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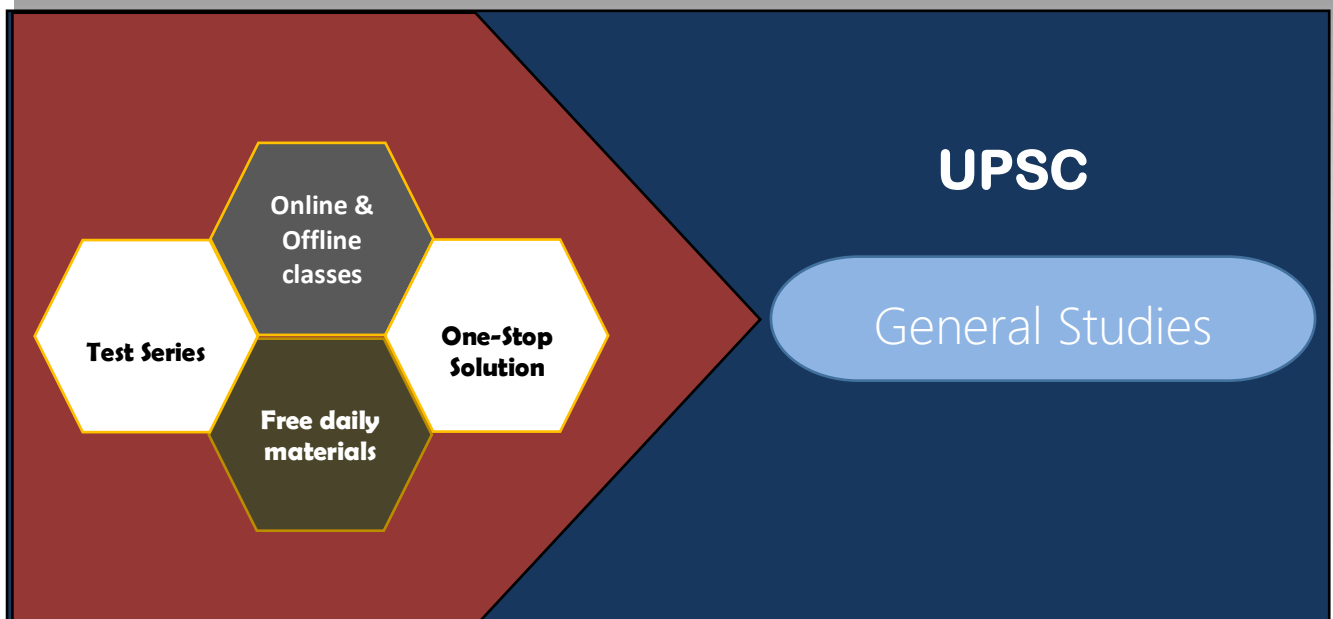
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THE HINDU & INDIAN EXPRESS**



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GS 2 : Polity, Governance, International Relations

1. BRICS succeeded up to a point but it now confronts multiple challenges

In News

The 13th BRICS summit is set to be held on September 9 in digital format under India's chairmanship

Challenges and opportunities for BRICS

- The importance of BRICS is self-evident: **it represents 42% of the world's population**, 30% of the land area, 24% of global GDP and 16% of international trade.
- **Weathering geopolitical challenges:** Member states have been carrying BRICS forward in an era of complex geopolitics.
- They have bravely continued holding dozens of meetings and summits, even as India-China relations were strained after Galwan valley incident.
- **Internal challenges:** There is also the reality of the strained relations of China and Russia with the West, and of serious internal challenges preoccupying both Brazil and South Africa.
- On the other hand, a potential bond emerged due to the battle against COVID-19.
- **Challenges to trade ties:** BRICS has been busy deepening trade and investment ties among its member states.
- The difficulty stems from **China's centrality and dominance of intra-BRICS trade flows**.
- How to create a better internal balance remains a challenge, reinforced by the urgent **need for diversification and strengthening of regional value chains**.
- **China's aggression:** Beijing's aggressive policy, especially against India, puts BRICS solidarity under exceptional strain.
- **Lack of support:** BRICS countries have not done enough to assist the Global South to win their optimal support for their agenda.

Does BRICS truly matter?

- The grouping has gone through a reasonably productive journey.
- **Acts as a bridge:** It strove to serve as a bridge between the Global North and Global South.
- It developed a **common perspective** on a wide range of global and regional issues.

- It established the **New Development Bank**; created a financial stability net in the form of Contingency Reserve Arrangement; and is on the verge of setting up a **Vaccine Research and Development Virtual Center**.

Immediate goals: 4 priorities

- As the current chair, India has outlined four priorities.
- **Reforms of multilateral institutions:** The first is to pursue **reform of multilateral institutions** ranging from the United Nations, World Bank and the International Monetary Fund to the World Trade Organization and now even the World Health Organization.
- Reform needs global consensus which is hardly feasible in the current climate of strategic contestation between the U.S. and China and the devastation caused by COVID-19.
- Nevertheless, Indian officials rightly remind us that BRICS emerged from the desire to challenge dominance (by the U.S.) in the early years of the century, and it remains committed to the goal of **counter-dominance (by China) now**.
- **Combating terrorism:** Tragic developments concerning Afghanistan have helped to focus attention sharply on this overarching theme, stressing the need to bridge the gap between rhetoric and action.
- China, for example, feels little hesitation in supporting clear-cut denunciations of terrorist groups and supports Pakistan, which is host to several international terrorist groups.
- BRICS is attempting to pragmatically shape its counter-terrorism strategy by crafting the **BRICS Counter Terrorism Action Plan**.
- **Counter Terrorism Action Plan** contains specific measures to fight radicalisation, **terrorist financing and misuse of the Internet** by terrorist groups.
- **Technology and digital solution:** Promoting technological and digital solutions for the Sustainable Development Goals and expanding people-to-people cooperation are the other two BRICS priorities.

Conclusion

It is necessary for leaders, officials and academics of this grouping to undertake serious soul-searching and find a way out of the present predicament.

2. Freedom of Movement and Residence

In News : The rights to free movement and residence across India cannot be curtailed on flimsy grounds, a Bench of Justices Indira Banerjee and V. Ramasubramanian held in a judgment.

Freedom of Movement and Residence

- Article 19(1)(d) and (e) of the Indian Constitution guarantees to every citizen of India right to move freely throughout the territory of India and to reside and settle in any Part of the of the Territory of India.
- This right is subject to reasonable restrictions imposed by law in the interest of the general public or for the protection of the interests of any Scheduled Tribes.

(A) Freedom of Movement under Article 19(1)(d)

- All Citizens of India have the right “to move freely throughout the territory of India.
- This Right is, however subject to reasonable restrictions mentioned under Article 19(5).

Restrictions:

- This clause (5) empowers the State to impose reasonable restrictions in the interest of the general public or for the protection of the interest of any Scheduled Tribe.
- **Kharak Singh V. State of UP (1963) Case:** The Supreme Court held that the right to move freely throughout the territory of India means the right of locomotion which connotes the right to move wherever one likes, and however one likes.
- **State of UP V. Kaushalya Case (1964):** In this case, the Supreme court held that the right of movement of prostitutes may be restricted on grounds of Public Health and in the interest of Public Morals.

(B) Freedom of Resident under Article 19(1)(e)

- Article 19(1)(e) of the Indian Constitution guarantees to every citizen of India, the right “to reside and settle in any part of the territory of India”.
- This right is subjected to reasonable restrictions which may be imposed by the State in the interest of the general public or for the protection of the interest of any Scheduled Tribe.

Some facts

- The Freedom of Movement and Residence apply only to citizens of India and not the Foreigners.
- A foreigner cannot claim the right to reside and settle in the country as guaranteed by Article Article 19(1)(e).
- The Government of India has the power to expel foreigners from India.

Why in news, now?

- The Supreme Court has held that the power of the State to pass an externment order or a direction barring certain people entry to specified areas should be exercised only in “exceptional cases”.
- The court said externment orders have their use in maintaining law and order.
- However, they cannot be employed as a vindictive or retaliatory measure.
- The drastic action of externment should only be taken in exceptional cases, to maintain law and order in a locality and/or prevent breach of public tranquility and peace, the court noted.

3. India observing ties between Taliban and Pakistan

In News :

- Taliban after having taken over Afghanistan, has been reaching out to several countries for establishing ties, India being one of them. In this regard, the **head of the Taliban’s Political Office in Doha met India’s envoy to Qatar.**
- The meeting gains significance in the context that this happens to be the **first such formal communication between India and Afghanistan.**
- Despite some hope of the normalization of ties between India and a Taliban controlled Afghanistan, the **future of this relationship will depend upon the ties between the Taliban and Pakistan.**

Details:

Pakistan - Taliban ties:

- **Pakistan had offered the Taliban support** in terms of shelter and resources when it was ousted from power post the U.S. attack on Afghanistan. In this regard, Pakistan has long been asserting the special bond between Pakistan and the Taliban. **Pakistan’s establishment has unparalleled leverage over the Taliban.**
- Intelligence sources have pointed out the strong support offered by Pakistan to the Taliban in its offensive against the elected civilian government and subsequent takeover of power in Afghanistan.
- The closeness between Pakistan and Afghanistan does not augur well for India, given that **Pakistan might use its influence with the Taliban to undermine India’s strategic depth in Afghanistan** and also use Afghanistan as a base for launching anti-India terror operations.

Areas of differences between Pakistan and Taliban:

- **The Durand line** which remains contested between Pakistan and Afghanistan is a sensitive issue for the Pashtun community that resides in both Afghanistan and Pakistan. Taliban has several times stated that it will work towards protecting Afghanistan's interests in this regard.
 - The Durand Line is the international land border between Afghanistan and Pakistan.
 - It demarcates Khyber Pakhtunkhwa and Balochistan and Gilgit-Baltistan of northern and western Pakistan from the northeastern, eastern, and southern provinces of Afghanistan.
 - The Durand Line divides ethnic Pashtuns, who live on both sides of the border.

Also, the **rise of the Taliban in Afghanistan may influence the restive Pashtun population in Pakistani territory** which could find some support from the Taliban. This could become a sore point between Pakistan and the Taliban.

Kashmir issue:

- In what would be comforting for India, the Taliban's spokesperson recently stated that **Kashmir is an issue between India and Pakistan and it would not interfere** in this regard. This gains all the more significance amidst fears that anti-India terror organizations might use Afghanistan as a base to launch attacks on India's Jammu and Kashmir.

Conclusion:

- The Taliban has adopted sophisticated messaging for **independently reaching out to major countries**, which constitutes a major departure from its earlier approach. This explains the **Taliban's attempts to project itself as a free player** and not be seen as completely dependent on countries like Pakistan. This development augurs well for India.

4. Additional Tier 1 Bonds

Context:

Recently, **State Bank of India (SBI)** has raised **Rs. 4,000 crore** of the **Basel compliant Additional Tier 1 (AT1) bonds** at coupon rate of 7.72%.

- This is the **first AT1 Bond issuance in the domestic market** post the **new SEBI regulations**.
- This is also the **lowest pricing ever offered on such debt** issued by any Indian bank since the implementation of **Basel III capital rules** in 2013.

Bonds

- Bonds are units of **corporate debt** issued by **companies and securitized as tradable assets**.
- A bond is referred to as a **fixed-income instrument** since bonds traditionally paid a fixed interest rate (coupon) to debtholders. **Variable or floating interest rates** are also now quite common.
- **Bond prices are inversely correlated with interest rates:** when rates go up, bond prices fall and vice-versa.
- They **have maturity dates** at which point the principal amount must be paid back in full or risk default.

Key Points

- **About:**
 - AT1 bonds, also called **perpetual bonds**, carry **no maturity date** but have a call option. The issuer of such bonds **may call or redeem the bonds if it is getting money at a cheaper rate**, especially when interest rates are falling.
 - They are like **any other bonds issued by banks and companies**, but pay a slightly **higher rate of interest compared to other bonds**.
 - Banks issue these bonds to **shore up their core capital** base to meet the Basel-III norms.
 - These bonds are also **listed and traded on the exchanges**. So, if an AT-1 bondholder needs money, he **can sell it in the secondary market**.
 - Investors **cannot return these bonds to the issuing bank** and get the money. i.e there is **no put option available to its holders**.
 - **Banks issuing AT-1 bonds can skip interest payouts** for a particular year or even reduce the bonds' face value.
- **Regulated By:**
 - **AT-1 bonds are regulated by the Reserve Bank of India (RBI)**. If the RBI feels that a bank needs a rescue, it can simply ask the bank to write off its outstanding AT-1 bonds without consulting its investors.

Basel III Norms

- It is an **international regulatory accord** that introduced a set of reforms designed to improve the regulation, supervision and risk management within the banking sector, post 2008 financial crisis.
- Under the Basel-III norms, banks were asked **to maintain a certain minimum level of capital** and not lend all the money they receive from deposits.

- According to Basel-III norms, banks' regulatory capital is divided into **Tier 1 and Tier 2**, while Tier 1 is subdivided into **Common Equity Tier-1 (CET-1) and Additional Tier-1 (AT-1) capital**.
 - Common Equity Tier 1 capital includes **equity instruments where returns are linked to the banks' performance** and therefore the performance of the share price. They have no maturity.
 - Together, **CET and AT-1 are called Common Equity**. Under Basel III norms, minimum requirement for Common Equity Capital has been defined.
- Tier 2 capital consists of **unsecured subordinated debt with an original maturity of at least five years**.
 - According to the **Basel norms**, if minimum **Tier-1 capital falls** below 6%, it allows for a write-off of these bonds.

5. India at BRICS Digital Health Summit

In News :

Digital Health has become the priority in wake of COVID 19 Pandemic. The two waves presented us with unique challenges for which an effective and humane centralized response sensitive to regional needs was warranted. The Digital health was aptly utilized to manage the pandemic and enabled us for a much more scientific and data driven approach for strengthening our response. India's **National Digital Health Blueprint** is an overarching architectural framework for digital initiatives of Health in India. We are implementing the recommendations for streamlining the digital health programmes through **National Digital Health Mission (NDHM)**.

- NDHM through the issue of Unique Health ID will create a single source of truth for facilities and practitioners and lead to extension of various health services through digital mode. India's immediate field level priorities for creating an ecosystem of Digital Health includes Hospital Management Information System (HMIS) implementation in all district hospitals for real time clinical management, affordable and accessible medical consultation to every citizen through telemedicine and establishing a framework for health disaster management integrating all stakeholders.
- On the creation of a pool of human resource for managing pandemic digitally, the Minister showcased how India **leveraged iGoT (online training platform)** to train more than 16 million COVID warriors across the spectrum to manage COVID which includes doctors, paramedic, nurses, community participants etc.

- BRICS digital health platform is the need of the hour to ensure health data availability across BRICS countries in an interoperable manner to ensure continuum of care
- India has priorities towards full adoption of digital health technologies at all levels and BRICS's strategy in building a cadre of competent health informatics professionals using a standardized curriculum across BRICS countries.
- India's expectations from the development of a repository of evidence based digital technologies and innovations for health systems (under BRICS) and India's strategic approach to sustain the gains from use of digital innovations during COVID-19 in a sustainable manner towards building health systems resilience was also discussed.
- Ability of the platform to leverage existing organizations and their experience like Global Digital Health Partnership, World Health Organization, G20 etc. and policy advocacy for wider as well as appropriate adoption of Digital Technologies not limiting to BRICS Countries was envisioned as India's key expectation from this platform.
- We initiated a robust mechanism through a national Covid portal which integrated surveillance, testing, logistic management, data driven analytics etc.
- We popularized Arogya Setu and **ITIHAS application - Digital Surveillance Application** to source data from citizens and to predict the upcoming hotpots in the community.
- Arogya Setu became one of the most downloaded application with more than 201 million downloads.
- Similarly, to take health services to the doorstep of citizen, we are augmenting the **National telemedicine platform (eSanjeevani) of India** and establishing telemedicine HUBs with dedicated doctors in all Districts. The HUBs will serve all facilities in their region, for both Covid & non Covid health care support.
- India is leveraging the Disease Surveillance Programme through an Integrated Health Information Platform which source real time data from facilities on 33 Epidemic Prone Diseases for community surveillance. India is undertaking the World's largest vaccine drive and the whole effort is being managed through digital tool, Co-WIN (Winning over COVID).
- **Co-WIN has been declared as a global good by Government of India** for adoption by any country for managing their vaccination drive, not only limiting to COVID but for conventional immunization also.
- In presence of honorable Health Ministers of BRICS nations, **BRICS Digital Health Declaration** was adopted.
- **India being the host of the BRICS Digital Health Summit**, the conclave was presided by Union Health Secretary Shri Rajesh Bhushan who brought focus to the wide adoption of digital health in the COVID-19 Pandemic on the

spectrum that includes population surveillance, active case finding, communication with common citizens in crisis.

- The embarking of nations on digital technology in embracing primary universal health coverage was highlighted.

6. IT Rules 2021 for Social Media & OTT Platforms

Context :

- The government has notified guidelines to provide a **grievance redressal mechanism** for users of digital platforms of all kinds – **social media sites, messaging apps, over-the-top (OTT) streaming services, and digital news publishers.**
- The **Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021** also mandate that social media and messaging platforms will have to adhere to new requirements in assisting investigative agencies of the government.

Rules for Social media intermediaries

Although there is no single set of rules that uniformly applies to the different kinds of digital platforms.

- **Grievance Officer: Social media platforms** like Google or Facebook, or intermediaries, for instance, will now have to appoint a grievance officer to deal with users' complaints.
- **Chief Compliance Officer:** There are additional requirements on '**significant' social media intermediaries** – meaning the platforms whose registered users in India are above the threshold notified by the government. Such intermediaries have to appoint a 'Chief Compliance Officer', who will have to ensure that the rules are followed; the officer "shall be liable in any proceedings relating to any relevant third-party information, data or communication link made available or hosted by that intermediary".
- **Nodal contact person:** The intermediaries will also have to appoint a nodal contact person for 24x7 coordination with law enforcement agencies.
- **Identification of 1st originator:** The other key requirement is that such a social media intermediary would have to "enable the identification of the first originator of the information on its computer resource" as may be required by a **judicial order.**
 - In other words, a problematic message, that is considered "an offence related to the sovereignty and integrity of India, the security of the State, friendly relations with foreign states, or public order, or of incitement to an offence relating to the above or in relation with rape,

sexually explicit material or child sexual abuse material”, will have to be traced to its initiator on messaging applications like WhatsApp and Signal.

Rules for digital publishers

- **3 tier Grievance Redressal mechanism:** For digital publishers of **news and current affairs** as well as **video streaming services**, an identical three-tier structure for grievance redressal has been mandated.
 - This structure will look into grievances in relation to a **Code of Ethics**, which is listed in the appendix to the rules.
- **Code of Ethics:** Among other things, the Code of Ethics includes the **‘Norms of Journalistic Conduct’** as prescribed by the **Press Council of India**, as also **content that shall not be published** – “content which is prohibited under any law for the time being in force shall not be published or transmitted”, and the **Programme Code** under the **Cable Television Networks (Regulation) Act, 1995**.
- **Classification of content:** The guidelines also require streaming services to classify content based on its nature and type.
 - So, for instance, content “for persons aged 16 years and above, and can be viewed by a person under the age of 16 years with parental guidance shall be classified as U/A 16+”.

Context in which these rules have been framed

- The issue came up last year when the Supreme Court was hearing a case involving **Sudarshan TV**.
- In the course of the case, it asked the government for suggestions to improve the **self-regulatory mechanism for electronic media**. The government, in its affidavit, highlighted the need to regulate web-based media.
- There has also been a face-off between the government and Twitter in recent weeks over the social media platform’s non-compliance with its order to block several hashtags and handles of journalists, activists and politicians in the backdrop of the ongoing farmers’ protests. Twitter eventually complied, though not fully.
- Questions about how social media platforms can be made accountable for the **spread of fake news and pornographic content** have been raised in Parliament and by the Supreme Court in recent years, something that has been highlighted by the government in its release as well.

What has changed from earlier?

- The scope of regulation of the digital space has been expanded.
- The new guidelines not only **replace the Information Technology (Intermediaries Guidelines) Rules, 2011**, but go a step further.
- They also **regulate digital news publishers and streaming services**, which was not the case earlier. The 2011 rules were a narrower set of guidelines for intermediaries.
- Under **Section 79 of the Information Technology Act**, the intermediaries are not liable for user-generated content, provided they adhere to the rules – “an intermediary shall not be liable for any third-party information, data, or communication link made available or hosted by him,” it states. These rules have been tightened now.

Why the rules being criticised?

- **Strict government regulation:** For digital news media, these guidelines will subject it to governmental regulation in a way.
 - The three-tier structure of regulation will entail oversight by a government committee at the highest level. Any grievance that does not get satisfactorily solved at the self-regulatory levels will get escalated to the government panel.
 - The **Internet Freedom Foundation (IFF)**, a digital liberties organisation, refers to this as “excessive governmental control over digital news and OTT content”.
- **Traceability of Originator:** The other rule that has been criticised by the IFF is the requirement of traceability of the originator of a problematic message.
 - The news guidelines do suggest that this will not be required “where other less intrusive means are effective in identifying the originator of the information”.
 - **Censorship and surveillance:** The rules have also been criticised for increasing the potential for censorship and surveillance.

7. Afghan exit- not the end of the road for the U.S.

In News

The debate has abruptly shifted to the future of the United States after its withdrawal from Afghanistan.

Background of the US presence in Afghanistan

- The terrorist attacks of 9/11, which was a game-changing global experience, led the U.S. to enter Afghanistan.
- The terrorist attacks transformed the geopolitics of the world.

- The most powerful country in the world, which had the capacity to destroy the world many times over, became powerless before a few terrorists.
- Once the responsibility of the attack was traced to Osama bin Laden and the terrorists in Afghanistan, it was imperative for the U.S. to retaliate by overthrowing the Taliban regime.

How US presence in Afghanistan benefited the region

- After accomplishing its mission the US was not able to withdraw because the Afghanistan government was unable to withstand the onslaught of the Taliban and other terrorist groups.
- Even **neighbouring countries, including India**, were strongly in favour of continuing the American presence.
- The US presence helped to provide a certain **stability for Afghanistan**.
- The result of their presence was the **prevalence of relative peace in the region** except that Pakistan fattened the Taliban with American largesse.
- The U.S. presence in Afghanistan had succeeded in **containing the dangers of terrorism for two decades**.

Way forward for the US and the rest of the world

- The US is still the most powerful economic and military power around which the whole constellation of the world rotates.
- **Democratic world leadership:** The world has a stake in ensuring that a democratic nation leads the world rather than an expansionist dictatorship which has no public opinion to restrain it.
- **Maintain the US leadership:** The free world has a responsibility to maintain the American leadership of the world till a wiser and more benign alternative is found.

Conclusion

Much has been written about a post-American world for some years now. But it looks that the demise of America, as Mark Twain said about the reports of his own death, is greatly exaggerated.

8. 'Breakthrough' infections a concern?

In News:

- In the light of the rise in daily COVID-19 infections in states such as Kerala and Maharashtra, which are among the States with a high rate of vaccination, there are growing concerns about the rise in 'breakthrough infections'.

- Internationally, too Israel and the U.S., despite high vaccination coverage, continue to report fresh cases.

Breakthrough infections:

- A case of Covid-19 that arises in someone who's been fully immunized – that is, 14 days after their final dose of the vaccine – is known as a breakthrough infection. The term implies that the virus “broke through a protective barrier provided by the vaccine.”
- The two-week window is the time it takes for the body to produce necessary antibodies following a shot of the vaccine.

Role of variants:

- The new variants of the coronavirus- Delta variant, Delta-Plus and Kappa variant seem to be leading to the breakthrough infections. These mutations mostly help the virus escape detection by antibodies.

Concerns:

- Vaccines are being labelled as the ultimate tool against the COVID-19 pandemic. However, the breakthrough infections have lead to questions on the efficacy of the vaccines.
- The bigger concern, however, is that those with a ‘breakthrough infection’, under the belief that they are fully protected, may be less stringent with using masks and could be carriers of infection.

Need for continued emphasis on vaccination:

- Notably, the infection rate is much higher in the unvaccinated population rather than the vaccinated population. Hence increasing vaccination coverage will no doubt help arrest the spread of the pandemic.
- There is evidence that vaccination may make illness less severe for those who are vaccinated and still get sick. The risk of infection, hospitalization, and death are all much lower in vaccinated compared to unvaccinated people. Breakthrough infections are not translating into serious disease requiring hospitalisation.

8. Reservation in promotions to persons with disabilities

In News The Supreme Court has asked the Centre to issue instructions “at the earliest and not later than four months” for giving reservation in promotions to persons with disabilities (PwDs).

- In a January 14, 2020 judgment of the apex court confirming that PwDs have a right to reservation in promotions. The judgement is famously known as Siddaraju v/s State of Karnataka.
- It said instructions should be issued in accordance with Section 34 of the Rights of Persons with Disabilities Act, 2016.
 - It provides that “every appropriate government shall appoint in every government establishment not less than 4% of the total number of vacancies in the cadre strength in each group of posts meant to be filled with persons with benchmark disabilities.

Siddaraju v/s State of Karnataka case

- In the case of Siddaraju v/s State of Karnataka, the Supreme Court affirmed the Reservation of Persons with Disability (PWDs) under the Rights of Persons with Disabilities Act, 2016. In the given case, the decision given under Indra Sawhney’s Case was reconsidered.
- The Court was of the view that the basis for providing reservation for PWD is a physical disability and not any of the criteria forbidden under article 16(1).
- Further, the reservation of persons with disability has nothing to do with 50% ceiling. Therefore, the rule of no reservation promotions as laid down in Indra Sawhney has clearly and normatively no application to persons with disability.

Other landmark judgements with regard to Reservation in promotion

- In the **Indira Sawhney case (1992)**, SC held that the reservation policy cannot be extended to promotions.
- However, the **77th Constitutional Amendment** inserted clause 4A in article 16 and restored provision of reservations in promotions.
- In **Nagaraj judgement (2006)**, Court laid down three controlling conditions that the state must meet prior to granting SC/ST a reservation in promotion:
 - state must show that backwardness of the class
 - class is inadequately represented in position or service
 - reservations are in the interest of Administrative efficiency
- In **Jarnail Singh case (2018)**, it struck down the demonstration of backwardness provision from Nagaraj judgement.

9. Caste census

In News :

The Union government last week told the Supreme Court that the **caste-based** data enumerated in the **Socio-Economic Caste Census (SECC) of 2011** was “unusable”, but in 2016, the **Registrar-General and Census Commissioner of India** had

informed the Standing Committee on Rural Development that 98.87% of the data on individual caste and religion was “error free”.

Why the data is “unusable” according to the government?

- The government had said that the total number of castes surveyed in 1931 was 4,147, while the SECC figures show that there are more than 46 lakh different castes. Assuming that some castes may bifurcate into sub-castes, the total number can not be exponentially high to this extent.
- The entire exercise was corrupted because the enumerators had used different spellings for the same castes. In many cases the respondents, the government said, had refused to divulge their castes.

How have caste details been collected so far?

1. While **SC/ST details are collected as part of the census**, details of other castes are not collected by the enumerators. The main method is by **self-declaration** to the enumerator.
2. So far, **backward classes commissions** in various States have been conducting their own counts to ascertain the population of backward castes.

SECC 2011

The **Socio-Economic Caste Census of 2011** was a major exercise to obtain data about the socio-economic status of various communities.

- **It had two components:** a survey of the rural and urban households and ranking of these households based on pre-set parameters, and a caste census.
- However, only the details of the economic conditions of the people in rural and urban households were released. **The caste data has not been released till now.**

Difference between Census & SECC:

- The Census provides a portrait of the Indian population, while the SECC is a tool to identify beneficiaries of state support.
- Since **the Census falls under the Census Act of 1948**, all data are considered confidential, whereas all the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households.

Pros of caste census:

The precise number of the population of each caste would help tailor the reservation policy to ensure equitable representation of all of them.

Concerns associated:

- There is a possibility that it will lead to heartburn among some sections and spawn demands for larger or separate quotas.
- It has been alleged that the mere act of labelling persons as belonging to a caste tends to perpetuate the system.

10. Illicit Proliferation of networks of N-weapons

India has underlined the need for the international community to pay closer attention to the “illicit proliferation” of networks of nuclear weapons, their delivery systems, components and relevant technologies.

Key takeaways from India’s remarks

- India’s remarks appeared to be a veiled reference to China and its “all-weather ally” Pakistan.
- China’s nuclear cooperation with Pakistan was in contravention with the Nuclear Suppliers Group (NSG).
- Several concerns have been raised over the export of nuclear materials to Islamabad by Beijing and that they are in violation of international norms and established procedures.

Issues in Nuclear Disarmament

- **Notion of Nuclear ‘Haves’ and ‘Have-Nots’:** The proponents of disarmaments are themselves nuclear armed countries thus creating a nuclear monopoly.
- **Concept of Peaceful Nuclear Explosion (PNE):** conducted for non-military purposes such as mining.

India’s commitment for de-nuclearization

India has always batted for a universal commitment and an agreed global and non-discriminatory multilateral framework.

- It has outlined a **working paper on Nuclear Disarmament** submitted to the UN General Assembly in 2006.
- India participated in the **Nuclear Security Summit** process and has regularly participated in the International Conferences on Nuclear Security organised by the International Atomic Energy Agency (IAEA).
- India is also a member of the **Nuclear Security Contact Group** (but has signed off the Nuclear Non-Proliferation Treaty (NPT)).

- India has expressed its readiness to support the commencement of negotiations on a **Fissile Material Cut-off Treaty (FMCT)**.
- India couldn't join the **Comprehensive Nuclear-Test-Ban Treaty (CTBT)** due to several concerns raised by India.
- India has piloted an annual UNGA Resolution on "**Measures to Prevent Terrorists from Acquiring Weapons of Mass Destruction**" since 2002, which is adopted by consensus.

Why didn't India join NPT?

- India is one of the only five countries that either did not sign the NPT or signed but withdrew, thus becoming part of a list that includes Pakistan, Israel, North Korea, and South Sudan.
- India always considered the NPT as discriminatory and had refused to sign it.
- India maintains that they are selectively applicable to the non-nuclear powers and legitimised the monopoly of the five nuclear weapons powers.

Way forward

- India has actively supported and contributed to the strengthening of the global nuclear security architecture.
- There is a need for the international community to pay closer attention to the illicit proliferation of networks of nuclear weapons, their delivery systems, components and relevant technologies.
- India hopes that the international community will continue to work towards realising our collective aspiration for a nuclear weapon-free world.

11. Government Aid is not a Fundamental Right

According to the Supreme Court, the right of an institution, whether run by a majority or minority community to get government aid is not a fundamental right.

- Both have to equally follow the rules and conditions of the aid.

Major Highlights:

- **Article 30(2)** States that, an institution is under the minority, whether based on religion or language, grant of aid to that educational institution cannot be discriminated against, if other educational institutions are entitled to receive aid.
- If the government made a policy call to withdraw aid, an institution cannot question the decision as a "**matter of right**".

- A grant of government aid comes with accompanying conditions. An institution is free to choose to **accept the grant with the conditions** or go its own way.
- An institution can **never be allowed** to say that the grant of aid should be on its own terms.

Why institutions cannot do so?

- Government aid is a **policy decision**. It depends on factors including the interests of the institution and the ability of the government to understand the exercise.
- **Financial constraints** and deficiencies are the factors which are relevant in taking any decision.
- Right to get an aid is not a **fundamental right**, the challenge to a decision made in implementing it, shall only be on restricted grounds.
- When a policy decision is made to withdraw the aid, an institution **cannot question** it as a matter of right.

What is Article 30?

- **Article 30** of the Indian Constitution states the right of minorities to establish and administer educational institutions.
- **It says:** "All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice."
- It was adopted on December 8, 1948.

Features:

1. **Article 30(1)** says, all minorities whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.
2. **Article 30(1A)** deals with the fixation of the amount for acquisition of property of any educational institution established by minority groups.
3. **Article 30(2)** states that, the government should not discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language, while giving aid.

12. The Quad could end up running out of steam

Issue:

- With the announcement of the new Australia-U.K.-U.S. (AUKUS) trilateral security partnership, Quad faces the danger of becoming irrelevant if it does not shape up.

- The announcement of the AUKUS and the recent outcome of the Quad summit indicate that AUKUS will go on to form a key security arrangement of the Indo-Pacific region.
- This might potentially push the Quad to the background in a struggle for attention, political will, and resources.

AUKUS:

- The U.S. President announced the new Australia-U.S.-Britain (AUKUS) defence alliance, extending U.S. nuclear submarine technology to Australia as well as cyber defence, applied artificial intelligence and undersea capabilities.
- AUKUS is a trilateral security pact between Australia, the United Kingdom, and the United States.
- The United States and the United Kingdom will help Australia to develop and deploy nuclear-powered submarines, adding to the Western military presence in the Pacific region.

Implications of AUKUS on the Quad:

- AUKUS may not replace the Quad and yet it appears that AUKUS has ventured where the Quad has been reluctant to make forays into – the military domain.
- AUKUS also exposes the inherent, also self-imposed, limits of the Quad, i.e., its inability and lack of desire to give itself any military role.
- The focus of the recently-held Washington summit, on challenges ranging from COVID-19 to climate, shows that the Quad is unlikely to take a security-dominated turn.
 - This is precisely the vacuum AUKUS seeks to fill.

AUKUS seems to have taken the focus away from the Quad.

Is QUAD losing its steam?

- AUKUS may have further shrunk the potential space available for the Quad, and India, to play a serious role in the region's security architecture.
- Quad seems to offer no clear purpose which, as a result, leads to too many items crowding the agenda.
- It neither has a secretariat or a charter, like the Shanghai Cooperation Organisation (SCO), nor a clear set of activities such as AUKUS.
- The ever-growing list of focal areas of the Quad will eventually make it a less than useful deliberative forum.
- While the Quad members have security/military considerations in mind vis-à-vis China while engaging the Quad platform, no one seems to be keen on framing it in such a manner.

- There is little interest in properly institutionalising the Quad nor has the objective for 'Quad Plus' been purposefully pursued.

Given this context, if AUKUS potentially overshadows the enthusiasm around the Quad, it would be disadvantageous to India's interests in the Indo-Pacific region.

Way Forward:

- Indo-Pacific is of great importance to India.
- Given the continental challenges it faces including from the new developments in Afghanistan, India should focus on shifting some attention to the maritime sphere as well.
- At a time when India is continentally in a difficult situation, an opportunity has presented itself for India – in the form of growing global interest in the Indo-Pacific – to be at the centre of a new geopolitical churning which it must make use of for its own security and prosperity.
- QUAD is a major way of bringing together like-minded states to check Chinese hegemony in the region.
 - Other Quad countries are either on the AUKUS or are alliance partners; India is neither.

It is possible to explore military utility for the Quad without making it a formal military alliance. More so, exploring mutually beneficial military and security cooperation within the Quad framework need not contradict the principles of strategic autonomy.

13. Beijing-Lhasa expressway

In News

China has completed a key section of the Beijing-Lhasa expressway, a 295-km stretch from Lhasa to Nagqu.

Details:

- The recently completed section is located at an average altitude of 4,500 metres above sea level, which Chinese media have termed the world's highest expressway.
- Earlier, China had launched a high-speed bullet train connecting Lhasa with Nyingchi, a strategically located Tibetan town located close to Arunachal Pradesh.

China's Border Infrastructure push – Strategic significance:

- The strategically significant highway **through the world's deepest canyon** is in Tibet along the Brahmaputra river.

- It passes through the Grand Canyon of the Yarlung Zangbo river, as the Brahmaputra is called in Tibet.
- It enables greater access to remote areas along the disputed border with Arunachal Pradesh in India.
- The construction began in 2014 and is part of a wider infrastructure push in border areas in Tibet.

In November 2020, China began work on a strategically important railway line – its second major rail link to Tibet that will link Sichuan province with Nyingchi.

- The first one was the Qinghai-Tibet railway that opened in 2006.
- The Chinese President called it a major step in safeguarding national unity and a significant move in promoting the economic and social development of the western region.
- The railway would act as a 'fast track' for the delivery of strategic materials in the time of crisis.

Another part of the border infrastructure push is the construction of new civilian settlements, along with the expansion of existing smaller hamlets, along border areas, some of which lie in disputed territories claimed by India and Bhutan, to strengthen China's control over the land.

In 2017, the Tibet Autonomous Region (TAR) government launched a plan to build moderately well-off villages along China's borders with India, Bhutan and Nepal.

Concerns:

- In 2020, satellite images emerged showing a new village called Pangda built 2-3 km into what Bhutan sees as its land.
- In 2021, a village built 4-5 km into what India sees as its territory in Arunachal was seen via satellite images.
 - Indian officials said this land has been under China's effective control since 1959 and there were military barracks there earlier.

Conclusion:

- The civilian settlements, along with the new infrastructure connectivity, are seen as aimed at bolstering China's control over the areas.

14. Flood management that cannot be watered down

Over the years, many of Bihar's districts have been facing serious challenges with recurrent and massive flooding. It is the right time to look at some of the key aspects of India-Nepal flood management.

Simultaneous floods in Bihar and Nepal

- Some of Nepal's biggest river systems originate in the Himalayan glaciers which then flow into India through Bihar.
- During the monsoons, these river systems flood causing many problems for Bihar.
- It is a necessity that there is process-driven coordination between the Centre and the Government of Bihar to handle the flooding in Nepal's Terai and North Bihar (largely the Mithilanchal region).

Which are those flooding rivers?

- Nepal's three biggest river systems – Kosi, Gandaki and Karnali – originate in the high mountain glaciers, flow through the country and then enter India through the state of Bihar.
- During the monsoon season, these river systems often get flooded due to heavy rains/landslides in Nepal which create floods in India's most flood prone state – Bihar.

Bihar's vulnerability

- The history of floods in Bihar from 1998 to 2012 reveals how strong discharges of water due to heavy rains in the catchment areas of Nepal have created a strong pressure on the river embankments in India.
- About 76 per cent of the population living in northern Bihar live under threat of floods due to these river systems and a total of 73.06 per cent of the total geographical area of Bihar is flood affected (mostly during the monsoon).

Measures: Joint flood management program

- As part of the long-term measures to address the problem of massive and recurrent floods in Bihar, the Joint Project Office (JPO), Biratnagar, was established in Nepal in August 2004.
- It aimed to prepare a detailed project report to construct a high dam on the Nepal side (on the Kosi, Kamla and Bagmati rivers).

Flaws: Yet to get effect

- Despite the best efforts made by the Government of Bihar, the task remains unaccomplished even after 17 years.
- The Government of Bihar has raised the matter at regular intervals for this.

Who is the obstructionist? : Fault lies with Nepal

- The Central Water Commission (CWC) has convened several meetings with Nepali Authorities.
- However, what is evident is Nepal's lack of prompt reciprocation.
- India has long-standing water sharing issues with Nepal.

What has been done so far?

- As in the figures shared by Bihar, a total of four new flood protection works in the Gandak basin area were proposed before the floods of 2020.
- There were proposed Barrage structures located in the border districts.

Nepal's reluctance

- However, Nepal argues that many of the bund area falls into no man's land along the open international border.
- This is notwithstanding the fact that the embankment was built by India 30 years ago and there has not been any dispute regarding its maintenance all these years.

What does this signify?

- There is a need for India-Nepal collaboration for an efficiently operated barrage.
- It is evident that Nepal's attitude towards mutual issues (water sharing, flood control, etc.) has been short of collaboration, unlike in the past.

Way forward

- In the best spirit of friendship, Nepal and India should restart the water dialogue and come up with policies to safeguard the interests of all those who have been affected on both sides of the border.
- It is time the two friendly countries come together and assess the factors that are causing unimaginable losses through flooding every year.
- Optimisation of the infrastructure will be decisive in finding an alternative paradigm of flood management.
- By controlling the flooding and using the water resources for common developmental uses such as hydroelectricity, irrigation and waterways, India-Nepal relations can be strengthened even further.
- Moreover, it is also linked to how the Himalayan glaciers and the green cover are managed.

Conclusion

- Water resources are priceless assets.

- Water cooperation should drive the next big India-Nepal dialogue, and despite the challenges, wisdom should prevail to turn the crisis into an opportunity, for the sake of development and environmental protection.

15. Quad to counter Afghan-origin terror

In News :

- The **Quad Leaders Summit** met in person for the first time in Washington.

Details:

- The grouping has announced a wide range of deliverables and announced new avenues for co-operation and collaboration.

COVID-19 co-operation:

- Quad plans to **produce at least 1 billion India manufactured vaccines by the end of 2022** in addition to pledging more than 1.2 billion vaccines globally.
- The group will also **prepare for future pandemics** and conduct at least one preparedness tabletop or exercise in 2022.

Climate action:

- The Quad countries intend to **update or announce ambitious NDCs** (Nationally Defined Contributions). The joint statement stated that the member countries would work with the “intent” to get to net zero emissions “preferably” by 2050 “taking into account national circumstances”.
 - Notably, India has not yet made any formal commitments for achieving net zero by 2050.

Infrastructure partnership:

- The grouping launched a new infrastructure partnership which would involve **mapping the region’s infrastructure needs and providing technical assistance and evaluation tools** for projects.
- This initiative would **work with the Blue Dot Network**.
 - The Blue Dot Network is an initiative formed by the United States, Japan and Australia to provide assessment and certification of infrastructure development projects worldwide on measures of financial transparency, environmental sustainability, and impact on economic development, with the goal of mobilizing private capital to invest abroad.

Afghanistan issue:

- The Quad would **coordinate diplomatically on the Afghanistan issue**. The major aspects of this co-ordination would be **based on counter-terrorism and humanitarian aid** in accordance with United Nations Security Council 2593 (a resolution passed under the Indian presidency of the UNSC).
- The resolution issued at the end of the Quad summit called for a negotiated settlement in Afghanistan.

Tech partnership:

- The member countries have expressed their intentions to **work more closely together in developing common standards for critical technologies**.
 - Notably, the Quad had earlier set up a **new critical and emerging technologies working group**, focusing on technical standards, 5G diversification and deployment and technology supply chains.
- Quad will establish **contact groups on Advanced Communications and Artificial Intelligence**. The grouping is also planning to launch a **semiconductor supply chain initiative** to map capacity, identify vulnerabilities and bolster supply-chain security for semiconductors and their vital components.
- The member countries have come out with the first **Quad “Principles on Technology Design, Development, Governance, and Use” document**. This envisages the ethical use of technology shaped by shared democratic values and respect for universal human rights and emphasizes that the technology should not be misused or abused for malicious activities such as authoritarian surveillance and oppression, for terrorist purposes, or to disseminate disinformation.

16. Death penalty awarded in T.N. inter-caste couple killing

In News :

The Special Court for SC/ST Act cases awarded the death sentence to the brother of a Hindu woman and sentenced 12 others, including her father, to life imprisonment in the killing of an inter-caste couple in 2003.

Honour Killing:

- Honour killing is the murder of an individual, either an outsider or a member of a family, by someone seeking to protect what they see as the dignity and honour of their family.
- It is defined as the killing of a relative, especially a woman, who is perceived to have brought dishonour on the family.

- A crime in the name of 'honour' is one of a range of violent or abusive acts. This includes emotional, physical and sexual abuse and other coercive acts.
- Those instrumental in committing these killings are families of the couple. Either they kill the couple themselves or in association with other persons from the same caste or khap or community-based panchayats.

Existing Laws

Existing Penalties under Indian Penal Code:

- Sections 299-304: Penalises any person guilty of murder and culpable homicide not amounting to murder. The punishment for murder is life sentence or death and fine. The punishment for culpable homicide not amounting to murder is life imprisonment or imprisonment for upto 10 years and fine.
- Section 307: Penalises attempt to murder with imprisonment for upto 10 years and a fine. If a person is hurt, the penalty can extend to life imprisonment.
- Section 308: Penalises attempt to commit culpable homicide by imprisonment for upto 3 years or with fine or with both. If it causes hurt, the person shall be imprisoned for upto 7 years or fined or both.
- Section 120A and B: Penalises any person who is a party to a criminal conspiracy.
- Sections 107-116: Penalises persons for abetment of offences including murder and culpable homicide.
- Section 34 and 35: Penalises criminal acts done by several persons in furtherance of common intention.

Supreme Court Judgements

The Supreme Court, which has been intervening repeatedly to preserve the freedom of marital choice of individuals, once remarked that **there is no 'honour' in 'honour killing'**. Various judgments have highlighted the need to come down on such crimes, as well as the social structures that keep such a communal outlook alive.

- Supreme Court ruling in **Lata Singh v. State of U.P. (2006)** ordering "stern action" against all those threatening or carrying out threats against couples. The Supreme Court reiterated the fact that **inter-caste marriages are not banned as per Hindu Marriage Act** and is in national interest. It is illegal to stop them in any way.
- In fact, the apex court, in **Bhagwan Dass v. Delhi in May 2011**, deemed honor killings in the "**rarest of rare**" category of crimes that deserve the death penalty.
- In **Armugam Servai vs. State of Tamil Nadu**, Supreme Court said that Khaps are illegal and must be rooted / stamped out.

- Chief Justice of India Dipak Misra, speaking against honour killings has said “Two adults are free to marry and no third party has a right to harass or cause harm to them”

Background

- Kevin was abducted by a group led by **Shyanu Chacko, the principal accused** and brother of Neenu
- The court ruled that it was an ‘honour killing’ based on **Neenu’s testimony that her family was vehemently against the marriage** as Kevin was a Dalit.

Court’s Judgment

- The court rightly **chose not to award the death penalty**. Instead it handed down two separate life terms, one each for kidnapping with intention to threaten the victim with death, and for murder.
- Even though there is a Supreme Court judgment allowing trial courts to deem ‘honour killings’ as those that fall under the ‘rarest of rare cases’ category, **the trial judge chose to take note of the fact that the accused were young and had no previous criminal background.**

Issue Area

- Discrimination against Dalits is not limited to Hindu communities listed as Scheduled Castes, but extends to those who have converted to other religions too.

Conclusion

- At a time when caste groups have become politically organised and caste associations attract the young and the educated, **there is a need for a redoubled effort to eliminate the evils of a stratified society.**
- In particular, administrators must give **full effect to the various preventive, remedial and punitive measures recommended by the Supreme Court.**
- The Centre may also **examine the need for a comprehensive law to curb killings** in the name of honour and prohibit interference in matrimonial choice of individuals.

17. Complex count: On caste census

These days, many states are urging the Centre to include a caste-wise census in the Census of India to have substantial data for reservations of certain dominant caste groups.

Reaction by the Centre

- In this backdrop, the Union government's assertion in the Supreme Court that a census of the backward castes is "administratively difficult and cumbersome" may evoke varying responses.
- There are two components to the Government's stand:
 1. **Jeopardizing the Census:** It asserts that it is a policy decision not to have caste as part of the regular census and that, administratively, the enumeration would be rendered so complex that it may jeopardise the decennial census itself.
 2. **Adding more vagueness:** It cites the difficulties and complexities inherent in getting an accurate count of castes, given the mind-boggling numbers of castes and sub-castes, with phonetic variations and similarities.

This is the reason that the data from the 2011 SECC were not acted upon because of "several infirmities" that rendered them unusable.

Why is caste census not feasible?

- **Hurdle to casteless society:** The idea of a national caste census is abhorrent when the stated policy is to strive for a casteless society.
- **Political polarization:** Political parties with their base in particular social groups may find a caste enumeration useful, if their favoured groups are established as dominant in specific geographies.
- **Electoral impact:** Politicians may find the outcome inconvenient, if the precise count turns out to be lower and has a negative bearing on perceptions about their electoral importance.

Limitations of SECC, 2011

- **Completeness and Accuracy:** Even in the Censuses up to 1931, when caste details were collected, they were wanting in completeness and accuracy.
- **Lakhs of Caste:** Further, the data contained 46 lakh different caste names, and if subcastes were considered, the ultimate number may be exponentially high.

Need for such census

- **Quantifiable data:** It may also be a legal imperative, considering that courts want 'quantifiable data' to support the existing levels of reservation.
- **Basis for Affirmative actions:** It will be useful to establish statistical justification for preserving caste-based affirmative action programmes.

These points do merit consideration, and even those clamouring for a caste census cannot easily brush them aside.

Way forward

- A caste census need not necessarily mean caste in the census.
- It may be an independent exercise, but one that needs adequate thought and preparation, if its ultimate goal is not for political or electoral purposes, but for equity in distribution of opportunities.
- A preliminary socio-anthropological study can be done at the State and district levels to establish all sects and sub-castes present in the population.
- These can be tabulated under caste names that have wider recognition based on synonymity and equivalence among the appellations that people use to denote themselves.
- Thereafter, it may be possible to do a field enumeration that can mark any group under castes found in the available OBC/BC lists.

Conclusion

- A caste census may not sit well with the goal of a casteless society, but it may serve, in the interim, as a useful, even if not entirely flawless, means of addressing inequities in society.

18. Campaign launched for social accountability law

In News :

A State-wide campaign has been launched in Rajasthan for demanding passage of the social accountability law in the next Assembly session.

Social accountability

“Social accountability” refers to actions initiated by citizen groups to hold public officials, politicians, and service providers to account for their conduct and performance in terms of delivering services, improving people’s welfare and protecting people’s rights.

Background:

- The Congress government’s support of the Rajasthan Transparency and Social Accountability Bill goes back to the year 2016.
- The activists had come up with the draft accountability law following the 100 days Jawabdehi Yatra.
- The 100-day campaign had witnessed seminars, clinics and workshops on Right to Information (RTI), Right to Education (RTE) and Right to Hearing Act (RTH).
- It was followed up with camps on RTI application, grievance submission and District Shiksha Sammelans in which ward panch and Panchayati raj representatives, among others, had participated.

- The yatra touched upon several social issues under government programmes such as MGNREGA, ration, pension, health, social security, etc. while pushing for an accountability law.
- In 2019, activists under The Suchana Evam Rojgar Adhikar Abhiyaan (SR Abhiyaan) came up with a comprehensive Rajasthan Public Accountability Bill, 2019.

Draft of Rajasthan Social Accountability Bill:

- The draft 2019 Bill had proposed an independent District Grievance Redressal Officer.
 - This is said to have been opposed by some bureaucrats, who believe that it will undermine the authority of the District Collector.
 - The proposed law touched upon 22 issues, such as job chart, grievance redress architecture, fortnightly hearing, automatic escalation, first/second appeal, online registration, etc.

Objectives of the Bill:

- To seek the accountability of public functionaries and authorities for timely delivery of goods and services.
- To create a democratic, decentralized and participative approach to enable wider public participation.
- To initiate monitoring of programmes and policies through community score cards, citizens report cards and social audits.

Details:

- In 2019, the Rajasthan government constituted a committee under retired IAS officer Ram Lubhaya to examine the previous draft.
- Although The Rajasthan Guaranteed Delivery of Public Service Act, 2011 and The Rajasthan Right to Hearing Act (2012) are in existence, the committee found major issues with both the Acts though both the laws had a few provisions among the 22 issues covered in the draft bill.
- The Lubhaya committee proposed repeal of both the Acts, while comparing their provisions with the proposed accountability law.
- The Lubhaya committee also proposed the designation of Grievance Redress Officers, from the state, district to the panchayat level.

19. Revitalising India's reservation system

In News:

- There has been a long-pending demand for a caste-based census in India and detailed data and information on the ethnic groups living in the country.

- The call for a fresh caste census is getting louder in the country with most of the political parties supporting the call.

History of Census in India:

- India got its first census report in 1881. The exercise takes place every 10 years.
- The last time India's population was enumerated on the basis of caste was in 1931, when it was under the British rule.
 - There is a strong argument that the colonial census was about creating and reinforcing caste and religious categories in India rather than recording them in a gentle manner.

Since 1941, the census of Scheduled Castes and Scheduled Tribes has been done. The rest of the castes and groups, especially the Other Backward Classes (OBCs), do not have a separate census as only religious figures are published in the report. The Socio-Economic and Caste Census (SECC) was conducted in 2011. It was the largest exercise of the listing of castes and has the potential of finding inequalities at a broader level.

- The SECC data excluded caste data and was published in 2016.

Justice G. Rohini Commission

- It was set up to look into the question of equitable redistribution of the 27% quota for Other Backward Castes (OBC).

Terms of reference:

- To examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of OBCs with reference to such classes included in the Central List;
- To work out the mechanism, criteria, norms and parameters in a scientific approach for sub-categorisation within such OBCs;
- To take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of OBCs and classifying them into their respective sub-categories.

Report on the sub-categorization of OBCs

- Based on the last five years' data on appointments in central government jobs and OBC admissions to central higher education institutions, the commission concluded that **97% of central OBC quota benefits go to just under 25% of its castes.**

- As many as 983 OBC communities – 37% of the total – have zero representation in both central government jobs and admissions to central universities.
- The report further states that just 10% of the OBC communities have accrued 24.95% of jobs and admissions.

System should be made accountable and sensitive to intra-group demands

- One, we need to develop evidence-based policy options to meet specific requirements of specific groups.
- Two, we need an institution like the Equal Opportunities Commission of the United States or the United Kingdom which can undertake two important but interrelated things:
 - Make a deprivation index correlating data from the socio-economic-based census of different communities including caste, gender, religion, and other group inequalities and rank them to make tailor-made policies.
 - Undertake an audit on the performance of employers and educational institutions on non-discrimination and equal opportunity and issue codes of good practice in different sectors.

Conclusion

- Successive governments have been reluctant to engage with such radical policy options, as they look up to short term gains.
- Thus a **socio-economic caste-based census** becomes a necessary precondition to initiate any meaningful reform in the affirmative action regime in India.

20. Role of judiciary in improving lawmaking

In News

- Lack of healthy debates in Parliament has deteriorated the quality of deliberation.

Concerns realted

- Chief Justice NV Ramana expressed concern at the manner in which laws are being passed in Parliament without proper discussion, deliberation, and quality debates and said the product of it was legislations with a lot of gaps and ambiguity.
- The number of bills passed should not be the measure of efficiency, instead, emphasis should be given to quality.

- Representatives are elected to discuss the problems of their constituency. They have to uphold the principles on which they were elected. Voting a bill without deliberating may have implications on the people at large as their rights might get affected.
 - If bills are passed without discussion, questions will not be asked to the minister concerned, expert opinion will not be taken compromising the quality of legislation.

The legislators are given the constitutional duty to question the executive and represent the diverse interest groups. Rushed lawmaking makes the Parliament a rubber stamp, sacrificing the two core ideals of a constitutional democracy, namely, equal participation and respect for fundamental rights.

Judiciary role

The judiciary can play an important role in improving the lawmaking process. A straightforward way of doing this is by enforcing the text and spirit of the constitutional provisions governing legislative procedures.

1. Right implementation of constitutional procedures
 - Voice votes registered during the passing of the bill is marred with disagreement.
 - This issue arose most recently when the controversial farm laws were reportedly rushed and passed by voice vote in the Rajya Sabha despite objections by Opposition members.

The procedures have to be followed and if need be questions should be raised about the implementation.

2. Bills as Money Bills

- The description of the Money Bill is provided under Article 110.
 - This Article identifies seven areas that can be governed through the enactment of Money Bills, including the imposition of tax, the regulation of borrowing and appropriation of money out of the Consolidated Fund of India.

Bills certified as Money Bills bypass the Rajya Sabha.

Therefore the judiciary should intervene in a timely manner if the features mentioned in the article are not met.

3. Judicial Review

In exercising judicial review, the court's role is to call on the State to provide justifications explaining why the law is reasonable and, therefore, valid.

- The court can examine whether and to what extent the legislature deliberated the reasonableness of a measure.
- The legislative inquiry would usually include evaluating the factual basis justifying the law, the suitability of the law to achieve its aim, and the necessity and proportionality of the law relative to its adverse impact on fundamental rights.
- The Supreme Court adopted such an approach in the Indian Hotel and Restaurants Association (2013) case.

4. Doctrine of presumption of constitutionality

- It is a legal principle where the judiciary initially assumes law enacted by the legislature to be constitutional, unless the law is declared unconstitutional by the Judiciary.
- To sustain the presumption of constitutionality the Court may take into consideration matters of common knowledge, matters of common report, the history of the times and may assume every state of facts which can be conceived existing at the time of legislation.

Issue Area

- When laws are passed without debates and empirical data, the State will find it difficult to substantiate the need for such a legislation and will continue to depend on this doctrine to resist close judicial scrutiny.

What should Judiciary do?

- By extending this doctrine to laws made by the legislature, the judiciary undermines the guarantee of judicial review provided to protect fundamental rights.
- Instead, if the judiciary **confines the doctrine only to cases where the State shows that laws and their consequences were carefully deliberated in Parliament**, the judiciary can encourage legislative bodies to ensure a deliberative lawmaking process.

Way forward

- The CJI's suggestion that the legislature be reformed from within is the ideal solution to remedying legislative dysfunction without raising concerns of separation of powers.
- However, the government has very little incentive to cooperate for such reform. The need of the hour is significant public mobilisation on the issue.
- By adopting a swift and systematic approach to reviewing the legislative process, the judiciary can help restore faith in the 'temples of democracy' and push us toward the culture of justification the Constitution sought to create.

21. SC tells Centre to fill tribunal vacancies by Sept. 13

In News

- The Supreme Court (SC) criticized the Central government for its inaction in filling vacancies in tribunals.

Details

- The SC said it did not want any confrontation with the government and asked the Centre to make some appointments to the tribunals.
- The court said it had three options.
 - One, close the tribunals.
 - Two, to make the appointments itself.
 - Three, to initiate contempt.

Tribunal Reforms Bill, 2021:

- The Bill replaced the **Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021**.

Major provisions:

- The Bill seeks to **dissolve certain existing appellate bodies and transfer their functions (such as adjudication of appeals) to other existing judicial bodies**.
- Provisions regarding the **composition of search-cum-selection committees**:
 - The Chairperson and Members of the Tribunals will be appointed by the central government on the recommendation of a Search-cum-Selection Committee. The Committee will consist of: (i) the Chief Justice of India, or a Supreme Court Judge nominated by him, as the Chairperson (with casting vote), (ii) two Secretaries nominated by the central government, (iii) the sitting or outgoing Chairperson, or a retired Supreme Court Judge, or a retired Chief Justice of a High Court, and (iv) the Secretary of the Ministry under which the Tribunal is constituted (with no voting right).
 - State administrative tribunals will have separate search-cum-selection committees.
 - The central government must decide on the recommendations of selection committees preferably within three months from the date of the recommendation.

Provisions regarding **qualification and terms and conditions of service of tribunal members**:

- The Bill provides for a four-year term of office (subject to the upper age limit of 70 years for the Chairperson, and 67 years for members).

- It also specifies a minimum age requirement of 50 years for the appointment of a chairperson or a member.

Concerns:

- Notably, the Tribunal Reforms Act of 2021 revives provisions of tenure and service of members of tribunals which were earlier struck down by the Supreme Court in a judgment. This gives rise to concerns of the **government overlooking the judiciary's observations in its previous judgments**. This could lead to the triggering of further litigation and causing inconvenience to citizens, courts and other stakeholders.
- The fact that this was done without debate in the parliament, raises **concerns over the falling standards of lawmaking in the country**.
- The bill has been criticised for **undermining the independence of the judiciary** by giving the government wide powers regarding appointments, service conditions, salaries, etc. of members of key tribunals.

22. Spirit of federalism lies in consultation

In News : The article talks about the need for consultation with the states while passing legislations, as unilateral legislations, more often than not, end up in protests.

Issue:

- Of late, various State governments have raised concerns about the Centre unilaterally enacting critical laws on subjects in the Concurrent List of the Seventh Schedule of the Constitution.
- The States and the Legislative Assemblies are standing up for their rights.
 - The Kerala Legislative Assembly unanimously passed a resolution against the Electricity (Amendment) Bill, 2020.
 - The Tamil Nadu Legislative Assembly passed a resolution against the controversial farm laws.

This assumes significance in the wake of the Union government introducing a number of laws without taking the States into confidence, thereby undermining the federal principles.

7th Schedule of the Indian Constitution:

The Seventh Schedule contains a three-fold distribution of legislative subjects between the Centre and the states, viz., List-I (the Union List), List-II (the State List) and List-III (the Concurrent List).

Impact:

Protests by the states:

- The enactment of farm laws without consultation with the States is an example.
 - The farm laws were passed by Parliament even as it does not have legislative competence to deal with agriculture. The lack of consultation in a matter that intrinsically deals with millions of farmers led to massive protests.
 - The laws, essentially related to Entry 14 (agriculture clause) belonging to the State List, were purportedly passed by Parliament citing Entry 33 (trade and commerce clause) in the Concurrent List.
- According to various decisions of the Supreme Court, beginning from the State of Bombay vs F.N. Balsara case, if an enactment falls within one of the matters assigned to the State List and reconciliation is not possible with any entry in the Concurrent or Union List after employing the doctrine of “pith and substance”, the legislative domain of the State Legislature must prevail.

Redundancy of local laws:

- When the Major Ports Authorities Act, 2021, was passed by Parliament, State governments objected to the law, stating that it would lead to the redundancy of the local laws.
 - When it comes to non-major ports, the field for legislation is located in Entry 31 of the Concurrent List.
 - According to the Indian Ports Act, 1908, which currently governs the field related to non-major ports, the power to regulate and control the minor ports remained with the State governments.
 - However, the draft Indian Ports Bill, 2021, proposes to change the status quo by transferring the powers related to planning, developing and regulating the non-major ports to the Maritime State Development Council (MSDC), which is overwhelmingly controlled by the Union government.

Coastal States like Odisha, Andhra Pradesh, Tamil Nadu and Kerala have objected to the Bill that proposes to seize the power of the State government with respect to non-major ports.

Even the BJP-ruled State government in Goa objected to the law stating that it would make its local laws redundant.

Various States like West Bengal, Tamil Nadu and Kerala have also come forward against the Electricity (Amendment) Bill, 2020.

- The field related to electricity is traceable to Entry 38 of the Concurrent List.
- The power to regulate the sector was vested with the State Electricity Regulatory Commissions (SERCs), which were manned by individuals appointed by the State government.
- However, the proposed amendment seeks to change the regulatory regime with the establishment of a National Selection Committee, dominated by members nominated by the Union government that will make appointments to the SERCs.
- It proposes the establishment of a Centrally-appointed Electricity Contract Enforcement Authority (ECEA) as the sole authority having jurisdiction over matters regarding the performance of obligations under a contract related to the sale, purchase or transmission of electricity.
- In effect, the power to regulate the electricity sector would be taken away from the State government.

Distribution of power between the Centre and the States: ★

- The model envisioned in the Government of India Act, 1935, was adopted by the framers of the Constitution and certain subjects were put in the Concurrent List by giving the Union and the State Legislatures concurrent powers regarding them.
 - The fields in the Concurrent List were to be of common interest to the Union and the States, and the power to legislate on these subjects to be shared with the Union so that there would be uniformity in law across the country.

However, one of the worst fears of Constituent Assembly member K.T.M. Ahmad Ibrahim Sahib Bahadur was that the subjects in the Concurrent List might end up being transferred to the Union List over a period of time due to the Union government's high-handedness.

- This fear seems to be coming true with the latest developments.

The Sarkaria Commission Report had specifically recommended that there should be a coordination of policy and action in all areas of concurrent or overlapping jurisdiction through a process of mutual consultation and cooperation is, therefore, a prerequisite of smooth and harmonious working of the dual system.

- It was further recommended that the Union government, while exercising powers under the Concurrent List, limit itself to the purpose of ensuring uniformity in basic issues of national policy and not more.

The National Commission to Review the Working of the Constitution (NCRWC), or the Venkatachaliah Commission, had recommended that individual and collective

consultation with the States should be undertaken through the Inter-State Council established under Article 263 of the Constitution.

Conclusion:

As the Supreme Court held in the S.R. Bommai vs Union of India case, the States are not mere appendages of the Union. The Centre should not meddle with the power of the States. The intention of the framers of the Constitution is to ensure that public welfare is subserved and the key to that lies in listening to stakeholders. The essence of cooperative federalism lies in consultation and dialogue, and unilateral legislation without taking the States into confidence will lead to more protests on the streets.

23. 75% Quota for locals in private jobs : Jharkhand

The Jharkhand Assembly has passed a Bill, which provides 75% reservation for local people in the private sector up to 40,000 salary a month.

- Every employer shall register such employees receiving gross monthly salary as wages not more than 40,000 as the limit notified by the government from time to time on the designated portal within three months of the Act coming into force.
- Every employer shall fill up 75% of the total existing vacancies on the date of notification of this Act and subsequent thereto by local candidates with respect to such posts where the gross monthly salary or wages are not more than ₹40,000".
- The Bill provides for the local MLA to supervise the employment procedure and issue directions to the employer concerned as it may deem fit.

Other such states

- Once notified, Jharkhand will become the third State in the country, after Andhra Pradesh and Haryana, to pass such law.
- In 2019, Andhra Pradesh passed such law, while in June last, Haryana passed law, reserving 75% quota for the local people in private jobs with monthly salary less than 50,000.

Quota for Locals

Ans. Constitutional provision for Equal Treatment

- Article 16 of the Constitution guarantees equal treatment under the law in matters of public employment. It prohibits the state from discriminating on grounds of place of birth or residence.

- Article 16(2) states that “no citizen shall, on grounds only of religion, race, caste, sex, descent, place of birth, residence or any of them, be ineligible for, or discriminated against in respect of, any employment or office under the State”.
- The provision is supplemented by the other clauses in the Constitution that guarantee equality.
- However, Article 16(3) of the Constitution provides an exception by saying that Parliament may make a law “prescribing” a requirement of residence for jobs in a particular state.
- This power vests solely in the Parliament, not state legislatures.

But are reservations not granted on other grounds such as caste?

- Equality enshrined in the Constitution is not mathematical equality and does not mean all citizens will be treated alike without any distinction.
- To this effect, the Constitution underlines two distinct aspects which together form the essence of equality law:
 1. Non-discrimination among equals, and
 2. Affirmative action to equalize the unequal

Supreme Court rulings on quota for locals

- The Supreme Court has ruled against reservation based on place of birth or residence.
- In 1984, ruling in *Dr Pradeep Jain v Union of India*, the issue of legislation for “sons of the soil” was discussed.
- The court expressed an opinion that such policies would be unconstitutional but did not expressly rule on it as the case was on different aspects of the right to equality.
- In a subsequent ruling in *Sunanda Reddy v State of Andhra Pradesh (1995)*, the Supreme Court affirmed the observation in 1984 ruling to strike down a state government policy that gave 5% extra weightage to candidates.
- In 2002, the Supreme Court invalidated appointment of government teachers in Rajasthan in which the state selection board gave preference to “applicants belonging to the district or the rural areas of the district concerned”.
- In 2019, the Allahabad HC struck down a recruitment notification by the UP PSC which prescribed preference for women who are “original residents” of the UP alone.

24. 2+2 meet will be held by India and Australia

In News:

- India and Australia will hold the **inaugural 2+2 Ministerial meeting** during the upcoming visit of the Australian Foreign Minister and Minister of Defence to India.

India Australia relations background

Ties between India and Australia started right from the time when European settlement began in Australia. When New South Wales was founded as a penal colony, all trade with the colony was controlled by the British East India Company. Before the Commonwealth of Australia was formed in 1901, many migrant workers and labourers were taken from the Indian subcontinent to Australia.

Diplomatic Ties

India established a Trade Office in Sydney in 1941. After independence, in 1950, Robert Menzies became the first Australian Prime Minister to visit India. He had earlier supported India's admission into the Commonwealth as a republic.

In 2009, a 'Strategic Partnership' was established between the two countries and relations have significantly expanded since then. In 2013, A K Antony became the first-ever Indian Defence Minister to visit Australia. The current PM Narendra Modi visited Australia in November 2014, a few months after he was appointed the PM.

Growing people-to-people ties

- There are many citizens in Australia with Indian origins. Out of the country's 24 million people, about half a million are of Indian origin.
- The fastest-growing language in Australia is Punjabi.
- As of 2017, more than 60000 students from India are studying in Australia.
- More than 2 lakh Indians visit Australia every year.

India - Australia Economic Relations

As of the year 2016, the bilateral trade between the two nations is worth A\$21.9 billion. This has grown significantly since 2003 when the figure stood at A\$ 4.3 billion. India's export of goods to Australia in 2011-12 was A\$ 2.49 bn (US\$ 2.60 bn) and India's import of goods was A\$ 13.11 bn (US\$ 13.71 bn). India's export of services was A\$ 0.80 bn (US\$ 0.84 bn) and import of services was A\$ 1.9 bn. (A\$ 2.0 bn). India is Australia's largest export market for gold and chickpeas, the second-largest market for coal and copper ores and the third-largest market for lead and wool. Four products - coal, non-monetary gold, copper ores & concentrates and petroleum - accounted for over 80 per cent of India's imports from Australia, with coal and gold being the dominant imports in 2011-12. India is Australia's tenth largest trading partner and the fifth-largest export market.

Major Australian Imports to India

- Coal

- Services (chiefly education)
- Gold
- Copper ores and concentrates
- Vegetables for consumption by consumers

Major Indian exports to Australia

- Refined petroleum
- Services (such as outsourcing)
- Pearls
- Gems
- Jewellery
- Medicaments

Both countries have established a **Strategic Research Fund** for \$100 million.

Uranium Import

In 2017, Australia shipped its first supply of uranium to India, after a deal which was signed in 2014. This is significant and can go a long way towards strengthening the relationship between the two countries. This is the first instance in which Australia is supplying uranium to a country that has not signed the Non-proliferation Treaty (NPT). This is also significant for satisfying India's increasing energy requirements.

Details:

- The inaugural 2+2 discussions are to be a cornerstone of the **Australia-India Comprehensive Strategic Partnership**, which is founded on a shared commitment to a **secure, stable and prosperous Indo-Pacific region**.
- The areas of discussion would include economic issues, cyber security, climate change, critical technology and supply chains. The discussion is also likely to include a **bilateral free trade agreement** between India and Australia.

25. Women entry into the NDA : Centre

The Centre gave the Supreme Court the "good news" that it had taken a decision to allow women entry into the National Defence Academy (NDA), so far a male bastion for recruitment into the Armed Forces.

National Defence Academy

- The NDA is the joint defence service training institute of the Indian Armed Forces, where cadets of the three services train together before they go on to respective service academy for further pre-commission training.

- It is located in Khadakwasla, Pune, Maharashtra.
- It is the first tri-service academy in the world.
- Applicants to the NDA are selected via a written exam conducted by the UPSC every year, followed by extensive interviews by the Services Selection Board.

Latest development?

- Recently, the Supreme Court upheld the right of serving Short Service Commission (SSC) women officers of the Navy to be granted Permanent Commission (PC) on a par with their male counterparts.

Women in Armed Forces: Importance

- The court ruled that women naval officers cannot be denied the right to equal opportunity and dignity entitled to under the Constitution on specious grounds such as physiology, motherhood and physical attributes.
- The battle for gender equality is about confronting the battles of the mind.
- History is replete with examples where women have been denied their just entitlements under law and the right to fair and equal treatment in the workplace.

Why males have ever dominated the armed forces?

- Militaries across the world help entrench hegemonic masculine notions of aggressiveness, strength and heterosexual prowess in and outside their barracks.
- The military training focuses on creating new bonds of brotherhood and camaraderie between them based on militarized masculinity.
- This temperament is considered in order to enable conscripts to survive the tough conditions of military life and to be able to kill without guilt.
- To create these new bonds, militaries construct a racial, sexual, gendered “other”, attributes of whom the soldier must routinely and emphatically reject.

Dimensions of the Issue

Gender is not a hindrance: As long as an applicant is qualified for a position, one's gender is arbitrary. It is easy to recruit and deploy women who are in better shape than many men sent into combat.

Combat Readiness: Allowing a mixed-gender force keeps the military strong. The armed forces are severely troubled by falling retention and recruitment rates. This can be addressed by allowing women in the combat role.

Effectiveness: The blanket restriction for women limits the ability of commanders in theatre to pick the most capable person for the job.

Tradition: Training will be required to facilitate the integration of women into combat units. Cultures change over time and the masculine subculture can evolve too.

Cultural Differences & Demographics: Women are more effective in some circumstances than men. Allowing women to serve doubles the talent pool for delicate and sensitive jobs that require interpersonal skills, not every soldier has.

Hurdles for Women

Capabilities of women: Although women are equally capable, if not more capable than men, there might be situations that could affect the capabilities of women such as absence during pregnancy and catering to the responsibilities of motherhood, etc.

Adjusting with the masculine setup: To then simply add women to this existing patriarchal setup, without challenging the notions of masculinity, can hardly be seen as “gender advancement”.

Fear of sexual harassment: Sexual harassment faced by women military officers is a global phenomenon that remains largely unaddressed, and women often face retaliation when they do complain.

Gender progressiveness could be an illusion: Women’s inclusion is criticized as just another manoeuvre to camouflage women’s subjugation and service as women’s liberation.

Battle of ‘Acceptance’: Acceptance of women in the military has not been smooth in any country. Every army has to mould the attitude of its society at large and male soldiers in particular to enhance acceptability of women in the military.

Job Satisfaction: Most women feel that their competence is not given due recognition. Seniors tend to be over-indulgent without valuing their views. They are generally marginalised and not involved in any major decision-making.

Doubts about Role Definition: The profession of arms is all about violence and brutality. To kill another human is not moral but soldiers are trained to kill.

Physical and Physiological Issues: The natural physical differences in stature, strength, and body composition between the sexes make women more vulnerable to certain types of injuries and medical problems. The natural processes of menstruation and pregnancy make women particularly vulnerable in combat situations.

Comfort Level: Most women accepted the fact that their presence amongst males tends to make the environment 'formal and stiff'. The mutual comfort level between men and women colleagues is often very low.

Way ahead

- Induction of women into armed forces should be on the basis of their abilities and not on the basis of their gender.
- The training for both women and men should be standardized to eliminate differentiation based on physical capabilities.
- The career aspects and opportunities for women need to be viewed holistically keeping the final aim in focus.

26. Afghanistan situation reviewed by India and Russia

Context

- Meeting between Russia's Security Council Secretary-General and India's National Security Adviser in Delhi.

Details:

- As part of the meeting, India and Russia conducted their first **detailed and extensive review of the situation in Afghanistan.**
- India and Russia have agreed to **coordinate their positions on the Afghanistan issue.**
 - The two sides have stressed the need to hold the Taliban to their promises of ensuring that they **won't allow Afghanistan to become a safe haven for terrorist organizations** and also take measures to curtail the increase in opium production and drug trafficking under the new Taliban regime.
 - India and Russia also agreed to undertake joint efforts aimed at creating conditions for launching a **peaceful settlement process in Afghanistan on the basis of an intra-Afghan dialogue.**

The talks followed a day after CIA Director flew into Delhi to meet India's National Security Advisor.

Importance:

- **On the Afghanistan issue, there continues to remain differences between India and Russia** with Russia's position more closely aligned with that of China.
 - Russia is among the few countries that continue to keep their embassies open in Afghanistan in contrast to India, which has evacuated all diplomatic personnel.

- Russia has also hosted Taliban delegations on a number of occasions unlike India which has refrained from actively engaging with the Taliban regime.

That the Russian President directly reached out to the Indian Prime Minister indicates the **Russian interest in working with India bilaterally, and multilaterally** at the United Nations Security Council (UNSC) and at forums like BRICS, despite the differences on the Afghanistan issue.

- BRICS can be an important platform to **strengthen political security cooperation** in Afghanistan among its members especially between India on the one hand and Russia and China on the other.

India could as well use this opportunity to engage with Russia as a **leverage to protect its interests in Afghanistan both in the short as well as long term.**

NSA level talks of BRICS:

- National Security Advisers (NSA) from the five BRICS countries met virtually to discuss developments in Afghanistan.
- The meeting reviewed the regional and global political and security scenario in the light of the current developments in Afghanistan, Iran, West Asia and the Gulf.
- The meeting also discussed **emerging threats to national security, such as cybersecurity and terrorism.**
 - The representatives present at the meeting adopted and recommended the **BRICS Counter Terrorism Action Plan.**
 - The BRICS Counter Terrorism Action Plan is aimed at strengthening result-oriented cooperation between BRICS countries in areas such as preventing and combating terrorism, radicalisation, financing of terrorism, misuse of internet by terrorists, curbing travel of terrorists, border control, protection of soft targets, information sharing, capacity building, international and regional cooperation.
 - The BRICS Counter Terrorism Action Plan is one of the **key deliverables during the upcoming BRICS leaders' summit, which India is chairing.**

27. The fall of Afghanistan, the fallout in West Asia

Three weeks after they walked into Kabul without any resistance, the Taliban now has announced an interim Council of Ministers.

Chord with Pakistan: Crowing of its puppets

- Pakistan appears to have got its way. This government formation was tightly controlled the head of its Inter-Services Intelligence (ISI).
- Afghanistan's acting PM is Mullah Hassan Akhund, close associate of former Taliban founder Mullah Omar.
- Abdul Ghani Baradar is his deputy, but again, this could be a token position.
- Baradar had been arrested in 2010 by the Pakistanis for pursuing a dialogue with the Hamid Karzai government without Pakistani sanction and jailed for eight years.
- Pakistan's true proteges are Sirajuddin Haqqani, the acting interior minister, and Mohammed Yaqoob, the acting defence minister, a son of Mullah Omar, who is also close to Haqqani.

The West Asian players

Saudi Arabia, Qatar and Iran have been direct role-players in Afghan affairs for over 25 years.

- **Sheikhdom involvement:** In the 1990s, the first two were supporters and sources of funding for the Taliban, while Iran was an antagonist. After the 9/11, all three countries became deeply involved with the Taliban. From 2005, the Gulf sheikhdoms have contributed millions of dollars to different Taliban leaders and factions.
- **Iran's defiance of US:** Iran began a substantial engagement with various Taliban leaders from 2007 and provided funding, weapons, training and refuge, when required. It wanted the Taliban to maintain pressure on the U.S. forces to ensure their speedy departure from the country.
- **Regional competition:** In the 2010s, when the US began to engage with Iran on the nuclear issue, Saudi Arabia became more directly involved in Afghan matters to prevent Iran's expanding influence among Taliban groups. Thus, besides Syria and Yemen, Iran and Saudi Arabia have also made Afghanistan an arena for their regional competitions.
- **Earliest acknowledgement of the Taliban:** In 2012, Qatar, on U.S. request, allowed the Taliban to open an office in Doha as a venue for their dialogue with the Americans. This has made Qatar an influential player in Afghan affairs, with deep personal ties with several leaders, many of whom keep their families in Doha.

Competitions for influence

The low-key reactions of the Gulf countries to recent developments in Kabul reflect the uncertainties relating to the Taliban in power.

Nature of the govt: Their ability to remain united, their policies relating to human rights, and, above all, whether the Taliban will again make their country a sanctuary for extremist groups.

Fractionalization within terror groups: The country already has several thousand foreign fighters, whose ranks could swell with extremists coming in from Iraq and Syria, and threaten the security of all neighbouring states.

Three sets of regional players are active in Afghanistan today:

1. **Pakistan-Saudi coalition:** This has been the principal source of support for the Taliban-at-war. They would like to remain influential in the new order, but neither would like to see the Taliban revert to their practices of the 1990s that had justifiably appalled the global community.
2. **Turkey and Qatar:** They represent the region's Islamist coalition and, thus, share an ideological kinship with the Taliban. Both would like to see a moderate and inclusive administration.
3. **Iran:** While many of its hardliners are overjoyed at the U.S. "defeat", more reflective observers recall the earlier Taliban emirate which was viscerally hostile to Shias and Iran. Iran also sees itself as the guardian of the Tajik, Uzbek and Hazara minorities in the country.

Options Available: The outlook for security

Linking with Israel-Palestine Conflict: The region now has two options: one, an Israel-centric security order in which the Arab Gulf states would link themselves with Israel to confront Iran. This is being actively promoted by Israeli hawks since it would tie Israel with neighbouring Arab states without having to concede anything to meet Palestinian aspirations.

Comprehensive regional security arrangement: The other option is more ambitious: The facilitators and guarantors of this security arrangement are likely to be China and Russia: over the last few years, both have built close relations with the major states of the region. i.e., Iran, Saudi Arabia, Turkey, Afghanistan and Pakistan.

Consensus to ward away the US

- The Gulf Cooperation Council (GCC) states led by Saudi Arabia lifted the over three-year blockade of Qatar.
- The discussions between Iran and Saudi Arabia and plans are in place for the next meetings.
- Turkey has initiated diplomatic overtures towards Egypt and Saudi Arabia.
- None of these initiatives involves the Americans.

Conclusion: A new order is in making

- These developments suggest that the germ of a new regional security order in West Asia is already sown in fertile ground.

Way forward for India

- The Indian policies are at a crossroads. Continued bandwagoning with the US makes no sense.
- Indian diplomacy should harmonize with the regional capitals, including Beijing, which can be a natural ally on issues of terrorism.
- The bottom line is that India's vital interests remain to be secured.
- Demonizing the Taliban can only be counterproductive.

28. A disease surveillance system, for the future

The article talks about the importance of a well-functioning disease surveillance system that can help reduce the impact of disease and outbreaks.

Epidemiology:

Epidemiology is the branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health.

Details:

- Epidemiology has become a key discipline to prevent and control infectious diseases (for non-communicable diseases as well).
- The application of principles of epidemiology is possible through systematic collection and timely analysis, and dissemination of data on the diseases.
 - This is to initiate action to either prevent or stop the further spread, a process termed disease surveillance.
 - In the late 19th century, with the emergence of understanding that germs cause diseases, and then in the early 20th century, with the discovery of antibiotics and advances in modern medicine, attention from epidemiology shifted.
 - The high-income countries invested in disease surveillance systems but low- and middle-income countries used limited resources for medical care. In the second half of the twentieth century, as part of the global efforts for smallpox eradication many countries recognised the importance and started to invest in and strengthen the diseases surveillance system.

- These efforts received a further boost with the emergence of Avian flu in 1997 and the Severe Acute Respiratory Syndrome (SARS) outbreak in 2002-04.

Surveillance in India:

- India launched the National Surveillance Programme for Communicable Diseases in 1997.
- However, this initiative remained undeveloped till, in the wake of the SARS outbreak, in 2004, India launched the Integrated Disease Surveillance Project (IDSP).
- The focus under the IDSP was to:
 - increase government funding for disease surveillance
 - strengthen laboratory capacity
 - train the health workforce
 - have at least one trained epidemiologist in every district of India

It was on this foundation of the IDSP (which now has become a full-fledged programme) that when the COVID-19 pandemic struck, India could rapidly deploy teams of epidemiologists and public health experts to respond to and guide the response, coordinate the contact tracing and rapidly scale up testing capacity.

Issues:

- The disease surveillance system and health data recording and reporting systems are key tools in epidemiology; however, these have performed variably in the Indian states.
- This is evident from available analyses, be it seroprevalence survey findings or the analysis of excess COVID-19 deaths.
- The estimated excess deaths are also higher in those states which have weak disease surveillance systems and the civil registration and vital statistics (CRVS) systems.
- In a well-functioning disease surveillance system, an increase in cases of any illness would be identified very quickly.

Way Forward:

- A review of the IDSP by joint monitoring mission in 2015, made a few concrete recommendations to strengthen disease surveillance systems.
 - These included increasing financial resource allocation, ensuring an adequate number of trained human resources, strengthening laboratories, and zoonosis, influenza and vaccine-preventable diseases surveillance.

- These recommendations must be re-looked and acted upon. At a more specific level, the following should be considered by health policymakers.
- The government resources allocated to preventive and promotive health services and disease surveillance need to be increased by the Union and State governments.
- The 'One Health' approach has to be promoted beyond policy discourses and made functional on the ground.
- The emerging outbreaks of zoonotic diseases, such as the Nipah virus, avian flu, scrub typhus in Uttar Pradesh are a reminder of the interconnectedness of human and animal health.
- There has to be a dedicated focus on strengthening the civil registration and vital statistics (CRVS) systems and medical certification of cause of deaths (MCCD). These are complementary to disease surveillance systems.
- It is also time to ensure coordinated actions between the State government and municipal corporations to develop joint action plans and assume responsibility for public health and disease surveillance.
- The allocation made by the 15th Finance Commission to corporations for health should be used to activate this process.

Conclusion:

The emergence and re-emergence of new and old diseases and an increase in cases of endemic diseases are partly unavoidable. With a well-functioning disease surveillance system and with the application of principles of epidemiology, their impact can be reduced. There is a need for coordinated actions between a disease surveillance system, a civil registration system and experts in medical statistics, and, finally, informed by the application of principles of epidemiology.

29. Caste census of Backward Classes difficult: Centre

The government has made it clear in the Supreme Court that a caste census of the Backward Classes is "administratively difficult and cumbersome".

Socio-Economic and Caste Census

- The SECC 2011 was conducted for the 2011 Census of India.
- Then government approved the Socio Economic and Caste Census 2011 to be carried out after discussion in both houses of Parliament in 2010.
- The SECC 2011 was conducted in all states and union territories of India and the first findings were revealed in July 2015.

- SECC 2011 is also the first paperless census in India conducted on hand-held electronic devices by the government in 640 districts.
- SECC 2011 was the first caste-based census since 1931 Census of India and it was launched on 29 June 2011 from the Sankhola village of Hazemara block in West Tripura district.

Issues with SECC

Ans. Data NOT available

- The SECC data is stored in the Office of the Registrar General and had not been made official.
- It cannot be used as a source of information for population data in any official document.

What did the Centre say?

- The Centre reasoned that even when the census of castes were taken in the pre-Independence period, the data suffered in respect of “completeness and accuracy”.
- It said the caste data enumerated in the Socio-Economic and Caste Census (SECC) of 2011 is “unusable” for official purposes as they are “replete with technical flaws”.
- The infirmities of the SECC 2011 data makes it unusable for any official purposes and cannot be mentioned as a source of information for population data in any official document.
- Besides, the Centre said, it was too late now to enumerate caste into the Census 2021.

Why not OBCs?

- Unlike the constitutional mandate for collection of census data on SCs and STs, there is no obligation to provide the census figures of OBCs.
- The census data on SCs and STs are used for delimitation of electoral constituencies as well as for reservation of seats, as mandated under the Constitution.

Reason: Official discouragement of Caste

- The center was replying to a writ petition filed by the State of Maharashtra to gather Backward Classes’ caste data in the State while conducting Census 2021.
- The Centre clarified that exclusion of information regarding any other caste – other than SCs and STs – from the purview of the census is a “conscious policy decision”.
- The government said caste-wise enumeration in the Census was given up as a matter of policy from 1951.
- It said there was a policy of “official discouragement of caste”.

What is the plea about?

- To Maharashtra's plea to reveal the SECC 2011 "raw caste data" of Other Backward Classes (OBC), the Centre said the 2011 Census was not an "OBC survey".
- It was, on the other hand, a comprehensive exercise to enumerate the caste status of all households in the country in order to use their socio-economic data to identify poor households.

Why is the Centre reluctant?

- The Centre explained that a population census was not the "ideal instrument" for the collection of details on caste.
- There is a "grave danger" that the "basic integrity" of census data would be compromised.
- Even the fundamental population count may get "distorted".

30. Make departments smart, first

The article talks about the significance of E-governance in improving local governance.

Details:

- As Urbanization in India is accelerating, the importance of effective governance and service delivery by city governments becomes central to the well-being of Indians.
- The country plans to design smart cities, where digital systems enable the use of data generated by people living and working in the city itself, in order to continuously improve the functioning of the city.
 - A smart city requires good data for informed decision-making.
 - The only reliable way to get good data is to design 'smart systems' that generate such data by default.

A smart city is a network of smart functions and departments. Given the complexity of Indian cities, and the various entities that are involved in their governance, this should be done one step at a time. More precisely, one function at a time, then one department at a time, finally building up to the city as a whole.

Digitisation:

- There is a five-level framework for assessing where a given function, department, or city stands in its journey of e-governance.
- The framework sees how the department has been able to apply digital technologies across three domains in order to work more smartly. The three domains are:
 - Processes

- Human resources
- Citizen-centricity

Even the most advanced e-governance systems stand on the foundation of a simple behavioural change, i.e, going digital.

- Records kept on papers instead of being stored digitally creates scope for errors and manipulation.

Way Forward:

- To ensure digitisation, a combination of expectation-setting and incentives must be introduced.
- The time saved and ease of work when digital tools automate record creation and retrieval can be demonstrated in order to gain confidence.
 - In Andhra Pradesh, for instance, ULB employees reported saving an average of 11 hours every week after a digital system was adopted.
 - Phased targets can be set for adoption of the new tools. Adequate technical support and education for employees is necessary during the transition.
 - In implementing such changes administrators must ensure that e-governance is not reduced to an exercise in performance management alone. The framework incorporates a 'citizen centricity' lever to emphasise that urban local bodies are service delivery organisations, and that internal reforms have to reflect in better experience and empowerment for citizens.

Conclusion:

- Digitisation leads to richer datasets that will bring various departments in a city to collaborate with each other to create a virtuous cycle of co-creation, learning, and efficiency.
- Thereby, smart cities emerge from organic collaboration between departments, employees, and citizens, who are simply looking to do their own jobs more effectively.

31. Role of Pakistani elements in Drug haul being examined

In News:

- **3,000 kilograms of heroin** were seized by the Indian law enforcement agencies at Gujarat's Mundra Port.
- The drugs were **shipped from Afghanistan**. The seized heroin was exported by a Kandahar-based Hassan Hussain Limited and imported by Vijayawada-based trading company via Bandar Abbas Port, Iran to Gujarat's Mundra Port.

Role of Afghanistan in drug trafficking:

- The seizure of this large haul of heroin raises **serious questions about the Taliban's promise to stop drug production and its trade using the soil of Afghanistan** given the fact that drug trafficking remains one of the biggest sources of income and funding for the Taliban.
- Notably, after the Taliban announced a ban on the production and supply of narcotics, the rate of heroin and opium almost doubled within a few days in the local and international markets.
- **Afghanistan controls 80 to 90 per cent of opium and heroin supply in the world**, according to the United Nations Office on Drugs and Crime (UNODC).

Details:

- With the Taliban's rise to power in Afghanistan, the **Indian anti-drug law enforcement agencies are suspecting a steep surge in cross-border trafficking of heroin and crystal methamphetamine.**
 - Heroin is a depressant and is manufactured from opium.
 - Methamphetamine is a stimulant that is mainly used as a recreational drug. The drug is prepared using ephedrine extracted from Ephedra plants.

This projection is based on the following recent reports.

There have been reports of an **increase in drug trafficking in the region, mostly through maritime routes.** Several seizures of Afghan-origin heroin and methamphetamine in the high seas of the region have been made in the recent past.

Security threat to India:

- The Indian investigators are still trying to find out the purpose of the import of such a huge quantity of heroin in India. **Narcotics trade has been used for decades to fund terrorist activities inside India.** On regular basis, consignments of drugs are seized at the Punjab and Jammu borders which are sent from Pakistan to fund terrorist organisations.
- A **possible role of Pakistan-based elements** is also being examined. The syndicate had roped in several local people to facilitate the smuggling.

32. Single window for businesses : Goyal

In News :

- Commerce and Industry Minister soft-launched the National Single Window System (NSWS) for investors and businesses.

National Single Window System (NSWS):

- The National Single Window System (NSWS) portal will serve as a one-stop shop **for investors for approvals and clearances**.
- NSWS will provide **end-to-end facilitation and support to investors**, facilitate clearances at the Centre and State levels, provide pre-investment advisory to new businesses, and share information related to land banks.
- The portal, as of today, hosts approvals across 18 Central Departments and nine States, and another 14 Central Departments and five States will be added by December 2021.
- By bringing transparency, accountability and responsiveness in the ecosystem, it will help **promote the ease of doing business**.

Details:

- The single window portal will become a one-stop-shop for investors for approvals and clearances.
- The system is expected to bring in transparency, accountability and responsiveness in the ecosystem and all information will be available on a single dashboard.
- An applicant Dashboard would be there to apply, track and respond to queries.
- The portal currently hosts approvals across 18 Central Departments and 9 States, and another 14 Central depts and five states will be added by December 2021.
- The NSWS provides the following services:
 - **Know Your Approval (KYA) Service:** It generates a list of approvals required by any business to commence operations. It does so by asking the investor a series of dynamic questions about their planned business activities and identifies the applicable approvals on the basis of responses provided. This service is for guidance purpose only.
 - **Common Registration Form:** To ensure a single point of submission of information and documents across Ministries and States, a unified information capturing system along with a common registration form has been introduced.
 - **State registration form:** Enables investor to have seamless single click access to respective State Single Window System.

- **Applicant dashboard:** Provides a single online interface to apply, track and respond to the queries pertaining to approvals and registrations across ministries and States.
- **Document repository:** An online centralized storage service for investors to enable one-time document submission and use the same across multiple approvals eliminating the need for submitting documents at multiple portals.
- **E-Communication module:** Enables online response to queries and clarification requests related to applications by Ministries and States.

33. Study says fertility rates of Hindus and Muslims converging

An analysis by US-based Pew Research Center published recently, titled '**Religious Composition of India**'.

- The study was based on data sourced from **India's decennial census** and the **National Family Health Survey (NFHS)**.
- It looked at the **three main factors** that are known to **cause changes in religious composition of populations** – fertility rate, migration, and conversions.

Highlights of the study:

- The religious composition of India's population since Partition has **remained largely stable** showing not only a marked decline but also a **convergence in fertility rates**.
 - It includes the two largest religious groups- Hindus and Muslims.
- Every religious group in India has seen its **fertility fall**, including the majority Hindu population and Muslim, Christian, Sikh, Buddhist and Jain minority groups.
- While **Muslims have the highest fertility rate** among India's major religious groups, their total fertility rate has declined dramatically.
- There are usually **three factors** that cause religious groups to shrink or expand- migration, religious conversion and fertility.
 - **Migrants leaving India outnumber immigrants** three-to-one, and religious minorities are more likely than Hindus to leave.
 - **Religious conversion** had a "relatively small impact" on India's overall composition, with 98 per cent of Indians still identifying with the religion in which they were raised.
 - **Sex selective abortions** have caused an estimated deficit of 20 million girls compared with what would naturally be expected between 1970 and 2017.

- Women in **central India tended to have more children**, with Bihar and Uttar Pradesh showing a total fertility rate (TFR) of 3.4 and 2.7 respectively, in contrast to a TFR of 1.7 and 1.6 in Tamil Nadu and Kerala respectively.

Growth rates:

- **Between 1951 and 1961**, the Muslim population expanded by 32.7%, 11 percentage points more than India's overall rate of 21.6%.
- From 2001 to 2011, the difference in growth between **Muslims (24.7%)** and Indians overall (17.7%) was **7 percentage points**.
- India's **Christian population grew at the slowest pace** of the three largest groups in the most recent census decade- gaining 15.7% between 2001 and 2011.
 - It shows lower growth rate than the one recorded in the decade following Partition (29.0%).

In terms of absolute numbers:

- In percentage terms, between 1951 and 2011, **Muslims grew by 4.4 percentage points** to 14.2% of the population, **Hindus declined by 4.3 points** to 79.8%.
 - Hindus comprised **84.1 per cent of the population in 1951**, and 79.8 per cent in 2011, while Muslims comprised 9.8 per cent of the population in 1951, and 14.2 per cent in 2011.
- All the **six major religious groups**- Hindus, Muslims, Christians, Sikhs, Buddhists, and Jains- have grown in absolute numbers.
- **Parsis** are in exception, whose number halved between 1951 and 2011, from 110,000 to 60,000.

On fertility rates:

- **Gaps in fertility rates** between India's religious groups have **shrunk over the years**.
 - Fertility rate refers to the **average number of children born to a woman** in childbearing age (15-44 years).
- While Muslim women were expected to have an average of 1.1 more children than Hindu women in 1992, the gap had shrunk to 0.5 by 2015.
- If all the women had an average amount of wealth and education, were the same age and lived in the same places, **Hindu women would be predicted to have 0.9 fewer children than their Muslim counterparts**, on average.
 - Analysed using **multilevel mixed-effects analysis**- a statistical technique.

- All religious groups have shown a **major decline in fertility rates between 1992 and 2015**.
- Muslims have the highest fertility rate, followed by Hindus. This reflects a long-standing pattern since 1992.

Christians may be undercounted:

- India's population has **more than tripled since Partition** and, accordingly, all religious groups have grown in size.
- **Indian Christian rose to 2.8 crore from 0.8 crore**, siting this could be an undercount.
 - People who indicate that they are Christian on the census are **not able to also identify as belonging to Scheduled Castes**.
- Members of Scheduled Castes are eligible for government benefits, reportedly prompting some people in that category to identify as Hindu when completing official forms.
- **Dalits who identify as Christians and Muslims can't avail of reservation** benefits and remain excluded from the Constitution (Scheduled Castes) Order, 1950.

34. South China Sea Issue

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- The South China Sea is an **arm of western Pacific Ocean in Southeast Asia**.
- It is south of China, **east & south of Vietnam**, west of the Philippines and **north of the island of Borneo**.
- **Bordering states & territories** (clockwise from north): the People's Republic of China, the Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- It is connected by **Taiwan Strait with the East China Sea** and by **Luzon Strait with the Philippine Sea**.
- It contains numerous shoals, reefs, atolls and islands. The **Paracel Islands, the Spratly Islands and the Scarborough Shoal** are the most important.
- **Importance of South China Sea**
- This sea holds tremendous strategic importance for its location as it is the connecting link between the **Indian Ocean and the Pacific Ocean**. (Strait of Malacca)

- According to the **United Nations Conference on Trade And Development (UNCTAD)** one-third of the global shipping passes through it, carrying trillions of trade which makes it a significant geopolitical water body.
- According to the **Department of Environment and Natural Resources, Philippines**, this sea has one-third of the entire world's marine biodiversity and contains lucrative fisheries providing food security to the Southeast Asian nations.
- The South China Sea is believed to have **huge oil and gas reserves** beneath its seabed.
- **In News:** The Chinese fishing fleets have been seen raiding the rich waters of the South China Sea that are internationally recognised as exclusively Indonesia's to fish. The fishermen in Natuna Islands (Indonesia) are worried.
- The Chinese steel trawlers scrape the bottom of the sea and **destroy other marine life**. Chinese trawling also **breaches the maritime borders**. Since China is its **largest trading partner**, it has been argued that the **Indonesian government has not taken any steps** to deal with the incursions by Chinese fishing boats.
- China's illegal fishing near the Natuna islands carries global consequence, reminding regional governments of Beijing's expanding claims to the South China Sea through which **one-third of the world's maritime trade flows**. China wants to claim the resources such as **oil, natural gas, and fish** in the South China Sea. The presence of Chinese fishers also helps to **embody China's maritime claims**. The **nine dash line** (rejected by an international tribunal) asserted by China violates the principle of **Exclusive Economic Zones (EEZ)**.
- **History of South China Sea Dispute**
- In the first half of the 20th century, the Sea remained almost quiet. In fact, at the end of World War II, no claimant occupied a single island in the entire South China Sea.
- China laid claim to the South China Sea in 1947. It demarcated its claims with a U-shaped line made up of **eleven dashes** on a map, covering most of the area.
- But two "dashes" were removed in the early 1950s to bypass the Gulf of Tonkin as a gesture to communist comrades in North Vietnam.

- The remaining ‘**nine-dash line**’ stretches hundreds of kilometers south and east of its southerly Hainan Island, covering almost 90% of South China Sea.
- After 1960’s when the huge reserve of oil and natural gas were discovered in the region, the territorial claims started growing in an unprecedented manner.
- **The United Nations Convention on the Law of the Sea (UNCLOS)**, which came into force in 1994, established a legal framework intended to balance the economic and security interests of coastal states with those of seafaring nations.
- While UNCLOS has been signed and ratified by nearly all the coastal countries in the South China Sea, based on their own interpretation of the UNCLOS, claimant countries started to legitimize their claims.
- In 2002, ASEAN and China came together to sign the Declaration on the Code of Conduct of Parties in the South China Sea to keep disputes away. However, it didn’t achieve the desired outcomes.
- In 2009, Malaysia and Vietnam sent a joint submission to the Commission on the Limits of the Continental Shelf (CLCS) for setting out some of their claims. In response to this China submitted a map containing the infamous “nine-dash” line and due to which, there was no headway in the dispute resolution.
- **Why is South China Sea in the news?**
- The **Permanent Court of Arbitration (PCA)**, based in The Hague, Netherlands, recently ruled that China’s claims of historical rights over the South China Sea (SCS) has no legal basis. The case against China was initiated by the Philippines.
- The Permanent Court of Arbitration (PCA) has ruled that China’s claims to the waters within the “nine-dash line”, was in breach of the **UN Convention on the Law of the Sea (UNCLOS)**. The court also observed that China has caused “severe harm to the coral reef environment” by building artificial islands.
- The Philippines had lodged the suit against China in 2013 and has welcomed the ruling, but China has reacted furiously, saying that it “does not accept and does not recognise” the decision.

- China had even refused to participate in the case, saying that the tribunal had “no jurisdiction” over the issue.
- **Geopolitics and Activities undertaken in the region:**
- Between China and the Philippines, the conflict centers around the **Scarborough Shoal**. The Scarborough Shoal, is essentially a triangle-shaped chain of reefs and rocks with a total area of 150 square kilometers.
- In 1995, China took control of the disputed **Mischief Reef**, constructing octagonal huts on stilts- Chinese officials said at the time that these would serve as shelters for fishermen. The Philippines registered a protest through the Association of Southeast Asian Nations.
- In fact, the current round of tension between the two countries began in 2008-2009 after a tense but bloodless stand-off over the Scarborough Shoal, led to China gaining de facto control of it in 2012.
- Also recently, China has constructed and installed military-capable infrastructure in the **Spratly Islands**.
- **Reasons for the stalemate on a possible solution**
- ASEAN member nations, namely, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, often show signs of anxiety whenever claimants over the South China Sea, most often China, escalate the conflict.
- In fact, one of the fundamental principles of the Association of Southeast Asian Nations (ASEAN) has been to resolve disputes by peaceful means and to reach agreement by a consensus.
- But on the issue of the South China Sea, ASEAN has been unable to formulate a consensus policy. Reasons for this can be attributed partly to the fact that not all 10 ASEAN members are claimants to the South China Sea. While another reason is that members of ASEAN have overlapping claims among themselves. Moreover, bilateral relations between China and some smaller ASEAN members, such as Laos and Cambodia, are also a factor. Because of its economic and military power, China has been able to win over some ASEAN members.
- In fact, when China insisted on talks among the parties concerned, the claimants in ASEAN wanted to pursue it through multilateralism or the

Court of Arbitration. Thus, the existence of two opposing approaches was, and continues to be a major challenge for bringing a mutually acceptable solution to the South China Sea disputes.

- **India's Stand on South China Sea**

- It is important to note that in July 2014, an Arbitration Tribunal, set up under the Permanent Court of Arbitration, delivered its ruling, in the matter of the Bay of Bengal Maritime Boundary Delimitation between India and Bangladesh. The maritime boundary so delimited covered the territorial sea, the exclusive economic zone (EEZ) and the continental shelf.
- The United Nations tribunal awarded Bangladesh 19,467 sq. km of the 25,602 sq. km sea area of the Bay of Bengal.
- India has been widely credited, with her acceptance of the decision and the manner in which she has abided by it. This is an example which China should be encouraged to emulate. In fact, it is interesting to note that the US has asked China to learn from India's handling of its maritime disputes with its neighbours- referring to the maturity with which India has agreed to the settlement on the maritime boundary with Bangladesh.
- Under the 'Act East' policy, India has been taking a higher position at the global high table- this was reflected in the joint statement issued in September 2014, by the Governments of U.S. and India when Indian PM Narendra Modi, travelled to U.S. The joint statement "urged the concerned parties to pursue resolution of their territorial and maritime disputes through all peaceful means, in accordance with universally recognized principles of international law, including the United Nations Convention on the Law of the Sea." The joint statement also, "affirmed the importance of safeguarding maritime security and ensuring freedom of navigation and over flight throughout the region, especially in the South China Sea."
- In the wake of the recent judgement by the Permanent Court of Arbitration, it is a good time for India to assert that it believes in global commons, and in freedom of navigation. India has rightfully not come out in 'open' support of the verdict from the tribunal, as any overt support to this verdict might run against India's ambitions of securing membership into the NSG- where China's support is needed.
- India has legitimate commercial interest in the South China Sea (SCS) region. But India follows the policy of not involving itself in the disputes between sovereign nations.

- India has been concerned about the security of its trade-flows and energy interests in the South China Sea. Vietnam has offered India seven oil blocks in its territory of the SCS- this move didn't get down well with China. India has signed energy deals with Brunei too.
- India has been a strong advocate of the idea of freedom of navigation. This belief is strongly echoed by most other major powers, including the U.S.
- **Possible Way Forward**
- China operates from a position of strength in the South China Sea, wherein it has physical control over critical islands in the region, coupled with this, her policy of gradual militarization of the disputed islands in the South China Sea, would impact freedom of navigation- making China the main arbiter of the accepted range of 'legitimate' operations in the South China Sea.
- Also, although the ruling is historic, the tribunal lacks powers to enforce its rulings, it is important that the claimant nations do not escalate the issue, but work on arriving at a consensus through effective diplomacy.
- Judicial verdicts on issues of contested sovereignty have had historical precedents of triggering a nationalist backlash. It is thus important to consider possible solutions to this dispute. Some measures are as under:
- To resolve the disputes peacefully, the claimants in the region should be willing to abandon their confrontational attitude, and instead agree to find a middle path- even if this requires sacrificing certain portions of their claims.
- All claimants can perhaps limit their claim to the areas of 200 nautical miles of the Exclusive Economic Zone in accordance with the United Nations Convention on the Law of the Sea (UNCLOS). Thus, by agreeing to such a proposal, the claimants can also reach an agreement to leave international waters for free navigation.
- Another possible solution would be for the parties concerned to establish a common ownership of the disputed areas whereby all the revenues from the South China Sea are equitably shared among the littoral countries.
- Perhaps another possibility would be for the disputing countries to specifically lay out their claims and allow a neutral party to adjudicate on the basis of the UNCLOS or any other relevant international laws.

35. It's time to criminalise marital rape

Background:

Marital rape:

- **Marital rape is not a punishable offence in India.**
- According to **Exception 2 to Section 375 of the Indian Penal Code**, sexual intercourse by a man with his own wife (provided she is over the age of 18) does not amount to the offence of rape.

Recent judgments of the High Courts:

- The **Kerala High Court** held that acts of sexual perversions of a husband against his wife amounted to (mental) cruelty and was therefore a **good ground to claim divorce**.
- The **Chhattisgarh High Court**, while discharging an accused husband, held that the charge of rape framed under Section 376 of the IPC was erroneous and illegal as it was covered under Exception 2 to Section 375 and the wife was not under 18 years of age.

Details:

- The recent judgments of two High Courts on marital rape have once again **raked up debate on whether Exception 2 to Section 375 of the Indian Penal Code is constitutional or not**.
- The article argues in favour of **scrapping the exception to marital rape** provided under Section 375 of the Indian Penal Code based on the following arguments.

Violation of fundamental rights:

- Marriage in modern times is regarded as a partnership of equals. It is an association of two individuals, each of whom has separate integrity and dignity. The violation of the bodily integrity of a woman is a clear violation of her autonomy and is a violation of **Article 21 of the Constitution**.

International practice:

- Marital rape is a **criminal offence in South Africa, Australia, and Canada**, among other countries.

Committee recommendations:

- The **Justice Verma Committee report of 2013** too recommends that the exception for marital rape be removed.

Address sexual violence against women:

- The doing away with Exception 2 would **show complete non-tolerance by the state with respect to rape and sexual violence against women**.

Counter arguments:

- One line of argument has been that once marital rape is criminalised, it **may lead to filing of false charges against husbands**. Also it will be very **difficult for the police to prove such cases beyond reasonable doubt**.

Conclusion:

- A closer examination of the counter arguments shows that the first apprehension is unfounded given that there are legal provisions to deal with false cases and also that legal remedies may be revised suitably to deal with such false cases.
- Also the difficulty of proof cannot be a criterion for not notifying **deviant behaviour such as marital rape** as an offence which amounts to a gross violation of the bodily integrity and autonomy of women.

36. Northeast Monsoon

Subdued Northeast Monsoon

Rainfall over the southern peninsular region has been deficient so far, indicating that the northeast monsoon has remained subdued this year.

Importance :

Pattern of Rainfall in India: **India receives rainfall during two seasons:**

- About 75% of the country's annual rainfall is received from the Southwest monsoon between June and September.
- The Northeast monsoon occurs during October to December, and is a comparatively small-scale monsoon, which is confined to the Southern peninsula. It is called the winter monsoon.

Northeast Monsoon and Rainfall:

- After the complete withdrawal of the Southwest monsoon from the country takes place by mid-October, the wind pattern rapidly changes from the south-westerly to the north-easterly direction.
- The period after the Southwest monsoon season, from October to December, is the peak time for cyclonic activity in the North Indian Ocean region covering the Arabian Sea and the Bay of Bengal.

The winds associated with the formation of low pressure systems, depressions, or cyclones influence this monsoon, and therefore, the rainfall.

Regions associated with Northeast Monsoon:

- The rainfall associated with the Northeast monsoon is important for Tamil Nadu, Puducherry, Karaikal, Yanam, coastal Andhra Pradesh, Kerala, north interior Karnataka, Mahe and Lakshadweep.
- Tamil Nadu records about 48% of its annual rainfall during these months, making it the key factor for undertaking agricultural activities and reservoir management in the state.
- Some South Asian countries such as Maldives, Sri Lanka and Myanmar, too, record rainfall during October to December.

Reasons for deficient rainfall this Northeast monsoon:

Prevailing La Niña conditions in the Pacific Ocean:

- La Niña conditions enhance the rainfall associated with the Southwest monsoon, but has a negative impact on rainfall associated with the Northeast monsoon.
- La Niña (Spanish for 'little girl') refers to the large-scale cooling of the ocean surface temperatures in the central and eastern equatorial Pacific Ocean, coupled with changes in the tropical atmospheric circulation, namely winds, pressure and rainfall.
- It usually has the opposite impacts on weather and climate as El Niño, which is the warm phase of the so-called El Niño Southern Oscillation (ENSO).
 - El Niño (Spanish for 'little boy') is the abnormal surface warming observed along the eastern and central regions of the Pacific Ocean (region between Peru and Papua New Guinea).
 - La Nina and El Nino are large-scale ocean phenomena which influence the global weather winds, temperature and rainfall.
 - They have the ability to trigger extreme weather events like droughts, floods, hot and cold conditions, globally.
 - Each cycle can last anywhere between 9 to 12 months, at times extendable to 18 months and re-occur after every three to five years.

Inter Tropical Convective Zone (ITCZ):

- The current position of the ITCZ has also contributed to the poor rainfall during the ongoing monsoon season.
- The ITCZ is a low-pressure belt, whose northward and southward movements along the equator determine the precipitation in the tropics.
- Currently, the ITCZ is located to the north of its normal position.

Other Important Atmospheric Circulation

Madden-Julian Oscillation (MJO): The MJO can be defined as an eastward moving 'pulse' of clouds, rainfall, winds and pressure near the equator that typically recurs every 30 to 60 days.

37. New Monsoon Forecast Model

New Monsoon Forecast Model

- The India Meteorological Department (IMD) may introduce new monsoon models this year to better forecast changes in rainfall.
- The monsoon that concluded in 2020 was unique, in that with monsoon 2019, it was only the third time in a century that India saw back-to-back years of above normal rainfall. In both years – and monsoon 2019 was a 25-year high – the IMD failed to forecast the magnitude of the excess and only indicated that the monsoon would be “above normal”.
- D.S. Pai, who heads the IMD’s Climate Research Services, Pune, said in his talk there were three different models that could be tested this year. Two of them were dynamical models and one a statistical model.

Computer simulation

- In the former, the climate on any particular day is simulated on supercomputers and meteorologists observe the changing daily output. The other is the traditional statistical model that equates relationships of physical parameters, such as for instance sea surface temperatures, snowfall, the temperature of landmass etc, with the actual observed rainfall in the past.
- The **three models** under consideration are:
 1. 12 global circulation models (dynamical) whose outputs would be combined into a single one;
 2. a model that gauges rainfall based on the sea surface temperature in the tropics (developed by Professor Sumant Nigam, University of Maryland, U.S.) and
 3. the statistical model based on climate variables observed during the pre-monsoon. All of them are ‘ensembles’ meaning smaller models are combined to arrive at an average value.
- M. Mohapatra, Director General, IMD, told The Hindu that the traditional statistical model would continue to be used this year. “However, we will continue to have discussions and will decide later on what new approach can be added.”
- It is an oceanic-atmospheric phenomenon which affects weather activities across the globe. It brings major fluctuation in tropical weather on weekly to monthly timescales.

- 2. The MJO can be defined as an eastward moving 'pulse' of clouds, rainfall, winds and pressure near the equator that typically recurs every 30 to 60 days.
- 3. It's a traversing phenomenon and is most prominent over the Indian and Pacific Oceans.

Phases of MJO (Madden Julian Oscillation)

The MJO consists of two parts or phases. Strong MJO activity often dissects the planet into halves. One half within the enhanced convective phase and the other half in the suppressed convective phase.

1. Enhanced rainfall (or convective) phase:

Winds at the surface converge, and the air is pushed up throughout the atmosphere. At the top of the atmosphere, the winds reverse (i.e., diverge). Such rising air motion in the atmosphere tends to increase condensation and rainfall.

2. Suppressed rainfall phase:

- Winds converge at the top of the atmosphere, forcing air to sink and, later, to diverge at the surface. As air sinks from high altitudes, it warms and dries, which suppresses rainfall.
- It is this entire dipole structure, that moves west to east with time in the Tropics, causing more cloudiness, rainfall, and even storminess in the enhanced convective phase, and more sunshine and dryness in the suppressed convective phase.

How Does MJO Affect Indian Monsoon?

- The Indian Ocean Dipole (IOD), El Nino and MJO are all oceanic and atmospheric phenomena, which affect weather on a large scale. IOD only pertains to the Indian Ocean, but the other two affect weather on a global scale-up to the mid-latitudes.
- IOD and El Nino remain over their respective positions, while MJO is a traversing phenomenon.
- The journey of MJO goes through eight phases.
- When it is over the Indian Ocean during the Monsoon season, it brings good rainfall over the Indian subcontinent.
- On the other hand, when it witnesses a longer cycle and stays over the Pacific Ocean, MJO brings bad news for the Indian Monsoon.
- It is linked with enhanced and suppressed rainfall activity in the tropics and is very important for the Indian monsoonal rainfall.

Periodicity of MJO:

- If it is nearly 30 days then it brings good rainfall during the Monsoon season.
- If it is above 40 days then MJO doesn't give good showers and could even lead to a dry Monsoon.
- Shorter the cycle of MJO, better the Indian Monsoon. Simply because it then visits the Indian Ocean more often during the four-month-long period.
- Presence of MJO over the Pacific Ocean along with an El Nino is detrimental for Monsoon rains.

38. 'Indianization' of Legal System is the need of the hour : CJI

Chief Justice of India NV Ramana has asserted the need for the “Indianisation of our legal system”, pointing out that the colonial system being followed currently may not be best suited to the complexities of India.

Prospects of Indianization

- CJI meant that the need to adapt to the practical realities of our society and localize our justice delivery systems.
- For example, parties from a rural place fighting a family dispute are usually made to feel out of place in the court.
- They do not understand the arguments or pleadings which are mostly in English, a language alien to them.
- These days judgments have become lengthy, which further complicates the position of litigants.
- For the parties to understand the implications of a judgment, they are forced to spend more money.
- For whom do the court's function, the CJI asked. For the litigants, who are the “justice seekers”. They are the ultimate beneficiaries.

What did CJI say?

- CJI has said the ordinary Indian feels out of place in our courts where proceedings are lengthy, expensive and in English.
- Besides, judgments are either too long or technical or manage to be both.
- It is time for courts to wake up from their colonial stupor and face the practical realities of Indian society.
- Rules and procedures of justice delivery should be made simple.
- The ordinary, poor and rural Indian should not be scared of judges or the courts.

Reasons for Indianization

- Multiple barriers continue to thwart the citizen's way to the courts.
- The working and the style of courts do not sit well with the complexities of India.

- The systems, practices and rules of courts are foreign and sourced from our colonial days. They do not take care of the practical realities of India.

Major suggestions by CJI:

(A) Simplification

- The simplification of justice delivery should be our pressing concern.
- It is crucial to make justice delivery more transparent, accessible and effective.
- Procedural barriers often undermine access to justice.
- The Chief Justice said both judges and lawyers have to create an environment which is comforting for the litigants and other stakeholders.

(B) Alternate dispute mechanisms

- The CJI said alternate dispute mechanisms like mediation and conciliation would go a long way in reducing pendency, unnecessary litigation and save resources.

39. 'Taliban have responsibility to exercise good governance, to be inclusive'

In News:

- Saudi Foreign Minister's visit to India.

Details:

- In the light of the official visit, the article analyzes some aspects of the **India-Saudi Arabia bilateral relationship**.

Co-operation and collaboration on the Afghanistan issue:

- A major aspect of the visit is based on the Afghanistan issue. India and Saudi Arabia have discussed the way forward in Afghanistan.
- **Peace, security and stability in Afghanistan** would be critical to the region including the countries of Saudi Arabia and India. The increasing probability of Afghanistan becoming a **source of transnational terrorism** poses grave threats to the internal security of both India and Saudi Arabia.
- Unlike in the earlier regime of the Taliban, Saudi Arabia has not maintained a diplomatic engagement with the Taliban regime this time, while its strategic rivals Qatar, Turkey and Iran have established contacts and ties with the new Taliban regime. Saudi Arabia fears that this development could place it in a strategically disadvantageous position in the region and beyond. In this light, **it is trying to co-operate on the Afghanistan issue with like-minded countries like India**.

- Neither Saudi Arabia nor India actually has a diplomatic presence or any formal engagement with the Taliban government in Afghanistan.

India faces the threat of infiltration attempts by armed militants along India's borders in Jammu and Kashmir. The **anti-India terror organizations** could find a base for their operations in Afghanistan under the new Taliban regime and renew their attacks against India. **Drug trafficking** emanating from Afghanistan also poses another major challenge for India's national security. India and Saudi Arabia can play a decisive role to make sure that the commitments made by the new Taliban regime are adhered to in areas of ensuring adequate rights for minorities and women, curbing the use of Afghan soil for terrorism, etc.

Economic co-operation:

- **Bilateral trade and investment** between the two countries have witnessed significant growth in recent years.
 - India remains one of the largest procurers of Saudi's oil outputs. **India is the third-largest trade partner for Saudi Arabia.**
 - Saudi Arabia had made an announcement of a **\$100 billion investment plan by the Saudi government and Aramco for India** in 2019.
 - ARAMCO, Saudi Arabia's state-run oil firm is planning a joint venture for an oil refinery in Ratnagiri, Maharashtra and the two countries are also cooperating in setting up strategic oil reserves in India.

Pakistan factor:

- Given that Saudi Arabia enjoys good relations with both India and Pakistan and enjoys some degree of influence over Pakistan, it can play a **decisive role in helping the two countries engage to resolve the outstanding issues between themselves** which can help bring in much-needed peace and security in the South Asian region.

Security aspects:

- India and Saudi Arabia have signed an MoU on cooperation in the **exchange of intelligence related to money laundering and terrorism financing.**

Indian Diaspora in Saudi Arabia:

- The **7 million-strong Indian community** is the largest expatriate group in Saudi Arabia. They send remittances of over US \$11 billion annually to India.

Irritants in the relationship:

- Saudi Arabia led OPEC has **overlooked India's repeated calls for rationalizing the oil prices.** This has not gone down well with India.

- Also, India has strongly condemned the **repeated statements by the Saudi Arabia-headquartered Organisation of Islamic Cooperation (OIC)** on Jammu and Kashmir, the status of Indian Muslims and incidents of communal violence in India as **gross interference in India's domestic affairs**.

Conclusion:

- The **Riyadh Declaration of 2010** had forged a **Strategic Partnership between India and Saudi Arabia**. Since then the two countries have **deepened their relationship in diverse sectors like investment, energy, trade, climate action and security cooperation**.
- Given the mutually beneficial partnership, the relationship is bound to only grow in the coming years.

40. Reservation in promotions to persons with disabilities ★

In News The Supreme Court has asked the Centre to issue instructions “at the earliest and not later than four months” for giving reservation in promotions to persons with disabilities (PwDs).

- In a January 14, 2020 judgment of the apex court confirming that PwDs have a right to reservation in promotions. The judgement is famously known as Siddaraju v/s State of Karnataka.
- It said instructions should be issued in accordance with Section 34 of the Rights of Persons with Disabilities Act, 2016.
 - It provides that “every appropriate government shall appoint in every government establishment not less than 4% of the total number of vacancies in the cadre strength in each group of posts meant to be filled with persons with benchmark disabilities.

Siddaraju v/s State of Karnataka case

- In the case of Siddaraju v/s State of Karnataka, the Supreme Court affirmed the Reservation of Persons with Disability (PWDs) under the Rights of Persons with Disabilities Act, 2016. In the given case, the decision given under Indra Sawhney's Case was reconsidered.
- The Court was of the view that the basis for providing reservation for PWD is a physical disability and not any of the criteria forbidden under article 16(1).
- Further, the reservation of persons with disability has nothing to do with 50% ceiling. Therefore, the rule of no reservation promotions as laid down in

Indira Sawhney has clearly and normatively no application to persons with disability.

Other landmark judgements with regard to Reservation in promotion

- In the **Indira Sawhney case (1992)**, SC held that the reservation policy cannot be extended to promotions.
- However, the **77th Constitutional Amendment** inserted clause 4A in article 16 and restored provision of reservations in promotions.
- In **Nagaraj judgement (2006)**, Court laid down three controlling conditions that the state must meet prior to granting SC/ST a reservation in promotion:
 - state must show that backwardness of the class
 - class is inadequately represented in position or service
 - reservations are in the interest of Administrative efficiency
- In **Jarnail Singh case (2018)**, it struck down the demonstration of backwardness provision from Nagaraj judgement.

GS 3 : Economy, Science and Technology, Environment

1. Holding transnational corporations accountable

In News

Given the enormous power that transnational corporations (TNCs) wield, questions about their accountability have arisen often. There have been many instances where the misconduct of TNCs has come to light such as the corruption scandal involving Siemens in Germany.

Holding TNCs accountable: Background

- The effort was made at the UN to develop a multilateral code of conduct on TNCs.
- However, due to differences between developed and developing countries, it was abandoned in 1992.
- **Role of BITs:** Aim was to use international law to institutionalise the forces of **economic globalisation, leading to the spread of BITs.**
- **Asymmetry in BITs:** These treaties promised protection to foreign investors under international law by bestowing rights on them and imposing obligations on states.
- This structural asymmetry in BITs, which confer rights on **foreign investors but impose no obligations**, relegated the demand for investor accountability.
- In 2014, the UN Human Rights Council established an open-ended working group with the mandate to elaborate on an international legally binding instrument on TNCs and other businesses concerning human rights.
- Since then, efforts are being made towards developing a treaty and finding ways to make foreign corporations accountable.
- The latest UN report is a step in that direction.

UN report on human rights-compatible international investment agreements

- The UN working group on 'human rights, transnational corporations (TNCs) and other businesses' has published a new report on human rights-compatible international investment agreements.
- It urges states to ensure that their bilateral investment treaties (BITs) are **compatible with international human rights obligations.**
- It emphasises **investor obligations at the international level** i.e., the accountability of TNCs in international law.

Using BITs to hold TNCs accountable

- BITs can be harnessed to hold TNCs accountable under international law.
- The issue of fixing accountability of foreign investors came up in an international law case, *Urbaser v. Argentina* (2016).
- **Subjecting corporates to international law:** In this case, the tribunal held that corporations can be subjects of international law and are under a duty not to engage in activities that harm or destroy human rights.
- The case played an important role in bringing human rights norms to the fore in BIT disputes.
- It also opened up the **possibility of using BITs to hold TNCs accountable provided** the treaty imposes positive obligations on foreign investors.
- **Recalibrating BITs:** In the last few years, states have started recalibrating their BITs by inserting provisions on investor accountability.
- **Issues with BITs:** However, these employ soft law language and are hortatory.

- They do not impose positive and binding obligations on foreign investors.
- They fall short of creating a framework to hold TNCs accountable under international law.

Takeaways for India

- The recent UN report has important takeaways for India's ongoing reforms in BITs.
- **Best endeavour clauses not enough:** India's new **Model BIT of 2016** contains provisions on investor obligations.
- However, these **exist as best endeavour clauses**. They do not impose a binding obligation on the TNC.
- **Impose positive binding obligations:** India should impose positive and binding obligations on foreign investors, not just for protecting human rights but also for imperative issues such as **promoting public health**.
- The Nigeria-Morocco BIT, which imposes binding obligations on foreign investors such as conducting an environmental impact assessment of their investment, is a good example.

Conclusion

Reforms would help in harnessing BITs to ensure the answerability of foreign investors and creating a binding international legal framework to hold TNCs to account.

2. The end of the doing business rankings

The World Bank Group has scrapped its flagship publication, the 'Doing Business' report.

Doing Business Report

- This report publishes the influential annual ranking of countries on the Ease of Doing Business (EDB) index.
- It ranks countries by the simplicity of rules framed for setting up and conducting businesses.

Utility of the index

The World Bank's decision has wide ramifications, as the index serves varied purposes.

- Many countries showcase improved ranking to signal market-friendly policies to attract foreign investments. National leaders often set EDB rank targets.
- This helps them measure domestic policies against global "best practices" and browbeat domestic critics.

- India, for instance, wanted its administration to ensure that India breaks into the top 50 ranks of the EDB index.
- Some countries seem to use their political heft to improve their rank, polish their international image and sway public opinion (as appears to be China's case).

Issues with the credibility of the report

- The Group acted on its commissioned study to examine the ethical issues flagged in preparing the 2018 and 2020 editions of the EDB index.
- It is accused of having exerted pressure on the internal team working on the Doing Business report to falsely boost China's rank by doctoring the underlying data.
- Similarly, tensions were also reportedly brought to bear in the case of Saudi Arabia's rank, among others.

EDB index rank vs economic outcomes

- There is a disconnect between the stellar rise in EDB index rank and economic outcomes.
- The theory underlying the EDB index could be suspect, the measurement and data could be faulty, or both.
- For example, China's phenomenal economic success, especially its agricultural performance (after the reforms in 1978), is perhaps the most unmistakable evidence demonstrating that lack of clarity of property rights may not be the binding constraint in a market economy.
- What matters is economic incentives.
- Measuring regulatory functions underlying the index could be tricky and subjective and possibly politically motivated as well, as the controversies surrounding the index seem to suggest.

EODB in India: At what cost

Ans. Weakening labour regulations

- Closer home, India has weaponised the mandate to improve the rank in the EDB index to whittle down labour laws and their enforcement and bring them close to the free-market ideal of 'hire and fire'.
- Most States have emulated Maharashtra's lead of administrative fiat, which renders labour laws toothless by dismantling official labour inspection systems and allowing employers to file self-regulation reports.
- The government has farmed out critical safety regulations such as annual inspection and certification of industrial boilers to 'third party' private agencies.
- The Labour Department's inspection is now not mandated; it is optional only by prior intimation to employers.

Implications of such moves

- Such abdication of the government's responsibility towards workers has reportedly affected industrial relations.
- The workers' strike at Wistron's iPhone assembly factory in Karnataka last year is an example.
- Further, severe industrial accidents are rising, damaging life and productive industrial assets.

Why did World Bank scrap the index?

- Investigations into "data irregularities" in preparing the EDB index, as brought out by the independent agency, seems to confirm many shortcomings repeatedly brought to light for years now.
- The index appears motivated to support the free-market ideal.
- It is dressed up under scientific garb and is underpinned by seemingly objective methods and data collection.
- Strong leaders (and motivated officials) seem to have used their position to manipulate the index to suit their political and ideological ends.

Conclusion

- India claimed the success of its Make in India initiative by relying on its ranking on the EDB index without tangible evidence.
- Handing over law enforcement to employers by self-reporting compliance seems to have increased industrial unrest and accidents.
- It perhaps calls for honest soul-searching as to what havoc a questionable benchmark can wreak.

3. Rooftop Solar Scheme

India has added 521 megawatts (MW) of rooftop solar capacity in the second quarter (Q2) of the calendar year (CY) 2021, a 53% increase than earlier quarter showing good signs of popularity.

Solar Rooftop

- A solar photovoltaic (PV) system mounted on a rooftop of a building is a mini-power requirement or feed into the grid.
- The size of the installation varies significantly depending on the availability of space, amount of electricity consumed by the property and the ability or willingness of the owner to invest the capital required.

Why rooftop?

- Rooftop solar with a storage system is a benefit for both, end consumers as well as discoms (power distribution companies).
- A one-kilowatt (kW) rooftop system can produce three to five units of electricity a day.
- The combination increasingly becomes cost-effective for electricity generation compared to the traditional grid supply and diesel generators.
- In 2021, solar and storage will be cheaper than grid supply for most commercial and industrial (C&I) customers.
- The increase in penetration of rooftop solar in the distribution grid will have a significant impact on the stability of the grid.

A viable alternative

- Most housing societies in urban India rely on diesel generators for power backup. However, as power availability improves in the country, diesel generators will become redundant.
- The operational cost of diesel generators is quite high – R16-18 per unit against Rs 5-6 a unit for solar rooftop systems. So rooftop solar power makes financial sense. Solar rooftop is also a perfect solution for commercial and institutional buildings that operate mostly during the day.
- Their rooftops can be utilized to generate electricity, and they can, partially or completely, replace diesel generators. This would also help them reduce their electricity bills.

Question of energy storage

- In order to integrate rooftop solar and electric vehicles, the grid needs to be flexible and smart.
- Energy storage systems will play a key role in providing this flexibility by acting as a load when there is a surplus generation, as well as generating sources when there is a supply shortage.
- There are two major methods of integrating battery storage into the electric grid:
 1. **Front-of-the-meter (FTM):** It is implemented at the utility scale, wherein the battery system is connected to the transmission or distribution network that ensures grid reliability. This happens on a considerably large scale (~MWh scale).
 2. **Behind-the-meter (BTM):** The other method is implemented at the residential and commercial/industrial level, mainly to provide backup during a power failure or to store excess locally generated energy from solar rooftop photovoltaic (PV) systems.

India's storage capacity

- About 34 GW / 136 GWh of battery storage is expected to be installed by 2030, according to the Central Electricity Authority of India.
- This capacity would be used for RE integration, demand-side and peak load management services.

Storage challenges

- The solar segment offers a huge market opportunity for advanced battery technologies.
- However, manufacturers have some ground to cover in addressing technical limitations of batteries, such as charging characteristics, thermal performance and requirement of boost current to charge deep cycle batteries.
- Since solar companies may directly procure batteries from manufacturers and require after-sale services and technical support, battery companies should have wider a presence to address these expectations.

Other key challenges

- Rooftop solar source doesn't match the rise in renewable energy in India.
- While industrial and commercial consumers account for 70% of total installed capacity residential consumers remain a big untapped potential to give the boost
- Solar rooftops also face several challenges such as little consumer awareness, lack of innovative government policies or attention, bureaucratic hassles, and limited support from discoms.

Way forward

- Supportive policies and innovative technological approaches are needed for the sector to achieve its potential.
- Indian policymakers need to plan for rooftop solar plus storage, rather than rooftop solar alone with the grid as storage (net / gross metering).
- The declining cost of storage solutions, along with that of rooftop solar solutions, is likely to change the future of the Indian power sector.
- Several countries such as Australia, the United States, Germany, among others have already endorsed solar power with battery storage.
- Energy storage, therefore, represents a huge economic opportunity for India.
- The creation of a conducive battery manufacturing ecosystem on a fast track could cement India's opportunity for radical economic and industrial transformation in a critical and fast-growing global market.

4. Changing the agri exports basket

The article talks about the steps that India must take to unleash its potential of becoming a global leader in the food processing sector.

Details:

- India's agricultural export basket is changing from traditional commodities to non-traditional processed foods.
 - Traditionally, Basmati rice is one of the top export commodities. However, now there is an unusual spike in the export of non-basmati rice.
- Indian buffalo meat is seeing strong demand in international markets due to its lean character and near organic nature. The export potential of buffalo meat is tremendous, especially in countries like Vietnam, Hong Kong and Indonesia.
- The export of processed food products has not been growing fast enough.
 - India lacks a comparative advantage in many items.
 - This may imply that the domestic prices of processed food products are much higher compared to the world reference prices.
- The main objective of the Agriculture Export Policy is to diversify and expand the export basket. Instead of primary products, the goal is to increase the export of higher value items, including perishables and processed food.

Issues:

The exporters of processed food confront difficulties and non-tariff measures imposed by other countries on Indian exports. Some of these include:

- Mandatory pre-shipment examination by the Export Inspection Agency being lengthy and costly.
- Compulsory Spice Board certification being needed even for ready-to-eat products which contain spices in small quantities.
- Lack of strategic planning of exports by most state governments.
- Lack of a predictable and consistent agricultural policy discouraging investments by the private sector.
- Prohibition of import of meat- and dairy based-products in most of the developed countries.
- Withdrawal of the Generalised System of Preference by the U.S. for import of processed food from India.
- Export shipments to the U.S. requiring an additional health certificate.
- Absence of an equivalency agreement with developed countries for organic produce.

Steps taken by the Government:

- The Indian government has been encouraging agricultural exports to meet an ambitious target of \$60bn by 2022.
- As per the Ministry of Food Processing Industries data, the contribution of agricultural and processed food products in India's total exports is 11%.
 - The major share is of primary processed agricultural commodities.

Way Forward:

- The Centre's policy should be in the direction of nurturing food processing companies.
- Developed countries have fixed higher standards for the import of food items. Low cost of production and global food quality standards must be ensured.
- A supportive environment is needed to promote the export of processed food.
- Reputed Indian brands should be encouraged to export processed foods globally as they can comply with the global standard of codex.
- Indian companies should focus on cost competitiveness, global food quality standards, technology, and tap the global processed food export market.
- India has competitive advantages in various agricultural commodities which can be passed onto processed foods. It has the potential to become a global leader in the food processing sector.

5. Nagaland Issue

Four years after the government inked **the Naga peace accord in 2015**, the Centre has now said that the process had almost concluded, despite the fact that the talks had hit a roadblock in its final stages.

Why is the Naga Peace talks being delayed?

It is mainly because of unrealistic demands. NSCN I-M has issued statements in the past claiming that it wanted a separate Constitution, flag and integration of all contiguous Naga-inhabited areas under Nagalim (Greater Nagaland).

Government of India's stand:

A mutually agreed draft comprehensive settlement, including all the substantive issues and competencies, is ready for inking the final agreement. Respecting the Naga people's wishes, the Government of India is determined to conclude the peace process without delay.

How old is the Naga political issue?

Pre- independence:

1. The British annexed Assam in 1826, and in 1881, the Naga Hills too became part of British India. The first sign of Naga resistance was seen in the formation of **the Naga Club** in 1918, which told the Simon Commission in 1929 “to leave us alone to determine for ourselves as in ancient times”.
2. In 1946 came **the Naga National Council (NNC)**, which declared Nagaland an independent state on August 14, 1947.
3. The NNC resolved to establish a “**sovereign Naga state**” and conducted a “**referendum**” in 1951, in which “**99 per cent**” supported an “**independent Nagaland**”.

What are the Naga peace talks?

- The talks seek to settle disputes that date back to colonial rule.
- The Nagas are not a single tribe, but an ethnic community that comprises several tribes who live in the state of Nagaland and its neighbourhood
- One key demand of Naga groups has been a Greater Nagalim that would cover not only the state of Nagaland but parts of neighbouring states, and even of Myanmar.

Rise of Naga nationalism

- The British had annexed Assam in 1826, in which they subsequently created the Naga Hills district and went on to extend its boundaries.
- The assertion of Naga nationalism, which began during British rule, has continued after Independence, and even after Nagaland became a state.
- Along the way, the unresolved issues gave rise to decades of insurgency that claimed thousands of lives, including of civilians.

How has the Naga assertion played out historically?

- The earliest sign of Naga resistance dates back to 1918, with the formation of the Naga Club.
- In 1929, the Club famously told the Simon Commission “to leave us alone to determine for ourselves as in ancient times”.
- In 1946, A Z Phizo formed the Naga National Council (NNC), which declared Naga independence on August 14, 1947, and then, in 1951, claimed to have conducted a referendum.
- The referendum got overwhelming majority in support of an independent Naga state.
- By the early 1950s, the NNC had taken up arms and gone underground.

- The NNC split in 1975, the breakaway group being the NSCN, which split further in later years, most prominently into the NSCN(I-M) and NSCN (Khaplang) in 1988.

And how have the peace talks played out in recent years?

Before the ongoing talks, which followed a framework agreement in 2015, there were two other agreements between Naga groups and the Centre.

1975:

- A peace accord was signed in Shillong in which the NNC leadership agreed to give up arms.
- Several NNC leaders, including Isak Chishi Swu, Thuingaleng Muivah and S S Khaplang refused to accept the agreement and broke away to form the NSCN.
- In 1988 came another split, with Khaplang breaking away to form the NSCN(K) while Isak and Muivah headed the NSCN(I-M).

1997:

- The NSCN(I-M) signed a ceasefire agreement with the government in 1997, preceded by rounds of talks since 1995.
- The key agreement was that there would be no counter-insurgency offensive against the NSCN(I-M), who in turn would not attack Indian forces.
- The NSCN(I-M) had then announced to “every citizen of Nagalim wherever they may be”, that a ceasefire agreement was entered into between India and the outfit to bring about a lasting political solution.

2015:

- In August that year, the Centre signed a framework agreement with the NSCN(I-M).
- PM Modi described it as a “historic agreement” towards settling the “oldest insurgency” in India. This set the stage for the ongoing peace talks.
- In 2017, six other Naga armed outfits under the banner of the Naga National Political Groups (NNPGs) joined the talks.
- Today, Muivah remains the senior-most Naga rebel leader. Isak died in 2016. In the NSCN(-K), its leader Khaplang died in 2018.

What are the other issues?

- The government and the NSCN(I-M) have failed to agree on issues relating to a separate Naga flag and a constitution.

- In its latest statement, the NSCN(I-M) has said it will not budge from the demand for the flag and the constitution – and that it is looking for a lasting solution.
- However the NSCN(I-M) has adopted a procrastinating attitude to delay the settlement raising the contentious symbolic issues of separate Naga national flag and constitution.

Where could the disagreement lead to?

- The statement from the Governor's office has given rise to speculation that the government is ready to sign a final peace agreement with other groups without the NSCN(I-M), the largest group.
- Civil society groups in Nagaland are divided in their opinion.
- Some have said the talks should be wrapped up with whatever is offered now and keep other issues open for later negotiations.
- Others believe all issues should be settled and the NSCN(I-M) should be on board, even if it takes longer than the deadline.

6. Improving the economic game

In News :

The Quad (Australia, Japan, India and the U.S.) will meet in a landmark physical summit at the White House, hosted by US President Joe Biden.

Agenda:

- The agenda for the Quad has widened.
- So far, its goal was focused largely on strengthening strategic and defence pillars.
- The earlier virtual meet captured the spirit of the Quad, stressing democratic values, while pledging to strengthen cooperation on the defining challenges of the times.
- On the economic side, challenges were identified as the economic and health impacts of COVID-19, cyberspace, critical technologies, and quality infrastructure investment.
- Working groups were set up on vaccines, critical and emerging technologies, and climate action.
- It is believed that “industry” would also be brought into the present dialogue process in order to advance the desired outcomes.

India and QUAD's economic engagement:

- The QUAD nations are vibrant democracies and open economies. Three are developed countries and one is an emerging market (India).
- For India, each of the other three countries is a strategic partner, and bilateral and multilateral initiatives have been taken across multiple areas in different fora.
 - The Quad is in line with India's other regional programmes such as the Indo-Pacific Oceans' Initiative and the Supply Chain Resilience Initiative (SCRI).
 - The SCRI with India, Australia and Japan aims to address vulnerabilities in existing supply chains that were exposed during the COVID-19 pandemic.

India's total trade with the three Quad partners was over \$108 billion in 2020-21, accounting for almost 16% of its total merchandise exports and imports. On the investment side, the U.S. is India's second-largest source of foreign direct investments, while Japan has a significant footprint in India's major infrastructure projects.

While inflows from Australia amount to less than a billion dollars, it has outlined a long-term strategy for economic engagement with India.

Way Forward:

- The first piece of the economic pillar is trade and investment.
 - Joint efforts by all Quad countries can help to establish alternative manufacturing hubs and make regional supply chains more diversified. In order to advance their goals for a free, open and inclusive Indo-Pacific, the Quad members must activate business partnerships with definitive measures.
 - This will help the participant countries align their economic and strategic objectives.

The Quad could consider adding a trade ministers' interaction to its agenda.

- It can facilitate lowering trade barriers and boosting trade linkages among the partner countries as well as in the Indo-Pacific region.
- With India as a natural option for a China-Plus strategy, domestic policies to promote manufacturing and ease of doing business would help in the long-term success of trade cooperation.
- Innovative financing and public-private partnership models can enlarge the space for private industry and support public funds. Climate change is also a priority for the QUAD and a working group has been set up.
- Cooperation on multiple dimensions of the climate challenge is proposed, including finance, emissions reduction, technology and capacity-building.

- The involvement of industry to support governmental efforts would be critical.

Conclusion:

The QUAD is a formidable economic force that can deliver many gains on the identified pillars for the members as well as the region. By adding businesses to its agenda, its initiatives can be further fortified and expanded. The governments must consider a forum for private sector engagement.

7. Sea level rise is certain

The article talks about the inevitable rise in sea levels owing to climate change and its implications for the future, despite a reduction in emissions.

In News :

The Intergovernmental Panel on Climate Change (IPCC) Assessment Report from Working Group I – ‘Climate Change 2021: The Physical Science Basis’ provides one of the most expansive scientific reviews on the science and impacts of climate change.

- The report discusses five different shared socio-economic pathways for the future with varying levels of greenhouse gas (GHG) emissions.
- Even in the intermediate scenario, it is extremely likely that average warming will exceed 2°C near mid-century.

Sea Level Rise – A Major Concern:

- Sea level rise will continue after emissions no longer increase, because oceans respond slowly to warming.
- The centennial-scale irreversibility of sea-level rise has implications for the future even under the low emissions scenarios.
- Sea level rise occurs mainly due to the expansion of warm ocean waters, the melting of glaciers on land, and the melting of ice sheets in Greenland and Antarctica.
 - The global mean sea level (GMSL) rose by 0.2m between 1901 and 2018. Projections based on structured expert judgments indicate that sea-level rise as high as 2.3m by 2100 cannot be ruled out. According to the UN Environment Programme Emissions Gap Report, the world is heading for a temperature rise above 3°C this century (double the Paris Agreement aspiration). And there is deep uncertainty in sea-level projections for warming above 3°C.

Understanding the risks involved from climate change and sea-level rise in the 21st and 22nd centuries is crucial.

- Close to 700 million people worldwide live along the coast.

Issues:

- Scientists rely on ice sheet models to estimate future glacier melt.
 - While these models have improved over the years, there are shortcomings in the knowledge and representation of the physical processes.
 - Ice sheets can destabilise rapidly as the water gets warm. Such changes are difficult to model and marine ice cliff instability (MICI) events are not included in the sea-level projections.
 - The models do not capture the abrupt and non-linear dynamics of changes that take place.

Besides, changes in ice-ocean interactions can cause extensive and rapid sea-level rise.

- This happens from the mass loss of ice shelves (ice that flows into cold oceans while attached to the land), which may disintegrate suddenly.

Therefore, using ice sheet models coupled with ocean models to create probabilistic scenarios for the future is tricky.

Vulnerability in India:

- Communities along the coast in India are vulnerable to sea-level rise and storms.
- With climate change, storms will become more intense and frequent. They will be accompanied by storm surges, heavy rain and flooding.
- Even the 0.1m to 0.2m rise expected along India in the next few decades can cause frequent coastal flooding.

Way Forward:

- The uncertainty regarding a metre or more of sea-level rise before 2100 is related to a lack of knowledge and inability to run models with the accuracy needed. Ignoring the unknowns can prove dangerous.
- Adaptation to sea-level rise must include a range of measures, along with coastal regulation, which should be stricter.
- Coastal communities should be alerted in advance and protected during severe weather events.
- Natural and other barriers should be considered in a limited manner to protect certain vulnerable areas.
- Retreat should be part of the adaptation strategies for some very low-lying areas.

8. Global air quality norms tighten by WHO

In News:

- The **World Health Organization (WHO)** has updated the **global air pollution standards** and set stricter standards.

Background:

Air pollution:

- Air pollution is a **severe health crisis**.
- Every year, exposure to air pollution is estimated to cause **7 million premature deaths** and result in the **loss of millions more healthy years of life**.
 - Long-term exposure to outdoor and household air pollution leads to stroke, heart attack, diabetes, lung cancer, chronic lung diseases and neonatal diseases.

Indian scenario:

- Major cities in India **experience annual PM2.5 and PM10 trends much higher than the WHO's air quality guidelines**.

- In fact, in 2020, the annual average level of PM2.5 in Delhi was 98 micrograms per cubic metre, against the national standard of 40.

According to the **State of Global Air 2020**, air pollution is the largest risk factor for death among all health risks in India.

Efforts being taken in India:

- India has a dedicated **National Clean Air Programme** that aims for a **20% to 30% reduction in particulate matter concentrations by 2024 in 122 cities**, keeping **2017 as the base year** for the comparison of concentration.
 - The selected 122 cities do not meet the **National Ambient Air Quality Standards (NAAQS)** when calculated from 2011 to 2015.
 - NAAQS sets limits for SO₂, NO₂, particulate matter (PM2.5 and PM10), Ozone, Lead, Carbon Monoxide, Ammonia, Benzene, Benzo Pyrene, Arsenic, Nickel.

Details:

- The update by WHO is the **first such update since 2005**.
- Notably, the WHO's air quality norms are not legally binding on countries, but rather a general guide for what nations should set as goals.
- The WHO has tightened the upper limits for both PM2.5 and PM10 levels.

- This update is in recognition of the emerging science that the impact of air pollution on health is much more serious than earlier envisaged.
- The move does not have an immediate effect in India as the **National Ambient Air Quality Standards (NAAQS) do not meet the WHO's existing standards**. However, the WHO update sets the stage for eventual shifts in policy towards evolving stricter national standards and it will put more pressure on the government to form policies to achieve stricter standards of air pollution.

9. Service Exports from India Scheme (SEIS)

The Directorate General of Foreign Trade has imposed a cap on the total entitlement under the Services Exports from India Scheme (SEIS) at Rs 5 crore per exporter for shipments done in 2019-20 (FY20). The move is expected to benefit small businesses in the services sector.

About SEIS

- Service Exports from India Scheme (SEIS) aims to promote export of services from India by providing duty scrip credit for eligible exports.
- Under the scheme, service providers, located in India, would be rewarded under the SEIS scheme, for all eligible export of services from India.
- SEIS was earlier termed as Served from India Scheme (SFIS).

Eligibility

- Service Providers of notified services, located in India are eligible for the Service Exports from India Scheme.
- To be eligible, a service provider (Company / LLP / Partnership Firm) should have a minimum net free foreign exchange earnings of USD 15000 in the preceding financial year to be eligible for duty credit scrips.
- For proprietorships or individual service providers, minimum net foreign exchange earnings of USD10,000 in the preceding financial year is required to be eligible for the scheme.
- Also, in order to claim reward under the SEIS scheme, the service provider shall have to have an active Import Export Code (IE Code) at the time of rendering such services for which rewards are claimed.

Merchandise Exports from India Scheme (MEIS)

- MEIS was launched with an objective to enhance the export of notified goods manufactured in a country.

- This scheme came into effect on 1 April 2015 through the Foreign Trade Policy and was in existence till 2020.
- It intended to incentivize exports of goods manufactured in India or produced in India.
- The incentives were for goods widely exported from India, industries producing or manufacturing such goods with a view to making Indian exports competitive.
- The MEIS covered almost 5000 goods notified for the purpose of the scheme.

10. PLI Scheme for Textiles

The Union Government has approved Production Linked Incentive (PLI) Scheme for Textiles. This move is a part of the overall announcement of PLI Schemes for 13 sectors made earlier during the Union Budget 2021-22.

PLI Scheme

- As the name suggests, the scheme provides incentives to companies for enhancing their domestic manufacturing apart from focusing on reducing import bills and improving the cost competitiveness of local goods.
- PLI scheme offers incentives on incremental sales for products manufactured in India.
- The scheme for respective sectors has to be implemented by the concerned ministries and departments.

Criteria laid for the scheme

- Eligibility criteria for businesses under the PLI scheme vary based on the sector approved under the scheme.
- For instance, the eligibility for telecom units is subject to the achievement of a minimum threshold of cumulative incremental investment and incremental sales of manufactured goods.
- The minimum investment threshold for MSME is Rs 10 crore and Rs 100 crores for others.
- Under food processing, SMEs and others must hold over 50 per cent of the stock of their subsidiaries, if any.
- On the other hand, for businesses under pharmaceuticals, the project has to be a greenfield project while the net worth of the company should not be less than 30 per cent of the total committed investment.

What are the incentives involved?

- An incentive of 4-6 per cent was offered last year on mobile and electronic components manufacturers such as resistors, transistors, diodes, etc.
- Similarly, 10 percent incentives were offered for six years (FY22-27) of the scheme for the food processing industry.
- For white goods too, the incentive of 4-6 per cent on incremental sales of goods manufactured in India for a period of five years was offered to companies engaged in the manufacturing of air conditioners and LED lights.

What is in the box for Textiles?

- The PLI scheme for textiles aims to promote the production of high value Man-Made Fibre (MMF) fabrics, garments and technical textiles.
- Any person or company willing to invest a minimum of Rs 300 crore in plant, machinery, equipment and civil works (excluding land and administrative building cost) to produce products of MMF fabrics, garments and products of technical textiles will be eligible.
- Investors willing to spend a minimum of Rs 100 crore under the same conditions shall be eligible.

Benefits offered

- PLI scheme for Textiles will promote production of high value MMF Fabric, Garments and Technical Textiles in country.
- The incentive structure has been so formulated that the industry will be encouraged to invest in fresh capacities in these segments.
- This will give a major push to the growing high-value MMF segment which will complement the efforts of the cotton and other natural fiber-based textiles industry.
- This will help to generate new opportunities for employment and trade, resultantly helping India regain its historical dominant status in global textiles trade.

11. MSP for Rabi Crops hiked by centre

The Centre has increased the Minimum Support Price (MSP) for various crops ahead of the upcoming rabi season harvest.

Minimum Support Price (MSP) system

- MSP is a form of market intervention by the Govt. of India to insure agricultural producers against any sharp fall in farm prices.

- MSP is price fixed by GoI to protect the producer – farmers – against excessive fall in price during bumper production years.

Who announces it?

- MSP is announced at the beginning of the sowing season for certain crops on recommendations by Commission for Agricultural Costs and Prices(CACP) and announced by Cabinet Committee on Economic Affairs (CCEA) chaired by the PM of India.

Why MSP?

- The major objectives are to support the farmers from distress sales and to procure food grains for public distribution.
- They are a guaranteed price for their produce from the Government.
- In case the market price for the commodity falls below the announced MSP due to bumper production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced MSP.

Historical perspective

- Till the mid-1970s, Government announced two types of administered prices:
 1. Minimum Support Prices (MSP)
 2. Procurement Prices
- The MSPs served as the floor prices and were fixed by the Govt. in the nature of a long-term guarantee for investment decisions of producers, with the assurance that prices of their commodities would not be allowed to fall below the level fixed by the Government, even in the case of a bumper crop.
- Procurement prices were the prices of Kharif and rabi cereals at which the grain was to be domestically procured by public agencies (like the FCI) for release through PDS.
- It was announced soon after harvest began.
- Normally procurement price was lower than the open market price and higher than the MSP.

Crops Covered

1. Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane.
2. The mandated crops are 14 crops of the kharif season, 6 rabi crops and two other commercial crops.
3. The list of crops is as follows:

- Cereals (7) – paddy, wheat, barley, jowar, bajra, maize and ragi
- Pulses (5) – gram, arhar/tur, moong, urad and lentil
- Oilseeds (8) – groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and nigerseed
- Raw cotton
- Raw jute
- Copra
- De-husked coconut
- Sugarcane (Fair and remunerative price)
- Virginia flu cured (VFC) tobacco

Exception for Sugar

- The pricing of sugarcane is governed by the statutory provisions of the Sugarcane (Control) Order, 1966 issued under the Essential Commodities Act (ECA), 1955.
- Prior to 2009-10 sugar season, the Central Government was fixing the Statutory Minimum Price (SMP) of sugarcane and farmers were entitled to share profits of a sugar mill on 50:50 basis.
- As this sharing of profits remained virtually unimplemented, the Sugarcane (Control) Order, 1966 was amended in October 2009 and the concept of SMP was replaced by the Fair and Remunerative Price (FRP) of sugarcane.

12. Green hydrogen, a new ally for a zero carbon future

In News

The forthcoming 26th UN Climate Change Conference of the Parties (COP26) in Glasgow from November 1-12, 2021 is to re-examine the coordinated action plans to mitigate greenhouse gases and climate adaptation measures.

How Green hydrogen as a fuel can be a game changer?

- Hydrogen is **the most abundant element on the planet**, but rarely in its pure form which is how we need it.
- **High energy density:** It has an energy density almost three times that of diesel.
- **'Green hydrogen'**, the emerging novel concept, is a zero-carbon fuel made by electrolysis **using renewable power from wind and solar to split water into hydrogen and oxygen.**
- **Best solution to remain under 1.5° C:** The International Energy Agency (IEA) forecasts the additional power demand to be to the tune of 25%-30% by the year 2040.
- Thus, power generation by 'net-zero' emission will be the best solution to achieve the target of expert guidelines on global warming to remain under 1.5° C.

- **Untapped potential:** Presently, less than 0.1% or say ~75 million tons/year of hydrogen capable of generating ~284GW of power, is produced.

Challenges: Production and storage cost

- The challenge is to compress or liquefy the LH₂ (liquid hydrogen); it needs to be kept at a stable minus 253° C.
- This leads to its '**prior to use exorbitant cost**'.
- The '**production cost**' of 'Green hydrogen' has been considered to be a prime obstacle.
- The production cost of this 'green source of energy' is expected to be around **\$1.5 per kilogram** (for nations having perpetual sunshine and vast unused land), by the year 2030; by adopting various conservative measures.

Experiments in India

- - The Indian Railways have announced the **country's first experiment of a hydrogen-fuel cell technology-based train** by retrofitting an existing diesel engine; this will run under Northern Railway on the 89 km stretch between Sonapat and Jind.
- The project will not only ensure diesel savings to the tune of several lakhs annually but will also prevent the emission of 0.72 kilo tons of particulate matter and 11.12-kilo tons of carbon per annum.

Way forward for India

- India is the world's **fourth-largest** energy-consuming country (behind China, the United States and the European Union), according to the IEA's forecast, and will overtake the European Union to become the world's third energy consumer by the year 2030.
- It is high time to catch up with the rest of the world by going in for clean energy, decarbonising the economy and adopting 'Green hydrogen' as an environment-friendly and safe fuel for the next generations.

Conclusion

In order to achieve the goal of an alternative source of energy, adopting a multi-faceted practical approach to utilise 'Green hydrogen' offers a ray of hope.

13. National Monetisation Pipeline (NMP)

The Union Minister for Finance and Corporate Affairs launched the National Monetisation Pipeline (NMP) for Central ministries and public sector entities.

About:

- The pipeline has been **developed by NITI Aayog**, in consultation with infrastructure line ministries, based on the mandate for **'Asset Monetisation' under Union Budget 2021-22**.
 - Union Budget 2021-22 had identified monetisation of operating public infrastructure assets as a key means for sustainable infrastructure financing.
 - The NMP is in line with the **government's strategic divestment policy**, under which the state will retain presence in only a few identified sectors with the rest privatized.

NMP is envisaged to serve as a medium-term roadmap for identifying potential monetisation-ready projects, across various infrastructure sectors including roads, ports, airports, railways, warehousing, gas & product pipeline, power generation and transmission, mining, telecom, stadium, hospitality and housing.

Under the plan, **private firms can invest in projects for a fixed return using the InvIT route as well as operate and develop the assets for a certain period**. Some assets such as warehouses and stadiums can also be given on a long-term lease for operations. Thus it will involve the **participation of the private firms** in the infrastructure sector.

The objective of this initiative is to enable **'Infrastructure Creation through Monetisation'**.

The programme will include **only brownfield assets** that are either languishing or have not been fully monetised. There would be no transfer of ownership of assets or land. The **primary ownership of the assets will continue to be with the Government** with the framework envisaging hand back of assets to the public authority at the end of transaction life.

NMP estimates aggregate monetisation potential of **Rs 6.0 lakh crores** through core assets of the Central Government, over a **four-year period, between 2021-22 and 2024-25**.

- The top 5 sectors include roads, railways, power, oil & gas pipelines and telecom.
- The central government has set a goal of Rs 88,000 crores to be monetised in 2021-22, adding that each ministry has been given an annual target.

As part of a multi-layer institutional mechanism for overall implementation and monitoring of the Asset Monetization programme, an **empowered Core Group of Secretaries on Asset Monetization (CGAM)** under the chairmanship of Cabinet Secretary has been constituted.

Additionally, the Finance Minister has stated that the **Centre will incentivise states to undertake disinvestment of PSUs and asset monetisation** and outlined a plan.

The central government has set aside Rs 5,000 crore to incentive state governments to monetise their assets.

Prescriptions made by NITI Aayog:

- Appropriate **policy and regulatory changes to scale up InvITs and REITs** need to be focussed upon. This would provide an impetus to expand the investor base of InvITs and REITs.
- **Tax-efficient and user-friendly mechanisms** like allowing tax benefits in InvITs will help attract investors to these instruments.
- The government should give **Income Tax breaks on capital gains to attract retail investors into InvITs And REITs**. Though this will entail a cost in the form of loss of revenue for the exchequer, the long-term benefits of infrastructure development and economic growth may outweigh the cost.
- **Investment instruments like InvITs should be included under the Insolvency and Bankruptcy Code**. This will give added comfort to investors planning to invest in InvITs as extending IBC provisions to InvITs would help lenders access a faster and more effective debt restructuring and resolution option.
 - Currently, InvIT structures are not considered a 'legal person' and cannot be brought under IBC proceedings.

Provisions for a **robust resolution process** would be crucial to ensure retail investor safety in NMP.

14. Taliban-led Afghanistan and the Chinese conundrum

The article talks about the impact of the Taliban's takeover of Afghanistan on China's Belt and Road initiative.

Background:

- With the exit of U.S. troops from Afghanistan, the country has seen a number of unsettling events.
- A devastating bomb blast took place outside Kabul airport.
- Besides the umpteen number of bomb blasts, there was one at the Gwadar East Bay Expressway project, targeting Chinese nationals.
- For the Afghan economy that is driven by the opium trade and ruled by tribal leaders, the new normal is bound to be governed by instability, fighting groups, and thereafter, boom, gloom, and doom.
- The return of the Taliban is seen as a victory of Chinese diplomacy and a defeat for the United States; comparable to the U.S.'s symbolic evacuation of Saigon, in 1975, at the end of the Vietnam war.

China's gains:

- China (and Russia) have kept their embassies running in Kabul while the western embassies have disappeared.
- China is engaging with the Taliban, with an eye to complete the new Belt and Road Initiative (BRI) investment. And a Chinese presence in Afghanistan with an all-weather ally Pakistan may sound unfavourable for India.
- Afghanistan has a few resources that are valuable: rare-earth metals and huge deposits of copper.
- The Chinese have the technology to excavate them.

Crucial link in the BRI:

- Afghanistan is indeed vital for the BRI.
- Without counting on Afghanistan, the bulk of Chinese investment in the China-Pakistan corridor will be at risk.
- Considering the heavy infrastructure investment in the BRI, only many years of successful operation could repay it. The amount of trade that should flow through the new Silk Road should be massive and long term. Otherwise, it will cost money and effort.

China's Investment Strategy:

- The Chinese successfully implemented this investment strategy, and it worked well in the context of Southeast Asia and Africa.
 - With the cost of production being lower in Southeast Asia, Chinese firms could gain by shifting their production bases outside China.
 - Investing in these regions meant access to bigger markets for Chinese firms and more uniform regional development.

Success in these two countries would imply that China will be able to bring together a large part of the Indian Ocean littoral and Eurasia through high speed rail lines, pipelines, and maritime linkages. The idea of connecting to the rest of the world stems from China's aspiration to get out of manufacturing, go up the global value chains, and start focusing on product designing and innovation. According to the government of China, the development of the BRI would impact 4.4 billion people and generate trade worth \$2.5 trillion within a decade.

China's Concerns:

- Afghanistan and Pakistan are not comparable to the Association of Southeast Asian Nations (ASEAN).
- The recent suicide attacks indicate the resurgence of terrorist groups such as al Qaeda, Daesh, and the Islamic State.

- No businesses can flourish in the presence of terrorism, especially when the Taliban are known to have a soft corner for the East Turkestan Islamic Movement – a militant group active in the Uighur province of China.
- Even in Pakistan, a country relatively better off than Afghanistan, the Chinese are facing problems.
 - Pakistan is unable to repay a China-funded energy project, built under the BRI.
 - The economy of Pakistan faltered because of dynastic politics and corruption.
 - There is an excessive dependence of the political class on the military.
 - Business decisions are not economically driven but are motivated by the vested interests of the army.

Conclusion:

- The Taliban ruling groups are far from united, making it impossible to make any reliable domestic and international policy predictions.
- There are good reasons to believe that the return of the Taliban in Kabul will spell gloom and doom for the Chinese.
- The dependence on opium export makes Afghanistan vulnerable to world mafias and corruption.
- Embargoes, rebellions, factional wars, will be the likely events in Taliban-controlled Afghanistan. These issues will spread to Kazakhstan, Turkmenistan, Turkey, and other essential rings in the BRI chain.
- While the Taliban are among the world's least acceptable ruling elite for the western countries, enormous markets controlled by the western powers are the most lucrative for China.
- Hence, the next decade will likely show a sequence of BRI trade flow following likely European and American decisions to block or sanction trade from Afghanistan.
- The U.S. decision of vacating Afghanistan may prove costly for China.

15. States warned of aggressive infiltration

In News:

- The Union government has warned of **possible infiltration attempts by militants into India.**

Aggressive infiltration bids:

- The Union Government has sent an alert to all States and Central Armed Paramilitary Forces of possible infiltration attempts of **trained, armed and**

battle-hardened terrorists from Afghanistan into India, particularly Jammu & Kashmir.

- Specific intelligence points to armed terrorists owing allegiance to the Islamic State Khorasan Province, the Lashkar-e-Taiba and the Jaish-e-Mohammed making aggressive infiltration attempts.
- The government has warned that this infiltration could be a **major challenge along the Afghanistan border given the weak and porous security systems there.**

Other security challenges:

- The fast-paced developments in Afghanistan could have serious security concerns for India.
 - The pull out of the U.S. armed forces and the Taliban takeover of Afghanistan could embolden radical sentiments and bring together armed fighters from other areas to pursue common goals. This could also **embolden the various banned terrorist outfits in India.**
 - The congregation of trained militants equipped with improvised explosive devices and weaponry poses a grave security threat for neighbouring countries including India. There has been an **intelligence input on Afghanistan-Pakistan based IS operatives coordinating with their associates in India to carry out a terror attack.**
 - The release of prisoners lodged in Afghan jails, including several foreign nationals is a matter of concern since they could potentially join the anti-terror organizations.
 - There could also be a **revival of organised crimes** like smuggling of drugs, counterfeit Indian currency and weapons.

Measures being taken by security agencies:

- **Security along the international land border and coastal districts** would also be strengthened with adequate checkpoints, combing operations in vulnerable areas and intensified patrolling.
- There would be increased security at foreign missions.
- Cybercrime police have been asked to **intensify vigil on social media** and curtail the spread of communally sensitive content.
- The Central Armed Police Forces protecting vital installations across the country would coordinate with the State administration in **enhancing the security arrangements based on the perceived threat level.**

16. 28% of 138,000 assessed species face extinction: IUCN

Habitat loss, overexploitation and illegal trade have endangered global wildlife populations.

Major Highlights:

- **28%** of the 1,38,374 species assessed by the **International Union for the Conservation of Nature (IUCN)** for its **survival watchlist** are now at high risk of extinction.
- The major reasons are **habitat loss, overexploitation and illegal trade and climate change**.
- Indonesia's Komodo dragons were listed as **endangered**.
 - The species is increasingly threatened by **the impacts of climate change** with rising sea levels expected to shrink its tiny habitat by at least 30% over the next 45 years.
- 37% of the 1,200 shark and ray species are directly threatened by **extinction**.

Komodo Dragon:

- Komodo dragon is the largest extant **lizard species**.
- It occurs on **Komodo Island** and a few neighboring islands of the **Lesser Sunda Islands** of Indonesia.
- The lizard's large size and predatory habits has allowed this endangered species to become an ecotourist attraction.
 - The lizard grows to **3 metres** (10 feet) in total length.
- They can run swiftly and occasionally attack and kill human beings.
- **IUCN status:** Endangered.

IUCN Green Status of Species:

- The **IUCN Red List of Threatened Species** is the global standard for assessing the risk of extinction that individual species of animal, fungus, and plant faces.

Background:

- The **Green Status** of Species was developed in response to Resolution WCC-2012-RES-41.
- IUCN called for the development of '**Green Lists**' of Species, Ecosystems and Protected Areas.
- In 2012, a Green List of Protected and Conserved Areas was launched, and the development of the Green Status of Species began under the name 'Green List of Species'.

How Does the Green Status of Species Define Recovery?

The Green Status assesses species against three essential facets of recovery.

- A species is fully recovered if it is present in all parts of its range, even that are no longer occupied but were occupied prior to major human impacts.
- It is viable in all parts of the range.
- It is performing its ecological functions in all parts of the range.

These factors contribute towards a “**Green Score**” ranging from 0–100%, which shows how far a species is from its “**fully recovered**” state.

17. When global firms disengage, employment suffers

In News :

The most recent labour statistics, for August 2021, released by the Centre for Monitoring Indian Economy (CMIE) shows that the unemployment rate has increased from around 7% in July to 8.3% for August 2021. In absolute terms 1.9 million jobs were lost in one month.

Details:

- Sectoral analysis presents the fact that most of the jobs lost were farm jobs.
- While employment in agriculture fell by 8.7 million, non-farm jobs increased by 6.8 million, mainly in business and small trade, but the manufacturing sector shed 0.94 million jobs.
- Much of the labour shed by agriculture has been absorbed in low-end service activities.
- While non-farm jobs increased to absorb some of these, the quality of new jobs generated is a matter of concern.
- During normal times, seasonal labour released from agriculture gets accommodated in the construction sector.
- But, currently, the construction sector itself is shedding jobs, forcing workers to find employment in the household sector and low-end services.
- This non-availability of sufficient jobs in manufacturing and higher end services could be the dampener for economic recovery in the subsequent quarters of the current fiscal year.

Raising the level of investments:

- The economy has been waiting for private investments, but their levels have been very low, accentuating the unemployment situation.
- According to the elementary economic theory raising the level of investments is the key to output and employment growth.
- While public investments are important, there is a dire need to complement it with even more private investments.

- Turning to Foreign Direct Investment (FDI) to supplement domestic capital formation is an approach that India has been pursuing by making 'ease of doing business' more attractive.

Issues – Employment sustainability:

- When FDI increases, the sustainability of increased employment is often threatened as it depends on the business avenues which other competing economies open up leading to corporate restructuring at the global level and firm exits from earlier locations.
- When such firms exit, they create a massive disruption in the local economy.
- The exits of high-profile global firms affect employment generation in the following ways.
 - It creates apprehensions among potential investors about choosing that location for greenfield investments or for scaling up existing facilities.
 - It affects private investments even if an economy claims to have the tag of investor friendliness. A downturn in private investments leads to slower employment growth.
 - The process of the destruction of jobs through exits creates mismatches in the labour market.
 - It leads to a levelling down of wages which occurs when high-end services firms exit.
 - When large assembly firms exit there would be a big influx of low-skilled workers to other sectors as the same sector might not be able to absorb the workforce released.
 - This disruption in the labour market aggravates an existing unemployment problem.

Way Forward:

- While inward FDI does generate jobs both directly and indirectly through an increase in production activities, the magnitude of employment generated especially in the manufacturing sector, needs closer scrutiny.
- The euphoria on the inflow of FDI and associated benefits must be evaluated in comparison with the reality of the emergence of modern transnational corporations (TNC).
 - When TNCs emerge as key players in an industry, a proliferation of mergers and consolidations across national and international borders might be frequent.
 - These are efforts to open up new opportunities in new markets. Such waves of expansions and contractions are aimed at acquiring new markets and new trade opportunities.

- This process of an internationalisation of production is driven by the big firms by investing in and out of developing economies.

Growing scepticism towards more open trade policies and the rise of protectionism have increased the risk and unpredictability of policy environments, leading to deeper reflection on both existing and new investments by global firms.

Thereby, permanency of large foreign firms operating for decades is slowly waning. It is here that domestic capital formation and private investments must be encouraged.

18. Status quo on petrol

In News :

- The **Goods and Services Tax (GST) Council meeting** held recently has decided to let petrol and diesel remain out of the ambit of the GST for the time being.

Arguments against bringing petrol and diesel under the GST:

Major source of revenue:

- Petrol and diesel bring in huge revenues to both the Central and State governments. **Fuel taxes were projected to contribute almost Rs. 6 lakh crore to the Central and State exchequers combined in 2020-21.**
- Bringing in petrol and diesel under GST which would tax at lower levels could invariably **affect the financial position of the government.** This could adversely impact the ability of the governments to fund social programmes.

Reluctance of the states:

- Bringing petrol and diesel under GST would mean that the **states would have to give up their powers to impose a value added tax on petrol and diesel.**
- The States are wary of losing even more of their already curtailed independent power to raise tax revenue by allowing petrol and diesel to be brought under the ambit of the GST since it **would make them further dependent on the Centre** to receive their share of the taxes.

Arguments in favour of bringing petrol and diesel under the GST:

In line with the principle of GST system:

- GST envisages one nation one tax system. The exclusion of items such as petrol and diesel from GST goes against this principle. The move to bring in

Petrol and diesel within the ambit of the GST system is thus a step to **further simplify the tax system in India and streamlining it.**

Help rationalize prices of the fuels:

- The record increase in the cost of petrol and diesel has increased pressure on the government to reduce taxes on the fuels.
- High taxes on the fuels are seen as a major reason for the rise in fuel prices. It should be noted that more than half of the money paid by the consumer to purchase fuels goes towards some tax or the other.
 - The share of the final price of petrol that goes towards taxes has increased from approximately 30% in 2014 to about 60% now.
- **Bringing Petrol and diesel under the GST would effectively mean reducing taxes on them.** The highest tax slab under the GST is 28%, while the fuels such as petrol and diesel are taxed at more than 100% currently.
- Such a move would **help ease the inflationary pressures on the economy** given the fact that diesel is the main fuel used by road freight operators, and its high price pushes up transport costs.
- A major argument against the government's policy of imposing high fuel taxes is that these **high taxes act as a drag on the economy**. The reduction of the taxes on petrol and diesel will help increase the disposable income in the hands of the people which could likely be diverted to other parts of consumption spending, thus boosting economic growth. Also the lower prices of petrol and diesel might lead to a scenario where more petrol and diesel may be consumed. This could give rise to a scenario where the governments could end up actually collecting more revenue than under the current high fuel tax regime.

Additional information:

- India imports more than 80% of its oil supplies.

19. One-time Programmable Memory developed by IIT Bombay

IIT Bombay researchers have developed a “memory technology” that can, in principle, revolutionise Indian industry and the many applications that need semiconductor chips, such as in the defence sector, automobiles and future aspirations in cell phone manufacturing.

One-time Programmable Memory

- Hard disks, flash memory, etc, are examples of memory technology.

- There is also another form of memory called the one-time programmable memory (OTP) where the memory is written once, stored for a lifetime, and retrieved and used many times.
- This finds varied uses, one of which is in correcting faulty chips that have been mass produced for specific applications.

Its utility

- For instance, think of a chip that helps read off the temperature.
- Due to a manufacturing defect, the chip may read 100 degree Celsius as 101 degree Celsius.
- This “offset” of 1 degree may be corrected by storing the error correction parameter in the OTP memory.
- This is done uniquely for each chip and once stored, the memory corrects the chip’s output for its lifetime.
- OTP memories are also used for other purposes, mainly three: chip identity, secure information storage and chip calibration for error correction.

How does it work?

- To store the correction value, the researchers used eight memory cells, each of which would store one “bit” (that is a value of zero or one).
- Each of the memory cells consist of an ultrathin silicon dioxide layer which is 10-15 atomic layers thick.
- This is deposited uniformly over a dinner plate-sized eight-inch silicon wafer to form millions of nanoscale capacitors.
- The pristine silicon dioxide layer is insulating, passing a very low current [which in digital electronics is read as a “0”].
- A nanoscale lightning is generated of 3.3 volts to blow the capacitor, leading to a short circuit that produced high current [this is a “1”].
- Thus, the OTP memory remembers either the “0” state or “1” state through its lifetime.

Benefits offered

- The group has successfully demonstrated CMOS 180-nanometre-based, production-ready, eight-bit memory technology.
- These include successful operation between minus 40 degrees C to 125 degrees C and reliability to ensure excess of 95% yield on eight-bit memories.

Significance

- A large fraction of manufactured chips may need to be discarded for faults that can be corrected using this technology.

- This technology is the first indigenous semiconductor memory technology adoption to manufacturing at 180-nanometre node.
- Thus, this is a major national milestone for semiconductor innovation.

20. Revitalising PM-KUSUM

In News :

The Union Minister of Power, New and Renewable Energy recently reviewed the progress of the PM-KUSUM scheme and reaffirmed the government's commitment to accelerating solar pump adoption.

Details:

PM-KUSUM:

- The Central Government announced the Kisan Urja Suraksha evam Utthaan Mahabhiyan or KUSUM scheme in 2019.
- This scheme was launched by the Ministry of New and Renewable Energy (MNRE) for the installation of solar pumps and other renewable power plants across the nation.
- It aims at furthering the production of solar power in India and also gives the benefits of solar farming to farmers.
- It aims to help farmers access reliable day-time solar power for irrigation, reduce power subsidies, and decarbonise agriculture.
- PM-KUSUM provides farmers with incentives to install solar power pumps and plants in their fields. They can use one of three deployment models:
 - off-grid solar pumps
 - solarised agricultural feeders
 - grid-connected pumps

Issue:

- Pandemic-induced disruptions, limited buy-in from States, and implementation challenges have all affected the scheme's roll-out.
- Off-grid pumps have been the most popular, but the nearly 2,80,000 systems deployed fall far short of the scheme's target of two million by 2022.
- Barriers to adoption include limited awareness about solar pumps and farmers' inability to pay their upfront contribution.
- Progress on the other two models has been rather poor due to regulatory, financial, operational and technical challenges.
- Only a handful of states have initiated tenders or commissioned projects for solar feeders or grid-connected pumps.

How to Revitalise the PM KUSUM Scheme?

- The scheme's timeline must be extended.
 - Most Indian discoms have a surplus of contracted generation capacity and are cautious of procuring more power in the short term.
 - Extending PM-KUSUM's timelines beyond 2022 would allow discoms to align the scheme with their power purchase planning.

A level playing field must be created for distributed solar plants.

- Selling surplus power to discoms is one of the main attractions of grid-connected models. Yet, discoms often find utility-scale solar cheaper than distributed solar due to the latter's higher costs and the loss of locational advantage due to waived inter-State transmission system (ISTS) charges.
- To tackle the bias against distributed solar, there is a need to:
 - address counter-party risks and grid-unavailability risks at distribution sub-stations.
 - standardise tariff determination to reflect the higher costs of distributed power plants.
 - do away with the waiver of ISTS charges for solar plants.
- Land regulations must be streamlined through inter-departmental coordination.
 - Doing so will help reduce delays in leasing or converting agricultural lands for non-agricultural purposes such as solar power generation.
- There is a need to support innovative solutions for financing farmers' contributions.
 - Many farmers struggle to pay 30-40% of upfront costs in compliance with scheme requirements.
 - They cannot access bank loans without collateral.
 - Out-of-the-box solutions like Karnataka's pilot of a farmer-developer special-purpose vehicle to help farmers install solar power plants on their farms are needed.
- Extensively experiment grid-connected solar pumps.
 - Current obstacles to the adoption of grid-connected solar pumps include concerns about their economic viability in the presence of high farm subsidies and farmers' unwillingness to feed in surplus power when selling water or irrigating extra land are much attractive prospects.

- Also, the grid-connected model requires pumps to be metered and billed for accounting purposes but suffers from a lack of trust between farmers and discoms.
- Adopting solutions like smart meters and smart transformers and engaging with farmers can build trust.
 - However, testing the model under different agro-economic contexts will be critical to developing a strategy to scale it up.

The scheme, if implemented successfully, can generate thousands of jobs, reduce the carbon footprint of agriculture, and result in oil import savings.

21. High water

Context:

Cyclone Gulab hit Andhra Pradesh near Kalingapatnam and has ravaged two districts.

Cyclone Gulab:

- The deep depression over the Bay of Bengal intensified into cyclone Gulab.
- Cyclone Gulab crossed the north Andhra Pradesh and south Odisha coast triggering widespread rain in the region.
- This is the third cyclone of 2021 after Tauktae and Yaas.
- Gulab however, appears to have been less intimidating than cyclones Yaas and Tauktae, although it continued to keep the seas unsafe for fishermen all along the coastline north of Andhra Pradesh, after moving overland.

Issue:

- Tropical cyclones have the propensity to inflict heavy damage to lives and property.
- They are laden with moisture and with accumulated energy, they pose a growing challenge to India.
- There have been some distressing deaths and inevitable material losses for many.
- Financial arrangements to insure the population against material losses also remain weak.
- Earlier experiences have shown that relief measures can easily fall victim to corruption.
- In the recovery phase of COVID-19, cyclones have upended life for many, disrupting key inter-State road links and leading to the cancellation or diversion of several trains.

- The northern Indian Ocean, of which the Arabian Sea and the Bay of Bengal are a part, experiences only a minority of tropical storms annually (about 7% of worldwide events).
 - However, their destructive impact on the subcontinent is severe due to a dense population and poor capacity to absorb large quantities of rainfall dumped in a short period over cities and towns.

Research evidence shows more cyclones forming over the Arabian Sea when compared to the Bay of Bengal.

- Overall there were eight storms of concern to India in 2019, and five in 2021, Amphan being a super cyclone.

The influence of climate change on cyclone characteristics in a world that is heating up due to the accumulation of greenhouse gases is an ongoing topic of study.

The IPCC, in its scientific report on 1.5° C warming, said with a high degree of confidence that changes in the climate system, including the proportion of tropical cyclones, would experience a larger impact from increasing warming.

Way Forward:

- The focus must now be on relief and rehabilitation.
- The imperative is to reach out to those affected by Gulab with food, shelter and healthcare support.
- There is an immediate need for deploying the many administrative capabilities acquired during the pandemic with the same speed.
- The welcome concern for public health and economic security must lead to stronger institutional responses to natural disasters too.
- The Centre and all States cannot afford to allow large-scale losses to communities to continue each year.
- Going beyond disaster response, the government must put in place institutional structures and insurance systems for financial protection.
- Cities must prepare to harvest every flood that brings vast quantities of water, which is vital to sustaining mass populations.
- In a nutshell, India must create a social safety net to manage the fallout of cyclonic storms.

22. Defence Ministry issues order for OFB dissolution

The Defence Ministry has issued an order for the dissolution of the Ordnance Factory Board (OFB) with effect from October 1.

Ordnance Factory Board (OFB)

- OFB consisting of the Indian Ordnance Factories is a government agency under the control of the department of defence production (DDP).
- It is engaged in research, development, production, testing, marketing and logistics of a product range in the areas of air, land and sea systems.
- OFB comprises 41 ordnance factories, nine training institutes, three regional marketing centres and four regional controllers of safety, which are spread all across the country.

Why are OFBs significant?

- OFB is the world's largest government-operated production organization and the oldest organization in India.
- It has a total workforce of about 80,000.
- It is often called the "Fourth Arm of Defence" and the "Force Behind the Armed Forces" of India.
- OFB is the 35th largest defence equipment manufacturer in the world, 2nd largest in Asia, and the largest in India.

Why corporatization?

- It is a major decision in terms of national security and also make the country self-sufficient in defence manufacturing as repeatedly emphasized by PM.
- This move would allow these companies autonomy and help improve accountability and efficiency.
- This restructuring is aimed at transforming the ordnance factories into productive and profitable assets, deepening specialization in the product range, enhancing competitiveness, improving quality and achieving cost efficiency.

What about employees?

- All employees of the OFB (Group A, B and C) belonging to the production units would be transferred to the corporate entities on deemed deputation.
- The pension liabilities of the retirees and existing employees would continue to be borne by the government.

Significance of the move

- With OFB dissolution, its assets, employees and management would be transferred to seven newly constituted defence public sector undertakings (DPSUs).

- This would mean the end of the OFB, the establishment of which was accepted by the British in 1775.

23. What are Electronic Gold Receipts?

The board of the Securities and Exchange Board of India (SEBI) has approved the framework for a gold exchange as well as for vault managers. This approval paves the way for gold exchanges to be set up for trading in 'Electronic Gold Receipt' (EGR).

EGR

- SEBI's concept paper proposes issuing an electronic gold receipt in exchange of physical gold (similar to equity shares), deposited with a vault manager (like a depository participant) and this receipt can then be traded.
- The government wants India's outsized influence in the physical market for gold to be visible in the financial market for gold as well.

Why need EGRs?

- EGI is a way of getting people to not hoard gold, by creating an exchange that provides transparent pricing and liquidity (to cash or back to gold).
- India is a net importer of gold. We are price takers and not price setters. The whole idea is to move from being price takers to be price setters.
- Price discovery at the exchanges will thus lead to transparency in gold pricing.
- The gold exchanges would provide transparent price discovery, investment liquidity and assurance in the quality of gold.

What is the SEBI regulation?

- SEBI has also proposed a regulatory framework for setting up a gold exchange.
- Existing stock exchanges will be allowed to provide the platform for trading of EGRs.
- The denomination for trading of EGR and conversion of EGR into gold will be decided by the stock exchange with the approval of SEBI.
- The clearing corporation will settle the trades executed on the stock exchanges by way of transferring EGRs and funds to the buyer and seller, respectively.

How will EGR work?

- EGR holders, at their discretion, can withdraw the underlying gold from the vaults after surrendering the EGRs.
- SEBI-accredited vault managers will be responsible for the storage and safekeeping of gold deposits, creation of EGRs, withdrawal of gold, grievance redressal and periodic reconciliation of physical gold with the records of depository.
- The vault manager will have a networth of at least ₹50 crore.

24. NASA's Perseverance rover

In News: NASA's Perseverance rover has successfully collected its first rock sample for return to Earth. NASA has called it a perfect core sample.

- NASA plans to launch more spacecraft to retrieve the samples collected by Perseverance.
- Perseverance arrived in February 2021 at **Mars' Jezero Crater**, the site on an ancient lake – in **search of rocks that might hold evidence of ancient life.**

Significance of the scheme

- It carried a unique instrument, **MOXIE or Mars Oxygen ISRU Experiment**: which for the first time manufactured molecular oxygen on Mars using carbon dioxide from the carbon-dioxide-rich atmosphere (ISRU means In Situ Resource Utilization: or the use of local resources to meet human needs or requirements of the spacecraft).
- It carried Ingenuity, the first ever helicopter to fly on Mars.
- It is the **planned first step to bring back rock samples from Mars** for analysis in sophisticated laboratories on Earth: with the goal of looking for biosignatures: or signatures of present or past life.

These are some of the key mission objectives:

- Look for signs of ancient microbial life.
- Collect Martian rock and dust samples for later return to Earth.
- Deliver an experimental helicopter.
- Study the climate and geology of Mars.
- Demonstrate technology for future Mars missions.

What is the reason for the near-term interest in Mars?

- Mars is located in the very near backyard (about 200 million km away).
- It is a planet that humans can aspire to visit or to stay for a longer duration.

- Mars had flowing water and an atmosphere in the distant past: and perhaps conditions to support life.
- It also has implications for commercial travel.

25. Edible oil prices likely to ease by December: official

In News:

- Edible oil price has reached a new high (up by 48% from the previous year) in 2021 due to various reasons. But, the prices are likely to soften by December as recent international commodity futures show a declining trend, and there is the arrival of domestic oilseed crops.

Background:

- With rising incomes and changing food habits, consumption of edible oils has been rising over some years.
- In 2019-20, domestic availability of edible oils from both primary sources (oilseeds like mustard, groundnut, etc.) and secondary sources (such as coconut, oil palm, rice bran oil, cottonseed) was only **10.65 million tonnes** against the total domestic demand of 24 million tonnes.
- As a result of this, India currently imports about 60% of its edible oil needs, leaving the country's retail prices vulnerable to international pressures.

Reasons for soaring edible oil prices:

- Edible oil is also used for making **biofuel** and many countries are pursuing biofuel policy. This leads to aggressive edible oil purchase sourcing from palm oil (Malaysia and Indonesia) and soybean (U.S). These two oils make up 50% of India's domestic consumption.
- Another reason includes the excessive buying of edible oil by China. Thus, it has created a supply-demand mismatch in the market.
- Lastly, the Government has maintained high import duty (including cess) to manage the fiscal resources strained due to the covid-19 pandemic.

Steps taken to contain edible food oil price:

- Recently the government has launched a scheme called **National Edible Oil Mission-Oil Palm (NMEO-OP)**, for self-reliance in edible oil involving an investment of over Rs. 11,000 crore (over a five year period).

Aims of the scheme:

- To rein in **domestic edible oil prices** that are dictated by expensive palm oil imports.
- To raise **the domestic production of palm oil** by three times to 11 lakh MT by 2025-26.
- This will also involve **raising the area under oil palm cultivation to 10 lakh hectares** by 2025-26 and 16.7 lakh hectares by 2029-30.

Features:

- The **special emphasis of the scheme will be on India's north-eastern states and the Andaman and Nicobar Islands** due to the conducive weather conditions in the regions.
- Under the scheme, **oil palm farmers will be provided financial assistance and** will get remuneration under a price and viability formula.

Conclusion

High dependence of edible oil on import makes both the country and the citizens vulnerable to international trends. It also hinders the manoeuvrability of foreign policy as last year India was forced to import palm oil from Malaysia even after having strained relations with the country. Hence being Atmanirbhar in edible oil should be the first priority of both central and state governments.

26. State Animal and Bird: Ladakh

In News :

Recently, Ladakh has adopted **Snow Leopard** and **Black-Necked Crane**, as State animal and State bird, two years after it was carved out as a separate **Union Territory (UT)** from the erstwhile State of J&K (Jammu and Kashmir).

Key Points

- **Snow Leopard:**
 - **About:**
 - **Snow leopards (Panthera uncia) act as an indicator of the health of the mountain ecosystem** in which they live, due to their position as the **top predator in the food web.**
 - **Habitat:**

- Mountainous regions of central and southern Asia. In India, their geographical range encompasses:
 - **Western Himalayas:** Jammu and Kashmir, Himachal Pradesh.
 - **Eastern Himalayas:** Uttarakhand and Sikkim and Arunachal Pradesh.
 - **Snow Leopard capital of the world:** Hemis, Ladakh.
 - **Hemis National Park** is the biggest national park in India and also has a good presence of Snow Leopard.
- **Threats:**
 - Reduction in prey populations.
 - **Illegal poaching and increased human population** infiltration into the species habitat.
 - **Illegal trade** of wildlife parts and products.
- **Protection Status:**
 - IUCN: Vulnerable.
 - CITES: Appendix I
 - **Wildlife (Protection) Act 1972:** Schedule I
 - It is also listed in the **Convention on Migratory Species (CMS)**, affording the highest conservation status to the species, both globally and in India.
- **Black-Necked Crane:**
 - **About:**
 - The black-necked crane (**Grus nigricollis**), also known as Tibetan crane, is a **large bird and medium-sized crane**.
 - **Both the sexes** are almost of the **same size** but **male is slightly bigger** than female.
 - A conspicuous **red crown adorns the head**.
 - **Habitat:**
 - The high altitude wetlands of the **Tibetan plateau**, Sichuan (China), and eastern **Ladakh** (India) are the main breeding ground of the species; the **birds spend winter at lower altitudes**.

- In **Bhutan and Arunachal Pradesh**, it only comes **during the winters**.
- **Threats:**
 - **Damage to the eggs** and chicks, caused by feral dogs.
 - Loss of habitat due to **human pressure (Development Projects)** on the wetlands.
 - Increased **grazing pressure on the limited pastures** near the wetlands.
- **Protection Status:**
 - **IUCN Red List:** Near Threatened
 - **CITES:** Appendix I
 - **Indian Wildlife (Protection) Act, 1972:** Schedule I

Ladakh

- It was established as a **Union Territory (UT)** of India on 31st October 2019, following the enactment of the **Jammu and Kashmir Reorganization Act**.
 - Before that, it was part of the **Jammu and Kashmir state**.
- It is the **largest and the second least populous** union territory of India.
- It extends from the **Siachen Glacier** in the **Karakoram Range** to the north to the main Great Himalayas to the south.
 - The eastern end, consisting of the uninhabited **Aksai Chin Plains**, is claimed by the Indian Government as part of Ladakh, and has been under Chinese control since 1962.
- The **largest town in Ladakh is Leh**, followed by **Kargil**, each of which headquarters a district.
 - The Leh district contains the **Indus, Shyok and Nubra river valleys**.
 - The Kargil district contains the **Suru, Dras and Zaskar river valleys**.
- Earlier, in 2020 Indian and Chinese troops were engaged in a temporary and short duration **face-off** along the **Line of Actual Control (LAC)** at Naku La (Sikkim) and near Pangong Tso Lake (**Eastern Ladakh**).

However, recently India and China have agreed in principle to **disengage at a key patrol point in eastern Ladakh**.

27. A hydro onslaught the Himalayas cannot take

The article talks about the need for the cancellation of the many upcoming and approved hydel projects in the fragile Himalayan region.

In News :

- Policymakers have permitted projects and large-scale infrastructure in the already fragile and vulnerable Ganga-Himalayan basin.
- Seven Himalayan hydel projects have been allowed to complete construction primarily on the grounds that they are over 50% complete.

Concerns:

- The recent approval for 7 hydel projects essentially goes against the core mandate of the Ministry of Environment, Forest and Climate Change (MoEFCC) which is to conserve the country's natural environment.
- Approvals have been given despite the dire warnings of climate change threats and environmental challenges these projects could pose.
- The proliferation of dams is not restricted to Uttarakhand.
 - By 2007, Sikkim had entered a contract with private-public sector players for the development of 5,000 MW.
 - Arunachal Pradesh signed memoranda of understanding in 2010 for 40,000 MW.
 - These agreements thrived on speculative investments and political brokering and had minimal accountability or experience in the courier and logistics, real estate, steel fabrication, and tourism sectors.

Evidences:

- The study and analysis of recurrent disasters in the last decade in the state of Uttarakhand point towards the anthropogenic pressure being a direct or an indirect contributor.
 - A recent example is the Rishi-Ganga valley disaster in which the river turned into a flood carrying a heavy load of silt and debris and demolishing hydropower projects along its course.

Post the 2013 Kedarnath tragedy, in suo motu cognisance by the Supreme Court, an expert body (EB-I) was constituted to investigate the link between hydro-power projects in Uttarakhand and the recurring disaster.

- In its findings, EB-I said there was a direct and indirect impact of these dams in aggravating the disaster.
- However, to get approvals for these projects, multiple committees were formed with some design changes to finally get approvals.

Besides, the latest Intergovernmental Panel on Climate Change report has special significance in the context of fragile mountainous ecological regimes.

- The sustainability of the dams in the long term is highly questionable as hydropower solely relies on the excess availability of water.
 - Climate change models are clear about the cascading impacts of global warming trends on the glaciers of the Himalayas – the main source of water in the region.
 - Temperatures across the region are projected to rise by about 1°C to 2°C on average by 2050.
 - Retreating glaciers and the alternating phases of floods and drought will impact the seasonal flows of rivers.

Evidences suggest that about 15% of the great earthquakes (of magnitudes greater than 8) of the 20th century took place in the Himalayas and many of its segments are likely to see a period of intense earthquake activity in the future.

- The 2015 Nepal earthquake is a case in point.
- Several dams were damaged in that event destroying a third of Nepal's hydropower.

Issue:

- The conclusions of EB-I that had flagged the incalculable environmental risks of such structures have been conveniently sidelined and overwritten by EB-II.
- EB-II has paved way for all projects through some design change modifications.
- Recent affidavit reveals that the Government is inclined towards the construction of 26 other projects, as in the recommendation of the expert body (EB-II; B.P. Das committee).
- The affidavit submitted by the MoEFCC conceals its own observations and admissions given in its earlier affidavit of 2014 which admitted that hydroelectric projects did aggravate the 2013 flood.
- It also conceals the minutes of the meeting and decision taken by the Prime Minister's Office (PMO) in 2019 in this regard which mentions that there would be "no new hydropower projects" on the Ganga along with the cancellation of those that have not reached 50% of its construction.
- A huge amount of money is being wasted in the construction of hydel dams that will function much below their efficiency, cause the loss of water and forests, and render the area fragile.
- By the time they are constructed, the cost of electricity generated will also be phenomenally high and would have no buyers.

Way Forward:

- Science and logic press on the need for conservation and protection in these sensitive areas.

- These are the projects that have been approved by the Government with no science backing them but with several scientific truths demanding their cancellation.
- Considering the environmental and cultural significance of these areas, it is imperative that the Government refrains from the economically challenged rapacious construction of hydroelectric projects and declares the upper reaches of all the headstreams of the Ganga as eco-sensitive zones. It must allow the river to flow unfettered and free.
- Additionally, the MoEFCC must formulate a written position on climate change adaptation with respect to the hydropower sector, after a thorough public discourse.

28. Exports rose 45% to \$33 bn in August

In News :

- Preliminary estimates of **India's foreign trade data for the month of August.**

About :

Exports:

- India's merchandise exports in August touched \$33.14 billion. This marks a **significant rise as compared to even the pre-pandemic phase as well.**
- In the first five months of 2021-22, India's merchandise exports have now touched \$163.67 billion, nearly 67% higher than that of the corresponding period last year and 22.9% higher than 2019. **The steady recovery in global trade seems to be aiding the uptick in exports from India.**
- Among the **major commodity groups**, excluding petroleum, and gems and jewellery, **engineering goods, cotton yarn, fabrics and handloom products have recorded impressive export growths.**
- Notably, the employment-intensive readymade garments sector has recorded relatively lower levels of growth.

Imports:

- Notably, the imports too have risen aided by a **sharp uptick in gold imports.**
- **Net oil imports have remained largely stable.** The moderation in crude oil prices has helped in this regard.

Trade deficit:

- The larger uptick in imports has **widened the trade deficit to a four-month high.**

Recommendations:

- The government has set a **target of merchandise exports worth \$400 billion for the current fiscal year**. Subsequently, the government also aims to reach a merchandise exports target of \$500 billion for FY23 and \$1 trillion in 2027-28.
- The government is aiming to target \$2 trillion exports by 2030, with \$1 trillion from merchandise exports and \$1 trillion from services exports.
- In order to meet these stiff targets, the following measures may be necessary.
 - The government should try and **curtail the increasing freight rates and rampant container shortages** as this could adversely impact the price competitiveness of Indian goods in the international markets.
 - The government should prioritize the **release of pending benefits under earlier export incentive schemes**. Also, the timely and efficient implementation of the RoDTEP scheme should be a top priority to incentivize exports.

29. Additional Tier-1 Bonds: Rationale and Features

Understanding BASEL-III Guidelines

As part of BASEL III, the banks are required to maintain regulatory capital in order to improve the strength and resilience of the banks to external shocks.

According to the RBI's guidelines, the regulatory capital to be maintained by the Indian banks is as under:

- Tier-1 Capital: 7% (Core Equity capital consisting of Minimum Common Equity Tier 1 of 5.5% and Additional Tier 1 capital of 1.5%)
- Tier-2 Capital: 2% (Basically comprising of Debt)
- Capital Conservation Buffer: 2.5%
- Total Regulatory Capital: 11.5% of Risk-weighted Assets

Additional Tier-1 Bonds?

The AT-1 Bonds are the unsecured and perpetual bonds which are issued by the Banks to meet regulatory capital requirements of 1.5% of Additional Tier 1 Capital under the BASEL III norms. However, they are quite different from the normal bonds in a number of ways:

Hybrid Instruments: The AT-1 Bonds are considered to be hybrid of shares and bonds. Just like shares, there is no obligation to return the money or pay the dividend. Just like bonds, the bank pay interest on such AT-1 bonds.

Perpetual Bonds: These Bonds do not have maturity period. Instead, these bonds carry call options i.e. the banks have an option to redeem them after five or 10 years. But banks are not obliged to use this call option and they can opt to pay only interest on these bonds for perpetuity. That is why they are called as Perpetual Bonds.

No Put Option: Investors do not have put option i.e. the investors cannot return back the AT-1 bonds to the banks. However, the investors can sell these bonds in the secondary market.

Skip Interest Payments: The Banks issuing the AT-1 bonds can skip payment of interest for a particular year. They can also reduce the face value of the bond. However, the banks can do so only when their regulatory capital ratio falls below certain threshold levels. These threshold levels are clearly specified when Banks issue AT-1 bonds.

Writing down of AT-1 Bonds: If the RBI feels that any bank is under a financial crunch, it can waive off the liability of the banks to redeem the AT-1 bonds and completely write it off. The RBI has used this option in the case of Yes Bank.

30. Opportunities, Challenges and Strategies needed by Microfinance in India

Microfinance is considered to be a tool to promote financial inclusion, enable the households to come out of poverty and increase their income levels. It can facilitate achievement of national policies such as poverty reduction, women empowerment, improvement in the standards of living etc.

Indian microfinance sector has witnessed phenomenal growth over past two decades. However, it is facing number of challenges such as absence of comprehensive regulatory framework, higher indebtedness, coercive recovery practices etc.

In this regard, recently the RBI has come out with a consultative document on the microfinance sector.

Evolution of Micro Finance Sector in India

1992: NABARD's SHG-Bank Linkage programme. Banks started lending to Women-led SHGs based upon the money which these SHGs saved in the bank accounts.

1992 to 2010: No separate RBI guidelines for the Micro finance sector. Facilitated rapid growth of micro-finance institutions (MFIs). These MFIs operated in regulatory vacuum and hence led to their exponential growth. This phase saw the growth of large sized MFIs such as SKS Microfinance, Spandana etc.

2010: Andhra Pradesh Microfinance crisis. MFIs indulged in unethical practices such as charging higher interest rates, adoption of forced recovery techniques, not following due-diligence in giving loans etc. Led to suicide by large number of people in the rural areas.

2011: Appointment of Malegam Committee on Regulation of MFIs. Committee recommended creation of separate category of MFIs called as NBFC-MFIs. Called upon RBI to lay down comprehensive guidelines.

2011-2020

- RBI created separate category of NBFC-MFIs and has laid down comprehensive regulatory framework.
- Some of the MFIs have been merged into Banks while some MFIs have been issued license to operate as Small finance Bank
- Bandhan Financial services, which was a MFI earlier, has been issued license for Universal Bank

Present Status: The total micro-finance loans stand at Rs 2.7 lakh crores. The highest share is accounted by the SCBs (40%). The NBFC-MFIs account for 30% of the loans.

RBI's present guidelines for the NBFC-MFIs

MFI is defined as a non-deposit taking NBFC that fulfils the following conditions:

- Minimum Net Owned Funds of Rs.5 crore. (For NBFC-MFIs registered in the Northeastern Region of the country, the minimum NOF requirement shall stand at Rs. 2 crore).
- Not less than 85% of its loans are in the nature of “qualifying assets.”

“Qualifying asset” shall mean a loan which satisfies the following criteria: -

- Loan disbursed by an NBFC-MFI to a borrower with a rural household annual income less than Rs. 1.25 lakh or urban and semi-urban household income less than Rs. 2lakhs.
- Loan amount does not exceed Rs. 1.25 lakh per borrower.
- Loan extended without collateral.
- The aggregate amount of loans, given for income generation should be at least 50 per cent of the total loans given by the MFIs.
- The loan is repayable on weekly, fortnightly or monthly instalments as per the choice of the borrower.

31. State Animal and Bird adopts by Ladakh

Ladakh has adopted two endangered species, snow leopard and black-necked crane, as State animal and State bird, two years after it was carved out as a separate Union Territory (UT) from the erstwhile State of J&K.

Snow Leopard

- The snow leopard (*Panther unica*) and black-necked crane (*Grus nicricollis*).
- Snow leopard, whose numbers are dwindling worldwide, has been categorized as “vulnerable” in the International Union for Conservation of Nature Red List.
- In total, there are about 7,500 snow leopards left in the world, out of which 500 are in India.
- However, experts state that the population of snow leopards is between 200-300 in Ladakh alone.

Black-necked Crane

- The black-necked crane is found in eastern Ladakh’s high-altitude wetlands and marshes.
- It is mostly listed as Near Threatened on the International Union for Conservation of Nature (IUCN) red list.
- Considered loyal couples, they are only found in Ladakh’s Changthang region. They arrive in March for breeding and migrate by October end or early November.
- It was the State bird of J&K before August 5, 2019.
- Ladakh was established as a union territory of India on 31 October 2019, following the passage of the Jammu and Kashmir Reorganization Act.
- Prior to that, it was part of the Jammu and Kashmir state. Ladakh is the largest and the second least populous union territory of India.
- It extends from the Siachen Glacier in the Karakoram range to the north to the main Great Himalayas to the south.
- The eastern end, consisting of the uninhabited Aksai Chin plains, is claimed by the Indian Government as part of Ladakh, and has been under Chinese control since 1962.
- The largest town in Ladakh is Leh, followed by Kargil, each of which headquarters a district.
- The Leh district contains the Indus, Shyok and Nubra river valleys. The Kargil district contains the Suru, Dras and Zaskar river valleys.

32. Mumbai Climate Action Plan

In News : The Brihanmumbai Municipal Corporation (BMC) is drafting a Mumbai Climate Action Plan (MCAP) in a bid to tackle climate challenges. It recently launched a website for the same.

- Mumbai joined C40 Cities group in December 2020.
- There are 97 cities across the world connected in C40 Cities, who are pushed to develop and implement climate action plans to address climate change by reducing greenhouse gas emission significantly.

Mumbai Climate Action Plan

- Amid warnings of climate change leading to extreme weather events in the city, the civic body has started preparing the Mumbai Climate Action Plan (MCAP).
- It will look at climate resilience with mitigation and adaptation strategies by focusing on six areas –
 - - Sustainable waste management
 - Urban greening and biodiversity
 - Urban flooding and water resource management
 - Building energy efficiency
 - Air quality
 - Sustainable mobility
- The plan is expected to be ready by November ahead of the United Nations Climate Change (COP26) conference.

Why does Mumbai need a climate action plan?

- As per a study conducted by the World Resource Institute (WRI) India on Mumbai's vulnerability assessment, the city will face **two major climate challenges** –
 - - Rise in temperature
 - Extreme rain events which will lead to flooding.
- IPCC has warned that at least 12 Indian coastal cities including Mumbai will face **sea rise of 0.1 metres to 0.3 metres** in next three decades due to climate change.
- In February 2020, a report from McKinsey India stated that by 2050, Mumbai will see a **25% increase in the intensity of flash floods** and a 0.5 metre rise in

sea level, which will affect two to three million people living within 1-km from the coastline.

- Since 2007, the city has seen a **constant rise in temperature mainly due to concretization, lack of green cover** and housing density. The average rise in temperature is up to 1 degree Celsius in these 14 years.
- City has witnessed increase in the number of **extremely heavy rainfall events**. Mumbai has seen, on an average, six heavy (64.5 – 115.5 mm), five very heavy (115.6 – 204.4 mm) and four extremely heavy (> 204.5 mm) rain events per year.
- Mumbai's climate action plan will help set a vision and implement strategies to fight these climate challenges with mitigation and adaptation steps

Greenhouse gas emission of the city

- The data show that Mumbai's greenhouse gas emission was **34.3 million tonnes in 2019**.
 - - 71% came from the energy sector which is mainly based on coal.
 - 24% is from transport,
 - Remaining 5% from solid waste management.
 - As per the data, 95 per cent of Mumbai's electricity is coal-based and needs to be shifted to renewable energy to bring down emissions.

How does BMC plan to tackle the climate challenges?

- To minimise the impact of climate change, the MCAP will focus on reduction of greenhouse gas emission by sectors, and consumption patterns, for the near term (2030), medium term (2040) and long-term (2050).
- To better adapt to increasing climate risks so as to make "climate resilient Mumbai", following steps will be taken
 - Vulnerability assessment
 - Increasing community resilience capacities in vulnerable neighborhoods
 - Building climate resilient infrastructure
 - Nurturing robust natural systems

33. India must commit to net zero emissions

In News :

The United Nations Climate Change Conference (COP26) in November in Glasgow is shaping up to be the most important climate meeting since the Paris Agreement in 2015.

Increase in pace and scale of climate action

- Over 50% of the global economy already committed to net zero emissions by 2050.
- **Over 100 countries** have already committed to net zero emissions by 2050, with more expected at COP26.
- The pace and scale of climate action is only set to increase, with the recent IPCC report unequivocal on the need for urgent and stronger responses.
- It is not only governments that are increasing climate action.
- **The business world** is too, not just to protect themselves against the risks of climate change but also to take advantage of the massive opportunities arising as the global economy shifts to net zero emissions.

Why India should commit to net-zero target

- **National interest due to vulnerability:** India itself has a national interest in ambitious global and national climate action.
- It is among the most vulnerable countries to climate change and, therefore, should be among the more active against the threats.
- **Influence as a rising power:** Second, as a rising power, India naturally seeks stronger influence globally.
- Being an outlier on the global challenge facing our generation does not support this aim.
- **Drag on international diplomacy:** India's reluctance to commit to net-zero will become a significant drag on **India's international diplomacy**.
- This applies not just to key relationships like with the U.S., but also with much of the Group of 77 (G77) states, who are increasingly concerned to see climate action, and in multilateral groupings such as the United Nations and ASEAN-APEC.
- **Interconnected with the economy:** There is no longer a trade-off between reducing emissions and economic growth.
- For example, the U.K. has reduced emissions over 40% and grown its economy over 70% since 1990.
- **Solar energy costs have fallen 90% in recent years**, providing the cheapest electricity in India ever seen.
- Also, given the negative impacts, addressing climate change in India's economic development is now central to success, not an added luxury to consider.

- The transition of the global economy to net zero emissions is the biggest commercial opportunity in history.
- In just the energy sector alone, an estimated \$1.6 to \$3.8 trillion of investment is required every year until 2050.

India's climate actions

- India is set to significantly exceed its **Paris Agreement commitment** of reducing the emissions intensity of its GDP by 33-35% below 2005 levels by 2030.
- **Emphasis on renewable:** India is impressing the world with its leading roll-out of renewable energy and target for 450GW by 2030, linked to its leadership on the International Solar Alliance and recent national hydrogen strategy.
- **Corporates: Indian corporates** are also stepping up, with the Tata Group winning awards on sustainability, Mahindra committing to net zero by 2040 and Reliance by 2035.
- Notwithstanding reasonable arguments about **historical responsibility, per capita emissions and equity**, India's national interests on climate action are now engaged in ways that go significantly beyond waiting for donor support to drive ambition.

Way forward: International cooperation

- World needs to work together for success in the form of stronger political engagement, policy support in areas of mutual challenge such as energy policy, carbon markets and economic recovery.
- Practical support and cooperation in areas like renewable energy and integrating it with the national grid, zero emissions transport, decarbonising hard to abate sectors like steel, cement and chemicals and decarbonising agriculture offer significant scope to raise ambition.
- As does working with India on **innovative green financing** for decarbonising investment.

Conclusion

India's tryst with destiny rests in its own remarkable hands, as it always has been. In a land where the earth is called mother, and Mahatma Gandhi, major religions and the Constitution enshrine environmental care, commitment to net zero emissions by 2050 should almost be foretold.

34. Govt. tells utilities to ship in coal as demand surges

The govt. has urged utilities to import coal despite having the world's fourth-largest reserves, with several power plants on the verge of running out of fuel due to a surge in power demand.

Coal Mining in India

- Coal in India has been mined since 1774 and is now the second fastest mined in the world, producing 716 million metric tons (789 million short tons) in 2018.
- Due to high demand and poor average quality, India imports coking coal to meet the requirements of its steel plants.
- Dhanbad city is the largest coal producing city and is called the Coal Capital of India.
- State-owned Coal India had a monopoly on coal mining between its nationalization in 1973 and 2018.

Consumption

- Coal-fired power accounts for more than 70% of India's electricity generation. Electricity generation makes up three-fourths of India's coal consumption.

Quality of coal

- The ash chemistry of Indian coal is such that it is high in silica and alumina.
- The ash is also highly abrasive because of high quartz content, which can lead to erosion of the syngas cooling system when it gets fused.
- Indian coals sulfur content is low, about 0.5 percent.
- So, from a gas clean-up perspective, the flue gas desulfurization (removal of SO_x gases) and NO_x removal system is not economically justifiable and, therefore, not important.
- Also, in the Indian context, this is unnecessary to meet emission norms.
- India has the fourth-largest coal reserves in the world. It is the second-largest producer of coal in the world, after China.
- Coal deposits are primarily found in eastern and south-central India.
- Jharkhand, Odisha, Chhattisgarh, West Bengal, Madhya Pradesh, Telangana and Maharashtra accounted for 98.09% of the total known coal reserves in India.
- As on 31 March 2019, Jharkhand and Odisha had the largest coal deposits of 25.88% and 24.76% respectively.

Imports

- Coking Coal is being imported by the Steel Authority of India Limited (SAIL) and other Steel manufacturing units mainly to bridge the gap between the requirement and indigenous availability and to improve the quality.
- Coal-based power plants, cement plants, captive power plants, sponge iron plants, industrial consumers and coal traders are importing non-coking coal.
- Coke is imported mainly by Pig-Iron manufacturers and Iron & Steel sector consumers using a mini-blast furnaces.

35. Bias in AI is a key topic of concern: Capgemini VP

Artificial Intelligence:

- Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.
- The AI systems are taught through sharing of enormous data of past human actions to learn from. This large amount of data is subject to fast, iterative processing and intelligent algorithms, allowing the software to learn automatically from patterns or features in the data.
- **Specific applications of AI include expert systems.** This helps in reducing the human interference in repetitive decision-making processes.

Challenges of AI

- Bias and discrimination of the system fed data
- Possibilities of misuse
- Usage of personal sensitive information (to build algorithms) without informed consent might compromise data privacy
- Ignorance on functioning of AI and its impact to government and ordinary citizens

Potential for misuse:

- AI systems find extensive use in the operation of search engines. The entire cycle of collecting, indexing and ranking content is automated with the help of AI systems.
- **The AI system used in such vital applications is prone to misuse and unintentional bias.** This is extremely worrisome as search engines have the power to shape user behaviour. This goes against the need for secular, neutral, unbiased and conflict-free search engines.

Privacy concerns:

- Personal data is used about individuals to build sharper algorithms to target them for offers, recommendations, treatments etc. The **use of personal sensitive information without informed consent gives rise to ethical concerns** on the use of AI systems.

Lower degree of understanding and insensitivity:

- There is still a **great degree of ignorance about how AI can impact our lives among the general populace and even the governments.**
- **Technology developers seem to be insensitive** to some critical issues in the domain of AI.
- This does not augur well for the future given the inevitable large scale implementation of AI systems in the coming years.

Recommendations:

- Data collection, curation and the methodology involved in processing the information in AI systems must **ensure fairness and ethical outcome.**
- **Accountability and ownership of AI systems** have to be well-defined.
- There is the need to develop a **regulatory and compliance framework** for AI systems through appropriate legal frameworks.

UNESCO's framework for ethical AI

- UNESCO's framework for ethical AI envisages a holistic and evolving **framework of values, principles and actions** that can guide societies in dealing responsibly with the known and unknown impact of AI on humans and society at large.
- The framework will impact areas such as **sensitivity to privacy and inclusion; transparency, fairness and non-discrimination;** accountability through participation; mindset change that supports a sustainable AI environment and a **balance between business growth and promotion of values.**

36. IISc researchers find a way to substitute for single-use plastics

In News:

- Researchers from Indian Institute of Science, Bengaluru (IISc) have developed a **biodegradable substitute for single-use plastic.**

Background:

Challenges of Plastic Pollution

- Plastics take longer to get decomposed
- Presence of plastic in saline water increases its toxicity
- Intake of plastics will affect the health of animals as they can't digest plastic
- Breakdown of plastics will increase micro plastics which can enter food system

Significance of this substitute

- Non-toxic to environment (as it is bio-degradable)
- Mitigates the problem of plastic accumulation
- Multi-purpose material (as it can be used for food packaging and healthcare applications)
- Reduces air pollution in National Capital Region (as it uses agricultural stubble as a raw material)

Plastic pollution:

- There has been an **exponential surge in the usage of single use plastics**. According to a report by Central Pollution Control Board of India, for the year **2018-2019, 3.3 million metric tonnes of plastic waste are generated in India**. Some experts point out the fact that this figure might as well be a gross under-estimation as well.
- More worryingly, **only 9% of all plastic waste produced in the world is recycled and around 79% enters the environment**.
- Landfills are choking with single use plastics. Accumulation of such large amounts of plastic waste is detrimental to the environment and ecology more so for aquatic ecosystems where a large amount of plastic waste ultimate makes its way to.

Details:

- The researchers have developed a **polymer using non-edible oil and cellulose extracted from agricultural stubble**.
 - The process makes use of non-edible Castor oil. However other non-edible oils such as jatropha oil and neem oil could also be experimented with.
- The proportion of cellulose to non-edible oil can be varied to **tune the flexibility of the polymer**.
 - Higher amount of cellulose makes the polymer stiffer while higher proportion of oil made the material more flexible
- The sheets of polymer have **performed satisfactorily in the leaching and thermal stability tests**.

Significance:

Environmental friendly:

- The newly developed material is **biodegradable and non toxic**.
- This would be a viable substitute for single-use plastic that can help **mitigate the problem of accumulating plastic waste in the environment**.

37. Why is it difficult for India to get to net zero?

In News:

- The recent visit of the U.S. Special Presidential Envoy for Climate to India in a bid to raise global climate ambition ahead of the upcoming UN Climate Change conference in Glasgow failed to receive any assurance on carbon neutrality from India.
 - The **Indian government has stated that it does not consider the “net zero” goal its only priority at present** and is focused on the “**key issues” of climate justice and sustainable lifestyles**.

Synopsis:

- United Nations (UN) asked the global nations to declare national climate emergencies and build a carbon neutral world by 2050.
- This target doesn't consider historical responsibilities, differentiation, size of economy or development.
- It is applicable to all

Global response:

- Nations contributing 65% of global CO₂ emissions agreed
- China committed to net zero GHG emissions by 2060
- U.S. & EU also adopted net zero targets

Possible impact:

- EU might impose carbon border levies on those nations that do have high carbon cut-down targets
- Despite having a small carbon footprint (2%), India will be subjected to intense observation which might affect its development measures
- It will modify WTO rules (at present it excludes tariffs on environmental grounds)

Carbon neutrality goals:

- **Major GHG emitters- China, U.S. and the E.U. have committed to a net zero target.**

- China has pledged to peak CO₂ emissions before 2030 and achieve carbon neutrality by 2060.
- The U.S., as the second biggest emitter with large historical emissions has pledged a 2050 net zero plan.
- The European Union (EU) member-states have committed themselves to reducing emissions by at least 55% by 2030 over 1990 levels and carbon neutrality by 2050.
- According to the United Nations, **the net zero concept is being considered by about 130 countries** that have either committed themselves to carbon neutrality by 2050, or are considering that target.
- India, as the third largest GHG emitter is under pressure to come up with a higher ambition on cutting CO₂ emissions including a target for carbon neutrality.

India's commitments:

- India has pledged to **cut the emissions intensity of GDP by 33%-35% by 2030 over the 2005 level.**
- India has also set ambitious renewable energy targets of around 450 GW by 2030. It plans to increase the **share of clean and renewable energy in total power production to 40% by 2030.**
- By 2030, India also intends to **increase our carbon sinks by creating an additional capacity equivalent to 2.5 to 3 billion tonnes of CO₂** through afforestation efforts.
- India is working to reduce its emissions, **aligned with the goal of less than 2°C global temperature rise.** Notably, India's plan is not aligned with the goal of 1.5°C temperature rise.
- **India is not in favour of a binding commitment towards carbon neutrality.**

Arguments in favour of adopting net zero target:

- Given **recent reports pointing towards the rapid global warming**, there are questions over Paris climate commitments. This makes measures such as achieving carbon neutrality inevitable in the global climate action efforts.
- Given the global impact of climate change despite the low contribution of GHG from the developing world and the fact that **India continues to remain extremely vulnerable to climate change risks**, it would be in India's interests to adopt ambitious climate action targets like the carbon neutrality goal.
- A net zero target can put India on a **green development trajectory**, attracting investment in innovative technologies. This could provide a **new avenue for economic growth in India.**

Arguments against adopting net zero target:

- The UN Framework Convention on Climate Change (UNFCCC) provides for **common, but differentiated, responsibilities of nations**. The goal of carbon neutrality seems to be against this concept as it pushes developing countries to adopt steeper targets and **forego cheaper developmental avenues** which the developed world had access to.
- Carbon neutrality **deflects important aspects such as emission reduction, improving energy efficiency and sustainable lifestyle practices** and emphasis more on nascent technology to suck out CO₂ from the atmosphere.

38. 27th Global Ozone Day

Global Ozone Day:

World Ozone Day is celebrated on **16th September** each year to commemorate the signing of the **Montreal Protocol**.

- This **international environmental treaty** for phasing out of production and consumption of **Ozone Depleting Substances** came into force on this day in 1987.
- The Day is celebrated every year to **spread awareness among people about the depletion of Ozone Layer** and the measures taken/ to be taken to preserve it.

The theme World Ozone Day 2021: “Montreal Protocol – Keeping us, our food and vaccines cool”.

Montreal Protocol:

The **Montreal Protocol on Substances that Deplete the Ozone Layer** (the Montreal Protocol) is an international agreement made in 1987.

- It was **designed to stop the production and import of ozone depleting substances** and reduce their concentration in the atmosphere to help protect the earth’s ozone layer.
- The Montreal Protocol sits under the **Vienna Convention for the Protection of the Ozone Layer** (the Vienna Convention).

‘Kigali Amendment’

Kigali Amendment was adopted by the **Parties to the Montreal Protocol on October, 2016** at 28th Meeting of the Parties to the Montreal Protocol held at Kigali, Rwanda.

- **Under the Kigali Amendment;** Parties to the Montreal Protocol will phase down production and consumption of **Hydrofluorocarbons**, commonly known as HFCs.
- All amendments and adjustments of the Montreal Protocol, prior to the Kigali Amendment have Universal support.

India's achievements in implementation of Montreal Protocol:

- India, as Party to the Montreal Protocol since June 1992, has been successfully implementing the Montreal Protocol.
- **India has phased out** Chlorofluorocarbons, Carbon tetrachloride, Halons, Methyl Bromide and Methyl Chloroform for controlled uses in line with the Montreal Protocol.
- **Currently Hydrochlorofluorocarbons are being phased out** as per the accelerated schedule of the Montreal Protocol.
- **Hydrochlorofluorocarbons Phase out Management Plan (HPMP) Stage-I** has been successfully implemented from 2012 to 2016 and **HPMP Stage-II** is currently under implementation from 2017 and will be completed by 2023.
- **Government of India has recently decided to Ratify the Kigali Amendment** to the Montreal Protocol.

Benefits of ratification of the Kigali Amendment:

- HFC phasedown is expected **to prevent the greenhouse gas emissions**, helping prevent climate change and would benefit the people.
- The industry producing and consuming Hydrofluorocarbons **will be phasing out Hydrofluorocarbons as per the agreed schedule under and transition to non-HFC** and low global warming potential technologies.

39. Four-year moratorium for AGR dues

In big bang reforms, the Union Cabinet approved a relief package for the telecom sector that includes a four-year moratorium on payment of statutory dues by telecom companies as well as allowing 100% foreign investment through the automatic route.

AGR

- Adjusted Gross Revenue (AGR) is the usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT).

- It is divided into spectrum usage charges and licensing fees, pegged between 3-5 per cent and 8 per cent respectively.

Why is AGR important?

- The definition of AGR has been under litigation for 14 years.
- While telecom companies argued that it should comprise revenue from telecom services, the DoT's stand was that the AGR should include all revenue earned by an operator, including that from non-core telecom operations.
- The AGR directly impacts the outgo from the pockets of telcos to the DoT as it is used to calculate the levies payable by operators.
- Currently, telecom operators pay 8% of the AGR as licence fee, while spectrum usage charges (SUC) vary between 3-5% of AGR.

Why do telcos need to pay out large amounts?

- Telecom companies now owe the government not just the shortfall in AGR for the past 14 years but also an interest on that amount along with penalty and interest on the penalty.
- While the exact amount telcos will need to shell out is not clear, as in a government affidavit filed in the top court, the DoT had calculated the outstanding licence fee to be over 92,000 crore.
- However, the actual payout can go up to ₹1.4 lakh crore as the government is likely to also raise a demand for shortfall in SUC along with interest and penalty.
- Of the total amount, it is estimated that the actual dues is about 25%, while the remaining amount is interest and penalties.

Is there stress in the sector?

- The telecom industry is reeling under a debt of over ₹4 lakh crore and has been seeking a relief package from the government.
- Even the government has on various occasions admitted that the sector is indeed undergoing stress and needs support.
- Giving a ray of hope to the telecom companies, the government recently announced setting up of a Committee of Secretaries to examine the financial stress in the sector, and recommend measures to mitigate it.

Issue of lower tariff

- Currently, telecom tariffs are among the lowest globally, driven down due to intense competition following the entry of Reliance in the sector.
- The TRAI examines the merits of a "minimum charge" that operators may charge for voice and data services.

40. Probe shows use of toxic material in firecrackers: Supreme Court

The Supreme Court has said a preliminary enquiry by the CBI into the firecracker industry, including in Tamil Nadu, revealed rampant violation of its ban on use of toxic ingredients like Barium and its salts.

Air Pollution created by firecrackers

- Firing crackers increase the concentration of dust and pollutants in the air.
- After firing, the fine dust particles get settled on the surrounding surfaces which are packed with chemicals like copper, zinc, sodium, lead, magnesium, cadmium and pollutants like oxides of sulphur and nitrogen.
- These invisible yet harmful particles affect the environment and in turn, put our health at stake.

Harmful elements used

- Copper: Irritates the respiratory tract.
- Cadmium: Leads to anemia by reducing the capacity of blood to carry oxygen.
- Zinc: Can cause metal fume fever and induces vomiting.
- Lead: Harms the nervous system.
- Magnesium: Metal fume fever is caused by Magnesium fumes.
- Sodium: It is a highly reactive element and caused burns when it is combined with moisture.

Why is the issue in news now?

Ans. Barium content

- A chemical analysis of the samples of finished and semi-finished firecrackers and raw materials taken from the manufacturers showed Barium content.
- The court stated that loose quantities of Barium were purchased from the market.
- Also, firecracker covers did not show the manufacture or expiry dates.

Issues with Barium

- Barium nitrate, which emits green flames when a cracker is lit, is a metal oxide that increases both air and noise pollution.
- There is no clarity on whether barium nitrate can actually be used or not.

Alternatives: Green Crackers

- The new CSIR-NEERI formulation for green crackers has **NO barium nitrate** – one of the key ingredients of traditional firecrackers.

- These crackers have been named “safe water releaser (SWAS)”, “safe minimal aluminium (SAFAL)” and “safe thermite cracker (STAR)”.
- The three crackers release water vapour or air as a dust suppressant and diluent for gaseous emissions.
- These products can only be manufactured by those who have signed a non-disclosure agreement (NDA) with CSIR-NEERI.
- The green crackers are sold with a unique logo on the box, and will also have a QR code with production and emission details.

