emissions.

Long term:

- In the long term, India should **move towards net-zero emissions**. Over time, India can and should get more specific about future economy-wide net-zero targets and dates.

Electricity sector:

- The article discusses measures that can be taken in the electricity sector.

De-carbonizing power sector:

- De-carbonizing the electricity sector is a critical measure to achieve net-zero emissions.
 - The **electricity sector is the single largest source (about 40%) of India's greenhouse gas emissions**.

Renewable energy:

- There have been laudable efforts in the electricity sector focused on expanding renewable electricity capacity.
 - The targets have been set at **175GW of renewable capacity by 2022 and 450GW of renewable capacity by 2030**.

Coal sector:

- Apart from expanding renewables, India also needs to focus on limiting the expansion of coal-based electricity capacity.
 - **Coal accounts for almost 75% of electricity generation**.
- India should consider pledging that it will not grow its coal-fired power capacity beyond what is already announced, and reach peak coal electricity capacity by 2030, while striving to **make coal-based generation cleaner and more efficient**.

- Apart from GHG mitigation, the ceiling of coal capacity would also **aid control air pollution**. Such a pledge would also give full scope for the development of renewable energy and storage, and send a strong signal to investors.
- Considering the significance of the coal sector in the economic as well as social development, it would be necessary to create a **multi-stakeholder Just Transition Commission** representing all levels of government and the affected communities to ensure decent livelihood opportunities beyond coal in India's coal belt. This move will help ensure that the transition costs to a low-carbon future would not fall on the backs of India's poor.

Addressing the challenges of distribution companies:

- A low-carbon electricity future cannot be realised without addressing the existing problems of the distribution companies (DISCOMS). This would require **sufficient financing as well as reforms in their structure** as well as their functioning patterns.

Developing requisite technology:

- India will need to work towards becoming a leader in technologies of the future such as **electricity storage, smart grids**, and technologies that enable the electrification of other sectors such as transportation.
- This would necessitate a well-planned **partnership with the private sector**, including tools such as production-linked incentives.
- India should develop a strategic road map to enhance its own technology and manufacturing competence as part of the **global clean energy supply chain**, to gain benefits of employment and export revenues.
- India could in fact use this electricity transition to aim for job creation and global competitiveness in these key areas.

Improving energy efficiency:

- Enhancing the efficiency of electricity use is an important complement to decarbonising the electricity supply.
 - **Air conditioners, fans and refrigerators together consume about 60% of the electricity in households.**
- The energy efficiency programmes apart from looking into electrical appliances should also focus on the development of green buildings.
- In addition to reducing green house gas emissions, this would have the benefit of lowering consumer electricity bills. India can leverage this transition too as an opportunity to become a global leader in the production of clean appliances.

Conclusion:

- A similar integrated approach as discussed above should also be adopted for other sectors.
- Such a sector-by-sector approach, which can and should be developed for other sectors, can demonstrate concrete, yet ambitious, domestic action that sets India on the path toward net-zero emissions.
- Additionally, such an approach also offers the following advantages:
 - It could allow India to insist on developed countries to complement their distant net-zero targets by enacting concrete near-term measures.
 - This approach allows India to nimbly adapt its sectoral transition plans as technologies mature and enable it to **ratchet up its pledges periodically as required by the Paris Agreement**.
 - This would allow India adequate time to undertake detailed assessments of its development needs and low-carbon opportunities, the possible pace of technological developments, the seriousness of the net-zero actions by developed countries to prescribe its very own climate action pledges.

33. A fresh push for green hydrogen

National Hydrogen Energy Mission (NHEM)

A look at stats

- Currently, India consumes around 5.5 million tonnes of hydrogen, primarily produced from imported fossil fuels.
- In 2030, according to an analysis by the Council on Energy, Environment and Water (CEEW), green hydrogen demand could be up to 1 million tonnes in India across application in sectors such as ammonia, steel, methanol, transport and energy storage.

Challenges

1. First, decentralised hydrogen production must be promoted through open access of renewable power to an electrolyser (which splits water to form H₂ and O₂ using electricity).
- Currently, most renewable energy resources that can produce low-cost electricity are situated far from potential demand centres. If hydrogen were to be shipped, it would significantly erode the economics of it.
 - A more viable option would be wheeling electricity directly from the solar plant.

2. Second, we need mechanisms to ensure access to round-the-clock renewable power for decentralised hydrogen production.
 - Therefore, as we scale up to the target of having 450 GW of renewable energy by 2030, aligning hydrogen production needs with broader electricity demand in the economy would be critical.
3. Third, we must take steps to blend green hydrogen in existing processes, especially in the industrial sector.
 - Improving the reliability of hydrogen supply by augmenting green hydrogen with conventionally produced hydrogen will significantly improve the economics of the fuel.
 - This will also help build a technical understanding of the processes involved in handling hydrogen on a large scale.
4. Fourth, policymakers must facilitate investments in early-stage piloting and the research and development needed to advance the technology for use in India.
 - The growing interest in hydrogen is triggered by the anticipated steep decline in electrolyser costs.
 - India should not be a mere witness to this. Public funding will have to lead the way, but the private sector, too, has significant gains to be made by securing its energy future.
5. Finally, India must learn from the experience of the National Solar Mission and focus on domestic manufacturing.
 - Establishing an end-to-end electrolyser manufacturing facility would require measures extending beyond the existing performance-linked incentive programme.
 - India needs to secure supplies of raw materials that are needed for this technology.
 - Further, major institutions like the DRDO, BARC and CSIR laboratories have been developing electrolyser and fuel-cell technologies.
 - There is a need for a manufacturing strategy that can leverage the existing strengths and mitigate threats by integrating with the global value chain.

34. A fresh push for green hydrogen

Increasing the production of green hydrogen

- India will soon join 15 other countries in the hydrogen club as it prepares to launch the **National Hydrogen Energy Mission (NHEM)**.
- India will soon join 15 other countries in the hydrogen club as it prepares to launch the **National Hydrogen Energy Mission (NHEM)**.
- In 2030, according to an analysis by the Council on Energy, Environment and Water (CEEW), green hydrogen demand could be up to 1 million tonnes in India across **application in sectors such as ammonia, steel, methanol, transport and energy storage**.

Dealing with challenges

Several challenges in scaling up to commercial-scale operations persist. Following are five recommendations.

1) Decentralise green hydrogen production

- Decentralised hydrogen production must be promoted through **open access of renewable power** to an electrolyser (which splits water to form H₂ and O₂ using electricity).
- Currently, most renewable energy resources that can produce **low-cost electricity are situated far from potential demand centres**.
- Producing oxygen at such locations and then shipped, it would significantly **erode the economics of it**.
- A more viable option would be wheeling electricity directly from the solar plant.
- However, **the electricity tariffs could double** when supplying **open-access power across State boundaries**.
- Therefore, operationalising **open access in letter and spirit**, as envisioned in the Electricity Act, 2003, must be an early focus.

2) Ensure access to round-the-clock renewable power

- To minimise **intermittency associated with renewable energy**, for a given level of hydrogen production capacity, a green hydrogen facility will store hydrogen to ensure continuous hydrogen supply.
- Therefore, as we scale up to the target of having 450 GW of renewable energy by 2030, aligning hydrogen production needs with broader electricity demand in the economy would be critical.

3) Blending green hydrogen in industrial sector

- We must take steps to blend green hydrogen in existing processes, especially the industrial sector.

- Improving the reliability of hydrogen supply by augmenting green hydrogen with conventionally produced hydrogen will significantly **improve the economics of the fuel**.
- This will also help build a technical understanding of the processes involved in handling hydrogen on a large scale.

4) Facilitate investment

- Policymakers **must facilitate investments** in early-stage piloting and the research and development needed to advance the technology for use in India.
- The growing interest in hydrogen is triggered by the anticipated **steep decline in electrolyser costs**.
- Public funding will have to lead the way, but the private sector, too, has significant gains to be made by securing its energy future.

5) Focus on domestic manufacturing

- India must learn from the experience of the National Solar Mission and focus on domestic manufacturing.
- Establishing an end-to-end electrolyser manufacturing facility would require measures extending beyond the existing **performance-linked incentive programme**.
- India needs to **secure supplies of raw materials** that are needed for this technology.
- Further, major institutions like the **DRDO, BARC and CSIR** laboratories have been developing electrolyser and fuel-cell technologies.

Conclusion

Hydrogen may be lighter than air, but it will take some heavy lifting to get the ecosystem in place.

35. 384 rescued, 10 bodies recovered after avalanche in Uttarakhand

Context:

- Avalanche in Uttarakhand.

Background:

Avalanche:

- An avalanche is a **rapid flow of snow down a slope**, such as a hill or mountain.
- Primarily composed of flowing snow and air, large avalanches have the capability to capture and move ice, rocks, and trees.
- Avalanches can be set off spontaneously, by such factors as **increased precipitation or snowpack weakening**, or by external means such as humans, animals, and earthquakes.

Details:

- Notably, the Joshimath–Malari–Girthidobla–Sumna–Rimkhim axis area had experienced **heavy rain and snow** since the last five days, which is still continuing. This seems to have resulted in the avalanche.
- The avalanche hit a Border Roads Organisation (BRO) detachment and labour camps north of Joshimath.
- Ten bodies were recovered and 384 people rescued in the ongoing search and rescue operations. Eight persons are still unaccounted for.

36. Making oxygen

Context:

- **NASA has extracted oxygen from the carbon dioxide present in the thin Martian atmosphere.**
- The Martian atmosphere is about 95% carbon dioxide

Details:

- The unprecedented extraction of oxygen on Mars, marking the first extraction of a natural resource from the environment of another planet, was achieved by a device called **MOXIE aboard Perseverance rover of NASA.**
- **MOXIE is short for Mars Oxygen In-Situ Resource Utilization Experiment.**
- The device extracted carbon dioxide from the atmosphere on Mars and then **electrochemically split oxygen atoms from carbon dioxide molecules.** The conversion process requires high levels of heat to reach **a temperature of approximately 1,470 degrees Fahrenheit (800 Celsius).**
- The device was able to produce about 5 grams of oxygen, equivalent to roughly 10 minutes' worth of breathing for an astronaut.

Significance:

- This breakthrough could allow for **longer human stays on future manned missions to mars**.
- It would also enable the space agencies to design **lighter launch vehicles with lower payload capacities** given that future missions could prepare the required oxygen for the return journey in situ on mars.

37. Groundwater depletion may reduce winter cropping intensity by 20% in India

Context:

- New study into the problems being faced by **wheat farmers in India** with respect to productivity and sustainability.

Background:

Rabi season in India:

- The **Indian cropping season** is classified into two main seasons-Kharif and Rabi.
- Rabi crops are also known as winter crops. **The Rabi crops are sown in late October or early November and harvested in spring.**

Important crops:

- Some of the important winter crops are **wheat, barley, mustard, peas and gram** with wheat being the most important crop of Rabi season.
- **India is the second-largest producer of wheat in the world**, with over 30 million hectares in the country dedicated to producing wheat in India.

Irrigation:

- **Rabi crops require frequent irrigation** because these are grown in dry areas.
- India's three main irrigation types on winter cropped areas include **dug wells, tube wells and canals**.

Concerns:

Sustainability issues with respect to cropping pattern:

- In the green revolution era, policy-supported environment led to a **large increase in rice cultivation in north western India mainly in Punjab and Haryana** which are **ecologically less suitable for rice cultivation** due to predominantly light soils.
- This policy-supported intensive agriculture led to **unsustainable groundwater use** for irrigation and in turn groundwater scarcity.

- There was also **post-harvest residue burning** to make way for the timely sowing of wheat. This has resulted in high levels of air pollution in NCT and adjoining areas which has cropped up as a major health challenge to India.

Water scarcity and impact on agricultural sector:

- The study found that 13% of the villages in which farmers plant a winter crop are located in **critically water-depleted regions**.
- The study notes that these villages may lose 68% of their cropped area in future if access to all groundwater irrigation is lost. The results suggest that these losses will largely occur in **northwest and central India**.
- The study notes that with severe groundwater depletion, **the cropping intensity or the amount of land planted in the winter season may decrease by up to 20% by 2025**.
 - Groundwater depletion has already **reduced yields** and cropped areas in India over the last 20 years.

Unviability of alternative sources:

- The study into using canals as an alternative irrigation source and as an adaptation strategy to falling groundwater tables noted that **switching to canal irrigation has limited adaptation potential at the national scale**.

Possible impact of climate change:

- Climate change is likely to further adversely affect the future availability of groundwater resources given the **dependence of India on Monsoons** for its water resources.

Way forward:

Adaptation strategy:

- The farmers will have to adopt new or additional adaptation strategies like the following:
 - Adoption of **water-saving technologies** like sprinkler, drip irrigation
 - Switching to **less water-intensive crops** to ensure more effective use of the limited groundwater resources. Example- Shifting from crops like Rice and Wheat to crops like millets
 - Growing crops suited to the local resource base and environment.

Promoting agriculture in eastern India:

- There are enough groundwater resources supported with higher monsoon rainfall in eastern Indian states like Bihar. But due to lack of enough irrigation infrastructure, farmers are not able to make use of natural resources there.
- **Better policies in eastern India to expand the irrigation** will not only help provide an impetus to agricultural activity and agriculture productivity in this region but will also release some pressure from north-western Indian states.

38. A space for science, experiments and unity

Context:

- Russian space agency Roscosmos's chief has declared that **Russia is ready to build its own space station and launch it by 2030.**
- Further, Russian Deputy Prime minister has also said that **Russia would leave the International Space Station (ISS) by 2025.**

International Space Station (ISS):

International collaboration:

- The International Space Station (ISS) is a landmark of international cooperation in the realm of space
- For over 20 years, it has seen intense collaboration between the **NASA (U.S.), Roscosmos (Russia), ESA (Europe), JAXA (Japan) and CSA (Canada)**, and has played host to people from 19 countries since its launch in 1998.
- Ever since November 2, 2000, the ISS has seen the steady presence of human beings.

Features:

- The ISS, at a **height of about 402 km above the Earth, orbits it 16 times every day, once every 90 minutes.** It has a speed of 28,000 km per hour.

Scientific studies:

- The space station will permit quantum leaps in human **research in science, communications, and in metals and lifesaving medicines** which could be manufactured only in space.
- The following studies have been undertaken so far.

Biological:

- The first experiments on the ISS studied the **dynamics of cells under microgravity**.
- Some of the experiments being conducted by the latest expeditions include a **study of how muscles work under long-term stay under low-gravity conditions**. This experiment observes biochemical properties of muscles under long-term exposure to spaceflight. This can help in developing rehabilitation both on Earth and in Space.

Material:

- An important experiment mimics the way geckos attach themselves to surfaces, using an **adhesive** that has been shown to work in space. This can help devise methods for robots to attach themselves to surfaces and then to detach just the way geckos do.

Physics experiments:

- Some of the early physical sciences experiments related to **crystal growth**.
- Current studies involve research into **Janus particles, or particles that have two 'faces' with distinct properties** — one side is hydrophobic, while the other is hydrophilic. Studying these in microgravity reveals the **fundamental physics behind microparticle self-assembly** and the kinds of colloidal structures that can be fabricated.

39. RBI to issue cybersecurity norms for payment services

Context:

- The Reserve Bank of India (RBI) will soon issue **cybersecurity norms for payment service providers (PSPs)**.

Background:

Increasing traction of digital payment system:

- As digitisation increases in any sphere, payments or otherwise, people would be involved in more and more digital transactions.
- Digital transactions are bound to gain further traction over the coming years.

Cyber security concerns:

- There have been a **series of data breaches** faced by operators including **Mobikwik** and **payment aggregator JusPay**.

Governmental efforts:

- Given the increasing risk posed by cyber frauds, **Reserve Bank of India has issued very recently basic guidelines on cyber hygiene and cybersecurity for banks and certain NBFCs.**

Details:

- The RBI would soon also be issuing cybersecurity norms for payment service providers (PSPs).
- While the standards for fintech-driven payment services providers will be similar to cyber hygiene norms issued recently for banks and non-banking finance companies, the RBI is quite clear that firms will have to do more than observe the minimum standards to ensure safety with respect to digital transactions.

Other concern in payment services segment:

Concentration of segment share:

- Experts have also raised concerns about the **domination of two or three players in the fintech-backed retail payments space.**
 - Two apps provide about 70% of third-party services in the UPI system.
- The concentration of two or three third-party providers in this retail payments space could **give rise to competitive weaknesses.**

Counterview:

- Given the fact that the two or big tech companies in the segment are not payment system providers as such, but act as just the front-end of the system and just on board customers and **have no control on the entire UPI itself**, in that sense, there is **not so much a concern on antitrust or monopolistic tendencies.**
- Given the rising popularity of UPI, the government will have to think twice about stepping in and **controlling the market share** of two or three popular apps because that **could actually hurt absorption of this tech in the population.**

Conclusion:

- Over the next decade, the critical challenge for regulators would be to **speed up the absorption of fintech without undermining the financial system's integrity or stability** by addressing the issue of cyber security and monopolistic tendencies.

40. Reforms in the National Pension System

Context:

- Changes proposed by the Pension Fund Regulatory and Development Authority (PFRDA) to the **National Pension System (NPS)**.

Background:

National Pension System:

- The National Pension System (NPS) is a **pension and investment scheme** developed by the Government of India to provide citizens of India with long-term financial security. It offers a long-term saving option for appropriately planning one's retirement through **market-linked returns**.
- The National Pension System (NPS) started out as the **New Pension Scheme for government employees in 2004** under a new regulator called the **Pension Fund Regulatory and Development Authority (PFRDA)**. It has since been opened for individuals from all walks of life to participate.
- The **NPS has been growing in size** and now manages ₹5.78 lakh crore of savings and 4.24 crore accounts in multiple savings schemes.
 - It includes over 3.02 crore accounts as **part of the Atal Pension Yojana (APY)**, a government-backed scheme for workers in the **unorganised sector** that assures a fixed pension payout after retirement.
 - The rest of the corpus constitutes voluntary savings from private sector employees and self-employed individuals.

Changes being proposed to the NPS:

Entry and exit age limit to be modified:

- Individuals between the age group of 18 and 65 can currently enter the NPS. The regulator is planning to hike the limit to 70 years. The proposed exit age of 70 years may be increased to 75 years.
- With the **longevity increasing**, it makes sense to hike the maximum entry and exit age to 70 years and 75 years, respectively.

PFRDA planning to issue minimum assured return:

- While different schemes under the NPS **have given reasonable returns at a low fund-management cost** so far, there has been a clamour for a **guaranteed**

return product for large sections of potential investors with a high aversion to risk.

- To lure more subscribers, the PFRDA is working on strategies to launch new retirement benefit options, such as one that has a minimum assured return.
- The moment pension fund managers start giving guarantee on products, it could help **popularize pension schemes**.

Exit option to be hiked:

- **NPS contributors can withdraw 60% of their contribution after retirement, while the remaining 40% must be maintained to purchase annuity.**
- Those who accumulate only up to Rs 2 lakh by the time they reach retirement age, on the other hand, are entitled to withdraw the entire amount.
- The PFRDA is planning to hike the limit to Rs 5 lakh.
- The reason for this change is that if a subscriber has a corpus of Rs 2 lakh or less at the time of retirement, the amount provided as a monthly pension is very low.

Payout options to be flexible:

- Currently subscribers must deposit 40% of their NPS deposits with one of the 12 insurance companies that the NPS has partnered with. The regulator is planning to introduce more flexibility in this regard.
 - **Annuity rates have dropped to ranges between 5% and 6%.** Since annuities are taxable, when one factor in **taxes and inflation**, the investors will end up with a **poor return, in some cases even yielding negative returns to the investors.**
- The regulator has now proposed to give members a choice to retain 40% of their corpus with the NPS fund managers even after retirement. This, the PFRDA chief believes, will allow them to get better returns, and these savings can be paid out to members over 15 years through something like the systematic withdrawal plan offered by mutual funds.
- Separately, the regulator has decided that the annuity purchase stipulation for 40% of members' retirement corpus should be dropped altogether.

Conclusion:

- The changes proposed by the pension regulator would to **make the National Pension Scheme more appealing and help broaden its scope across India.**