

## **VISION IAS**

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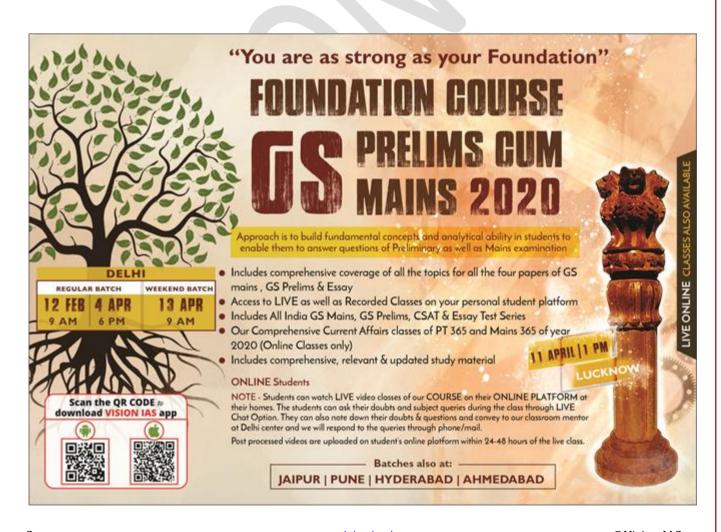
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#### 1. POLITY AND GOVERNANCE

#### 1.1. FALLING PRODUCTIVITY OF RAJYA SABHA

#### Why in news?

Rajya Sabha Chairman recently presented a "report to the people", highlighting the below-par performance of the Upper House and need to hold legislatures accountable.

#### **Highlights of report**

- Since June 2014, the Rajya Sabha has held 18 sessions and 329 sittings and passed 154 Bills — which comes to less than one Bill in two sittings.
- The **legislative output** of the Rajya Sabha has been falling. In 2009-2014, it cleared 188 Bills and in 2004-09 it cleared 251 Bills.
- Since 2014, the Upper House has been unable to function for 40% of its allotted time due to disruptions.
- Out of 48 hours in the Budget session, the house functioned only for eight hours.

#### Reasons for low productivity of Rajya Sabha

- Political Tussle between the government and opposition leads to stalling of its functioning, adjournments etc.
- Lack of consensus: It also reflects that there
  is lack of consensus on many issues and
  government is not able to take opposition
  in confidence on such matters.
- Politicization of Rajya Sabha deviating it from being a serious deliberative body providing important insights on matters of public importance.

#### Relevance of Rajya Sabha

- **Permanent House:** Rajya Sabha is never dissolved. Hence it provides the nation leadership and stability in the times when Lok Sabha is not constituted. It also acts as a check against any abrupt changes in the composition of the Lower House.
- **Guard against populist measures:** While Lok Sabha may work under populist compulsions; Rajya being the permanent and less political house can take a deeper and non-populist look at bills and issues at hand. It also provides a second opinion on crucial issues of national interest.
- **Representation of States:** Rajya Sabha has representatives from State, hence interests of states are reflected and guarded by the Rajya Sabha.
- **Space for Experts:** Rajya Sabha provides a space for experts in their fields to voice their opinion on crucial legislative matters.
- Sharing the legislative burden: Legislatures, the world over, are grappling with increasing demand to legislate on newer areas. The Upper House thus becomes much more useful in sharing the burden of the Lower House.

#### Criticism of Rajya Sabha

- **Reduced Significance:** On the matters of importance like the money bill and the budget, Rajya Sabha has little say which reduces its significance compared to Lok Sabha.
- Chamber for political end seekers: The Upper House has become a ground for party fund-raisers, those who lost in elections, crony capitalists, journalists, retired CEOs and civil servants.
- **Hindrance to speedy Legislation:** Given the competitive politics today, Rajya Sabha is also used by opposition parties to hinder speedy legislation, which is detrimental to the growth of the nation.
- **Frequent disruptions** in recent times is also undermining the deliberative and accountability functions of the upper house.

#### Way forward

- Legislative Measures: Parliament (Enhancement of Productivity) Bill, 2017 should be taken up which seeks to fix the minimum number of days (100 days for Rajya Sabha) in which parliament shall be in session.
  - O National Commission to Review the Working of the Constitution (NCRWC) has also recommended the minimum number of working days to be 120 and 100 respectively for Lok sabha and Rajya Sabha.
- **Performance related pay:** There is also a call for linking salaries of legislators to their performance and attendance in Rajya Sabha.
- Stricter Rules of Procedure and conduct of business to deal with the unruly behavior shouting, sloganeering of certain members so that time of the Rajya Sabha is not lost.

- Reviewing the Anti-Defection Law as it gives sweeping powers to the political parties. If the party decides to not let parliament function then MPs cannot deviate from their decision even if they think differently.
- **Sustained Evaluation of performance** of our parliament and the MPs on regular intervals can be undertaken by Citizen's pressure groups to put pressure on MPs to perform and let parliament do its designated work.

#### 1.2. NATIONAL SECURITY ACT

#### Why in news?

Recently, the Madhya Pradesh Government invoked the National Security Act (NSA) against three men accused of killing a cow.

#### **About National Security Act, 1980**

- The National Security Act was promulgated on September 23, 1980, "to provide for preventive detention in certain cases and for matters connected therewith".
- The **grounds for preventive detention** of a person include:
  - o Acting in any manner prejudicial to the defence of India, the relations of India with foreign powers, or the security of India.
  - o Regulating the continued presence of any foreigner in India or with a view to making arrangements for his expulsion from India
  - o Acting in any manner prejudicial to the security of the State or from acting in any manner prejudicial to the maintenance of public order or from acting in any manner prejudicial to the maintenance of supplies and services essential to the community it is necessary so to do.
- A detenu may be held for up to three months and in certain circumstances six months, without any review.
- A three person Advisory Board made up of high court judges or persons qualified to be high court judges determines the legitimacy of any order made for longer than three months. If

#### approved, a person may be held extra-judicially for up to 12 months. The term can be extended if the government finds fresh evidence.

- The state government needs to be intimated that a person has been detained under the NSA.
- It extends to the whole of India except the State of Jammu and Kashmir.

#### Concerns

5

- Accused is denied basic rights available to others arrested in normal course such as-
  - **Under Criminal Procedure Code (CrPC)** 
    - The person arrested has to be informed of the grounds of arrest, and the right to bail. Under NSA, a person could be kept in the dark about the reasons for his arrest for up to five days, and in exceptional circumstances not later than 10 days.
    - ✓ Even when providing the grounds for arrest, the government can withhold information which it considers to be against public interest to disclose.
    - It further provides that a person has to be produced before a court within 24 hours of arrest.
  - Article 22(1) of the Constitution- an arrested person cannot be denied the right to consult, and to be defended by, a legal practitioner of his choice. Under NSA, the arrested person is not entitled to the aid of any legal practitioner in any matter connected with the proceedings before the advisory board.
  - Violates due process of law- such as presumption of innocence
- Over-reliance of governments on preventive detention- In recent times, different State governments have invoked the stringent provisions of the NSA to detain citizens for questionable offences, which has brought the focus back on the potential abuse of the controversial law.

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#### **History of Preventive Detention laws in India**

- Pre-independence laws- Bengal Regulation III of 1818, Defence of India Act 1915, Rowlatt Acts of 1919
- Post-independence laws-
  - **Preventive Detention Act (1950-1969)**
  - **Unlawful Activities (Prevention) Act** (1967)
  - Maintenance of Internal Security Act (MISA) (1971 - 1978)
  - **Conservation of Foreign exchange and Prevention** of Smuggling Activities (COFEPOSA) (1974)
  - National Security Act (1980)- amended in 1984, 1985 and 1988
- **Recent Cases-**
  - UP government arrested three persons under the NSA in connection with an alleged cow-slaughter incident in Bulandshahr
  - A Manipur journalist, who had posted an alleged offensive Facebook post on the Chief Minister, was detained for 12 months under the NSA.

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- No figures available for the exact number of detentions under the NSA- National Crime Records Bureau (NCRB), which collects and analyses crime data in the country, does not include cases under the NSA in its data as no FIRs are registered.
- Against Constitutionalism as government's arbitrariness is not checked and is prone is misuse.
- Can be used by the state to avoid other provisions of law- Many provisions like imperil the defence of state, relations with foreign powers etc. are already punishable under several sections of the IPC. NSA allows the government to keep such offenders in custody without charging them.

#### Arguments in favor of such a law

- **Presence of anti-national forces-** including terrorists, extremists, radical elements among others which threaten the unity and integrity of the nation.
- **Intelligence gathering-** Terrorists may use the provisions of innocence under the law to evade crucial details required immediately by the law enforcement agencies.
- **Misuse is not an excuse for repeal-** Mere allegation of misuse in particular cases should not undermine the efficacy in majority cases.
- Application is a part of reasonable restriction- provided under the Article 19 (2).

#### **Way Forward**

- There needs to be a balance drawn between security of the state and ensuring rights of the people.
- The law enforcement agencies must be sufficiently guided as to where the section must be imposed and where not. Standard Operating Guidelines must be put in place to ensure wrongful application of NSA does not take place.

#### 1.3. SECTION 124-A OF THE INDIAN PENAL CODE

#### Why in news?

A legal opinion was sought by the Union Government on a Law Commission report on the Sedition law (Section 124-A of the Indian Penal Code).

#### **Background**

- The section 124A of Indian Penal Code is a pre-independence provision, which covers sedition charges against government.
- Various verdicts by Indian Judiciary have led to reinterpretation and re-examination of 'sedition' in light of Article 19 of the Constitution.
- There has been an effort to strike a balance between right to free speech and expression and power of State to impose reasonable restrictions (Article 19(2)).
- These verdicts have narrowed the ambit of 'Sedition' making its meaning more explicit, precise and unambiguous.
- Last year, the Law Commission submitted a "consultation paper" to the Centre saying the country did not want to be quoted as an example of one using such draconian laws

#### Section 124-A

- As per Section 124A of IPC, Sedition is an act that brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the Government established by law in India by words, either spoken or written, or by signs, or by visible representation, or otherwise.
- As per this Section, a person is liable to be punished with imprisonment for life or imprisonment up to three years with fine.
- Popular cases where sedition law was used recently-
  - Dr. Vinayak Binayak Sen v. State of Chhattisgarh
  - Kanhaiya Kumar v. State (NCT of Delhi)
  - o V.A. Pugalenthi v. State (Tamil Nadu)
- In this regard, the Government is seeking views from various stakeholders including state government. Its dilution seems unlikely, as majority including law enforcement agencies, have expressed the need to retain the law without changes. Hence, the focus now is to check its misuse.

#### **Arguments in favor of Section 124A**

- **Not really a colonial law-** Now after the Supreme Court directions, its jurisdiction has been narrowed down. It can be applied only on grounds laid down by the court.
- Application is a part of reasonable restrictions- provided under the Article 19 (2)
- Does not really curb free speech- One can use any kind of strong language in criticism of the government without inviting sedition. However, such dissent should not be turned into some kind of persuasion to break the country.

- Threats to unity and integrity of nation due to presence of anti-national elements and divisive Forces such as naxals, separatists who are receiving support from inside and outside the country.
- Mere misuse cannot be a ground of repeal- rather provisions should be made where such misuse is eliminated.

#### **Argument against Section 124A**

- Against democratic norms- It stifles the democratic and fundamental right of people to criticize the government.
- Inadequate capacity of State Machinery -The police might not have the "requisite" training to understand the consequences of imposing such a "stringent" provision.
- Possibility of Misuse- It has been used arbitrarily to curb dissent. In many cases the main targets have been writers, iournalists. activists who question government policy and projects, and political dissenters.

#### **Views of the Supreme Court**

- In 1962, the Supreme Court in Kedar Nath Singh vs. State of Bihar upheld Section 124A and held that it struck a "correct balance" between fundamental rights and the need for public order.
- The court had significantly reduced the scope of Sedition law to only those cases where there is incitement to imminent violence towards overthrow of the state.
- Further, the Court held that it is not mere against government of the day but the institutions as symbol of state.
- Various verdicts in Romesh Thappar, Kanahiya Kumar case redefined a seditious act only if it had essential ingredients as:
  - Disruption of public order,
  - Attempt to violently overthrow a lawful government,
  - Threatening the security of State or of public

#### **Views of the Law Commission**

- While it is essential to protect national integrity, it should not be misused as a tool to curb free speech. Dissent and criticism are essential ingredients of a robust public debate on policy issues as part of vibrant democracy.
- Hence, Section 124A should be invoked only in cases where the intention behind any act is to disrupt public order or to overthrow the government with violence and illegal means.
- The draconian nature of this law—as the crime is non-bailable, non-cognisable and punishment can extend for life—it has a strong deterrent effect on dissent even if it is not used.
- Used to gag press- The press should be protected so that it could bare the secrets of government and inform the people. Only a free and unrestrained press can effectively expose deception in government.

#### **Way Forward**

- The guidelines of the SC must be incorporated in Section 124A as well by amendment to IPC so that any ambiguity is removed. A private member bill was introduced in 2015 to amend this section. The Bill suggested that only those actions/words that directly result in the use of violence or incitement to violence should be termed seditious.
- The state police must be sufficiently guided as to where the section must be imposed and where not.
- Need to include provisions where the government can be penalized, if it misuses the section. This will ensure that section 124 A of IPC strikes a balance between security and smooth functioning of state with the fundamental right of freedom of speech and expression.

#### 1.4. JUDGES AND POST RETIREMENT POSITIONS

#### Why in news?

Recently, refusal of a post retirement job by a Supreme Court judge caused controversy.

#### Why the judges should accept post retirement jobs?

- Legal knowledge: The valuable experience and insights that judges acquire during their period of service cannot be wasted after retirement.
- No bar: Constitution doesn't bar them from accepting post retirement posts.

#### **Related information**

- A report by Vidhi Centre for Legal Policy pointed out that as many as 70 out of 100 Supreme Court retired judges have taken up assignments in the many tribunals and commissions.
  - Since 1950, there have been 44 Chief Justices of India who have accepted post-retirement jobs.
  - More than 30 judges were appointed within one year of their retirement. About seven were appointed even before they retired.
- Statues lay down conditions: These posts are generally constitutional or of quasi-judicial bodies, whose laws more often than not mandate that only retired judges can occupy them.

#### Why judges should not accept?

- **Separation of powers and judicial independence**: Justice should not only be done, but seen to be done. Here, accepting and offering post retirement jobs bridges the constitutional distance which executive and judiciary needs to have, creating the perception of bias. This hampers judicial independence when positions are taken within a short time of retirement or accepted before retirement.
- **Conflict of interest-** Positions at tribunals and constitutional bodies create a conflict as Government itself is a litigant and appointment authority at the same time. The first Law Commission, headed by M C Setalvad, had recommended that judges of the higher judiciary should not accept any government job after retirement.
- **Politicisation of judiciary:** The acceptance of post-retirement jobs leaves newly retired judges open to political criticism from the opposition, who use it to cast aspersions on the Court, the Judicial system, and the judgments and orders passed by these judges while in office.

#### What can be done to strike a balance?

#### Cooling off period: Many have suggested that there should be a minimum cooling-off period of 2 years post retirement.

# Increase age of retirement: Unlike in many other countries, a judge of the higher judiciary in India retires at a comparatively young age and is capable of many more years of productive work.

#### **Practices Worldwide**

such a post.

**USA:** No Supreme Court judge retires lifelong. Done to prevent conflict of interest **UK:** Supreme Court judges retire at the age of 70. No law stopping judges from taking post-retirement jobs but no judge has taken

- **Enact a law:** to set up a commission made up of a majority, if not exclusively, of retired judges to make appointments of competent retired judges to tribunals and judicial bodies. In the meantime, judges themselves can fill the legislative void by giving suitable directions.
- **Amend existing laws:** which mandate the appointment of retired judges in tribunals and other quasi-judicial bodies e.g. NHRC, NGT etc.
- Envisioning a transparent process: Former Chief Justice R M Lodha, had suggested that before a judge retires, the government should provide option of either being a pensioner or continue to draw existing salary. If they opt for pension, government jobs are out but if they opted for full salary, that name should be put in a panel. When a vacancy arises, these persons can be considered and the process becomes devoid of allegations of appeasement, favouritism etc.
- Amending the constitution: by incorporating a provision similar to Articles 148 (barring CAG from post retirement job) or 319 (similar provision for UPSC members).



#### 2. INTERNATIONAL RELATIONS

#### 2.1. INDIA-SAUDI ARABIA RELATIONS

#### Why in news?

Recently, Saudi Arabia's Crown Prince Mohammed bin Salman visited India as a part of its 3-nation tour, including China and Pakistan.

#### Importance of Saudi Arabia

#### Energy Security

- Saudi Arabia is India's largest supplier of crude oil (~19% of the total import). India also sources ~32% of its LPG requirements from Saudi Arabia.
- Recently, Saudi Arabian oil major ARAMCO (in partnership with ADNOC of UAE) has decided to partner in Ratnagiri Refinery and Petro-Chemical Project in Maharashtra, a Joint Venture of US\$ 44 billion billed as the world's biggest.

#### • Bilateral Trade & Investment

- Total bilateral trade is around \$28 bn. India is 4<sup>th</sup> largest trading partner of Saudi Arabia and the 4<sup>th</sup> largest market for Saudi exports. Further, both have invested in FDI in each other countries in various sectors.
- Both countries have also signed Bilateral Investment Protection and Promotion Agreement and a Double Taxation Avoidance Agreement in 2006.

#### • Rights of Indian Workers

- o Of the 11 million Indians working in West Asia, nearly 3 million are in Saudi Arabia.
- India is the largest recipient of foreign remittances (upto \$11 bn annually) from the kingdom.

#### • Strategic Cooperation

- The Delhi Declaration (2006) has laid a foundation of cooperation on terrorism while the Riyadh Declaration (2010) has raised the level of partnership to strategic partnership and diversified the relations to include space and energy cooperation.
- Due to the recent global downturn, the oil prices have fallen and as a result, Saudi deficits are necessitating diversification and movement beyond oil. This has created opportunities for India to strengthen its strategic presence and outreach in Saudi. E.g. cooperation in the domain of science and technology.
- o Being one of the major investors, Saudi Arabia can force Pakistan to abandon its anti-India foreign policy.

#### Security relations

- o In recent years, bilateral ties had acquired a security dimension with both countries stepping up cooperation in counter-terrorism and intelligence-sharing.
- o Riyadh also extradited several terror suspects to India.

#### Socio-cultural relations

- o India has the world's 3<sup>rd</sup> largest Muslim population (after Indonesia & Pakistan). Being the custodian of the two of Islam's holiest sites (Mecca & Medina), Saudi becomes important in India's strategic calculus.
- o Saudi Arabia facilitates Hajj Pilgrimage to more than 1,75,000 Indians every year.

#### **Challenges in India-Saudi Arabia Relations**

- Saudi Pakistan relation: Pakistan is a "historical ally" of the Saudis. Saudi gains from mostly unbridled military and political support from Islamabad and Rawalpindi, while the latter gains from financial infusions into its economy emboldened by the common theological bridge between the two states.
- Ideological support to terrorism: Saudi money has been accused of funding Wahhabi Islamic groups around the world, which ultimately channel to terrorist groups acting against India & Iran. Many extremist outfits are inspired by the Wahhabi branch of Islam.
- Saudi-Iran rivalry: The sectarian rivalry is destabilizing West Asia and influencing West Asian geopolitics.
   Considering its economic interests in Iran, India needs to walk on a tightrope balancing relations between the two countries.

- Saudi Arabia's aggressive foreign policy in West Asia: It is doing great damage to regional stability, which is India's most important goal in the region.
  - o In Syria, the Saudi support for the rebels has played a key role in destabilizing the regime, leading to the rise of the Islamic State.
  - o In Yemen, the war has unleashed chaos and a humanitarian catastrophe, creating conditions for radicalism to flourish.
- **Bilateral Issues:** The working conditions for the Indian blue collared labourers in Saudi Arabia have been a major bilateral concern. Restrictive visa & hiring policies, stringent labour laws, lack of human rights & absence of minimum wage provision has resulted into many cases of exploitation of Indian workers.
  - During the visit of Indian PM in 2016, Saudi Arabia has announced several labour reforms such as a unified standard contract for domestic workers, security against abuse for female domestic workers, minimum wage, new format for labour categorization etc.

#### **Way Forward**

- As Saudi Arabia attempts to shed its ultra-conservative image and move towards a more open and moderate economy and society alike, **India is being seen as a major collaborator and market.**
- Saudi Arabia has identified India as one of the eight strategic partners with whom it intends to deepen partnership in areas of political engagement, security, trade and investment, and culture. As part of this engagement, the two sides are finalizing the **setting up of a Strategic Partnership Council** at the Ministerial level.
- India needs to **continue the balancing act in West Asia** that allows it to have good relations with Saudi Arabia, Iran and Israel alike, the three poles of power at loggerheads with each other in the region.
- At the same time, **maintaining distance from regional fractures and conflicts** would allow India to pursue its economic and geo-strategic aims in the region.

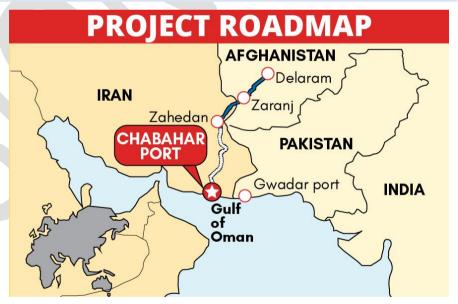
#### 2.2. CHABAHAR PORT

#### Why in news?

Afghanistan began exports to India through Chabahar port.

### Relevance of Chabahar Port in India-Afghanistan Relations

- Boost to bilateral trade: The development of a port in Iran can serve as an alternative route.
  - The perishables (e.g. fruits & vegetables) and dry fruits exported from Afghanistan to India face long custom clearance time at India-Pakistan borders. Moreover,



Pakistan doesn't **allow Afghan trucks to carry in return goods** from India. Chabahar port can help the two countries overcome this limitation of overland trade.

- o Goods brought at the port can be easily transported to the Afghan border & distributed to different parts of Afghanistan via **Zaranj-Delaram highway**.
- o India can export the **iron ore extracted** from the **Hajigak mines** in **Central Afghanistan** through Chabahar port.
- Reducing Pakistan's Influence: Afghanistan has historically been dependent on Pakistani territory for access to maritime trade from the Arabian Sea, giving Islamabad monopoly on most trade with Kabul and influence Afghanistan's economic & political life. The Chabahar Port reduces Afghanistan's dependence on Karachi Port and might help India to contain Pakistan's influence in Afghanistan.

- Regional Integration of Afghanistan: India believes that increased regional cooperation will encourage all stakeholders to view Afghanistan as an avenue of cooperation rather than competition, which in turn could promote stability in Afghanistan.
- Access to Central Asia: India can use its presence in Afghanistan as a base to expand its presence further north to the Central Asian Republics (CARs). India's plans to extend the Zaranj-Delaram highway to connect with Uzbekistan should be seen in this context.

### Other Initiatives to increase connectivity with Afghanistan

#### • India-Afghanistan Air Corridor:

- To reduce dependence on the Karachi port for foreign trade, subsidized air cargo facilities between India & Afghanistan were announced at Heart of Asia Conference 2016.
- o But, the arrangement still faces logistical problems such as lack of air cargo planes etc.

#### Afghanistan-Pakistan Transit Trade Agreement (APTTA):

- o Under this agreement, goods originating in Afghanistan would be allowed transit upto Wagah and in return Afghanistan will allow Pakistan the transit route to Central Asian Republics (CARs).
- But, the progress on APTTA has been slowed due to tensions between India & Pakistan and individual alternate connectivity efforts by the countries
  - India working on Chabahar port to bypass Pakistan.
  - Pakistan connecting to China through Pakistan-Occupied-Kashmir (PoK) and Gilgit-Baltistan region once CPEC corridor is ready.
  - Afghanistan consolidating its position as an important component in China's OBOR initiative with train connecting Yiku in China to Mazar-i-Sharif in Afghanistan.

#### • International North South Transport Corridor (INSTC):

- Though Afghanistan is not a member, INSTC will boost connectivity to Afghanistan as well through Chabahar to Zaranj and Delaram.
- Recently, India signed a MoU with Russia to fast-track implementation of INSTC. Russian Railways Logistics Joint Stock Company (RZD) and Container Corporation of India (CONCOR) signed the MoU for providing logistics services on INTSC.

#### 2.3. GENEVA CONVENTION 1949

#### Why in News?

Recently, Pakistan government was accused of violating Geneva Convention in treatment of Indian Airforce Pilot who crashed in the Pakistan Occupied Kashmir region.

#### What is Geneva Convention?

- The Geneva **Conventions and their Additional Protocols** form the basis of modern international humanitarian law, setting out how **soldiers and civilians** should be treated during the war.
- Although they were adopted in 1949, to take account of the experiences of the Second World War, **the four Geneva Conventions** continue to apply to armed conflicts today.
- Three additional protocols were also adopted later on which expanded the rules.
- The **Conventions** have been **ratified by all States** and are universally applicable.

#### International North South Transport Corridor (INSTC)

- Multi modal transport corridor signed in 2000 in St. Petersburg with Iran, Russia and India as founding members.
- It was expanded to include 11 new members: Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Belarus, Oman, Bulgaria.
- It aims to link India and Iran via the sea route and then through Iran to the Caspian sea onwards to Central Asia.



- Any nation that has ratified the Geneva Conventions but not the protocols is still bound by all provisions of the conventions.
- The provisions of the conventions apply in peacetime situations, in declared wars, and in conflicts that are not recognised as war by one or more of the parties.
- They contain stringent rules to deal with what are known as "grave breaches".
- International Committee of the Red Cross (ICRC) has been mandated under the Geneva Conventions to ensure the application of international humanitarian law.

#### The four Geneva Conventions

- Convention I: This convention protects wounded and infirm soldiers from torture, assaults upon personal dignity, and execution without judgment. It also grants the right to proper medical treatment and care.
- Convention II: This extends the protections described above to shipwrecked soldiers and other naval forces, including special protections to hospital ships.
- Convention III: It defined 'Prisoner of War,' and accorded them proper and humane treatment as specified by the first convention.
  - It states that PoW have to be protected against insults and public curiosity as well as acts of violence or intimidation. In this context, Pakistan may have violated the treaties when their military spokesperson tweeted an image of the captured IAF pilot.
  - o ICRC describes "PoWs (as) usually members of the armed forces of one of the parties to a conflict who fall into the hands of the adverse party." ICRC visits prisoners, both military and civilian.
- Convention IV: Under this convention, civilians are afforded the same protections.

#### The protocols

- Protocol I expands protection for the civilian population as well as military and civilian medical workers in international armed conflicts.
- Protocol II elaborates on protections for victims caught up in high-intensity internal conflicts such as civil wars. It was the first-

#### **International Red Cross and Red Cross Movement**

- It is a humanitarian movement with approximately 17 million volunteers worldwide.
- It consists of various International and National organizations with common objective but legally independent of each other.
- International Committee of Red Cross: Established in 1863, the ICRC operates worldwide, helping people affected by conflict and armed violence and promoting the laws that protect victims of war. It is based in Geneva, Switzerland.
- International Federation of Red Cross and Red Crescent Societies: it was founded in 1919, it coordinates activities between 190 national red cross and red crescent societies worldwide.
- National Red Cross and Red Crescent Societies: Currently 190 are recognized by International Committee of Red Cross.
- The collective focus of the International Federation and its National Societies is on achieving the following four goals:
  - Goal 1: Reduce the number of deaths, injuries and impact from disasters.
  - Goal 2: Reduce the number of deaths, illnesses and impact from diseases and public health emergencies.
  - Goal 3: Increase local community, civil society and Red Cross Red Crescent capacity to address the most urgent situations of vulnerability.
  - Goal 4: Promote respect for diversity and human dignity, and reduce intolerance, discrimination and social exclusion.

#### **Grave Breaches**

- It involves any of the following acts, if committed against persons or property protected by the Convention:
  - Willfully killing, torture or inhuman treatment, including biological experiments,
  - Willfully causing great suffering or serious injury to body or health
  - Extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly.
- Those responsible for grave breaches must be sought, tried or extradited, whatever nationality they may hold.
- ever international treaty devoted exclusively to situations of non-international armed conflicts.
- o It does not apply to internal disturbances such as riots, demonstrations and isolated acts of violence.
- Third Additional Protocol: It provides for distinctive emblem- the red crystal which has the same international status as the Red Cross and Red Crescent emblems. People displaying any of these protective emblems are performing a humanitarian service and must be protected by all parties to the conflict.

#### 2.4. ICJ ON DECOLONIZATION OF MAURITIUS

#### Why in News?

International Court of Justice in an advisory opinion has said that Britain has to handover Chagos Archipelago to complete the process of decolonization of Mauritius.

#### **More on News**

- British government has rejected the opinion as it said that ICJ has no jurisdiction to deliberate on this matter.
- According to Britain, the request for advisorv noinigo bv Government of Mauritius circumvents a vital principle: that a State is not obliged to have its bilateral disputes submitted for judicial settlement without its consent.
- Britain's "unilateral" decision to ban the right of return of Chagossians (African Tribe) and to renew the lease for the US base on Diego Garcia, one of the Chagos Islands, breached international law.
- Mauritius proposed a resolution in

#### Mauritius has maintained that

UN General Assembly in 2016 to take

#### Brief understanding on the status of Decolonization

- When the United Nations was founded in 1945, some 750 million people, nearly a third of the world's population, lived in Territories that were dependent on colonial Powers.
- As the process of decolonization continued to advance, the General Assembly, in 1960, adopted its landmark Declaration on the **Granting of Independence to Colonial Countries and Peoples.**
- The Declaration affirmed the right of all people to selfdetermination and proclaimed that colonialism should be brought to a speedy and unconditional end.
- Two years later, a Special Committee on Decolonization was established to monitor its implementation, which continues to monitor the situation in the now remaining 16 Non-Self -Governing territories.
  - Countries administering Non-Self-Governing Territories are called administering Powers.

Britain to the international court of justice in a dispute over sovereignty of the Chagos Islands. India supported it.

#### **About International Court of Justice (ICJ)**

- It is the principle judicial organ of the UN established in 1945 succeeding the Permanent Court of Justice (established under League of Nations).
- The Court may entertain two types of cases:
  - Contentious cases Legal disputes between States submitted to it by them. Only States (States Members of the United Nations and other States which have become parties to the Statute of the Court or which have accepted its jurisdiction under certain conditions) may be parties to contentious cases.
  - Advisory proceedings Requests for advisory opinions on legal questions referred to it by United Nations organs and specialized agencies. Contrary to judgments, the Court's advisory opinions are not binding.
- It has no jurisdiction to deal with applications from individuals, NGOs or private groups and it rules only on the rights and obligations of States.
- It comprises 15 Judges, elected by United Nations General Assembly and Security Council for 9 year term. **Five Judges** are elected **every 3 years** to ensure continuity.
- It is headquartered in Peace Palace, Hague, Netherlands and India is a founding member of the ICJ.

#### Importance of ICJ

- Impact on international credibility: Its judgements has a moral pressure on the states because their acceptance or rejection has a bearing on the State's reputation regarding the respect for international law. This in turn affects the state's credibility when entering into any treaties or agreements. For eg - Pakistan could not ignore the preliminary order from ICJ preventing it from carrying out the execution of Kulbhushan Jadhav.
- Impact on international laws: The advisory function of the court is an effective instrument of preventive diplomacy and can also make a substantial contribution to resolving existing disputes. For example: the ICJ was asked to provide an advisory opinion on Restrictions to the Genocide Convention case and the legality of

the threat or Use of Nuclear Weapons case. These opinions have greatly contributed towards international humanitarian law and international environmental law.

- Contributions to Global Geography and State Sovereignty: Data suggests that States that agree to take their
  disputes to ICJ are successful in finding a resolution. While several international courts exist, which deals
  with international disputes, none in particular specializes in geography and sovereignty related issues. In this
  context, the ICJ through special agreements makes a significant contribution to International law.
- **Platform for the Weak:** A state that does not have economic and military standing or the capacity to influence outcomes in the international realm can still gain access to assistance from the ICJ.

#### **Limitations of ICJ**

- Court composition: The ICJ has a judicial panel composed of 15 judges, whose distribution is based on regions. The division of representation for 191 countries amongst fifteen judges is striking. Further, data suggests that 90% of the time judges vote in favour of their own country affecting the impartiality of the court. For e.g.- in the current Mauritius case, the only dissenting note was of an American judge.
- Jurisdiction: ICJ has limited jurisdiction as it only covers cases by 'special agreement' or cases authorised by a
  treaty or cases between the states that have declared themselves subject to the compulsory jurisdiction of
  the court.
- Lack of Compliance and Enforcement: The court itself does not have any direct powers to ensure implementation of its judgements. Further, the exclusive power of veto that the UNSC's permanent five members have made enforcement of ICJ judgments difficult, and grants some states more influence over decisions than others. For example: in the case of Nicaragua v.s. The United States of America (1986), the ICJ decision was vetoed by the USA.

#### 2.5. INTERMEDIATE-RANGE NUCLEAR FORCES TREATY

#### Why in news?

Recently, U.S.A (and then Russia) suspended its obligations under the Intermediate-Range Nuclear Forces (INF) Treaty.

#### **Background**

- The erstwhile President of USSR Mikhail Gorbachev and American President Ronald Reagan signed a Comprehensive intermediate-range missile elimination agreement which culminated in the INF treaty in 1987.
- Since 2013, however, both Russia and America have accused each other of violating terms of the treaty.
- In October 2018, President Donald Trump announced his intention to withdraw from the INF treaty.

#### What is the INF treaty?

- It is an **arms control treaty** between the United States and Russia under which both agreed not to develop, produce, possess or deploy any ground-based ballistic and cruise missiles that have a range between 500 and 5,500 km. It however exempted the air-launched and sea-based missile systems in the same range.
- It mandated agreeing parties to destroy all such existing weapons within three years of the signing of the treaty and also clarified that **each of the parties could withdraw from the treaty** with a six-month notice.
- It laid out a **comprehensive inspection protocol,** whereby each of the parties could inspect and monitor each other's' elimination process.
- In 1991 the treaty was expanded to include Russia and the successor states of the former USSR.
- However, it was a bilateral agreement between US and USSR which left the other nuclear weapon powers
  free to develop ground based intermediate range forces. Among various countries that have expanded
  their weapon power, since then, is China which is a major concern for the US.

#### Significance of the treaty

• It helped to address the fears of an **imminent nuclear war in Europe** during the cold war era while building some trust between Washington and Moscow and **contributed to the end of the Cold War.** 

• In today's world **the risk of nuclear war,** especially through accident or misunderstanding, remains intolerably high. And with keeping a check on two of the biggest nuclear capable states the treaty held a place of significance.

#### **Concerns for India**

- It may lead to a renewed arms race.
- As the US conflict with Russia deepens, India's partnership with Russia and simultaneously USA on advanced military systems will come under increasing scrutiny and pressure.



#### 3. ECONOMY

#### 3.1. PRADHAN MANTRI KISAN SAMMAN NIDHI (PM-KISAN)

#### Why in news?

In the Interim Budget 2019-20, the Union Government has launched the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN).

#### **About PM-KISAN scheme**

#### **Objective:**

- o To provide income support to all Small and Marginal landholding farmer families having cultivable land.
- o To supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income.
- Benefits: Under the scheme, financial benefit as given below will be provided to all Small and Marginal landholder farmer families across the country
  - Landholder Farmer families with total cultivable holding upto 2 hectares shall be provided a benefit of Rs.6000 per annum per family payable in three equal installments, every four months.
  - Multiple land parcels (even if each is less than 2 hectares) held by a single family will be pooled together to determine eligibility.
  - Even landholdings, bigger than 10 hectares, will be eligible for benefits under the scheme, if owned by multiple families (e.g. If five brothers jointly own a single 10 hectare holding, each of them will be eligible for the scheme).

#### Definition of A Small and Marginal landholder farmer

A Small and Marginal landholder farmer family is defined as "a family comprising of husband, wife and minor children who collectively own cultivable land upto 2 hectare as per land records of the concerned State/UT".

The existing land-ownership system will be used for identification of beneficiaries for calculation of benefit.

- Responsibility of identifying the landholder farmer family eligible for benefit under the scheme shall be of the **State/UT Government**.
- The lists of eligible beneficiaries would be **published at the village level** to ensure transparency.
- Exclusions: Certain categories of beneficiaries of higher economic status such as institutional land holders, former and present holder of constitutional posts, persons who paid income tax in last assessment year etc. shall not be eligible for benefit under the scheme.
  - For the purpose of exclusion State/UT Government can certify the eligibility of the beneficiary based on self-declaration by the beneficiaries.
- A dedicated PM Kisan Portal will be launched for implementation of the scheme.
- This is a Central Sector Scheme and will be funded fully by the Government of India.

#### Why needed?

The agriculture sector employs over 50% of the workforce either directly or indirectly, and remains the main source of livelihood for over 70% of rural households. Thus, economic development is not possible without sustained overhaul of agriculture in India.

- Stagnant farm income: Indian agriculture has been marred with stagnant and uncertain farm income.
  - o According to a report by NITI Aayog, between 1993-94 and 2015-16, the income per cultivator grew at an annual rate of just 3.4%.
  - To achieve the target of doubling farmers' real income, it will have to grow at 10.4% annually between 2015-16 and 2022-23. This is almost impossible to achieve without any supplemental support.
- High Indebtedness: More than half of the agricultural households in India are in debt, with average debt of Rs 47,000. National Sample Survey Office (NSSO) 2014 says that average farmer income was around Rs 3,081
- Rural Distress & Farmer Suicides: According to National Crime Records Bureau (NCRB) report (2015), over 8000 farmers and 4500 agricultural labourers have committed suicide.

- **Supply Side Constraints:** Farmers are unable to get remunerative prices for their produce, especially for non-MSP commodities, because of the regulations in domestic market (e.g. stocking limitations under Essential Commodities Act 1955), restrictions in export market & externalities like depressed international prices.
- **Increased Public Unrest:** In 2018, there were 13 massive protests held by farmers across the country, which has put significant pressure on the Government to respond appropriately.

#### **Benefits of PM-KISAN**

- For the first time, an attempt has been made to **transfer income directly to farmers without using price** (of either inputs or output) as a policy tool. Earlier, the focus has mainly been on provision of inputs at lower price (input subsidies) and provision of a higher output price (MSP).
- Since benefits are not linked to production of any crop, the **resultant supply-demand imbalance would be minimal**, unlike in the case of MSPs.
- It can **replace input subsidies**, many of which have resulted in gross overuse of resources (e.g. pesticides, free electricity etc.) resulting in soil degradation & declining water tables in states like Punjab. When raising farmers' income is the main objective, direct transfer may perhaps be a more appropriate instrument.
- Many farmers still depend on informal sources (local arhatiyas, moneylenders etc.) for credit. There are substantial delays in payment by procurement centres (e.g. in case of sugarcane), which leads to distress selling. Providing assured supplemental income to the vulnerable farmer families would help them meet their emergent needs especially before the harvest season.
- It would improve the credit uptake and boost rural consumption demand.
- The **cash transfers have greater efficiency** than loan waivers & subsidies, as they enable poor households to directly purchase required goods & services as well as enhance their market choices.
- With the support of a minimum income, youths from farm households may be **inspired to start enterprises** or take higher training or look for higher paying non-farm jobs.

#### Issues in conception & implementation

#### Insufficient Amount

 Annual direct income transfer (DIT) under PM-KISAN would be only about 5-8% of their existing income levels. Also, it is less in comparison to schemes rolled out in Telangana (Rythu Bandhu) and Odisha (KALIA).

#### Beneficiary selection

- Under this scheme, family is being defined as a unit, while most other government schemes use household (group of people living together using common kitchen) as a unit. The re-classification might be an administrative challenge.
- The scheme is not universal in nature. Strict targeting is prone to corruption due to bureaucratic discretion and politics. Moreover, **exclusion errors** are more common in targeted schemes.
- It is unclear if beneficiary farmers, who wish to lease their lands to tenant farmers or keep their lands fallow for some time, are eligible to receive cash benefits.

#### Coverage

- According to the 2011 Socio-Economic and Caste Census, around 40% of rural households are landless and depend on manual labour. The scheme does not include landless farmers - tenants, sharecroppers etc. In the regions of high tenancy, the absentee landlords will receive greater benefits under the scheme.
- Many Adivasi communities also cultivate land as community farmers & without individual rights, and may be left out of the scheme, although they are among the most vulnerable.

#### Poor maintenance of land records:

- o Many states (e.g. Jharkhand, Bihar, Gujarat & Tamil Nadu) have still **not digitized land records** under Digital India Land Records Modernization Programme.
- o In most parts of the country, **land records are not regularly updated**, especially in case of inherited land, which may lead to exclusion of beneficiaries.
- Verifying ownership claims can be a daunting task, as multiple government departments hold the required documents - Registration Department maintains sale deeds, maps are kept by the Survey Department, while the Revenue Department keeps property tax receipts.

#### • DBT related issues:

- Direct cash transfer in accounts has previously met (like in MNREGA) with **delays in disbursing wages**. Also, rural banking infrastructure has poor outreach & lacks last mile connectivity.
- o Cash transfers can be **eroded by local price increases**, even if they are indexed to the general price level.

#### Authentication Issues:

- For 1<sup>st</sup> planned payout on 31<sup>st</sup> March 2019, field functionaries are pushed to meet stiff targets. Being short-staffed & inadequately trained, this might result in many technical and unforeseen errors in land record reconciliation.
- o From the 2<sup>nd</sup> installment, Aadhaar authentication will be compulsory to access benefits. But, as evident from previous welfare schemes, biometric authentications face significant hurdles.

#### • Impact on Agriculture:

- o Lure of cash benefits may further induce fragmentation of family-owned land among members.
- Today, agriculture in India faces diverse set of problems. While Punjab faces scarcity of water, Bihar
  faces the challenge of poor supply chains and lack of infrastructure. It would be more judicious for policy
  makers to find synergies and areas of alignment rather than pushing a one-size fits all prescription.

#### **Way Forward**

- Address the lacunae in the existing scheme like exclusion of landless farmers & create adequate institutional infrastructure for easy identification of beneficiaries and land record reconciliation.
- As agriculture is a state subject, the Centre should focus more on creating an enabling environment through responsive bureaucracy, easing of doing business, market infrastructure, and trade facilitation. The processes related to cropped area assessment & claim payout need to be taken care of by the state governments.
- There is a need for **comprehensive social security package for farmers**, which includes health insurance as well. The KALIA scheme, which includes a life insurance cover & additional personal accident coverage of Rs 2 lakh, is a good example in this regard.
- This could pave a way for the introduction of minimum basic income (MBI) for farmers in future.

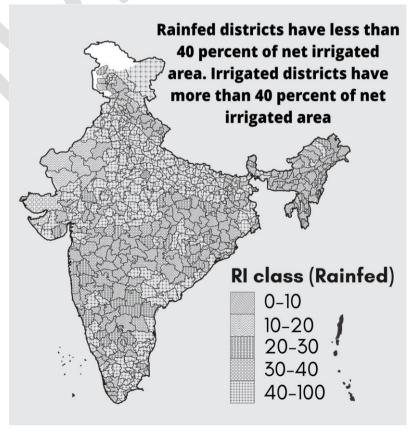
#### 3.2. POLICY BIAS AGAINST RAINFED AGRICULTURE

#### Why in news?

Recently a **Rainfed Agriculture Atlas** was released, which has pointed out that there are biases against rainfed agriculture in the policies of the government.

#### **About Rainfed Agriculture**

- A region is classified as rainfed, if assured irrigation is not provided to majority of the net sown area. It is an interrelation of production systems, natural resources and people's livelihoods in rainfed regions.
- Indian Rainfed regions are very diverse in nature comprising of upland regions, coastal regions, deserts as well as pastoral areas
- In India they cover around 180 districts and exist in all agro-climatic regions but are mostly concentrated in the arid and semi-arid area. About 61 per cent of India's farmers rely on rain-fed agriculture and 55 per cent of the gross cropped area is under rain-fed farming.



#### Importance of these areas

- Rain-fed areas contributed significantly to the country's food production. They account for **88 per cent of pulses and 40 per cent rice production** in the country.
- They also support **64 per cent of cattle population** in the country.
- If managed properly, these areas have tremendous potential to contribute a larger share in food production and faster agricultural growth compared to the irrigated areas which have reached a plateau.

#### Inherent issues with Rainfed agriculture

- Low Incomes of farmers- While farmers in irrigated areas earn 60 per cent of their income from agriculture, their counterparts in rainfed areas earn only 20-30 per cent from farm-related activities.
- Majority people in rain fed areas are poor- There is an overlap of the poorest districts with rainfed districts in various parts of India.
- Low crop yields While the average yield in rain-fed areas is about 1.1 tonnes per hectare, that in irrigated areas is about 2.8 tonnes per hectare.
- Increasing number of suicides among farmers- especially in the dry land areas.
- Ecologically fragile- One-third of the dry land areas are highly degraded, which cannot be put under cultivation. They receive rainfall of either less than 500 mm or more than 1,500 mm and suffer from serious water management problems either way.
- Government Policies are not conducive.

### Issues with Current Policies in regard to Rainfed Agriculture

- Schemes not framed particularly for rainfed agriculture- Flagship government schemes, such as seed and fertiliser subsidies and soil health cards, are designed for irrigated areas and simply extended to rainfed farmers without taking their needs into consideration.
- Negative impact on rainfed farms by
   extension of other schemes- e.g. Many hybrid seeds notified by the government scheme need plenty of
   water, fertiliser and pesticides to give high yields and are thus not useful to most rainfed farmers.
   Commercial fertilisers simply burn out the soil without sufficient water.
- Lower Investment on infrastructure- Lands irrigated through big dams and canal networks get a per hectare investment of Rs. 5 lakh. Watershed management spending in rainfed lands is only Rs. 18,000-25,000 per hectare.
- Low Procurement from crops in rainfed areas- From, 2001-02 and 2011-12, the government spent Rs. 5.4 lakh crore on wheat and rice (Irrigated areas). Whereas on coarse cereals, which are grown in rainfed areas, only Rs. 3,200 crore worth of procurement has been done in the same period.
- Lack of utilization of local expertise- The government has no system in place to channelise indigenous seeds or subsidised organic manure in the same way.

#### **Way Forward**

• Separate Policy orientation for Rainfed farms- Need to give rainfed farmers the same research & technology focus, and production support that their counterparts in irrigation areas have received over the last few decades (Green Revolution).

### Related Information Revitalising Rainfed Agriculture Network

- It was formed in 2010 is a pan India network of more than 600 members, including eminent academics, policy makers, farmer and civil society organisations that work to influence public systems, policy and investments for productive, prosperous and resilient
- It publishes the Rainfed Agriculture Atlas.

#### **Important Government Initiative**

National Mission for Sustainable Agriculture(NMSA) – It
is envisaged as one of the eight Missions outlined under
National Action Plan on Climate Change (NAPCC). The
major thrust is enhancing agriculture productivity
especially in rainfed areas focusing on integrated farming,
soil health management, and synergizing resource
conservation.

rainfed agriculture.

O Rainfed Area Development - It focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability's. Under this system, crops/cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events with the income opportunity from allied activities during crop damage.

- **Need to enhance productivity of Rainfed areas** Most of these areas can take up a second crop. Hence, scientific selection of crops **suitable for local agro-climatic zones** should be done.
- Need to increase market access to Rainfed crops.
- Shift from 'input-centricity' to 'needs/requirements'-centricity- In the long run, cash incentives and income support like the PM-KISAN scheme announced in the budget earlier this month would be better than extensive procurement.
- **Focus on livestock** Livestock is an essential component of dryland ecosystems. They provide much needed farmyard manure for maintaining soil fertility apart from being useful for other agricultural operations. The whole livestock support systems are 'milk-centric'. There are practically no support systems available for livestock rearing for most of the farmers of dryland regions.
- Investing in rainfed agriculture would have huge implications for the ecological, social and economic well-being of the large and diverse populations that inhabit it.

#### 3.3. NATIONAL MINERAL POLICY 2019

#### Why in news?

The Union Cabinet has recently approved the National Mineral Policy, 2019 which aims at bringing about more effective regulation to the sector as well as a more sustainable approach while addressing the issues of those affected by mining.

#### **Background**

- National Mineral Policy 2019 replaces the extant National Mineral Policy 2008 in compliance with the directions of the Supreme Court in **Common Cause v/s Union of India & Others.**
- The Ministry of Mines constituted a committee under the chairmanship of **Dr. K Rajeswara Rao** to review the National Mineral Policy 2008.
- Based on the committee's report and subsequent deliberations with stakeholders, the ministry has finalized the policy.

#### **Need of the review of Policy**

- Low rate of growth of Indian Mining sector- with just 1-2 per cent contribution to GDP over the last decade (as opposed to 5 to 6 per cent in major mining economies).
- Lack of focus on exploration- the production vs import of minerals is in the ratio of 1:10 in India. High import is mainly because of non-availability of raw material for industries. Hence, exploration must be treated as a business and treating it as a startup giving tax holidays, tax benefits etc. to encourage investments for exploration.
- Lack of incentives with private sector to invest- Companies fear investing in exploring minerals owing to various risks.
- **Need to address illegality in mining-** Apparently 102 mining leases in the state of Orissa did not have requisite environmental clearances, approvals under the Forest Act, 1980.
- **Need to address environmental concerns-** e.g. in Bellary due to mining operation. Also there is need for reclamation and restoring the mined land.
- Need to address concerns of intergenerational rights

#### Salient features of National Mineral Policy 2019

- Introduction of **Right of First Refusal for reconnaissance permit and prospecting license (RP/PL) holders**for encouraging the private sector to take up exploration.
- Encouragement of merger and acquisition of mining entities and transfer of mining leases
- Creation of dedicated mineral corridors to boost private sector mining areas.
- **Granting status of industry to mining activity** to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector.
- Long-term import export policy for mineral will help private sector in better planning and stability in business
- Rationalize reserved areas given to PSUs which have not been used and to put these areas to auction, which will give more opportunity to private sector for participation.

- Efforts to harmonize taxes, levies & royalty with world benchmarks to help private sector.
- **Introduces the concept of Inter-Generational Equity** that deals with the well-being not only of the present generation but also of the generations to come.
- **Constitutes an inter-ministerial body** to institutionalize the mechanism for ensuring sustainable development in mining.
- **Incorporation of e-governance-** IT enabled systems, awareness and Information campaigns have been incorporate.
- Focus on using waterways- coastal waterways and inland shipping for evacuation and transportation of minerals.
- Utilization of the district mineral fund for equitable development of project affected persons and areas.

#### 3.4. DRAFT E-COMMERCE POLICY

#### Why in news?

The government released the draft e-Commerce policy.

#### **Need for an E-Commerce policy**

- **Data Ownership:** In the age of e-Commerce, companies control large amounts of customer data. The questions, related to control of an individual over his own data or government accessing the data of its citizens, need to be answered.
- Rapid growth of e commerce: The Indian B2C e-commerce market was valued at \$38.5 bn in 2017 and is estimated to rise to \$200 bn in 2026, while B2B e-commerce was estimated to be around \$300 bn. Its export potential too has not been realized. Thus, the rules for electronic commerce in the country must be clearly laid-down.
- Presence of multiple regulators: The specific issues in e-Commerce are the subject matter of different statutes - Information Technology Act 2000, Competition Act 2002, Consumer Protection Act 1986 etc. – and involves multiple government departments. Hence, a national e-commerce policy would consolidate the various norms and regulations to cover all stakeholders.
- Other regulatory issues: Government is finding existing regulations inadequate to deal with issues thrown up by the digital economy. For instance, authorities cannot impose 'custom duty' on digital transactions. Regulators find it difficult to hold entities responsible that have physical presence abroad.
- **Consumer Protection:** A strong regulatory regime would address the issues of frauds in online sale and protect the interest of consumers.
- **Digital Infrastructure:** There is a lack of requisite connectivity required for e-Commerce & digital literacy in many parts of the country. New e-Commerce policy will address such structural issues.
- Inequality in opportunity among businesses: Enterprises with deep pockets indulge in large scale capital dumping to finance sustained selling at losses, which has threatened existence of small businesses. A policy is needed to provide a level-playing field to all stakeholders, including consumers, MSMEs & start-ups.
- International Trade Outlook: A new policy will preempt any possible obligations on e-commerce imposed by WTO. Creating binding obligations, like permanent moratorium on imposing customs duties on electronic transmissions, would lead to loss in revenue of developing countries like India.

#### Strategy proposed in the draft policy

- Data: The policy acknowledges the importance of data as a 'national asset'/ 'societal common' and seeks to
  establish a legal & technological framework to restrict cross-border flow of data generated in India. It calls
  for creating domestic standards for devices which are used to store, process and access data to increase
  interoperability, enhance data security and prevent violation of privacy.
- Infrastructure Development: It recommends according 'infrastructure status' to supporting digital infrastructure like data centres, server farms for data storage etc. Designated implementing agencies should establish requisite physical infrastructure (like power supply, internet connectivity etc.). Also, domestic alternatives to foreign-based clouds and email facilities should be promoted.
- E-Commerce Marketplaces
  - FDI Policy: The policy aims to clearly demarcate between a marketplace model & an inventory-based model and seeks to encourage FDI in the 'marketplace' model alone.

Other important provisions are related to anti-Counterfeiting & Anti-Piracy Measures, grievance redressal mechanism etc.

#### **Regulatory Issues**

- o Inter-disciplinary nature of e-commerce: Standing Group of Secretaries on E-Commerce (SGoS) should tackle specific issues emerging under different statutes, give recommendations to address policy challenges & ensure that the policy keeps pace with the digital environment.
- o Controlling data flow & network: Regulation of advertising charges in e-commerce, especially for MSMEs & start-ups. To seek better accountability in situations of Al-driven decision making, government must reserve its right to seek disclosure of source code & algorithms.
- Law & Order: Access to data for maintenance of law & order must be allowed.
- o Small enterprises and start-ups: Small firms and startups attempting to enter the digital sector can be given 'infant-industry' status.
- o Taxation Issues: The concept of 'significant economic presence' should be adopted as the basis for determining 'permanent establishment' for the purpose of taxation. Additionally, the current practice of not imposing custom duties on electronic transmissions must be reviewed in light of the changing digital economy.
- Content Liability: Online platforms and social media ('intermediaries') must bear the responsibility & liability to ensure genuineness of any information posted on their websites.
- Stimulating the Domestic Digital Economy: It intends to increase use of internet in day-to-day governance and economy. E.g. automating logistics sector through online customs clearance & adopting Customs Electronic Data Interchange (EDI) platform.
- Export Promotion Through E-Commerce: The transaction procedures must be simplified to increase competitiveness of e-commerce exports.

#### 3.5. NATIONAL POLICY FOR SOFTWARE PRODUCTS

#### Why in news?

The Union Cabinet has recently approved a national policy on software products which aims to position India as a Software Product nation and create 65 lakh jobs by 2025.

#### **Need of a New Policy**

- Indian IT Industry has predominantly been a service Industry. However, a need has been felt to move up the value chain through technology-oriented products and services.
- As per NASSCOM Strategic Review 2017, the Global Software Product Industry is estimated to be USD 413 billion. However, the contribution of Software Products in Indian IT-ITES revenue is just USD 7.1 billion out of which 2.3 billion USD are exports.
- On the other hand, import of Software Products is estimated to be nearly 10 billion USD, so as such India is a **net importer of software products** at present.
- Also, past few years have seen serious decline in growth, owing to rapid transformation in technology and Software industry, globally.
- The first Software policy came up in 1986. It resulted into Software Technology Park (STP) scheme in 1991.
- However, as a maturing industry, with a distinct and strong charter of growth, there is a need to reevaluate the sector and to draw out strategies with a medium to long term perspective and introduce innovative solutions to leverage its full potential.
- There is a need to address weaknesses in regard to developing innovative software products that address the challenges thrown in implementing ambitious programmes like Digital India, Make in India, Smart cities etc.

#### Issues with the new policy

- Treating individual's data as a collective property and national asset that the government holds in trust for its citizens implies that the government does not trust its citizens to make the right choices about their personal data. This is in contradiction with the recommendations of the Justice Srikrishna committee and SC's decision in its right to privacy judgement.
- Many Indian companies use the facilities of cloud-based storages and solutions like Amazon Web Services (AWS). Mandating these companies to store in locally will affect their operational efficiency.

• With internet penetration reaching 400 million and with more than a billion mobile phone connections, the opportunities to leverage the soft power of Indian IT professional for producing niche innovative IT solutions for Indian needs is enormous.

#### **Strategies of National Policy for Software Products**

- Promoting Software Products Business Ecosystem by
  - o **Creation of an Indian Software Product Registry-** through industry ownership which will act as a common pool of Indian Software Products thereby providing a trusted trade environment.
  - o Facilitating active participation of software companies in Capital Market
  - Creation of a Single Window Platform
  - Evolving a Classification System for Indian Software Products.
- Promoting Entrepreneurship & Innovation for Employment by
  - o **Initiating a programme of incubation** to provide all kinds of support so as to nurture at least 10,000 software product startups.
  - o Initiating a Programme to support Research and Innovation on Software Products in Institutes of Higher Learning and Research to bridge the existing gaps in the Industry-Academia research.
  - o Creating 20-domain specific Indian software product clusters such as in automobile, textile, etc.
  - o Organizing a program to give 20 dedicated challenge grants such as in Education, Healthcare, etc.
  - Establishing a Centre of Excellence- to promote design and development of software products with industry participation.
  - o Creating a dedicated Software Product Development Fund (SPDF)- it will have a corpus of Rs. 1000 crore in the form of Fund of Funds and participate in venture fund to provide risk capital so as to promote scaling up of market ready Software

Products.

#### Skilling and Human Resource Development by

- Using a FutureSkills Programme- for upskilling/re-skilling of 3 million IT Professionals in emerging technologies.
- Initiating a national "Talent Accelerator" programme- to motivate school and college students.
- Creating a talent pool of 10,000 committed software product leaders
- Improving Access to Domestic Market and Cross Border Trade Promotion by
  - Integrating the registry of Indian software products with Government e-market (GeM)
  - Encouraging Indian Product Startups/
     MSMEs through hackathons.
  - Promoting implementation of open Application Program Interface (APIs) proactively- for both public and private sector to foster incremental innovation and to encourage inter-operability in Indian software products ecosystem
  - Promoting preferential inclusion of Indian software product in Government procurement- in line with Public Procurement (Preference to Make in India), Order 2017

#### **Five Missions of the Policy**

- To promote the creation of a sustainable Indian software product industry, driven by intellectual property (IP), leading to a ten-fold increase in share of the Global Software product market by 2025.
- To nurture 10,000 technology startups in software product industry, including 1000 such technology startups in Tier-II and Tier-III towns & cities and generating direct and in-direct employment for 3.5 million people by 2025.
- To create a talent pool for software product industry through
  - Up-skilling of 1,000,000 IT professionals,
  - Motivating 100,000 school and college students
  - Specialise 10,000 professionals that can provide leadership.
- To build a cluster-based innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/test beds and mentoring support.
- In order to evolve and monitor schemes & programmes for the implementation of this policy, National Software Products Mission will be set up with participation from Government, Academia and Industry.
- Promote integration of Indian Software Products in international trade development programs.
- Overcoming language barriers- by incentivizing the industry to develop products across major Indian Languages.

- Implementation Mechanism such as
  - Establish a "National Software Product Mission (NSPM)"- This mission will undertake following tasks for development of software products- design appropriate strategy, recommend specific policy measures, recommend specific initiatives, monitor and collate various initiatives.
  - Include various Ministry of Electronics and Information Technology's organizations in the implementation- such as Software Technology Parks of India (STPI), National Informatics Centre (NIC) etc.

#### 3.6. NATIONAL POLICY ON ELECTRONICS, 2019

#### Why in news?

The Union Cabinet has recently approved the National Policy on Electronics 2019 (NPE 2019).

#### **Need for this new Policy**

- Evolving nature of Electronics Industry in India- The implementation of the Schemes/ Programmes under the aegis of the National Policy on Electronics 2012 (NPE 2012) has successfully consolidated the foundations for a competitive Indian ESDM value chain. Now, this NPE 2019 proposes to build on that foundation to propel the growth of ESDM industry in the country
- Spillover effects of Electronics Industry- such as growing security concerns, rising inverted duty structures, dependence on major powers and potential of job creation.

### Status of ESDM industry

- Indian electronics hardware production has been registering a Compound Annual Growth Rate (CAGR) of 26.7% (2017-18), as against a growth rate of 5.5% in 2014-15.
- India's **share in the global** hardware electronics production is about 3%.
- The share of domestic electronics production in India's GDP is 2.3%.
- **Imports** of electronics hardware account for more than half of India's domestic production increasing rapidly from \$37 billion in 2014-15 to \$53 billion in 2017-18.

Hence, Electronics is not just about a manufacturing of electronics as a consumable but electronics, which will have impact on working of every sector.

#### Mission and Objective the Policy

- The Policy envisions positioning India as a global hub for Electronics System Design and Manufacturing (ESDM) by promoting domestic manufacturing, skill development, start-up, export eco-system and improving ease of doing business for the ESDM industry.
- It aims to achieve a turnover of \$400 billion and generate 1 crore jobs in the ESDM sector by 2025.

#### Strategy outlined in the NPE 2019

Creating eco-system for globally competitive ESDM sector- by encouraging domestic manufacturing through tax incentives, establishing Manufacturing Clusters, promoting Defence Offsets and sub-sectors like semi-conductor facilities. display fabrication units etc.

#### **Initiatives taken under NPE 2012**

- The Modified Special Incentive Package Scheme (M-SIPS). launched in the wake of NPE 2012 offers subsidies for electronics industry. However, the rate of approval for applications filed and the investments made thereafter remain low.
- The Electronics Manufacturing Clusters (EMC) Scheme, launched in 2012, encouraged entities, including Government entities, to provide good quality infrastructure within a cluster. Under the scheme, 50% of the project cost for Greenfield EMC and 75% for Brownfield EMC is given as grant.
- The Electronics Development Fund (EDF) **Scheme** was launched in order to promote startups and innovation. EDF is a Fund of Funds which invests in Venture Funds.
- Developing and Mandating Standards in the sector- using a standards development framework, which would include institutional mechanism for participation of all stakeholders (Government, Industry, Academia, Experts) and mandatory compliance in the field of electronics goods, including cyber security.
- Promoting Ease-of-doing Business- by facilitating single window mechanism for global investors using existing mechanisms like Invest India, National Investment Promotion and Facilitation Agency.
- Encourage Industry-led R&D and Innovation- in all sub-sectors of electronics. This would encompass support to various initiatives in areas like 5G, IoT/ Sensors, Artificial Intelligence etc. The support will include new Educational Courses, Incubation Centres, Sovereign Patent Fund and incorporate principles of sustainability of electronic goods through their life cycle.

- **Human Resource Development-** by generating research base at Ph.D. level, opportunities for joint IPRs to Indian candidates at foreign institutions, and work closely with all agencies (Centre and State) to ensure availability of adequate skilled manpower to the industry.
- **Export Promotion-** by providing attractive package of incentives so that exporters can compete in global markets
- **Promote Trusted Electronics Value Chain-** to improve national cyber security profile and control its supply chain across **national defense** and **critical national infrastructure** like energy grids, communication networks, digital economy etc.
- **Promote Cyber Security-** by enhanced **understanding** of cyber security issues, risks; **development** of testing facilities, photonics, nano-based devices etc by the start-ups. Further, **encouragement for use** of tested & secure IT products, secure chips,
- Developing Core Competencies in the sub-sectors of Electronics- such as Indian Fabless Chip Design Industry, Medical Electronic Devices Industry, Automotive Electronics Industry, Power Electronics for Mobility and Strategic Electronics Industry.
- **Promotion of Electronic Components Manufacturing Ecosystem-** by providing incentives for lithium-ion cells, chip components, fuel cells, optical fibre, solar cells etc.
- **Promotion of Electronics Manufacturing Services (EMS) Industry-** including Engineering & Design of PCBs, Functional testing, Maintenance services like warranty and repair services etc.
- **Mega Projects** by providing special package which would invite extremely high-tech and huge investments in areas like semiconductor facilities, display fabrication etc.
- Preferential Market Access- by encouraging states to adopt the Public Procurement (Preference to Make in India) Order 2017 (PPO 2017) and leveraging the Government e-Market Place (GeM) in the procurement of electronic products (including cyber security).
- **Governance Structure-** Creation of institutional mechanism for implementation of various schemes under the Policy, including support from the State Governments.
- Other Measures- Promoting Eco-park for e-Waste processing, Warehousing of raw materials, Acquiring mines of Rare Earth Metals in foreign countries (Africa, Australia) and Developing an index to asses the status of electronics manufacturing industry in the states.

#### 3.7. SETTING UP OF INDIA POST BANK AS PAYMENT BANK

#### Why in News?

The Standing Committee on Information Technology has submitted its report on 'Setting up of Post Bank of India as a Payments Bank- Scope, Objectives, and Framework'.

#### **About India Post Payment Bank (IPPB)**

- It is a financial service provider, launched with the mandate of improving financial inclusion.
- It has been incorporated under the Companies Act, 2013 as a public limited company with 100% Government of India equity under Department of Posts (DoP).
- Objectives
  - Provide a secure and reliable payments channel for social security payments under Mahatma Gandhi

#### **About Payment Bank**

- A payments bank is a differentiated bank, offering a limited range of products.
- It cannot lend to customers
- It can accept demand deposits, issue ATM/debit cards but not credit cards.
- It can accept deposits upto Rs. 1 Lakh per account from individuals and small businesses.
- Apart from maintaining Cash Reserve Ratio with the RBI, it will be required to
  - invest minimum 75% of its "demand deposit balances" in Statutory Liquidity Ratio (SLR) eligible Government securities/treasury bills with maturity up to one year
  - hold maximum 25% in current and time/fixed deposits with other scheduled commercial banks for operational purposes and liquidity management.
- 25% of its branches must be in the unbanked rural area.
- The promoter's minimum initial contribution to equity capital will have to be at least 40% for the first five years.
- National Rural Employment Guarantee Act (MGNREGA), National Social Assistance Programme (NSAP) etc. and all Government to Citizen (G2C) transactions.
- o Become the preferred partner for **service delivery for Government** (Central, State and Local).

- Tie up with various other banks, insurance companies, mutual fund houses and other financial institutions and service providers to help in customer acquisition and distribution of third-party products like loans, insurance etc.
- Safe, economical and reliable money transfer to meet the needs of migrant labourers and the unorganized sector.
- To provide a payments platform for integrating services provided by Government and Private sector for the economic upliftment of the poorer and marginalized sections in both urban and rural India.
- Build the most accessible payments bank through various channels including Mobile Point of Sale (MPoS), mobiles, Internet banking transactions at the Post Office Counters as well as at the door step of the customers and encourage the transition to a less cash economy.

#### **Challenges for IPPB**

- Striking down of certain provisions of Aadhaar by SC has made Aadhar based KYC authentication difficult. The last mile rural population may not have other required documents prescribed by RBI to become part of the formal financial ecosystem.
- Promoting IPPB as well as Maintaining balance with DoP work by staff: It needs to be ensured that the
  work of Department of Posts (DoP) does not get affected by IPPB-related activities. Also, DoP staff needs to
  be trained in digital operations. For this, they can be associated with the centrally sponsored schemes under
  Digital India Programme such as NDLM/PMDISHA.
- Competition from Private Payment Banks such as Aditya Birla, Airtel, Jio and Paytm Payment Banks. For egthere is a need to review the interest rate of 4% on savings account which is on a lower side as compared to other Payment Banks.
- Low utilization of door-step banking services provided by IPPB: There is some reluctance in people in rural and remote areas to opt for IPPB services.
- **Sustenance issue:** Since IPPB cannot lend or issue credit cards, the only source of its income would be the transaction fee and not interest spread, hence sustenance issues will persist unless it provides its services efficiently, at lower cost.
- Other challenges include: Under-utilization of allocated funds, Inadequate manpower etc.

#### 3.8. OMBUDSMAN SCHEME FOR DIGITAL TRANSACTIONS (OSDT)

#### Why in News?

Recently Reserve Bank of India (RBI) launched Ombudsman Scheme for Digital Transactions (OSDT).

#### **About the Scheme**

- It is launched under Section 18 of the Payment and Settlement Systems Act, 2007 which will provide a cost-free and expeditious complaint redressal mechanism relating to deficiency in customer services in digital transactions conducted through non-bank entities (like mobile wallets or tech enabled payment companies using UPI for settlements) regulated by RBI.
- The Ombudsman for Digital Transactions is a senior official appointed by the Reserve Bank of India (appointed for a period not exceeding 3 years at a time) to redress customer complaints against

#### **Related Information**

#### Payment and Settlement Systems Act, 2007

It provides for the **regulation and supervision of payment systems** in India and designates the apex institution (RBI) as the authority for that purpose and all related matters.

#### **About Banking Ombudsman Scheme 2006**

- The Banking Ombudsman is a quasi-judicial authority appointed by the Reserve Bank of India
- It aims to provide a cost-effective grievance redressal mechanism to customers for deficiency in certain banking services.
- All Scheduled Commercial Banks, Regional Rural Banks and Scheduled Primary Co-operative Banks are covered under the Scheme.
- The complaint has to be first filed in the respective banks before approaching Ombudsman.
- System Participants as defined in the Scheme for deficiency in certain services covered under **the grounds of complaint.**
- The Scheme also provides for an **Appellate mechanism** under which the complainant / System Participant has the option to appeal against the decision of the Ombudsman before the Appellate Authority.
- Transactions undertaken through the banking channels will still be managed by the Banking Ombudsman.

- The new ombudsman will work from the 21 existing offices of the Banking Ombudsman and work within the existing territorial jurisdictions.
- Customer compensation:
  - Rs 1 lakh is the compensation that can be awarded in lieu of loss of customer's time, expenses incurred and mental agony.
  - Rs 20 lakh is the maximum compensation the digital payments ombudsman can award.

#### Why it is needed?

- There is a need to establish a digital payments ombudsman, keeping in mind the massive adoption of digital
  payments in the country and the magnitude of complaints regarding problems incurred during those
  transactions. This is due to the complexities and challenges involved in the process such as fraudulent
  transactions.
- A dedicated and empowered grievance redressal mechanism becomes a prerequisite for **promoting the level of trust and customer confidence** in this powerful channel that has wide and deep reach,.

#### 3.9. NATIONAL MINIMUM WAGE

#### Why in news?

- The Expert Committee under the Chairmanship of Dr. Anoop Satpathy has brought out a timely technical Report on "Determining the Methodology for the Fixation of the National Minimum Wage (NMW)".
- A uniform national minimum wage of Rs 9,750 per month or region-wise minimum wages ranging from Rs 8,892-Rs 11,622 per month for five regions (as of July 2018) has been recommended.

#### **Background**

- Wage policy and minimum wages have been subject of considerable debate in India
- The Payment of Wages Act, 1936, and the Minimum Wages Act 1948, sought to provide protection and ensure better working conditions for low-paid workers
- The **absence of criteria** in the Minimum Wages Act to determine minimum wages has been addressed by **Indian Labour Conference and SC recommendations** providing guidelines for this purpose. Through its Five Year Plans, the Planning Commissions also contributed towards addressing wage issues in India.
- Over the years, there has been a demand to improve the minimum wage policy and even an interest in framing a "national wage policy".
- In 2017, Code on Wages Bill, provided for bringing in a statutory National Minimum Wage. In this regard, this expert committee was tasked to determine the methodology for the same.

#### **Need of the National Minimum Wage**

- To ensure a uniform standard of living across the country- At present, there are differences in minimum wages across states and regions. Such differences are attributed to the fact that both the central and state governments set, revise and enforce minimum wages for the employments covered by them
- Allow for easier implementation and compliance with the minimum wage law- as it will reduce ambiguity and confusion over multiple wage laws.

#### Code on Wages Bill, 2017

 This bill will amalgamate the four central labour laws relating to wages: The Payment of Wages Act, 1936, The Minimum Wages Act,

#### Minimum Wage

- It is one, which is paid by an employer/industry to its workers irrespective of its ability to pay.
- It must provide not only for the bare sustenance of life, but for the preservation of the efficiency of the workers.

#### **Living Wage**

 It should enable the earner to provide for himself and his family not only the bare essentials of food, clothing and shelter but a measure of frugal comfort including education for his children, protection against ill-health, requirements of essential social needs and a measure of insurance against the more important misfortunes including old age.

#### Fair Wage

It is linked with the capacity of the industry to pay.
 Factors such as labour productivity, prevailing wage rates, the level of national income and its distribution etc. are variables in determining fair wage. It is above the minimum wage but below the living wage.

- 1948, The Payment of Bonus Act, 1965 and The Equal Remuneration Act, 1976.
- The proposed Wage Code establishes that the central government may notify a **statutory national minimum** wage for the whole country. It will ensure that no State Government fixes the minimum wage below the National Minimum Wages for that particular area as

notified by the Central Government

 Under the Wage Code, the central and state governments will constitute their respective advisory boards. These boards will advise the respective governments on aspects including: (i) fixing minimum wages; and (ii) increasing employment opportunities for women.

#### **International Conventions on Minimum Wages**

- The ILO Minimum Wage Fixing Machinery Convention, 1928
- Minimum Wage Fixing Machinery (Agriculture) Convention, 1951
- Minimum Wage Fixing Convention, 1970
- The central or state governments will **fix the number of hours that will constitute a working day**, as well as a day of rest for employees every week. The amount of overtime will be at least twice the normal wage of the employee.

#### **Recommendations of the Committee**

- **Need to update existing norms for fixing minimum wages** in the light of the latest available evidence relating to per household consumption units, food and nutritional requirements, changing consumption pattern and non-food expenditure requirements.
- Need for elaborating a nationally representative and culturally palatable food basket- by adopting an approach that would focus on a balanced diet rather than merely its calorie intake. Hence, committee recommends minimum wage at a level that would allow for a minimum recommended intake (per adult person per day) of 2,400 calories, 50 grams of protein and 30 grams of fats.
- **Intermediate adjustment for inflation** to accommodate changes in prices at least in every six months, on the basis of the CPI made available by the CSO.
- **Non-food items-** For estimating the required expenditure on non-food items, the committee identifies two groups of commodities:
  - Essential non-food items, namely clothing, fuel and light, house rent, education, medical, footwear, and transport;
  - o **Other non-food items**, such as entertainment, durable goods, toilet articles, other household consumables, consumer services excluding conveyance, and consumer taxes
- Single value of the National Minimum Wage- for India should be set at Rs.375 per day as of July 2018. This
  would be equivalent to Rs.9, 750 per month, irrespective of sectors, skills, occupations and rural-urban
  locations. It has also recommended to introduce an additional house rent allowance (city compensatory
  allowance), averaging up to INR 55 per day i.e., INR 1,430 per month for urban workers over and above the
  NMW.
- Method for estimating the NMW at the regional level- For the purpose of estimating national minimum
  wages at regional levels, the committee has grouped the states into five regions based on a composite index
  and have recommended region specific national minimum wages in the range of Rs 8,892-Rs 11,622 per
  month.
- **Minimum wages should be fixed at round numbers**-which are much easier to disseminate. This will also facilitate the minimum wage enforcement process.
- Creation of a research unit in the Ministry of Labour and Employment- to support the Central Advisory Board and State Advisory Boards at the time of formulating recommendations to set and adjust minimum wages.

### 3.10. PM SHRAM-YOGI MAANDHAN YOJANA (PMSYM)

#### Why in News?

**Ministry of Labour and Employment** launched pension plan 'PM Shram-Yogi Maandhan Yojana' for informal workers.

#### About the Scheme

- **Eligibility:** The unorganised workers whose monthly income is Rs 15,000/ per month or less and belong to the entry age group of 18-40 years are eligible for the scheme.
  - They should not be covered under **New Pension Scheme (NPS), Employees' State Insurance Corporation (ESIC) scheme or Employees' Provident Fund Organisation (EPFO)**.
  - o Further, he/she should not be an income tax payer.
- Pension: They shall receive minimum assured pension of Rs 3000/- per month after age of 60 years.
  - o **In case of death during the receipt of pension**, his/her spouse shall be entitled to receive 50% of the pension received by the beneficiary as family pension.
  - In case of death before 60 years of age, his/her spouse will be entitled to join and continue the scheme subsequently by payment of regular contribution or exit the scheme as per provisions of exit and withdrawal. Family pension is applicable only to spouse.
- **Contribution by the Subscriber**: He/she is required to contribute the prescribed contribution amount from the age of joining PM-SYM till the age of 60 years.
- Matching contribution by the Central Government: PMSYM is a voluntary and contributory pension scheme on a 50:50 basis where prescribed age-specific contribution shall be made by the beneficiary and the matching contribution by the Central Government.
  - The contributions from workers per month will change depending on the applicant's age like at the age
    of 18 years would have to contribute Rs 55, whereas workers at the age of 29 years would pay Rs 100.
    Those in the upper age limit of 40 years will have to pay Rs 220.

#### **Comparison between Atal Pension Yojana and PMSYM**

- APY also targets the unorganised sector and is co-contributory in nature, and promises a minimum pension between ₹1,000-5,000 while the PMSYM pension is capped at just ₹3,000 per month.
- PMSYM is only open to those with monthly income of up to ₹15,000, whereas APY contains no such income
  limit.
- In APY, you can choose to contribute **monthly, quarterly or half yearly**, which is of great help to those in the unorganized sector with irregular income. PMSYM only allows **monthly** contributions.
- APY provides for return of corpus on the death of the subscriber and his spouse. In PMSYM, workers only
  get a pension and do not accumulate a corpus for their family. On the death of the worker and his/her
  spouse, the corpus is forfeited to PMSYM.
- PMSYM will be directly managed by the government unlike APY, which is regulated by the Pension Fund Regulatory and Development Authority (PFRDA).

### 3.11. PERIODIC LABOUR FORCE SURVEY (PLFS) OF THE NSSO

#### Why in News?

National Sample Survey Office (NSSO), Ministry of Statistics and Programme Implementation has recently released draft report of the first Periodic Labor Force Survey (PLFS).

#### What is Periodic Labor Force Survey?

- PLFS was launched in 2017 by the NSSO, superseding the earlier system where such data was available only
  every five years.
- It is a **regular survey** for generating estimates of **various labour force indicators** on quarterly basis for urban areas and annual basis for both rural and urban areas, at State/UT and all-India level.
- It would supply data not only about the **formal sector**, but also about the **informal sector**.
- The PLFS is designed to generate the indicators of labour market operations using two approaches:
  - Usual Status (US) approach: This approach records only those persons as unemployed who had no
    gainful work for a major time during the 365 days preceding the date of survey and are seeking or are
    available for work. Thus, the estimates of unemployment obtained on the basis of usual status approach
    are expected to capture long-term open unemployment.
  - Current Weekly Status (CWS) approach: In this approach current activity status relating to the week
    preceding the date of survey is recorded. Those persons are classified as unemployed who did not have

gainful work for even an hour on any day in the preceding week and were seeking or were available for work. Thus, weekly status approach would capture not only open chronic unemployment but also seasonal unemployment.

In this survey, Computer Assisted Personal Interviewing (CAPI) Method has been adopted with field operators using tablets to enter the data. This would generate more accurate and timely information.

#### 3.12. PUBLIC SECTOR UNDERTAKING

#### Why in news?

Recently, The Public Enterprises Survey of 2017-18 highlighted the performance of all the Central Public Sector Enterprises.

#### **Performance of CPSEs/PSEs**

- In 2017-18, the number of profitable public sector enterprises (PSEs) stood at 184.
- The profit of top 10 most profitable firms in 2017-18 amounted to 61.8% of the profit made by the profitable PSEs. This means that many PSEs are barely making money to justify the capital invested
- The oil companies followed by coal companies formed the major chunk of the profit.

#### Issues faced by PSUs

- Lack of Professional Management: It has been highlighted that top decision making or chief executive officers in various PSUs lack domain **expertise.** Moreover, culture of Ad-hocism reduces the functional credibility of PSU.
- Inadequate Autonomy: There is frequent political interference in day-to-day administration of PSUs, reducing its status to that of a government department.
- Over-Governance: Majority of PSUs suffers from over-governance, because of constant pressure of accountability, scrutiny, expansion of RTI act. This promotes conservative, cautious and risk averse organisational culture.
- **Poor Human Resource Management:** There is problem of overstaffing, inefficient training, promotion and transfer policy which results into high rate of labour turnover and promoted absenteeism.
- Less competitive: It is being noticed that various PSUs are making profit in a limited competitive environment e.g. until 2005-2006 BSNL (Bharat Sanchar Nigam Limited) was second most profitable PSE, but with the expansion of private sector into the telecom space and the subsequent fall in data tariffs, BSNL became the largest loss-making PSE in 2017-18, with losses of ₹7.993 crore.

#### What needs to be done?

Manpower Planning Strategy: There is a need for every CPSE to conduct a comprehensive manpower planning exercise by identifying the key skills and talent requirements across all levels.

#### Why the need of PSUs emerged?

- Removal of Regional Disparity: In the initial period, PSUs were set up in underdeveloped and in those states where local government cannot command adequate resources for regional development. Thus, PSUs were visualised as tools for removing regional disparities.
- Source of fund for development: The surplus of PSUs was seen as re-investment opportunity for the government sector such as education, health etc.
- Socialist pattern of society: In the pursuance of socialist pattern of governance, it had become necessary that basic and strategic importance sectors should be in public control.
- Control of Monopoly: PSUs are also established and used as means of social control. Their aim is to prevent the growth of monopoly and restrictive trade practices in private sector.
- Inadequate competence of private sector: The private sector at the time of independence was incapable of handling big affairs and the long term gestation period investment.

#### Achievements of some PSUs

- The **Gross revenue** from operation of all CPSEs has shown a growth of 10.24% in 2017-18 over previous year.
- Some CPSE are playing a dominant position in areas such as Petroleum, Coal, Power, Steel, Mining, and Transport & Logistic Services which helps in reducing the energy import burden.
- Companies like ONGC Videsh is successfully conducting natural resource exploration overseas such as Vietnam, Mozambique etc. thus enhancing the strategic interests.
- Food Corporation of India, National Fertilizer limited etc. help in sustaining the right based policy approach of the government.

- Rational Pricing Mechanism: PSUs should consider the market dynamics as well as the cost of producing and delivering for pricing the products/services to minimize losses.
- **Enhance autonomy**: For this, CPSUs' Board must be sufficiently empowered to take nearly all strategic decisions such as formation or dissolution of partnerships/Joint ventures, mergers/acquisitions, appointment of CEO etc. (as per a report by Committee on Public Undertakings 2018-19)
- **Strategic Disinvestment:** As mooted by NITI Aayog, all CPSEs except those in strategic area are eligible to be considered for strategic Disinvestment.
- Sharing of Best Practices: There should be identification and sharing of best practices adopted by various different PSUs.
- Other measures include timely Technology Upgradation as soon as the company starts losing market for their products and timely Assets Monetisation of loss-making PSUs.

#### **Strategic Disinvestment**

It is the sale of substantial portion of the Government shareholding of a **central public sector enterprise (CPSE) of up to 50%** or higher along with transfer of management control.

## 3.13. DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE (DPIIT)

#### Why in news?

The Department of Industrial Policy and Promotion (DIPP) has been renamed as the Department for Promotion of Industry and Internal Trade (DPIIT) with a mandate to deal with matters related to start-ups, facilitating ease of doing business among others.

#### **Details**

- DIPP (under the Ministry of Commerce and Industry) was established in 1995 and reconstituted in the year 2000 with the merger of the Department of Industrial Development.
- It looked after external trade earlier and there were demands by various bodies to create a separate ministry of Internal Trade.
- The matters related to internal trade were under the domain of the Ministry of Consumer Affairs.
- With this decision, now the Department will also look over the subject of **internal trade** including retail trade, welfare of traders and their employees etc.
- Hence, with this both internal and external trade have come under the same ministry i.e. Ministry of Commerce and Industry, through this department.
- Other functions of this body include:
  - Formulation of industrial policy and strategies
  - Monitoring of industrial growth
  - o Formulation of FDI policy and its regulation
  - Formulation of policies relating to various IPRs
  - Coordinates with UN Industrial Development Organization
  - Administers Laws namely- The Explosives Act, 1884; The Salt Cess Act, 1953; The Patent Act, 1970; The Boilers Act, 1923 etc.

#### 3.14. DRAFT NATIONAL LOGISTICS POLICY

#### Why in News?

Recently, Ministry of Commerce and Industry released Draft National Logistics Policy.

#### What is Logistics?

- It refers to overall process of how resources are handled and moved along the supply chain.
- It encompasses an array of activities beyond transportation, including warehousing, brokerage, express delivery, critical infrastructure services etc.

#### **Significance of Logistics Sector**

- **Employment**: Industry employs over 45 million people and is growing at the rate of 15% with sub-sector growing at even 30-40% per annum.
- **GDP**: India spends around 14.4% of its GDP on logistics and transportation. The sector is expected to grow at a CAGR of 15-20 percent between FY2016-2020.

• **Farmer Income:** an efficient logistic supply chain network has the potential to increase farmers' income manifold, which can **lead to a domino effect** on the overall economy.

#### Need of the policy

income.

- Fragmented Policy approach: Different parts of the logistics value chain currently are being managed by multiple ministries and agencies (Road Transport and Highways, Shipping, Posts, Finance, Central Drug Standard Control Organization etc.) which hampers coordinated oversight policy action.
- High Logistics Cost: Despite being recognised as critical driver of economic development, logistics cost in India is very high i.e. 13-14% of GDP as compared to USA 9-10%, Europe 10%, Japan 11%.
- **Skewed modal transportation mix** with 60% of freight moving on roads. It is significantly larger than in key developed economies.

#### **Government Initiatives for Logistic Sector**

- Logistic sector has been given infrastructure status in 2017, which will ease-out fund related and other logistic bottlenecks.
- Government proposed a Logistic Hub in Assam, with the aid of Asian Development bank.
- Government has launched Logistic Ease Across Different States (LEADS) index in order to look at logistic bottleneck at state level.
- Logistic Efficiency Enhancement programme was launched to improve India's logistics efficiency.
- GST solves the problem of complex tax structure for logistics thereby leading to efficient decision making by logistic firms.
- Emerging new trends- like domain expertise with specific skill set, environmentally friendly logistic and resilience to cyber threat demand an overhauling of man-power driven, underleveraged by an unorganised and fragmented logistic sector.

#### **Highlights of Draft National Logistics Policy 2018**

• **Policy Vision:** To drive economic growth and **trade competitiveness** through a truly integrated, reliable and **cost-effective** logistics network, leveraging **best in class technology**, processes and skilled manpower.

Policy objectives	Corresponding policy thrust areas
Policy objectives  Creating a single point of reference of knowledge and information sharing platform for logistic.  Driving logistics cost as a % of GDP down to 10% and incentivize the sector to become more efficient by promoting integrated development of logistics  Optimizing the current modal mix and promote development of multi modal infrastructure  Improving first mile and last mile connectivity to expand market access of farmers, MSMEs and small businesses  Enhancing efficiency across the logistics value chain through increased digitization and technology adoption  Ensuring standardization in logistics (warehousing, packaging etc.)	<ul> <li>Corresponding policy thrust areas</li> <li>Creating a National Logistics e-marketplace as a one stop marketplace.</li> <li>Setting up a logistics data and analytics center (LDAC) to serve as a single source of data for relevant performance metrics across the logistics value chain and enable data driven decision-making.</li> <li>Develop certain key corridors as 'Model Logistics' corridors connecting major clusters.</li> <li>Driving development of Multi Modal Logistics Parks (MMLP) to enable seamless and world-class multimodal freight transfer.</li> <li>An integrated policy and a Multi Modal Logistics Park Authority should be established for the development of MMLP in the country.</li> <li>Modal shift from road to rail, coastal shipping, inland waterways etc. to drive down costs.</li> <li>Promoting cross regional trade on e-commerce platforms by enabling a seamless flow of goods</li> <li>Adoption of Warehouse Management System (WMS) and other IT-driven solutions are becoming effective in increasing the competitiveness of the warehousing industry. An efficient warehouse can bring a 15-20% cost reduction in the entire logistics operations.</li> <li>The Logistics Wing should work with standard setting bodies for logistics in India such as the Bureau of India Standards, Indian Institute of Packaging to facilitate the development of relevant standards for India.</li> <li>Technology-based interventions such as e-tolling, electronic document flow, rationalization of checkpoints are proposed steps in reducing the dwell time in cargo movement.</li> </ul>
Improving India's ranking in the <b>Logistics</b> Performance Index	Data from LDAC can be taken to review and work on the <b>six indicators</b> of <b>World Banks' LPI</b> - Custom; International Shipment; Tracking & Tracing of trace consignment; Infrastructure; Logistic Competence; Timeliness of consignment
Reducing losses due to agri-wastage to less than 5% and thereby enhance agriculture price realization and farmer income.	Focus on providing <b>specialized nature of requirements</b> for packaging, transportation and storage of <b>perishable commodities</b> .

Encouraging adoption of <b>green logistics</b> in the country.	Policy visualises a reduction in <b>supply chain carbon foot print</b> through duty rationalization on alternative fuels, improved vehicle design etc. and also focus will be placed on the <b>3R – Reduce, Reuse and Recycle</b> in packaging.
Some Other Objectives and Thrust Areas	

#### The policy also aims at

- Enacting a Framework Act on Integrated Logistics' to provide a broad overarching national framework of general principles for logistics in India and overseas for greater efficiency.
- Institutional Framework & Governance for Logistics: Logistics Wing under the Department of Commerce, will have the primary responsibility to drive the aforesaid policy key thrust areas and National Logistics Forum (chaired by Commerce Secretary) as well as an Empowered task force will review the progress against the Integrated National Logistics Action Plan.
- Setting up a non-lapsable Logistics fund to drive progress in areas like providing viability gap funding for MMLP projects, Incentivizing logistics skilling programs, setting up a start-up acceleration fund, setting up a big data enabled logistics data hub etc.

#### 3.15. RIVER INFORMATION SYSTEM

#### Why in news?

The Union Minister of Shipping recently inaugurated the Phase 2 of the River Information System on National Waterway-1 (River Ganga) between Farakka and Patna (410 km).

#### **About River Information System**

- It is a form of vessel traffic management using next generation technology. It will help in crises management and enhanced inland navigation safety by preventing ship-to-ship collisions, ship - bridge collisions, groundings etc.
- It is a combination of tracking and meteorological equipment with specialized software designed to optimize traffic and transport processes in inland navigation.

  Relate
- The system enables swift electronic data transfer between mobile vessels and shore (base stations) through advance and real-time exchange of information so as to ensure navigation safety in inland waterways.
- It also provides virtual navigational aids to guide the vessel during navigation.



#### **Related News**

- The Inland Waterways Authority of India (IWAI) launched a new portal LADIS – Least Available Depth Information System recently for ensuring optimum use of National Waterways.
- It will ensure that real-time data on least available depths is
  disseminated for ship/barge and cargo owners so that they can
  undertake transportation on NWs in a more planned way. It will
  facilitate the day to day operations of inland vessels plying on National
  Waterways and avoid any hindrance in service and operation.
- An assured depth of waterway is required for seamless movement of vessels. Details of LAD will be fed into the portal by respective surveyors and regional incharge deputed with IWAI survey vessels which constantly move on NWs.

- The services are being used in advanced waterways of Europe, China and U.S.A. The operationalization of this system in India is a landmark in itself.
- It is one of the components of Jal Marg Vikas Project.

#### **Current Status**

- Inland Waterways Authority of India (IWAI) has taken up installation of River Information System (RIS) initially in National Waterway-1 (NW-1) on river Ganga, in three phases, viz.
  - Haldia-Farakka Stretch (already operationalized)
  - Farakka-Patna Stretch (covered under Phase 2)
  - Patna-Varanasi Stretch

#### **Jal Marg Vikas Project**

- The Government is implementing this project for the capacity augmentation of navigation on the Haldia-Varanasi stretch of National Waterway-1 (Ganga) with the technical and financial assistance of the World Bank at an estimated cost of Rs.5,369.18 crore.
- Under this project, construction of three multimodal terminals, two intermodal terminals, one new navigational lock and works for fairway development, River Information System (RIS), vessel repair and maintenance facilities and Ro-Ro terminals are envisaged to be completed.

#### 3.16. NEW ANGEL TAX RULES

#### Why in news?

Recently the government notified new rules pertaining to angel tax which will exempt registered start-ups of a specified size from the tax.

#### **Angel Tax**

- It is **an income tax** levied at 30.9 % tax on investments made by external investors in unlisted startups or companies.
- It is applicable when companies have raised capital through sale of shares at a value above their 'fair market value'.
- The tax was introduced in the Finance Budget of 2012 with an aim to curb money-laundering through the sale of shares of private unlisted companies at bloated prices.

**Fair market value (FMV)**: It is the price that a property would sell for on the open market.

- It represents the price of an asset under the usual set of conditions: like when prospective buyers and sellers are reasonably knowledgeable about the asset.
- It represent an accurate valuation or assessment of its worth.

#### **New rules**

- **Definition of start-up broadened**: An eligible start-up would be one that is registered with the government and has been incorporated for less than 10 years (from previous 7 years), and has a turnover that has not exceeded ₹100 crore over that period.
- Start-ups can apply for an **exemption** if their paid-up share capital is up to Rs25 crore, compared to Rs10 crore earlier.
- Start-ups may raise tax free capital from investments made by
  - non-residents
  - Listed company having a net worth of INR 100 Crores or turnover of at least INR 250 Crores
- The notification **imposes certain restrictions on investments** by the start-ups. The start-up have to attest to the fact that it has not invested in any land that is not being used in its ordinary course of business, any vehicle over the value of ₹10 lakh, any jewellery, among other things.
- There is a requirement that the start-ups must be registered with the Department for Promotion of Industry and Internal Trade. Some applicants have claimed that the procedure is complex and time consuming.
  - Some of these restrictions can lead to hardships for the start-ups and may even disqualify some genuine start-ups from this exemption.

#### **Criticism of Angel Tax**

• Issues in establishing Fair market value: Start-ups are often valued subjectively and the valuation which seems sky-high to some, may be fair to others. Valuing start-ups based on their assets alone, given

intangibles such as goodwill is not easy. Nor is it easy to arrive at a 'fair value' for them, based on discounted cash flows.

- For example, Ola is valued at \$4.3 billion but its actual assets might not be worth more than a million dollars.
- **Arbitrary power:** Under the Income tax Act, the IT department is free to arbitrarily decide the fair value of a company's share and tax start-ups. This could become a tool for harassment of genuine start-ups.
  - The notification has not dealt with the arbitrary power that it vests in the hands of the income tax authorities.
- **Hamper investments:** For startup founders, venture capital firms and overseas investors are the key sources of funds. Taxes such as angel tax discourage these investments. Investors in countries such as US are offered tax benefits when they fund small companies.

#### 3.17. FAME INDIA PHASE II

#### Why in news?

The Union Cabinet has approved a proposal for implementation of the 2<sup>nd</sup> Phase of FAME-India ('Faster Adoption and Manufacturing of Electric Vehicles in India') with the total outlay of over 10,000 cr.

#### Key details of Phase II

It will be implemented over the period of 3 years from 2019-20 to 2021-22. The main objective of the scheme is to encourage faster adoption of electric & hybrid vehicle by the way of **market creation and indigenization.** 

- Electrification of the public & shared transport: it is planned to support 10 Lakhs e-2W (electric 2 Wheeler), 5 Lakhs e-3W, 55000 4Ws and 7000 Buses.
  - Demand incentives on operational expenditure mode for electric buses will be delivered through State/city transport corporation (STUs).
  - o Incentives will be given to 3-wheeler/4 wheeler vehicles used for public transport or registered for commercial purposes.
  - o In e-2Ws segment, the focus will be on the private vehicles.
- Local manufacturing: Special incentives will be given for local manufacturing of critical components for electric vehicles, especially the **lithium ion batteries**.
- **Establishment of charging infrastructure:** About 2700 charging stations will be established in metros, million plus cities, smart cities and cities of hilly states across the country.
  - The guidelines propose setting up at least one charging station in a grid of 3km x 3km in the cities; and on both sides of highways connecting major city clusters at every 25km.
  - Existing retail outlets of oil marketing companies (OMCs) will be given higher preference for setting up public charging stations.

#### Significance of Phase II of the Scheme

- FAME Phase II builds over the Phase 1 of the scheme (which began in 2015 & has been extended till March, 2019) with greater focus on demand-creation by pushing adoption of EVs in public transport/commercial segment (in comparison to consumer segment).
- The Phase 2 presents a more holistic approach as it not only touches upon critical technical issues such as battery cost & efficiency, charging infrastructure etc., but also stresses upon the indigenization of the entire EV value chain.
- Offering incentives to Original Equipment Manufacturers (OEMs) to invest in setting up a charging network, simplifying the requirements of a station & the process of installation and operation will be an added push in the right direction.
- Under FAME-2 scheme, withdrawal of subsidies on EVs using lead acid batteries & low-speed electric two-wheelers would further popularize efficient EVs in India.
- FAME-Phase 2 has been introduced to achieve the target of **more than 30% electric vehicles by 2030**, a more realistic goal in comparison to the earlier target of 100% EVs by 2030.

#### 3.18. PRINTING PRESSES DECLARED AS PUBLIC UTILITY

#### Why in News?

The Ministry of Labour and Employment issued a notification refreshing the categorization of currency printing presses and mints as 'public utility service' under the Industrial Disputes Act, 1947.

#### **More on News**

- As per the Industrial Disputes Act, 1947, no person employed in a public utility service shall go on strike in breach of contract without giving a notice to the employer.
- The Notification under the Act is valid for six months and can be reissued after expiry. Current notification is part of a series of earlier notifications declaring currency printing presses and mints as 'public utility service.'

#### What is Public Utility Service?

- Public Utility Services are those business undertakings engaged in supplying essential goods and/or services of daily necessity for the general public.
- All the public utility undertakings have an obligation to supply the essential goods and services to everyone in the community without any discrimination at reasonable prices.
- They are also been defined as:
  - Any railway services [ or any transport services for carriage of passengers or goods by air] or any service in connection with the working of any major port or dock.
  - Any section of an industrial establishment on the working of which the safety of the establishment or the workman employed therein depends.
  - Any postal, telegraph or telephone services.
  - Any industry which supplies power, light or water to the public.
  - Any system of public conservancy or sanitation.
  - o Any industry specified in the [First Schedule] of the Industrial Disputes Act.
- The "public utility service" also include services in hospital or dispensary and insurance services.

• In India, right to protest is a fundamental right under Article 19 of the Constitution of India.

Right to Strike in India

- However, right to strike is not a fundamental right but a legal right and with this right statutory restriction is attached in the Industrial Disputes Act, 1947.
- Under the Industrial Dispute Act, 1947 the ground and condition are laid down for the legal strike and if those provisions and conditions are not fulfilled then the strike will be illegal.
- Essential Services Management Act outright bans key employees of essential service from strike altogether.

#### **Essential Services Management Act, 1968**

- It was enacted to **ensure the delivery of certain services**, which if hindered would affect the normal life of the people.
- It includes a long **list of "essential services"** in its charter -- ranging from post and telegraph, public transport, health services etc.
- It also allows states to choose the essential services on which to enforce this act.
- Each state in the union of India, hence has a separate state Essential Services Maintenance Act with slight variations from the central law in its provisions.

#### **Essential Commodities Act, 1955**

- It was enacted to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or black-marketing would affect the normal life of the people.
- This includes foodstuff, drugs, petroleum products etc.

#### 3.19. INTERNATIONAL FINANCIAL SERVICES CENTER AUTHORITY BILL

#### Why in News?

The Union Cabinet has approved the International Financial Services Centres (IFSC) Authority Bill, 2019.

#### What is an IFSC?

- SEZ act provides for the establishment of an IFSC in India within an SEZ in India and enables the Central Government to regulate IFSC activities.
- Gujarat International Finance Tec-City Co. Ltd (GIFT) is being developed as the country's first IFSC.
- IFSC has been designated for all practical purposes as a 'deemed foreign territory' which would have the same ecosystem as other offshore locations, but which is physically on Indian soil.
- Any financial institution (or its branch) set up in the IFSC is
  - treated as a non-resident Indian located outside India;

- expected to conduct business in such foreign currency and with such entities, whether resident or non-resident, as the Regulatory Authority may determine;
- o Nothing contained in any other regulations shall apply to a unit located in IFSC, subject to certain provisions.
- Some of its major services include:
  - Fund-raising services for individuals, corporations and governments
  - Asset management and global portfolio diversification undertaken by pension funds, insurance companies and mutual fund
  - Wealth management
  - o Global tax management and cross-border tax liability optimization
  - o Risk management operations such as insurance and reinsurance
  - Merger and acquisition activities among trans-national corporations etc.

#### **Need for the Bill**

- Currently, banking, capital markets and insurance sectors in IFSCs are regulated by multiple regulators —
  the RBI, SEBI and IRDAI, respectively. However, the dynamic nature of business in the IFSCs necessitates a
  high degree of inter-regulatory coordination.
- The establishment of a unified financial regulator for IFSCs will result in providing world-class regulatory environment to market participants and providing a stimulus for further development of IFSCs in India.

#### **Highlights of the Bill**

- International Financial Services Centres Authority: It provides for the establishment of an authority to develop and regulate the financial services market in the International Financial Services Centres set up under the Special Economic Zones Act, 2005.
- Composition of Authority: It will consist of nine members appointed by the central government Chairperson; four members to be nominated from RBI, SEBI, IRDAI and PFRDA; two members from amongst
  officials of the Ministry of Finance; two members to be appointed on the recommendation of a Selection
  Committee.
- **Functions:** Its major functions include Regulating financial products, financial services, and financial institutions in an IFSC.
- **Transaction in foreign currency:** As per the Bill, all transactions of financial services in IFSCs will be in such foreign currency as specified by the Authority, in consultation with the central government.
- Setting up an International Financial Services Centres Authority Fund: All grants, fees and charges received by the Authority and all sums received by the Authority from various sources, as decided by the central government will be credited to this Fund.

## 3.20. PRICING OF DRUGS

#### Why in news?

Recently, a Parliamentary Standing Committee on Chemical and Fertilizers submitted its report on the subject "Pricing of Drugs with special reference to Drugs (Prices Control) Order, 2013".

## Need for controlling the drug prices

- According to NSSO's 71<sup>st</sup> round survey (2014), around 72% in rural areas & 68% in urban areas of the total
  medical expenditure was incurred for purchasing medicines. Hence, the affordability of medicines is a
  crucial element in availing medical treatment by all sections of the people.
- Insurance covers only hospitalization bills and not the cost of drugs. More than 2/3<sup>rd</sup> of Out-of-Pocket expenditure is incurred on drugs.
- There is a **lack of awareness among the public about the free supply** of drugs by the Government as well as generic drugs. There exists a nexus between medical practitioners, chemists & pharmaceutical companies.

## **Development of Price Control Regime in India**

- Drugs (Price Control) Orders [DPCO] under **Essential Commodities Act 1955** aim to regulate the prices of bulk drugs and their formulations to make them more affordable.
- Initially, **Drug (Price Control) Orders** focussed primarily on limiting the overall profitability through **cost-based pricing**.

- National Pharmaceutical Pricing Policy 2012 put in place a regulatory framework for pricing of drugs to ensure availability of essential medicines at reasonable prices even while providing sufficient opportunity for innovation & competition to support the growth of industry.
  - National Pharmaceutical Pricing Policy (NPPP) is the policy governing price control and DPCO is the order by which price control is enforced.
  - NPPP was implemented through Drugs (Prices Control) Order 2013 [DPCO 2013]. The list of essential medicines, along with dosages & strengths, are included in Schedule-1 of DPCO & are subject to price ceilings.
- Under current mechanism, the Health Ministry draws up a National List of Essential Medicines (NLEM). Under NLEM 2015, a total 376 drugs are under price control.
- On the basis of the NLEM, National Pharmaceutical Pricing Authority (NPPA) fixes prices of formulations using the provisions of the DPCO and monitors its compliance.
  - All essential medicines (as defined under NLEM) are treated as scheduled formulations (under DPCO-2013). However, it does not mean that all drugs brought under price control are essential medicines
- In addition, the following safeguards were provided in Drug Price Control Order, 2013 to ensure effective control & regulation in price movement of scheduled & non-scheduled medicines and availability of the essential medicines:
  - The government has the power to bring any item of medical necessity under price control in public interest. This provision has been used to cap the prices of cardiac stents and knee implants.
  - The manufacturers selling scheduled formulations below the ceiling price are to maintain the sub-ceiling price.
  - The manufacturers proposing to produce a new combination/ strength/ dosage form of the Schedule 1 medicines need to take price approval before selling it.
  - The manufacturers have to take permission of the Government before discontinuing the manufacture of essential medicines.
- It is pertinent to note that the Drugs & Cosmetics
  Act, 1940 administered by the Ministry of Health
  and Family Welfare do not contain any provisions
  for pricing of drugs.

## **Principles of NPPP**

- **Essentiality of Drugs:** Regulation of prices of drugs is on the basis of essentiality of drugs as per NLEM
- Control of Formulations prices only: Only the prices
  of formulations (i.e., medicines used by consumers
  and not applicable to any upstream products such
  as bulk drugs or intermediaries) are to be regulated
  and not the prices of the Bulk Drugs (unlike Drug
  Policy of 1994).
- Market Based Pricing: Ceiling price is calculated based on 'market data' wherein Average Price to Retailer & local taxes are considered for pricing.

#### **Features of NPPP**

- Methodology of price fixation: Ceiling prices of essential drugs is fixed based on simple average of the prices of all brands of the drug (in a particular therapeutic segment), which have at least 1% market share.
- Revision of prices: Ceiling prices of scheduled medicines are allowed an annual increase as per the Wholesale Price Index (WPI)
- Non-scheduled formulations: Non-scheduled medicines are allowed a price increase of 10% per annum only, to control the overall prices of drugs.
- No separate price for imported drugs (if mentioned in Schedule 1 of DPCO).

#### **National Pharmaceutical Pricing Agency**

- It is an independent, executive body of experts under Ministry of Chemicals and Fertilizers formed in 1997.
- Its primary function is to fix & revise the prices of scheduled formulations under the Drugs (Prices Control) Order (DPCO).
- It also undertakes monitoring and enforcement of prices of scheduled drugs through market surveillance
  - Purchase of samples by NPPA officers all over India to ensure compliance
  - o Examine complaints by individuals / NGOs
- Failure to adhere to price limits makes companies liable to refund excess amount to NPPA.
- NPPA also provides inputs to Government on pharmaceutical policy and issues related to affordability, availability and accessibility of medicines.

Bulk drug or Active pharmaceutical ingredients (API)-means any pharmaceutical, chemical, biological or plant product including its salts, esters, isomers, analogues and derivatives, conforming to standards specified in the Drugs and Cosmetics Act, 1940 and which is used as such or as an ingredient in any formulation.

**Formulation** - means a medicine processed out of or containing one or more drugs with or without use of any pharmaceutical aids, for internal or external use for or in the diagnosis, treatment, mitigation or prevention of disease and, but shall not include any AYUSH medicine.

#### Why market-based pricing mechanism was introduced in DPCO, 2013?

Prior to 2013, the DPCO followed a cost-based pricing mechanism that was based on the **costs involved in manufacturing a medicine along with reasonable profit margins**. But, such a mechanism suffers from following flaws:

- **Difficult to put a reasonable limit on the profit margin:** In Pharma industry, the process of discovering a new drug involves a long process of attrition, where hundreds of compounds might trickle down to one or two medicines. Thus, research & development of new drugs takes a lot of time and incur huge cost and must be appropriately incentivized.
- **Different cost of inputs:** The same drug can be manufactured by many companies of different scale and thus, will have different cost of inputs. It is difficult to maintain uniformity in cost-based calculation of price.
- **Problems in auditing cost:** Many companies don't divulge the actual costs incurred in the manufacturing process for competitive reasons. The process of verification may lead to intrusive inspector raj and increase red-tapism.

Thus, the government has decided to go for market based pricing to bring in more transparency and to encourage innovation and research in the field.

## Prevailing issues in Drug Price Control regime in India

- Reduced supply of essential drugs: Price ceilings makes manufacturing of scheduled drugs unprofitable, so many pharmaceutical companies are moving to manufacture non-scheduled drugs especially smaller companies. This has dried up the supply side for many essential drugs. E.g.
  - Supplies of Furoped (a life-saving drug for children with heart ailments) had come down by almost 40% after NPPA had imposed a price ceiling.
  - o Similar arguments have been raised against capping of prices of cardiac stents and knee implants.
- Lack of control over non-essential drugs: NPPA doesn't have pricing control in case of non-essential drugs, which comprise around 90% of domestic Pharma sales. Many drugs needed against life threatening diseases such as breast cancer are not included.
- Nexus between Pharma companies and Hospitals: Hospitals overcharge for treatment within their facilities, not allowing patients to source drugs independently from distributors. Pharma companies keep the retail price of drug high but offer huge cut to hospitals for prescribing their brands

## **Recommendations of the Committee**

- National Essential List of Medicines:
  - Every medicine is essential from the context of treating the disease for which it is formulated. The present nomenclature of NLEM is not appropriate and may be reviewed & suitably modified.
  - Moreover, the existing list of essential & life-saving medicines must be enlarged.
  - Also, permanent representation should be given to NPPA in the core committee on to review and revise the National List of essential Medicines (NLEM).
- **Market based pricing:** An expert committee should be constituted to study the impact of market based and cost based pricing systems on drug prices in the country.
  - Many health experts suggest that cost based pricing would actually make the drugs cheaper.
- Jan Aaushadhi Stores: More functional Jan Aaushadhi stores should be opened in all districts and supply
  chain should be improved by appointing distributors and Carrying & Forwarding (C&F) agents. Awareness
  among people about Pradhan Mantri Bharatiya Janaushadhi Pariyojana (PMBJP) scheme should be
  increased.
- **Generic Drugs:** Doctors should be advised to prescribe generic name of the drug instead of the brand name.
- Stringent Penal Provisions: If the manufacturer does not refund the excess amount (charged above the
  ceiling price) within the prescribed time limit given by NPPA, cancellation of licenses of such companies may
  be considered. Similar action may also be taken on retailers who indulge in overcharging of drugs/medical
  devices.
- **Better Quality Control:** Adequate measures should be taken to considerably increase the number of samples of drugs to be tested to better identify and curb the sale/distribution of spurious/non-standard quality

- drugs. There is also urgent need for time bound decision on the prosecutions launched against manufacture, sale and distribution of spurious/non-standard quality drugs.
- Composition of NPPA: The current composition of NPPA needs to be expanded to include more full time expert members so that administrative efficiency of the organization is enhanced.

## 3.21. STRATEGIC PETROLEUM RESERVE

### Why in news?

Recently the Visakhapatnam Strategic Petroleum Reserve (SPR) facility was operationalized.

## **About Strategic Oil Reserve**

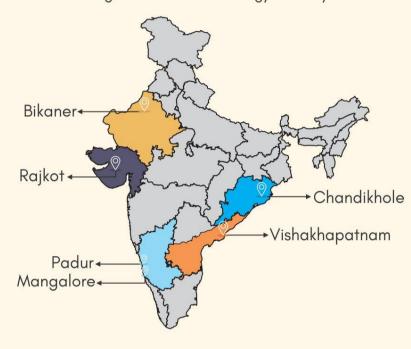
- It is a storage of crude oil which would act as a cushion during any external supply disruptions or supply demand mismatch shock.
- The global standard for strategic oil reserves, as set by International Energy Agency (IEA) and Integrated Energy Policy 2006 of India recommended that country should maintain a reserve equivalent to 90 days of oil imports for strategiccum-buffer stock purposes.
- The crude oil storages constructed in underground rock caverns and are located on the East and West coast of India.
- They are considered to be more environment friendly and incur less evaporation loss than ground level storage.
- Construction of storage facilities are maintained by Indian Strategic Petroleum Reserves Limited (a special purpose vehicle of the Oil Industry Development Board under Ministry of

Petroleum and Natural Gas).

- Presently, strategic reserves situated at Visakhapatnam (Andhra Pradesh), Mangalore (Karnataka), and Padur (Kerala).
- Moreover, project of three additional reserves is in pipeline at Chandikhol (Orrisa), Bikaner (Rajasthan) Rajkot (Gujrat).

# STRATEGIC PETROLEUM RESERVES

A big boost to India's Energy Security



## International Energy Agency (IEA)

- It was founded in 1974 to help countries collectively respond to oil supply disruptions.
- It is an autonomous body within the OECD framework.
- Only the OECD member states can become members of the IEA.
- India is **not a member** but has joined IEA as an association country.
- It publishes the World Energy Outlook (WEO).
- To become a member of the IEA, a country must have petroleum product reserves equivalent to 90 days of the previous year's net imports.

## 3.22. GLOBAL IP INDEX

## Why in news?

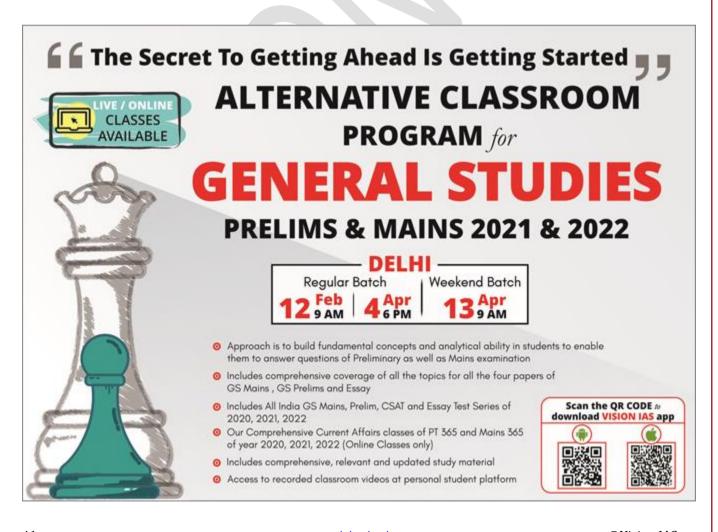
US Chamber of Commerce recently released its Global Intellectual Property Index.

#### Global IP Index 2019

- This is the seventh edition of the annual International IP Index which analyses the IP climate in 50 world economies, based on 45 indicators critical to an innovation-led economy.
- India climbed up 8 places to reach 36 as opposed to 44 in the 2018 edition.
- Despite the improvement, certain barriers continue to exist such as barriers to licensing and technology transfer, strict registration requirements, limited framework for the protection of biopharmaceutical IP rights, patentability requirements outside international standards, etc.

#### **Related News**

- In order to "Boost Intellectual Property culture" in defence sector an Intellectual Property Rights Facilitation (IPF) Cell has been established under the Department of Defence Production to promote self-reliance in IPR in Defence Sector.
- Department also launched the "Mission Raksha Gyan Shakti" to encourage Defence Public Sector Undertakings (PSUs) and Ordnance Factory Board to boost "IPR culture" in their respective organization to promote self-reliance in defence sector.



## 4. SECURITY

## 4.1. TERROR ACTIVITIES AND MUTUAL DISTRUST IN INDIA-PAKISTAN RELATIONS

## Why in news?

The recent terror attack on Indian security forces in Pulwama led to the India-Pakistan tensions on an all time high in the near past.

## **Background of Terrorism in India-Pakistan Relations**

- Stemming from the **two-nation theory** of Pakistan, the conflict of control over Jammu and Kashmir (Muslim Majority State) has led to multiple wars and skirmishes between the two countries.
- But, this two-nation theory was debunked after 1971, when Bangla speaking Muslim population formed a new country of Bangladesh.
- After 1971, Pakistan changed the course. This military incapacity of Pakistan, led it to change the course in fighting an asymmetric warfare against India. The Pakistani deep state (The Army and the ISI) nurtured terror as a state policy to deal with India.
- This policy has resulted in a mutual distrust between the two nations.
- Whenever, the governments of two nations have tried to indulge in confidence building measures (Bus Diplomacy, Sports, Summits, Kartarpur Corridor), the cross border terror activities have derailed such Indo-Pak dialogue.

Terror as a State Policy of Pakistan

Radical Groups (Mujahideens) as strategic assets to be used against its adversaries. This strategy was increasingly adopted after

Deep State in Pakistan has nurtured Islamic

- the success of US-funded Mujahideens in Afghanistan against USSR.
- There are primarily three types of such groups-
  - Ones who act against India- e.g. Lashkare-taiba, Jaish e mohammed
  - Ones who act against Afghanistan- e.g. Al-Qaeda and Taliban
  - The Pakistani Taliban (Tehreek-e-Taliban-Pakistan)- this group has become rogue fighting against the Pakistani establishment itself.
- Lack of Terror Crackdown- Pakistan has remained in denial mode and taken sham actions on its terror assets to international pressure.
- Also, Pakistani State does not have the capacity to deal with them militarily, if armed rebellion takes place since these groups have certain constituency in Pakistan.

## Measures taken by India to deal with Pak-sponsored terrorism

- Military Efforts- India has conducted strikes on terror camps in 2016 and 2019. Also, the state has launched the Mission All Out to liquidate all the terrorists in the Jammu and Kashmir.
- Economic Efforts- the Indian government has withdrawn "Most Favoured Nation" or MFN status accorded to Pakistan.
- Strategic Shift- India made an unprecedented direct reference to Baloch freedom struggle in the PM's Independence Day speech.

#### **Diplomatic Efforts-**

- All major countries including America, Russia, France, U.K and Australia have supported India on its counter-terror activity. Recently, Saudi Arabia and Organization of Islamic Countries also supported India's stand on terror.
- India has started to completely utilize its share of water under the Indus Water Treaty, by building dams in Jammu and Kashmir.
- In 2016, after the Uri Attack, India successfully isolated Pakistan in the 19<sup>th</sup> SAARC summit. Since then, no SAARC meeting has happened.

## Change in Indian approach towards Pak-based terror

- On 14<sup>th</sup> February, 2019- a vehicle bound suicide attack led to death of 40 CRPF personnel in Pulwama, Jammu and Kashmir.
- The links to this attack were again traced to Pakistan based terror group Jaish-e-Mohammed.
- On 26<sup>th</sup> February, the Indian Airforce hit a training camp of the group in **Balakot, Pakistan**.
- This marked a change in Indian response, as it was a pre-emptive strike on non-military, noncivilian target to fight terror.
- It was a mature decision to achieve the target, as well as, prevent any escalation towards war.
- International Measures on Terrorism- India has been pushing for the adoption of universal definition of terrorism and steps needed to tackle it under the Comprehensive Convention on International Terrorism (CCIT).

## Impact of Pakistan sponsored terror activities

- Holdback regional peace and security- such as recent attacks in India, Afghanistan and Iran. People-to-People Contact remains low and the region has become a hotbed for even a nuclear showdown.
- Roadblock in SAARC and trade- The South Asian Sub-continent remains deprived of regional trade, market access and prosperity on the lines of European Union and other blocs, due to Pakistan's obstructionism and terror politics.
- Diversion of resources towards arm procurement-With both the countries entering into an arms race, resources are diverted which could have been used to address other human demography challenges in the region such as poverty, diseases etc. For instance, in the period of 2000-2016, Jammu and Kashmir got Rs. 1.14 trillion in grants and much of it went for security.
- Small constituency being able to hold back majority interests- which includes Pakistan's deep state and small section in Kashmir Valley that ends up driving the overall discourse in the region.
- Rising discontent in the region due to lack of development in the region which creates a vicious cycle whereby youth from this region becomes more vulnerable towards radicalism.

## Issues in dealing with Pakistan's terror infrastructure

- It is difficult to completely isolate Pakistan in the international community for long time, because it has -
  - Large population
  - **Nuclear Capabilities**
  - Islamic nations backing Pakistan
- The organs of Pakistani state, be it the Executive or the Judiciary or the Civil Society- have been overshadowed by its deep state. Whenever in the past, any of the other organs tried to stand, they have been crippled by the deep state.

The illness of its Deep State run so deep, that it

has become incurable. If nuclear weapons come

in the hands of Terror groups, it may become a danger for international peace.

## Need to take a multi-pronged strategy towards terror infrastructure

- To deal with Pakistan based terror-
  - Inflict Costs of Terrorism- A consistent policy must be evolved, where the Pakistan deep state bears the brunt of sponsoring terror against India, as done in recent Air Strikes in Balakot.
  - Alert Defence Architecture- Indian defence forces have to keep the tempo up at all levels, be it at the Line of Control, Jammu and Kashmir or any other region.
  - Declare Pakistan as a Terror State- to put pressure on Pakistan. Here the need is to take the international community along with India.
  - Economic Measures- Pakistan has large foreign debt with a small foreign exchange reserves. If, the FATF further downgrades Pakistan to black list, its financial condition will be completely crippled. This pressure must be kept on Pakistan.
  - Talk with Pakistan's all weather allies- Need to talk with countries like China, Saudi Arabia, Turkey on India's stand on terror, be it on banning terrorists or working on counter-terror activities.
  - Cohesive Boycott- An integrated national response should be given to any terror activity emanating from Pakistan. There should be no soft engagement channels with Pakistan like Bollywood, Sports, Cultural activities.
- To improve India's counter-terror capabilities-
  - Kashmir Outreach- Further increase the democratization process, employment opportunities under schemes like Udaan, talks with radicalized youth.
  - Intelligence Gathering- Need for comprehensive intelligent reforms with focus on creating synergies among various agencies, forces and people.
  - NCTC- Consensus needs to be formed on National Counter Terrorism Centre, which will work as an federal anti-terror agency, as proposed after 2008 Mumbai attacks.
  - De-radicalization- Given the dangers of ISIS, lone wolf attacks, a national effort on de-radicalization needs to be taken up. Some states like Maharashtra, Karnataka have taken some steps in this direction.
  - Hit Terror Financing- All sources of money, which are used to fund terror activities, need to be dried. Actions such as recent crackdown on Jamaat-i-Islami could be done on other such organizations found in this regard.

## 4.2. PROJECT 75-I

## Why in news?

Recently the Defence Acquisition Council approved Indigenous construction of Six Project 75(I) submarines under strategic partnership model.

#### **Details**

- Project 75 India (P-75I) is follow-on of the Project 75 Kalvari-class submarines for the Indian Navy.
- Under this project, the Indian Navy intends to acquire six diesel-electric submarines, which will also feature advanced Air-independent propulsion (AIP) systems to enable them to stay submerged for longer duration and substantially increase their operational range.
- Six Scorpene-class submarines are currently being built under 'Project 75' of the Indian Navy.
- The submarines, designed by French firm Naval Group are being built by Mazagon Dock Limited in Mumbai.
- The first of these, INS Kalvari was commissioned in Dec 2017 and the second INS Khanderi is undergoing sea trials while the third INS Karanj is under construction.
- The P75I project is part of a 30-year submarine building plan that ends in 2030. According to this, India has to build 24 submarines 18 conventional submarines and six nuclear-powered submarines (SSNs).

### Strategic Partnership (SP) Model

- The SP model has four segments submarines, single engine fighter aircraft, helicopters and armoured carriers/main battle tanks which would be specifically opened up for the private sector.
- Under this policy an Indian private company would be selected in each segment which would tie up with shortlisted global Original Equipment Manufacturer (OEM) to manufacture the platforms in India under technology transfer.
- It was first suggested in 2015 by Dhirendra Singh Committee and was introduced by Defence Procurement Procedure 2016.
- A 49 per cent FDI cap has been kept for setting up ventures under this for the production of defence platforms and the companies have to be in control of Indian entities.

#### **Potential Benefits**

- The SP model, if implemented well, is likely to have a number of benefits for both the private sector and the larger Indian defence industry.
- The private sector would have the opportunity to participate in some big ticket contracts estimated to be worth over two lakh crore rupees in the initial phase of execution ¬– which were hitherto reserved for the DPSUs and OFs.
- The model would also go a long way in bridging the long-standing trust gap between the Indian private sector and Ministry of D, with the latter perceived to be friendlier toward public sector entities.
- Further private sector companies are expected to exploit their dynamism, competiveness, profit orientation, and exposure to the civilian sector for efficient utilisation of the technology, manpower and infrastructure developed in the process.

## Concerns

- There is a lack of institutional capacity, governance and policy and legal issues to realise it on the ground.
- Another is the long-term viability of SPs largely due to the privileged position enjoyed by public sector entities as govt.
   tends to awards big contracts to the public sector.
- Private companies have opposed the clause that there should be only one strategic partner per military segment. Having too few companies could reduce competitiveness.

## 5. ENVIRONMENT

## 5.1. HINDU KUSH HIMALAYA ASSESSMENT REPORT

#### Why in news?

The Kathmandu-based International Centre for Integrated Mountain Development's (ICIMOD) "Hindu Kush Himalaya Assessment" reveals that more than one-third of the glaciers in the region could retreat by 2100, even if the global temperature rise is capped at 1.5°C.

### **Key Findings of the Assessment Report w.r.t Glaciers**

Hindu Kush-Himalaya-Karakoram Glaciers: Since the mid-18th century, glaciers in the extended HKH have been, on average, in retreat. Since the 1950s, only reductions in glacier area (or shrinkage) have been observed.

#### **Area Changes**

- Since 1970s, nearly 15% of the glaciers in the HKH has disappeared. Eastern Himalaya glaciers have tended to shrink faster than glaciers in the central or western Himalaya.
- In contrast to the Himalayan glaciers, on average, glacier areas in the Karakoram have not changed significantly. Given the context of glacier retreat throughout the rest of the extended HKH region, this behaviour has been designated the 'Karakoram anomaly'.
- o Area loss also leads to glacier fragmentation; the number of glaciers in the Himalaya is reported to have increased over the past five decades.
- Mass Changes: Glaciers in the extended HKH show mass loss since at least the 1970s.

## MAY DAY IN THE WORLD'S THIRD POLE

Hindu Kush Himalayas, along with the Tien Shan mountains in Central Asia, represents the largest area of permanent ice coveroutside the two poles of our globe, and is thus also referred to as the 'third pole'.

The Climate Prognosis		
Best Case Scenario	Limited Public Action	Business as Usual
If Emissions are:		
Slashed	Contained	Not Checked
1.5°C Global average surface warming	2°C Global average warming	4-5°C Global average warming
2.1°C temperature rise in Hindu Kush Himalaya	2.7°C temperature rise in Hindu Kush Himalaya	5-6°C temperature rise in Hindu Kush Himalaya
A third of ice lost by 2100	Half of the ice lost by 2100	At least <b>2/3</b> of ice lost by 2100

River Basin Population (in million) 580 Ganga | 268 Indus 68 Brahmaputra

Biodiversity 4 Global hotspots 35,000+ plant species | 200+ animal species

## Hindu Kush Himalaya Total Area 4.2 Million Sq. km Afghanistan, Pakistan, India, Countries China, Nepal, Bhutan, Myanmar, Bangladesh Amu Darya, Indus, Brahmaputra, Irrawaddy, Ganga Major River Salween, Tarim, Basins Yangtze, Yellow River, Mekong Estimated number of People at disaster risk in India

Overview of The

337.8 Million

## **Glacier Projections**

- Glacier volumes are projected to decline by up to 90% through the 21st century in response decreased snowfall, increased snowline elevations, and longer melt seasons.
- Even if warming can be limited to the ambitious target of +1.5 °C (Paris

## **Elevation-dependent warming (EDW)**

- It is one of the expressions of global warming wherein there is an enhancement of warming rates with elevation.
- One of the possible reasons could be that reductions in mountain snow cover exposes the dark coloured earth beneath. This reduces the surface albedo and increases the absorbed solar radiation that can lead to elevation-dependent amplification of warming via the snow albedo feedback (SAF).

Climate Deal), this will lead to a 2.1°C rise in the HKH region due to elevation-dependent warming. In such a scenario, the region will lose 36% of its glaciers, with more than half of glacier ice lost in the eastern Himalaya.

#### **Impact of HKH Warming**

- River flows and water availability: Melting glaciers will increase river flows, pushing up risks of highaltitude lakes bursting their banks causing floods (glacial lake outburst floods (GLOFs)). From 2060s, however, river flows will decline.
- On Western Disturbances: These are also likely to see increased variability.
- Drying Springs: As per the report of the NITI Aayog, 30% of springs in the Indian Himalaya have dried up due to reasons including receding glaciers.
- Impact on Monsoon: The HKH region is also crucial
  as it controls the monsoon system which South
  Asia relies on for most of its rainfall. Shifting
  monsoon patterns will lead to intense precipitation
  which would increase the risk of floods, landslides
  and soil erosion.
- It may also cause **sea level rise** with its own consequences.

Other Major Findings of the Assessment Report: The HKH mountains provide two billion people a vital regional lifeline via water for food (especially irrigation), water for energy (hydropower), and water for ecosystem services (riparian habitats, environmental flows, and rich and diverse cultural values).

- International Centre for Integrated Mountain Development (ICIMOD): It is a regional intergovernmental learning and knowledge sharing centre serving the eight regional member countries of the Hindu Kush Himalaya Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan and based in Kathmandu, Nepal.
  - It supports regional transboundary programmes through partnerships with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub.
  - o It aims to strengthen networking among regional and global centres of excellence.
  - Overall, it is working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream, now and for the future.
- The Hindu Kush Himalayan Monitoring and Assessment Programme (HIMAP) is a long-term, integrated science-policy initiative coordinated by the International Centre for Integrated Mountain Development (ICIMOD) that aims to promote enabling policies, sustainable solutions and more robust regional cooperation in the HKH region to sustain mountain environments and livelihoods.
- Global Warming and Climate Change: The HKH have shown a rising trend of extreme warm events; a falling trend of extreme cold events; and a rising trend in extreme values and frequencies of temperature-based indices.
  - o Climate change is further enhanced by **short-lived climate pollutants** such as black carbon, which is emitted in large quantities in regions upwind of the HKH (especially India and China).
- Losing Biodiversity: 70-80% of the region's original habitat has been lost and that may increase to 80-87% by 2100. A quarter of endemic species in the Indian Himalayas alone could be wiped out by 2100.
- Energy insecurity: More than 80% of the rural population rely on traditional biomass fuels for cooking and about 400 million people still lack basic access to electricity. The hydropower potential of nearly 500 GW remains untapped.

#### **Way Forward**

- International agreements must mitigate climate change through emission reductions to reduce and slow cryospheric change.
- To better monitor and model cryospheric change and to assess spatial patterns and trends, researchers
  urgently need expanded observation networks and data-sharing agreements across the extended HKH
  region. This should include in situ and detailed remote sensing observations on selected glaciers, rapid
  access to high-resolution satellite imagery etc.
- **Improved understanding of cryospheric change and its drivers** will help reduce the risk of high-mountain hazards.

## 5.2. POLAR VORTEX

## Why in news?

Recently, US mid-west experienced sub-zero temperatures due to a breakdown in the polar vortex.

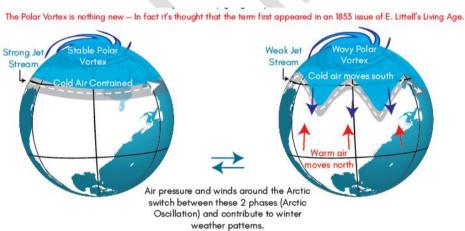
## What is a polar vortex?

- It is a large area of low pressure and cold air surrounding the Earth's North and South Pole.
- The term refers to the **counterclockwise flow (clockwise over south pole)** of air that helps keep the colder air close to the poles.
- There are not one but two polar vortexes in each hemisphere.
  - One exists in the lowest layer of the atmosphere, the **troposphere**. The tropospheric polar vortex is the one that affects our weather.
  - The other exists in the second-lowest, called the stratosphere. It is much more compact than its tropospheric counterpart.
  - If the two polar vortexes line up just right, very deep freeze conditions may occur.
- The boundary of the polar vortex is really the boundary between the cold polar air to the north, and the warmer sub-tropical air (considering Northern

Hemisphere). And that boundary is actually defined by the **polar front jet stream**- a narrow band of very, very fast-moving air, moving from west to east.

 But that boundary shifts all the time. It shrinks in summer, pole-ward while in winter, the polar vortex sometimes becomes less stable and expands, Stratospheric Polar vortex

Tropospheric Polar Vortex



sending cold air southward with the jet stream. This is called a **polar vortex event** ("breaking off" of a part of the vortex).

• The break in polar vortex appears to be linked to the long and chilly winter in the north India this year.

## Why cold air plunges south (in Northern Hemisphere)?

- Greenhouse gas emissions has **amplified Arctic warming** resulting into dramatic melting of ice and snow in recent decades, which exposes darker ocean and land surfaces that absorb a lot more of the sun's heat.
- Because of rapid Arctic warming, the north-south temperature difference has diminished. This reduces
  pressure differences between the Arctic and mid-latitudes, weakening jet stream winds which tend to
  meander.
- Large north-south undulations in the jet stream generate wave energy in the atmosphere. If they are wavy and persistent enough, the energy can travel upward and disrupt the stratospheric polar vortex. Sometimes this upper vortex becomes so distorted that it splits into two or more swirling eddies.
- These "daughter" vortices tend to wander southward, bringing their very cold air with them and leaving behind a warmer-than-normal Arctic.

# 5.3. INDIAN SUNDARBANS- A WETLAND OF INTERNATIONAL IMPORTANCE

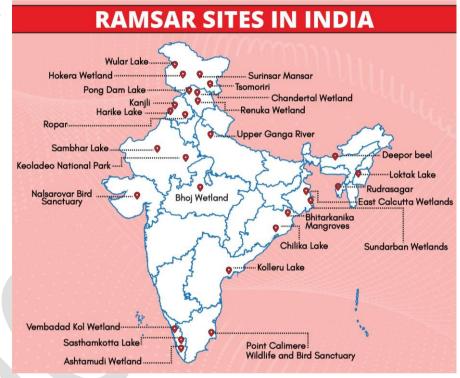
## Why in News?

India has designated Sundarban Reserve Forests as the wetlands of International Importance, making it the 27<sup>th</sup> site in India.

#### More on Sundarbans

The Indian Sunderbans, with 2,114 sq. km. of mangrove forests, comprise almost 43% of the mangrove cover
in the country according to a 2017 Forest Survey of India report. It is the largest tidal halophytic mangrove
forest in the world.

- It is located in delta region of Padma, Meghna and Brahmaputra river basins.
- Sundarbans has now become the largest Ramsar Site in India.
- The Sundarbans was made a UNESCO World Heritage Site in 1987.
- They are the only mangrove habitat which supports a significant population of tigers (Royal Bengal Tigers), and they have unique aquatic hunting skills.
- The Site is also home to a large number of rare and globally threatened species such as the critically endangered northern river terrapin, the endangered Irrawaddy dolphin, and the endangered fishing cat.



• Threats to Conservation: climate change, sea level rise, widespread construction, clearing of mangrove forests for fisheries, establishment of coal-based thermal power plant just a few kilometres north of the reserve forest in Bangladesh.

#### **About Wetlands of International Importance**

- It is declared under **Ramsar Convention on Wetlands of International Importance**, an intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources.
- It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Ramsar Sites acquire a new national and international status. They are recognized as being of significant value not only for the country or the countries in which they are located, but for humanity as a whole.
- There are currently over 2,200 Ramsar Sites around the world. They cover over 2.1 million square kilometres, an area larger than Mexico.
- Now there are 27 Ramsar Site in India, including Sundarbans.
- **Chillika lake** was designated the first Ramsite in India in 1981.

## The Montreux Record

- It is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.
- It is maintained as part of the Ramsar List.
- Sites from India included in this are Keoladeo National Park, Rajasthan and Loktak Lake, Manipur.

- Some criteria for identifying Wetlands of International Importance include:
  - o Sites containing representative, rare or unique wetland types
  - Sites of international importance for conserving biological diversity Criteria based on species and ecological communities
  - o Specific criteria based on waterbirds
  - o Specific criteria based on fish etc.

## 5.4. KELP FORESTS

## Why in News?

According to a recent study, Climate change could lead to decline of underwater kelp forests.

## **About Kelps**

• They are large brown algae seaweeds. They grow in "underwater forests" (kelp forests) in shallow oceans.

 Generally speaking, kelps live further from the tropics than coral reefs, mangrove forests, and warm-water seagrass beds.

 Although kelp forests are unknown in tropical surface waters, a few species have been known to occur exclusively in tropical deep waters.

 Kelps and coral reefs are composed of algae that grow in the shallow parts of the ocean in warm and sunny waters. However, kelp forest grows in nutrient-rich waters while corals can develop in low nutrient waters.



 The environmental factors necessary for kelp to survive include hard substrate (usually rock), high nutrients, clear shallow coastal waters and light.

• The productive kelp forests tend to be associated with areas of significant oceanographic upwelling.

• They are known for their **high growth rate**. Some varieties grow as fast as half a metre a day, ultimately reaching 30 to 80 metres.

 Kelp forests are recognized as one of the most productive and dynamic ecosystems on Earth. Smaller areas of anchored kelp are called kelp beds.

## **Importance of Kelp Forests**

- They are considered as Keystone Species and their removal is likely to result in a relatively significant shift in the composition of the community and perhaps in the physical structure of the environment.
- marine species. In some cases, up to 60% of carbon found in coastal invertebrates is attributable to kelp productivity. It may be consumed directly or colonised by bacteria that in turn are preyed upon by consumers.
  - Also, the rich fauna of mobile invertebrates in kelp beds makes this an important habitat in the diet of fish species. They provide a foraging habitat for birds due to the associated and diverse invertebrate and fish communities present.
- It increases productivity of the near shore ecosystem and dumps carbon into that ecosystem. Kelp primary production results in the **production of new biomass, detrital material** etc.
- It slows down the flow of the water which is important in situations where animals are spawning and releasing their larvae.
- They are natural breakwaters and prevent coastal erosion.
- They can influence coastal oceanographic patterns and provide many ecosystem services.
- It is an important source of **potash** and **iodine**. Many kelps produce **algin**, a complex carbohydrate useful in industries such as **tire manufacturing**, **ice-cream industry**.

## **Climate Change and Kelp Forest**

- Ocean warming and ocean acidification can cause changes in the microbiome on the surface of Kelp, leading to diseasesymptoms like blistering, bleaching and eventually degradation of the kelp's surface.
- This will affect the **Kelp's ability** to **photosynthesize and potentially survive**.
- This could impact kelp forests around the world and potentially putting the marine biodiversity at risk, which thrives on these forests.

# 5.5. LANDSCAPE-LEVEL APPROACH TO ADDRESS HUMAN-ELEPHANT CONFLICTS

## Why in News?

A study involving close monitoring of elephants on daily basis for two years in Karnataka has concluded that landscape-level management is necessary for mitigating human-elephant conflicts.

## **Background**

- Rising human population has altered natural forest ecosystems to a greater extent. There are large coffee plantations, tea estates, monoculture plantations have come up adjoining the 'Protected areas'.
- Elephants tend to move across diverse habitats for feeding and breeding and often tend to venture these human-modified landscapes which ultimately lead to human-animal conflict.
- Researchers tracked movement of elephants across habitats and collected GPS reading during the wet and dry season of 2015 to 2017.
- There is a common belief that elephants specifically move towards agricultural lands in the dry season in search of water and forage.

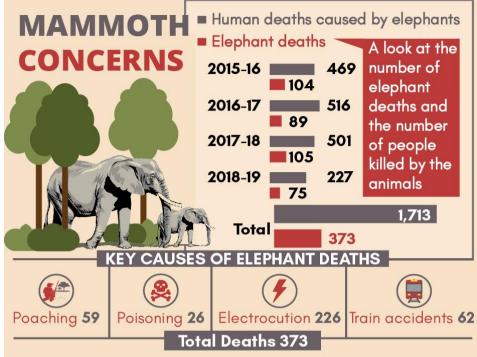
## What is Landscape-Level Approach?

- As per the Food and Agricultural Organisation (FAO), Landscape level strategy deals with large-scale processes in an integrated and multidisciplinary manner, combining natural resources management with environmental and livelihood considerations.
- It can be used as a viable solution for minimising the Human-Elephant conflicts.

# How the Landscape-Level Strategy helps in minimising Human- Elephant Conflict?

The 'landscape approaches' are increasingly seen as imperatives to protect ecosystems as well as reducing man-animal conflict. It involves:

Scientific management of Monoculture
 Plantations: Since elephants prefer to stay in
 monoculture plantations (for example
 monoculture plantations of Acacia, Eucalyptus),
 forest departments should think strategically



#### **Related news**

The Asian Elephant Alliance has come together to secure 96 existing corridors used by elephants across 12 States in India by raising £20 million in the next 10 years.

#### **Asian Elephant Alliance**

- It was launched in July 2015 in London, United Kingdom.
- It is an umbrella of five NGOs-Elephant Family, International Fund for Animal Welfare (IFAW), IUCN Netherlands, World Land Trust (WLT) and Wildlife Trust of India (WTI).
- It aims to secure a safe future for the wild elephants of India, which make up approximately half of the world's wild Asian elephants.

# Pattern of Elephant movement during Wet and Dry Season (as observed)

- During hotter months/dry period, natural vegetation areas such as monoculture plantations and forest fragments are important resource areas which provided shelter for elephants.
- Coffee plantations were used more frequently by elephants in the dry season and natural vegetation was visited frequently in dry season.
- However, most of the crop damage by elephants occurs in paddy fields and it can be seen during late wet and early dry seasons, which peculiarly established that agriculture habitat was more frequently used by the elephants during wet season.

when to clear-fell these plantations. If these places are not available, elephants will start using **agriculture habitats** more frequently which may aggravate human-elephant conflict situation.

- Regular Monitoring of land-use practices: Proper planning needs to be done before making any change in the land –use practices in habitats such as coffee, agriculture or forest patches as it may have negative effects on elephant conservation or aggravate human-elephant conflict.
- Preserving Forest remnants and monoculture refuges: These refuges are vital for elephants and helpful in containing conflicts as most of the forest is fragmented.



## 5.6. CHEETAH REINTRODUCTION

### Why in news?

The National Tiger Conservation Authority (NTCA) has reported to the Supreme Court that African cheetahs, to be translocated in India from Namibia, will be kept at Nauradehi wildlife sanctuary in Madhya Pradesh

### **Background**

- India has tried re-introduce Cheetah since early 2000s. However, Iran refused India's request to either clone Asiatic cheetah or transport live pair to India. Hence, it was decided to introduce African Cheetahs to India instead.
- Project Cheetah was launched in 2009 and expert committee short listed some sites where Cheetah could be reintroduced. These were Kung-Palnur and Nauradehi Will

#### **About African Cheetah**

- It is a large cat that occurs in Southern, North and East Africa. Also some localities in Iran.
- It inhabits different habitats like dry forests, scrub forests, and savannahs
- IUCN status: Vulnerable (Asiatic Cheetah

   Critically endangered)
- India was once home to many cheetahs, but it was declared extinct in India in 1952 and last spotted in Chhattisgarh 1947.
- The only mammal to become extinct in India in last 1,000 years.

reintroduced. These were **Kuno-Palpur** and **Nauradehi Wildlife Sanctuary** in Madhya Pradesh, **Velavadar National Park** in Gujarat and the **Shahgarh bulge** in Rajasthan

## How Cheetah Re-introduction will help India?

- Help restore dry land ecosystems- as the cheetah is the flagship species of the grasslands, scrublands and open forests. Being a top carnivore, the cheetah is a major evolutionary force that shapes ecosystem functions.
- **Enhances species diversity-** With great speed and dexterity, the cheetah is known for being an excellent hunter, its kills feeding many other animals in its ecosystem—ensuring that multiple species survive.
- Better control over livestock- India is home to the world's largest free-roaming populations of livestock.
   Bringing back the cheetah will focus attention on pastoralism, and in doing so, help restore India's natural heritage.
- **Boost ecotourism-** Enhance livelihood options and living conditions among the local communities where the cheetah is introduced.
- If successful, this project will make India the **only country in the world** to host six of the world's eight large cats, including lions, tigers, jaguars, panthers and leopards.

## Issues with the plan of Cheetah Re-introduction

- May harm the current species- Some wild life experts are on the view that the introduction of African
  cheetah may act as an alien species to the native ecosystem, which might generate negative effects on
  indigenous wild life species.
- Lack of required habitat- A cheetah requires a large area to support itself. India has very few natural grasslands left.
- Lack of prey base- A cheetah's main prey in India in earlier times was the Indian Gazelle or Chinkara which is diminishing in number due to ecological succession.
- **Human-Animal Conflict-** as humans have taken over grasslands and use them for agriculture.
- Rehabilitation of people- many villages will have to be shifted to make sufficient space for Cheetah's habitat.

How ecological succession affects Chinkara's population? As humans take over grasslands and use them for agriculture, over time, such landscapes develop more woodland into which species like chital, wild pig and Sambur move in and species like the Chinkara diminish.

## **Way Forward**

- Local communities should be counseled on living in harmony with wildlife.
- There is need to utilize global expertise, such as of **Cheetah Conservation Fund (CCF)** in research and conservation of cheetahs. CCF is an international non-profit organization headquartered in Namibia and is internationally recognized center of excellence in the conservation of cheetahs and their ecosystems.

## 5.7. INDUS DOLPHIN

#### Why in news?

Recently, the Government of Punjab declared the Indus Dolphin as Punjab's 'State Aquatic Animal'.

## **About Indus Dolphin**

- IUCN Conservation Status- Endangered.
- **Features-**They are freshwater, and **functionally blind species** of dolphins which rely on echolocation to navigate communicate and hunt prey including prawns, catfish and carp.

#### **Related News**

The Punjab Government also declared the **Kanjli Wetland and Kali Bein** as a wildlife conservation reserve.

- Distribution
  - o Except for a tiny, isolated population of about 30 in **India's Beas River** (185 km stretch between Talwara and Harike), Indus river dolphins live exclusively in the Indus river in Pakistan.
- The Punjab Government has stated that Indus river dolphin would be the key species for conservation of the Beas eco-system.

### Threats faced by Indus Dolphin

- Unintentional killing through entanglement in fishing gears and overexploitation of prey or Fisheries bycatch, mainly due to the widespread use of non-selective fishing gear.
- **Additional Information**
- Punjab- Blackbuck (State Animal), Northern Goshawk (State Bird), Sheesham (State tree), Gladious (State flower).
- **Directed harvest** for meat and for dolphin oil which is used as a fish attractant and for medicinal purposes.
- Water development projects (e.g. water extraction and the construction of barrages, high dams, and embankments) have resulted into genetic isolation of dolphin populations.
- River Pollution- Punjab witnessed the worst ever contamination due to a molasses leak in the Beas.

## 5.8. THE NEW DELHI DECLARATION ON ASIAN RHINOS 2019

## Why in News?

Recently, 2<sup>nd</sup> Asian Rhino Range Countries (i.e. India, Nepal, Bhutan, Indonesia and Malaysia) meeting, has signed- The New Delhi Declaration on Asian Rhinos 2019.

#### **About the Declaration**

• It intends to conserve and review the population of the Greater one-horned, Javan and Sumatran rhinos (three species of Asian Rhino) every four years to reassess the need for joint actions to secure their future.

• The declaration outlines a series of strategic actions including **Trans-boundary collaboration** among India, Nepal, and Bhutan for one-horned rhino; engagement of the **local communities**; initiate proactive monitoring on potential adverse **impacts of climate change**; accelerate **natural and conservation breeding** of Sumatran rhino etc.

### **Related Facts**

- Javan and Sumatran rhinos are currently classified as critically endangered.
- The Sumatran rhino, the smallest of all rhino species and the **only Asian rhino with two horns**, became **extinct in the wild** in Malaysia.

#### The Great One-Horned Rhinoceros

- The great one-horned rhino or Indian Rhino is the largest of the rhino species found commonly in Nepal, Bhutan, Pakistan and India.
- In India, it is found in Assam Kaziranga National Park, Manas National Park, Pobitora Reserve Forest, Orang National Park, Laokhowa Reserve Forest etc.
- It is listed as **Vulnerable on the IUCN Red List** and is protected under the Schedule I of the Wildlife Protection Act. It is threatened by poaching, habitat destruction, flooding etc.
- Indian Rhino Vision 2020 It has been implemented by Assam State Government with the Bodo autonomous council as an active partner and supported by WWF- India. The aim is to increase the number of Rhinos and provide long term viability of the one-horned rhino population.
- The government of Assam has raised the Special Rhino Protection Force from people living in the fringe areas of the Kaziranga National Park.

## 5.9. LOW CARBON STRATEGY FOR RENEWABLE ENERGY INTEGRATION

## Why in News?

Recently NITI Aayog, International Energy Agency (IEA) and Asian Development Bank (ADB) released a report titled "Low Carbon Strategy for Renewable Energy Integration".

## Why do we need renewable Energy Integration?

- While economic, environmental and energy security concerns have been the key influencers for promotion and development of Renewable Energy sources, these sources are characterized by inherent issues like variability, intermittency etc. which impose a threat on effective management of the system operation and management.
- The **need to effectively integrate** such large-scale Renewable Energy in the Grid has been one of the key concerns for all stakeholders including the policy makers, planners and regulators.
- Currently, India's power grid is one of the world's largest operational synchronized networks with about 334 gigawatt (GW) of total installed capacity of which variable renewable energy capacity comprises 63 GW (19.5 GW solar photovoltaic [PV] and 32.95 GW wind).

### **Challenges in integrating Variable Renewable Energy**

#### Technical Challenges

 Increasing flexibility of the Conventional Plants: Current conventional sources are old and are technological incapable of responding to quick ramp up and back down emerging from fluctuations in RE generation.

#### Variable Renewable Energy

- It is renewable energy source that is nondispatchable due to its fluctuating nature, like wind power and solar power, as opposed to a controllable renewable energy source such as hydroelectricity, or biomass etc.
- o **Forecasting and Scheduling**: Solar and wind are dependent on highly variable weather conditions and shall lead to high fluctuations in the power injected. Forecasting (both Load, RE generation as well as Net Load) is therefore essential for ensuring resource adequacy during operation and grid security. These fluctuations can only be predicted fairly accurately up to a few days in advance and forecasts improve greatly if they are only for a few hours ahead.
- Improved Market Operations: As the renewable sources are concentrated in some of the States, adequate market operations and support services needs to be put in place which would encourage interstate trading of the RE. Currently, there are significant barriers for such inter-state trading of RE

including lack of reserve sharing between control areas / States, absence of products / markets for primary and secondary response for ancillary services, etc.

- Lack of Regulatory and Policy framework: The current market rules and regulations needs to be modified to achieve operational efficiency in system with increasing penetrations of variable RE. Electricity being a concurrent subject, limited initiatives have been undertaken at the State level. Not many states have undertaken adequate steps for aligning the state regulations with the central regulations.
- Other Challenges: They are more modular and are deployed in a much more distributed fashion. Unlike fossil fuels, wind and sunlight cannot be transported and locations with the best resources are frequently at distance from load centres.

#### Steps that needed to be taken for integration of renewable power within the synchronized Indian grid

## Upgrading grid technology

- Ensuring effective scheduling and dispatch at the state level in all states and enhance power exchanges with neighboring states for better access of least cost generation.
- Deploy sensors for real-time data on grid conditions coupled with sophisticated analytical tools to provide necessary information for grid operations.
- o Renewable generators to provide grid services such as Automatic Generation Control and operational data

#### Upgrade grid operational protocols

- Upgrade scheduling and dispatch to 5 minutes from current 15 minute basis.
- State regulators should upgrade their grid code to ensure renewable energy addition does not affect the grid and acknowledge attributes unique to renewable generators.

## Improved market design and renewable energy procurement

- Create model Power Purchase Agreement for renewable that move away from must -run status and employ alternative approaches to limit financial risk.
- Allow buying/selling of power at rapid speed at power exchange to manage sudden ramping up and down.
- o Enable fair price discovery and compensation of flexible resource providers.

## Promote flexible demand and balancing resources system with a high share of renewable require access to sufficient flexible resources

- Create policy and regulatory incentives to access the full capabilities of existing coal, gas turbine, hydro and pumped storage generators.
- o Improve the flexibility associated with conventional generating units to accommodate the variability and uncertainty of generation from renewables.
- Address integration issues on the distribution grid, including rooftop PV and utility-scale wind and solar that are connected to low-voltage lines.

## 5.10. RAINWATER HARVESTING IN METROPOLITAN CITIES

## Why in news?

The Parliamentary Standing Committee on Urban Development submitted its report on "Rainwater Harvesting in Metropolitan Cities".

## **Need for Rain Water Harvesting**

- Increasing demand due to rapid Urbanization- As per Census 2011, 37.7 cr people lives in urban population, which may grow to 57.5 cr by 2030. As a consequence of this phenomenon, water demand in urban areas is increasing rapidly.
- Increasing Concretization in urban areas- leading to less available space for water percolation and recharge in ground.

#### **Best Practices of Rain Water Harvesting**

## Chennai-

- Has a separate legislation making RWH mandatory.
- Massive awareness campaign "Conserve Water where It falls".
- Dedicated RWH cell- "Rain Centres".
- 1<sup>st</sup> city to become 100% rain water compliant.

### Delhi

- Delhi Jal Board gives 10% rebate in water bills for providing RWH in a house.
- Financial assistance of 50% of total cost for adopting rainwater harvesting by the Residents Welfare Associations (RWAs) and neighborhood societies.

- Inefficient use of water resources- The rainfall on the surface tends to flow and as large as 85,565 MCM of surplus run-off can be harnessed to augment the ground water.
- Over-dependency on Ground Water- nearly 30% of urban water supply and 70% of rural water supply comes from groundwater.

Techniques of Rainwater Harvesting in Urban Areas- NITI Aayog has outlined the following techniques-

- Roof Top Rain Water Harvesting- A container needs to be constructed or placed beneath the roof level, which will store the rainwater intercepted and redirected towards it through pipes made out of wood, bamboo, or PVC.
- Driveway Rain Off Harvesting- This technique is useful where the built-up area is much larger, such as office complexes. The rain water is harvested by intercepting it with the help of a shallow gutter or a bump near the gate and directed to a recharge well.

#### Recommendations

- Install Rain Water Harvesting Systems mandatorily- in all Government and public premises such as done by West Bengal and Tamil Nadu.
- Launch a mega programme on Rain Water Harvesting- on the analogy of 'Swachh Bharat Mission'.
- Greater compliance in environmental clearance- where measures taken to ensure rain water harvesting should be ensured before giving any clearance.
- Use of satellite technology for mapping of ground water for assessing water needs of urban towns.
- Stricter enforcement of laws relating to groundwater usage- Currently, 70-80% of states have passed legislation for protecting water bodies and mandating rainwater harvesting as per the Niti Aayog.
- **Drafting a National Law** for Rain Water Harvesting and on Storm Water.
- **Need for use of the unutilized space** in Nalas in various cities for rain water harvesting.
- **Promotion of traditional practices of Roof Water Harvesting and simple technologies.**
- Convert Rain Water Harvesting into a peoples' movement in a big way- such as the Ministry had organized 'India Water Weeks' in 2012, 2013 and 2015 to resolve water related issues and create awareness on ground. Similarly, Jal Bachao, Vedio Banao, Puruskar Pao Campaign have been undertaken.

# 5.11. PRADHAN MANTRI JI-VAN (JAIV INDHAN- VATAVARAN ANUKOOL FASAL AWASHESH NIVARAN) YOJANA

#### Why in news?

Recently Cabinet Committee on Economic Affairs approved Pradhan Mantri JI-VAN yojana.

#### Details of the scheme

- The scheme under the Ministry of Petroleum & Natural Gas (MoP&NG) will provide financial support to Integrated Bioethanol Projects using lignocellulosic biomass and other renewable feedstock.
- 12 commercial scale and 10 demonstration scale Second Generation (2G) ethanol projects will be provided viability gap funding support over the next six years in two phases.
- It also seeks to increase Research & Development in this area.
- The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs) to further enhance the blending percentage under Ethanol Blended Petrol Programme.
- Centre for High Technology (CHT), a technical body under the aegis of MoP&NG, will be the implementation Agency for the scheme.

Some Traditional Methods of Rainwater Harvesting in states- In India, rainwater harvesting has been in practice for more than 4000 years.

- Himachal Pradesh- Kul, Kuhi
- Rajasthan-Baoris, Jhalaras, Johad, Nadis
- Maharashtra-Bhandaras
- Bihar- Ahar-Pynes
- Karnataka- Kere
- Pradesh- **Bundela** Madhya Tank, Chandela Tank, Katas, Pat
- Tamil Nadu- Eri, Ooranis
- Nagaland- Cheo-ozihi
- Andhra Pradesh- Cheruvu
  - West Bengal- Dungs

#### Benefits of the scheme

- reducing import dependence by way of substituting fossil fuels with Biofuels.
- achieving the GHG emissions reduction targets through progressive blending/ substitution of fossil fuels.
- addressing environment concerns caused due to burning of biomass/ crop residues.
- improving farmer income by providing them remunerative income for their otherwise waste agriculture residues.
- creating rural & urban employment opportunities in 2G Ethanol projects and Biomass supply chain.
- contributing to Swacch Bharat Mission by supporting the aggregation of non-food biofuel feedstocks such as waste biomass and urban waste.

**Bio ethanol:** It is an alcohol produced from fermentation of carbohydrate and cellulosic material of crops and other plants and grasses. It is generally used as an additive to increase octane number of fuel.

#### Generation of biofuels

- First Generation Biofuels: It uses the food crops like wheat and sugar for making ethanol and oil seeds for bio diesel by conventional method of fermentation.
- **Second Generation Biofuels:** It uses non-food crops and feedstock such as Wood, grass, seed crops, organic waste are used in fuel preparation.
- Third Generation Biofuels: It uses specially engineered Algae whose biomass is used to convert into biofuels. The greenhouse gas emission here will be low in comparison to others.
- Fourth Generation Biofuels: It aimed at not only producing sustainable energy but also a way of capturing and storing CO2.

**Lignocellulosic biomass:** refers to plant biomass that is composed of cellulose, hemicellulose, and lignin. Lignocellulosic materials including agricultural wastes, forestry residues, grasses and woody materials have great potential for biofuel production.

#### **Ethanol blending in India**

- Government had launched Ethanol Blended Petrol (EBP) programme in 2003, under which OMCs are to blend upto 10% of ethanol in Petrol.
- Despite govt efforts, the highest ever ethanol procurement stands around 150 crore litres during 2017-18 which is sufficient only for around 4.22% blending Pan India.
- Ethanol availability is constrained by procurement price variation, lack of distilleries, limited feedstock availability and lack of an integrated and dedicated supply chain.

## 5.12. EVICTION ORDER OF FOREST DWELLERS

#### Why in news?

The Supreme Court recently stayed its previous order to evict forest dwellers in over 16 states.

#### **Background**

- A case was filed by various wildlife groups in the Supreme Court stating that all those Forest Dwelling Scheduled Tribes and Other Traditional Forest Dwellers, whose claims over forest land were rejected under the 2006 Forest Rights Act should be evicted by state governments.
- Under the law, only notified scheduled tribes and traditional forest dwellers, in bona fide occupation of the land, are entitled to cultivate and occupy the lands.
- But over the years, several non-tribals and traditional forest dwellers had illegally occupied the forestlands, causing massive deforestation.
- On February 13, the Supreme Court ordered the forced eviction of nearly 1.89 million tribal and other forest-dwelling households from forestlands across 16 states.

### Issues pertaining to rejection of claims under Forest Rights Act

- Large number of cases in Left-Wing Extremism affected areas- where tribal population is high. The forest land claims of these tribes and forest-dwellers are mostly rejected by the States owing to the security concerns.
- Lack of awareness of forest dwellers- Being poor and illiterate, living in remote areas, they do not know the appropriate procedure for filing claims.

 Inadequacy of Gram Sabha- The gram sabhas, which initiate the verification of their claims, are low on awareness of how to deal with them. More than half the rejections in Chhattisgarh were found to be at the gram sabha level.

#### Administrative Callousness-

- In several states there have been reports on administrations going particularly slow on even accepting community-level claims.
- The district administration is expected to assist the gram sabhas by providing forest and revenue maps. But this hasn't taken place as expected.
- In some cases, one-line orders are being passed without following the procedure.
- Hasty Rejections- A large number of cases are rejected due to lack of evidence or incomplete evidence.
   Officials demand tribals to furnish satellite imagery and non-existent 75-year-old records.

# The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

- It provides for a rights-based, democratic and decentralised governance of forests.
- The rights granted under the act are:
  - Title rights i.e. ownership to land that is being farmed by tribals or forest dwellers as on 13 December 2005, subject to a maximum of 4 hectares; ownership is only for land that is actually being cultivated by the concerned family as on that date, meaning that no new lands are granted.
  - Use rights to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
  - Relief and development rights to rehabilitation in case of illegal eviction or forced displacement; and to basic amenities, subject to restrictions for forest protection.
  - o Forest management rights to protect forests and wildlife.
- Eligibility to get rights under the Act is confined to those who "primarily reside in forests" and who depend on forests and forest land for a livelihood. Further, either the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 75 years.
- The Act provides that the gram sabha, or village assembly, will initially pass a resolution recommending whose rights to which resources should be recognised.
- This resolution is then screened and approved at the level of the subdivision and subsequently at the district level.
- The screening committees consist of three government officials and three elected members of the local body at that level.
- Other Illegalities done by authorities, which are alleged/ claimed by petitioners- such as
  - o Raising of frivolous objections. E.g. the summons and notices issued to 60 Bhil tribals for encroaching on forest land in 2002 were used as evidence for evicting them under the Forest Rights Act, 2005.
  - Range officers are not authorised to reject FRA claims; they can only provide recommendations to claims committees. However, many cases are decided by forest guards or patwaris.

## **Way Forward**

- There is need to collate proper data which accurately indicates the status of a claim.
- Any rejection order should be passed after **observance of due process of law**; compliance with principles of natural justice and whether appeal mechanisms have been properly exhausted.
- The administrative machinery should focus on **increasing the awareness** of tribals and aiding these groups in finding evidences, rather than ignoring them.
- The Ministry of Tribal Affairs should **coordinate this drive** and take help of other non-state actors such as the Campaign for Survival and Dignity (CSD), a national organisation of several adivasi and forest dwellers' movement.

### 5.13. ENVIRONMENTAL RULE OF LAW

## Why in News?

United Nations Environment Programme (UN) has released its first ever global assessment of environmental laws titled "Environmental Rule of Law".

#### What is Environmental Rule of Law?

- The United Nations defines rule of law as having three related components
  - law should be consistent with fundamental rights;

- law should be inclusively developed and fairly effectuated;
- law should bring forth accountability not just on paper, but in practice—such that the law becomes operative through observance of, or compliance with, the law.
- Environmental Rule of Law incorporates above components and applies them in environmental context.
- It is emphatically multidimensional. It cuts across many forms of law and norms—from social and customary norms of villages to statutory laws of nations to voluntary standards adopted by companies.
- Following the 1992 United Nations Conference on Environment and Development (known as the Rio Earth Summit), many countries made a concerted effort to enact environmental laws.

#### Reason behind poor Implementation

- Many agreements on the environment fail to work because governments are also signing other agreements on trade or the economy that consistently ignores environment.
- **Lobbying by Powerful Companies** who just ignores national and international environmental laws and agreements.
- Failure to ratify signed agreements: many countries sign agreements at international conferences but then quietly fail to ratify them or pass them into domestic law.
- Impunity by Developed Countries: In the case of climate change, Canada ratified Kyoto but its cabinet did not agree to reduce emissions "in the national interest". The failure of developed countries to join treaties or to ignore them undermines global environmental protection.
- Need for Reforms: some analysts argue there are too many bodies making too many agreements, and reform of the UN system is needed.
- Inadequate implementation of Judicial orders: For e.g. in India, the judiciary's order failed to curb illegal rat hole mining and miners in Meghalaya paid price for that.
- By the 2012 United Nations Conference on Sustainable Development, the focus had shifted to implementation of environmental laws, which is where progress has waned.

## **Major Observations and Recommendations of the Report**

- Poor Implementation of Laws: The world fares poorly on implementation of environmental laws and regulations despite the fact that 38 times more green laws have been framed and approved in the last four decades.
  - o Policymakers can **evaluate the current mandates and administrative structure** of environmental institutions to identify regulatory overlap or underlap.
  - According to the report, we now have "treaty congestion". World leaders have signed up to 500 internationally recognized agreements in the past 50 years. The international community's efforts should focus on fostering improved implementation of environmental rule of law.
  - o Moving forward, there will be a need for a **regular global assessment** of the environmental rule of law and to track progress using consistent indicators.
- **Immature Institutions:** While laws and institutions addressing environmental issues have expanded, they are still maturing.
  - Investing in information collection and management systems is vital to building strong institutions.
  - Engage with customary institutions: Communities possess vast amounts of knowledge and have developed customs over centuries to manage natural resources.
- People's Participation: Public and community groups need to be seen as critical stakeholders in environmental protection.

# Environmental Rule of Law and Sustainable Development Goals (SDGs)

- Environmental rule of law and the SDGs are mutually reinforcing.
- The SDGs promote norms and a framework that are essential to environmental rule of law; meanwhile, many of the Goals are only achievable under conditions of effective environmental rule of law.
- The governments can focus on fostering a culture of civic engagement through steps such as making
  information readily available on websites, collecting citizen monitoring data and complaints, responding
  to citizen inquiries with speed and efficiency etc.
- Focus of environmental laws is more on environmental duties rather than rights: A rights-based approach can strengthen environmental rule of law by elevating the importance of environmental protections.
  - The governments should **prioritize protection of environmental defenders** from harassment and attack and bring those who harm or threated defenders to justice swiftly and definitively.

- Governments should publicize the rights available to the public and ensure a robust, free civil society able to help citizens actuate these rights
- **Understanding of Interlinkages:** Laws have best taken hold where countries have understood the linkages between the environment, economic growth, public health, social cohesion, and security.
- Lack of Political Will: There has been a lack of political will to implement these laws due to the potential impact on livelihoods, lands, properties and profits.

## 5.14. SMALL GRANTS PROGRAMME (SGP)

## Why in news?

Recently, a workshop on MoEFCC-GEF, UNDP Small Grants Programme (SGP) was inaugurated in New Delhi.

## **Background**

- This program was launched alongside the Rio Earth Summit in 1992.
- This initiative provides direct financial and technical support to communities and Civil Society Organizations for various projects

**Development Program (UNDP).** 

- that conserve and restore the environment while enhancing people's well-being and livelihoods.
- The program is funded by Global Environment Facility (GEF) and executed by the United Nation
- The GEF UNDP/SGP program started in India from the year 1996-1997. So far it has in India supported 331 projects in various geographical locations across the country and in all five thematic areas of Climate Change, Conservation of Biodiversity, Land Degradation, Persistent Organic Pollutants (POPS) & International Waters

#### Some Achievements of the Program

- 110,000 hectares of land brought under sustainable land and resource management in the Western Ghats, Himalayan Front and Arid and Semi-Arid Regions through sustainable measures such as organic farming and community managed enterprises for non-timber forest products etc.
- 85,000 MTs of CO2 emissions reduced through a range of alternative energy and energy efficient technologies such as efficient cook stoves, solar driers, etc., which resulted in enhancing the livelihoods of poor and marginalized communities.

#### **Centre for Environment Education**

- It is a national level institution supported by Ministry of Environment and Forest, Government of India as a "centre of excellence", and affiliated to the Nehru Foundation for Development, Ahmedabad.
- In India the program is hosted through the **National Host Institution** (NHI) i.e. **Centre for Environment Education (CEE)** as the responsible party for the GEF Small Grants Programme.

# 5.15. REPEATED EARTHQUAKES IN PALGHAR

#### Why in news?

The Palghar district in northern Maharashtra has been witnessing an unusual frequency of earthquakes since November, 2018.

#### More in news

- Palghar falls in seismic zone III.
  - Bureau of Indian Standards has grouped the country into four seismic zones, viz. Zone II, III, IV and V. Of these, Zone V is seismically the most active region, while zone II is the least.
- National Centre for Seismology (NCS) has categorized the unusual tremors as an 'earthquake swarm'.
- Earthquake swarms can occur through the process of Reservoir Induced

#### Eathquake swarm

- It is a series of low magnitude earthquakes that occur in a localized region and over a period of time ranging from days, weeks to even months.
- When seismic energy piles up inside the Earth and is released in small amounts from certain points, such a series of earthquakes can occur.
- A Geological Survey of India (GSI) in 2003 found that such activity was observed at 30 places in the region even though the Deccan Plateau is not an earthquake-prone zone.
- But earthquake swarms are not limited to the Peninsula. In 2016, a series of 58 earthquakes were recorded in the Rampur area of Himachal Pradesh. This Himalayan swarm was attributed to low strength of the earth's crust in the area which could not hold the tectonic energy.
- The situation cannot be taken lightly as many major earthquakes in the region have been preceded by earthquake swarm activity. Two such instances were the Latur and Koyna earthquakes in 1993 and 1967 respectively.

**Seismicity (RIS)** when large amount of seismic energy gets concentrated in a small area due the weight of the large structure and the water that it holds.

- However, scientists have ruled out a small reservoir nearby as the cause and have found no mining activity to explain the quakes.
- **Hydro-seismicity** is being hypothesized as the reason for swarms in peninsular India.
  - o Water from heavy rainfall enters the small fractures in the rocks creating pressure between them.
  - With every 10 meter rise in groundwater, pore pressure increases by 1 bar. This pressure is released in the form of earthquake swarms.



# 6. SCIENCE AND TECHNOLOGY

## 6.1. CLEANING UP SPACE DEBRIS

#### Why in news?

As part of the space junk cleanup, a new device named **space harpoon** that captures junk has been tested successfully. It is part of the **RemoveDEBRIS project**, a multi-organization European effort to create and test methods of reducing space debris.

### **About Space Debris**

- Space debris encompasses both natural (meteoroid) and artificial (man-made) particles. Meteoroids are in orbit about the sun, while most artificial debris is in orbit about the Earth. Hence, the latter is more commonly referred to as orbital debris.
- The term **Kessler syndrome** is associated with Space Debris, which is used to describe a self-sustaining

cascading collision of space debris in LEO (Low Earth Orbit).

## Why Space Debris is a concern?

#### Obstruction to various space endeavors

- NASA estimates that there are about 500,000 pieces of debris larger than half an inch across in low orbit, posing a potential danger to the 780-odd satellites operating in the area.
- Space junk travels at speeds up to 30,000 km an hour, which turns tiny pieces of orbital debris into deadly shrapnel that can damage satellites, space shuttles, space stations and spacecraft with humans aboard.
- Increase the cost of missions- Various space agencies have to manoeuvre their space programme in light of increasing space debris thus adding to extra economic and human resource on space programme.
- Debris is bound to increase- Space-scientists concern about the inexpensive, tiny satellites called CubeSats, which are going to add space junk around 15% in next 10 years.

## Initiatives taken towards Space Debris cleanup

 Committee on the Peaceful Uses of Outer Space, and Inter-Agency Space Debris Coordination Committee (IADC) advocates Global mitigation measures including preventing the creation of new debris, designing satellites to withstand impacts by

### The Remove Debris Mission

The Remove Debris satellite platform will showcase four methods for release, capture and deorbit two space debris targets, called DebriSATs:

- Net capture: It involves a net that will be deployed at the target CubeSat.
- **Harpoon Capture**: Which will be launched at a target plate made of "representative satellite panel materials"
- Vision-based navigation: Using cameras and LiDAR (light detection and ranging), the platform will send data about the debris back to the ground for processing.
- **De-orbiting process**: As it enters Earth's atmosphere, the spacecraft will burn up, leaving no debris behind.

The mission will demonstrate key Active Debris Removal (ADR) technologies in orbit, which will have significance for future missions as well.

#### **Space Harpoon**

The harpoon is meant for larger targets, for example full-size satellites that have malfunctioned and are drifting from their orbit. A simple mass driver could knock them toward the Earth, but capturing them and controlling descent is a more controlled technique.

## **About Inter-Agency Space Debris Coordination Committee**

- It is an international governmental forum for the worldwide coordination of activities related to the issues of man-made and natural debris in space.
- It aims to exchange information on space debris research activities between member space agencies, to facilitate opportunities for cooperation in space debris research, to review the progress of ongoing cooperative activities, and to identify debris mitigation options.
- ISRO is also a member of this committee.

small debris, and improving operational procedures such as using orbital regimes with less debris, and predicting and avoiding collisions. However, these guidelines are only voluntary in nature and there is no international treaty on space debris currently.

• **UK-** The Remove Debris mission is led by the Surrey Space Centre at the University of Surrey. UK and cofunded by various other partners from EU.

- **European Space Agency- e. Deorbit mission**, which would target an ESA-owned derelict satellite in low orbit, capture it, then safely burn it up in a controlled atmospheric reentry.
- Japan- It launched Kounotori 6 satellite, which uses a half mile long tether to remove some of the debris from Earth's orbit. The tether, made of aluminium strands and steel wire, is designed to slow the debris, pulling it out of orbit.

#### • India-

- A team of ISRO and Physical Research Laboratory are working on setting up an observatory to track the space junk.
- A multi- object tracking radar (MOTR) developed by the Satish Dhawan Space Centre allows ISRO to track
   10 objects simultaneously. It tracks India's space assets and space debris, for which India was solely dependent on data provide by the US space agency NASA till early 2016

## 6.2. PROGRESS OF DIGITAL LITERACY PROGRAMS IN INDIA

## Why in News?

Recently a report on review of National Digital Literacy Mission was laid in Parliament by the Parliamentary Standing Committee on Information Technology.

## **About Digital Literacy**

- As per the Ministry of Electronics and Information Technology, Digital Literacy is defined as the ability of
  individuals and communities to understand and use digital technologies for meaningful actions within life
  situations. Any individual who can operate computer/laptop/tablet/smart phone and use other IT related
  tools is being considered as digitally literate.
- Digital Literacy holds important in areas such as using Government Schemes, Digital Payments, e-governance, Agriculture, Education, Health, Employment etc.

## **Current Status of Digital Literacy in India**

- Low Digital Literacy- Among people in the age group of 14-29 years, only 18.3% were able to operate a computer in rural areas as compared to 48.9% in urban areas.
- Ineffective usage of digital literacy- An IIT-Delhi study found that while beneficiaries were now comfortable using social media, they were not as adept at browsing the internet for education opportunities and employment listings among others.

#### **Background of Government Initiatives**

- The Government of India launched the 'Digital India' campaign for transforming India into a digitally empowered society and economy.
- One of the goals of this campaign is to empower those who are IT-illiterate so that they are competent
  enough to use IT and related applications for effectively participating in the democratic processes and
  enhancing their livelihood opportunities.
- In this context, the Ministry of Electronics and Information Technology initiated the **National Digital Literacy Mission** (NDLM) as a means of realising the vision of 'Digital India'.
- **Under the mission**, beneficiaries undergo a 20-hour training programme in using computers and other digital devices, browsing the Internet and sending and receiving emails.
- The original deadline for the National Digital Literacy Mission was 18 months but it was extended to 27 months before it was scrapped in June 2016. While the programme was still running, the government introduced the **Digital Saksharta Abhiyan**, or **DISHA**, in January 2015.
- Under these two schemes, a total of 53.67 lakh beneficiaries were trained, out of which around 42% were from rural India.
- In 2017, the government launched the **Pradhan Mantri Gramin Digital Saksharta Abhiyan** by improving upon previous two schemes.

#### Issues with government schemes

- Lack of Consolidation of Schemes- Parallel schemes creates confusion in the minds of intended beneficiaries and makes the evaluation difficult.
- Focus on quantitative parameters instead of quality of training- There is inconsistency and variation in the findings of the independent studies with regard to data on various aspects such as usage of digital device, level of confidence etc. Further, there is no component of monitoring repeat transactions by individuals trained in NDLM, DISHA and PMGDISHA schemes to ensure that there is a behavioral change in the trainees and they continue to make use of digital/IT tools even after completion of their training.
- Unrealistic data- Under NDLM scheme, 16 out of total 36 States/UTs have achieved 100% certification of enrolled candidates. The committee found these to be unrealistic.
- Duplication of beneficiaries- The first impact assessment study, conducted by the research and advocacy group Council for Social Development, found that two-thirds of the beneficiaries of the scheme were not eligible for it.

#### Challenges in expanding Digital Literacy in India

- Lack of awareness about the benefits of digital literacy among the masses.
- Lack of availability of requisite training infrastructure and resources at several places in the country – As per National Sample Survey Office (NSSO) 71st Round report on social consumption relating to education, the proportion of households in the country having computers during 2014 was around 14% (only 6% in rural households and 29% in urban households possessed computer).
- Internet connectivity issues as well as Localization/Language issues in rural areas.
- Inadequate support from State Govt. & other stakeholders- such as by North- Eastern states.
- Insufficient financing for scheme- Only Rs. 500 cr. released which is much less than allocated outlay.

## **Recommendations of the Parliamentary Standing Committee**

- Need for Long-term planning and perceptible outcomes- should be the focus of government schemes, rather than having short-term parallel schemes with different names.
- **Change the criteria to increase coverage-** The current restriction of covering only one person per household in the existing schemes should be removed.
- Need for qualitative impact assessment- by focusing on qualitative parameters through continuous feedback mechanism and strengthening of monitoring mechanism to ensure that there is a positive behavioral change in successful trainees and they continue to use digital/IT tools even after completion of their training
- **Promote Digital Finance** through schemes like Digital Finance for Rural India: Creating Awareness and Access through Common Service Centres (CSCs), which was closed earlier.
- **Enhanced enrolment of training partners-** with proven expertise in IT domain so as to achieve the set targets.
- **Grievance redressal and feedback mechanism-** should be adequately strengthened to make the scheme equally accessible to all the beneficiaries and remove any element of discrimination.

# 'Pradhan Mantri Gramin Digital Saksharta Abhiyan' (PMGDISHA)

- Objectives: To make six crore persons in rural areas, across States/UTs, digitally literate, reaching to around 40% of rural households by covering one member from every eligible household.
- Implementing Agency: The scheme is implemented by CSC eGovernance Services India Limited, a Special Purpose Vehicle (SPV) incorporated under the Companies Act 1956, (herein after referred to as 'CSC-SPV'), under the overall supervision of Ministry of Electronics & Information Technology, with active collaboration of all the State Governments and UT Administrations.
- **Duration**: The duration of the Scheme is up to 31st March, 2019.
- **Coverage of scheme:** The Scheme is applicable for rural areas of the country.

Achievements of the previous Schemes based on independent studies by IIT Delhi and Council for Social Development, Delhi

Majority beneficiaries-

- Claimed to gain confidence to learn new things easily
- Felt more aware about their educational needs
- Felt happy to reach anyone they want through computer and internet

- Usage of low cost, easy to use such as feature/smart phones and associated apps, which are popular among, masses in comparison to the conventional IT hardware and allied software. The content may be user-friendly and appropriate for all ages.
- Focus on laggard States/UTs- The good practices in some States may be replicated in other States and also the States which are very supportive and doing very well need to be incentivized so that there is visible impact.
- Close coordination amongst different Central/State agencies and entities

## 6.3. SOLID FUEL DUCTED RAMJET (SFDR)

## Why in news?

Recently, DRDO successfully flight tested the second indigenously developed 'Solid Fuel Ducted Ramjet (SFDR)' propulsion-based missile system, the first test of which was carried out in May 2018.

#### **About SFDR**

- SFDR is an **Indo-Russian R&D project** which has been established to develop a long-range air-to-air missile and a surface-to-air missile system in near future. It was started in 2013 to develop the technology and demonstrate it in 5 years.
- The **Defence Research Development Laboratory (DRDL), Hyderabad** is the lead agency for the collaborative mission project.
- At present, the conventional missiles use booster or sustainer configuration with solid or liquid propellants. They do not allow the missile enough energy to maintain its speed and tackle a maneuvering target.
- SFDR technology, based on the ramjet propulsion system depends only on its forward motion at supersonic speed to compress intake air and the engine flow-path components have no moving parts.
- Unlike solid rocket propellant whose formulation is approximately 20% fuel and 80% oxidizer, the solid ramjet
  - fuel is **100% fuel and obtains oxidizer from air,** with the result being approximately **four times the specific impulse** (the product of thrust and time divided by propellant weight) as compared to solid rocket propellant.
- Hence, this air breathing ramjet propulsion technology helps propel the missile at high supersonic speeds (above Mach 2) for engaging targets at long ranges.
- Consequently, it has inherent simplicity, reliability, lightweight, and high-speed flight capability not possible with other air-breathing engines.

## 6.4. PARAM SHIVAY

### Why in News?

Recently PARAM Shivay, the first super computer designed & built under the National Supercomputing Mission by C-DAC (Center for Development of Advanced Computing) at IIT-BHU was launched.

#### **About National Supercomputing Mission**

- The Mission, launched in 2015, envisages empowering our national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high-performance computing facilities.
- These supercomputers will also be networked on the **National Supercomputing grid** over the National Knowledge Network (NKN).
- The Mission would be implemented jointly by the **Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY)** for over a period of seven years, through the **C-DAC and Indian Institute of Science (IISc)**, **Bengaluru**.

#### **Differences between Ramjet and Scramjet**

- Ramjet: A ramjet engine does not have any turbines unlike the turbojet engines.
   It achieves compression of intake air just by the forward speed of the air vehicle.
- Scramjet engine: It is an improvement over the ramjet engine as it efficiently operates at hypersonic speeds and allows supersonic combustion. Thus it is known as Supersonic Combustion Ramjet, or Scramjet.

- The Mission also includes development of highly professional High Performance Computing (HPC) aware human resource for meeting challenges development of of these applications.
  - o PARAM Shavak is one such machine has been that deployed to provide training.
- **Application** areas: Climate Modelling, Computational Biology, Atomic Energy Simulations, National Security/ Defence Applications, Disaster Simulations and Management, Computational Material Science and Nanomaterials, Cyber Physical Systems, Big Data Analytics etc.

#### Top-500 Project

- Started in 1993, it ranks the 500 most powerful non-distributed computers in the world.
- It publishes an updated list of the supercomputers twice a year.
- Currently, **China dominates** the list with 229 supercomputers, leading the second place (United States) by a record margin of 121.
- Since June 2018, the American "Summit" is the world's most powerful supercomputer, based on the LINPACK benchmarks.
- LINPACK benchmark are a measure of a system's floating point computer power. It measures how far a computer solves a nxn system of linear equations.
- India has 4 supercomputers in the Top-500 list of the world's top 500 supercomputers with Pratyush and Mihir being the fastest supercomputers in India.

#### **About C-DAC**

- It is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.
- PARAM 8000, first supercomputer of India, was built by CDAC.

## 6.5. MEASLES-RUBELLA

## Why in news?

Recently, Global Measles and Rubella Update stated that India had 56,399 confirmed measles cases and 1,066 confirmed rubella cases in 2018.

#### **About Measles-Rubella**

- Measles and Rubella are highly contagious viral diseases that are spread by contact with an infected person through coughing and sneezing.
  - Measles weakens the immune system and opens the door to secondary health problems, such as pneumonia, blindness, diarrhoea etc. This virus is an exclusive human pathogen and has no animal reservoirs or vectors.
  - Rubella, also known as German Measles, is generally a mild disease but can have serious consequences
    - for pregnant women and their children as it may cause congenital rubella syndrome in the foetus. India accounts for around one third of all children born worldwide with congenital rubella syndrome (CRS).
- Measles-rubella (MR) vaccine is given at 9-12 months and 16-24 months of age for preventing both measles and rubella diseases in the child as no specific treatment is available for the disease.
- To eliminate measles and control rubella, over 95%
  - immunisation of children or strengthening of **Herd Immunity** is required.
  - o It is a form of immunity that occurs when the vaccination of a significant portion of a population (or herd) provides a measure of protection for individuals who have not developed immunity.

### 6.6. NATIONAL ACTION PLAN FOR VIRAL HEPATITIS CONTROL

## Why in News?

Recently, Ministry of Health and Family Welfare launched National Action Plan for Viral Hepatitis.

#### **About National Action Plan for Viral Hepatitis**

The Plan provides a strategic framework, based on which National Viral Hepatitis Control Program was launched in 2018 under National Health Mission.

## Government efforts to control Measles-Rubella

- MR vaccination was launched as a part of Universal Immunization program 1985.
- MR vaccination campaign was launched in 2017 with an aim to eliminate measles and control rubella/congenital rubella syndrome (CRS) by 2020.

 It is in line with the Government of India's deep commitment towards elimination of viral hepatitis.

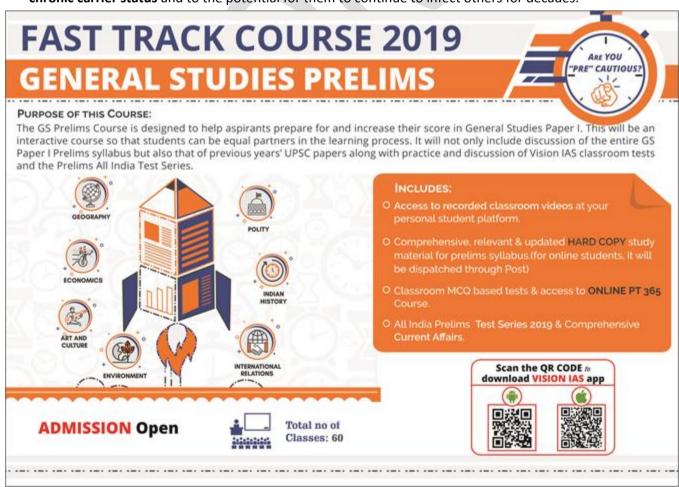
#### **About Hepatitis**

- It is an inflammation of the liver often cause by virus and other infections, toxic substances (e.g. alcohol, certain drugs).
- There are **5 main hepatitis viruses**, referred to as types A, B, C, D and E.
  - Viral hepatitis types B and C can cause chronic hepatitis and are responsible for 96% of overall hepatitis mortality while Hepatitis A and E usually cause acute hepatitis.
  - Hepatitis A and E are typically caused by ingestion of contaminated food or water.
  - Hepatitis B, C and D usually occur as a result of contact with infected body fluids such as during receiving blood, invasive

medical procedures using contaminated equipment, transmission from mother to baby at birth, sexual contact etc.

## About National Viral Hepatitis Control Program

- Its goal is **ending viral hepatitis** as a public health threat in the country by **2030**.
- It aims to reduce morbidity and mortality due to viral hepatitis.
- The key strategies include:
  - Preventive and promotive interventions with focus on awareness generation, safe injection practices and socio-cultural practices, sanitation and hygiene, safe drinking water supply, infection control and immunization
  - Co-ordination and collaboration with different Ministries and departments
  - Promoting diagnosis and providing treatment support for patients of hepatitis B & C
  - Building capacities at national, state, district levels and sub-district level up to Primary Health Centres (PHC) and health and wellness centres such that the program can be scaled up till the lowest level of the healthcare facility in a phased manner.
- There are vaccines to prevent hepatitis A, B and E. However, there is no vaccine for hepatitis C.
   Also, Hepatitis D virus (HDV) infections occur only in those who are infected with Hepatitis B Virus.
- The infections can progress to other health complications and liver cancers.
- The challenge in eliminating chronic viral hepatitis is due to the **infected person being unaware of their chronic carrier status** and to the potential for them to continue to infect others for decades.



# 7. SOCIAL ISSUES

## 7.1. DEFINING MINORITIES IN INDIA

#### Why in news?

The Supreme Court recently asked the National Commission for Minorities to take a decision on a plea seeking guidelines for defining the term 'minority' and for their identification State-wise.

#### More on news

- The PIL sought minority status for Hindus in Lakshadweep, Mizoram, Nagaland, Meghalaya, J&K, Arunachal Pradesh, Manipur and Punjab.
- It sought the following relief from SC
  - Declare that Section 2(c) of the National Commission for Minorities (NCM) Act 1992 and NCM notification granting minority status to 5 religious communities is void according to Articles 14, 15 and 21, 29 and 30 of the Constitution of India;
  - o Direct the Government to define "Minorities" with the State being the unit of determination.

#### Minorities in India

- The Constitution of India uses the word 'minority' in various articles viz. Article 29, 30, 350 A and 350 B.
- It recognises minorities based on religion and language.
- But it neither defines the term 'minority' nor delineates the criteria for determining a minority.
- As per sec 2(c) of the NCM Act 1992, 'minority' means a community notified as such by the Central govt.
- Six religious communities, viz; Muslims, Christians, Sikhs, Buddhists, Zoroastrians (Parsis) and Jains have been notified as minority communities by the Union Government.
  - The six notified minorities constitute about 19% population of the country.
  - The literacy rate among persons of age 15 years and above is highest for Christians, for both the sexes in rural and urban areas.
  - The Labour Force Participation Rate (LFPR) for male is much higher than female for all religious groups.
  - The unemployment rate in rural areas is less than that of urban areas. In rural areas, during 2009-10, unemployment rate was the highest for Christians for both males (3 per cent) and females (6 per cent). In urban areas, unemployment rate was the highest for Sikhs for both males (6 per cent) and females (8 per cent).

#### **About NCM**

- It was set up under the National Commission for Minorities Act, 1992.
- It is a quasi-judicial body with powers of a civil court.
- It consists of a Chairperson, a Vice Chairperson and five Members to be nominated by the Central Government –all should be from Minority communities.
- The Chairperson and every Member shall hold office for a term of three years from the date he assumes office.
- The central government presents its report to the parliament.

#### **Functions**

- evaluate the progress of the development of minorities under the Union and States;
- monitor the working of the safeguards provided in the Constitution and in laws enacted by Parliament and the State Legislatures;
- make recommendations for the effective implementation of safeguards for the protection of the interests of minorities by the Central Government or the State Governments;
- look into specific complaints regarding deprivation of rights and safeguards of the minorities and take up such matters with the appropriate authorities;
- cause studies to be undertaken into problems arising out of any discrimination against minorities and recommend measures for their removal;
- conduct studies, research and analysis on the issues relating to socio-economic and educational development of minorities;
- suggest appropriate measures in respect of any minority to be undertaken by the Central Government or the State Governments;
- make periodical or special reports to the Central Government on any matter pertaining to minorities and in particular difficulties confronted by them; and
- any other matter which may be referred to it by the Central Government.

• States governments are also empowered to designate state minorities and set up State Minority Commissions. For e.g. Jains were designated as minority by 11 states before they were nationally recognized in 2014.

#### Case for defining minorities state-wise

- Increasing inequality: Classification of religious minorities at a pan-India level has not only created a wave of inequality across different States but is also encouraging conversion to seek social, political and economic benefits available to minorities. The six notified minorities have various benefits at central level such as:
  - o Pursuant to Art 30, government interference in institutions and trusts of the community will cease to exist.
  - o 50% reservation from their community will be allowed in educational institutions run by them.
  - They would be allowed to teach culture and religion in their institutions and seek government funding for land
  - They will be eligible to avail of exclusive schemes run by the ministry of minority affairs like Jiyo Parsi, Nai Roshini, Nai Manzil, Hamari Dharohar etc.
- Exclusion of various sections: Failure to identify and recognize minorities leads to unreasonable disbursement of minority benefits e.g. In J&K, Muslims are 68.30% but are considered a minority and hence get a lion's share of benefits. Similarly, Christians are a majority in Mizoram, Meghalaya and but they are treated as minority.
- **Similar provisions:** 'Scheduled Castes' and 'Scheduled Tribes' are identified at the State/UT level. In terms of Articles 341 and 342 the President is empowered to draw up a list in consultation with the Governor of each State subject to revision by Parliament.
- Supreme court judgements: Supreme Court through its various judgements has tried to provide guidelines for defining minorities:
  - Merala Education Bill case 1958: It said minority should to be a group of people who are numerically a minority in a 'State as a whole' as distinguished from any particular area or region'.
  - o **Bal Patil & others v UOI, 1999 and TMA Pai Foundation v State of Karnataka 2002:** It held that with regard to state law, the unit to determine a religious or linguistic minority should be the state.

#### Conclusion

The concept of minority in social context is intricate. There is no single definition of the term minority as acceptable to all, and free from criticism. However, there is a need is to lay down guidelines for their identification and to ensure that only those religious and linguistic groups, which are socially economically and politically non-dominant and numerically inferior, may enjoy rights and protections guaranteed under Articles 29-30.

# 7.2. DEVELOPMENT AND WELFARE BOARD FOR DENOTIFIED, NOMADIC AND SEMI-NOMADIC COMMUNITIES

## Why in news?

The Union Cabinet has given its approval for constitution of Development and Welfare Board for Denotified, Nomadic and Semi-nomadic Communities (DNCs).

#### **Details**

- During the British colonial rule, if the local government had reason to believe that a gang or a tribe had
  "addicted to systematic commission of non-bailable offences" then it was registered as criminal tribe under
  the Criminal Tribes Act, 1871.
- Next came the **Criminal Tribes Act (CTA), 1924**. Under this act, the local government may establish reformatory schools and separate criminal tribe children from their parents and guardians and place them in such schools.
- Nomadic Tribes and Denotified Tribes both are the ones that were regarded as criminal tribes under CTA.
   Most Denotified Tribes are spread across the Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes (OBC) categories.

- After the **Ananthsayanam Ayyangar Committee** (gave a comprehensive report on how CTA worked throughout India), the Act was repealed in 1949 and was replaced by the **Habitual Offenders Act, 1951**.
- In 2002, **Justice Venkatchaliah Commission** recommended for strengthening the programmes for economic and educational development of De-Notified Tribes (DNTs). It also recommended constituting a special commission to look into the needs and grievances of the DNTs.
- Consequently, a National Commission for Denotified Nomadic and Semi-Nomadic Tribes was constituted in 2005 under the chairmanship of Balkrishna Sidke Renke, to study the socio-economic conditions of these groups
- Another National Commission for Denotified Nomadic and Semi-Nomadic Tribes chaired by Bhiku Ramji
  Idate was constituted in 2015 for a three-year period. It submitted its report viz "Voices of the Denotified,
  Nomadic & Semi-Nomadic Tribes" in 2018.
- In consonance with the recommendations of Idate Commission, the Union cabinet has approved a
  permanent Development and Welfare Board under the Societies Registration Act, 1860 under the aegis of
  Ministry of Social Justice and Empowerment for the purpose of implementing development and welfare
  programmes for Denotified, Nomadic and Semi-nomadic Communities.

#### **Challenges Faced by DNT**

- **Still face social apathy-** People of these communities continue to be stereotyped. A large number of them have been labeled ex-criminal tribes.
- Face alienation and economic hardships- Most of their traditional occupations such as snake charming, street acrobatics and performing with animals have been notified as criminal activity making it difficult for them to earn a livelihood.
- Large scale Exclusions- Many of the denotified, nomadic and semi-nomadic tribes are spread among SC/ST/OBC but are still not classified anywhere and have no access to socioeconomic benefits whether education, health, housing or otherwise. Also, there is a lack of data on these communities.
- Poor Grievance Redressal- Grievances of these groups include food, drinking water, sanitation, education, health, housing, poor infrastructure, etc. Many also complain about not getting caste certificates, not having ration cards, voter ID cards, aadhaar cards, etc.
- Lack of Uniform Approach- There are many anomalies in terms of identification of these communities, from state to state. There is a lack of awareness about these tribes and about authority looking after their grievances. Also, no permanent commission had been set up till now.
- Declining Population- As a result of all these problems many communities are facing decline in population.

## Conclusion

- A Committee under the Chairpersonship of Vice-C hairman, NITI Aayog has also been setup. It will complete the process of identification of the Denotified, Nomadic and Semi-Nomadic Communities (DNCs) that have not yet been formally classified.
- These communities could be included under The Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989.

## Other Recommendations of National Commission for Denotified Nomadic and Semi-Nomadic Tribes under Bhiku Ramji Idate

- Since basic census data is not available on these tribes/communities there is a need to undertake a socioeconomic survey.
- The Centre should carve out sub-categories DNT-SC, DNTST and DNT-OBC, with dedicated sub-quota for them. While sub-categorisation of SCs and STs may prove complicated, it can be done immediately among the OBCs since the Centre has already formed a commission headed by Justice Rohini Kumar to sub-divide the central list of OBCs according to the developmental status of member communities.
- Seeking "destigmatisation" of denotified tribes, the panel has recommended that the Centre repeal the Habitual Offenders Act of 1952.

## 7.3. OPERATION DIGITAL BOARD

## Why in News?

Recently, Ministry of Human Resource Development launched Operation Digital Board (ODB).

## **About Operation Digital Board**

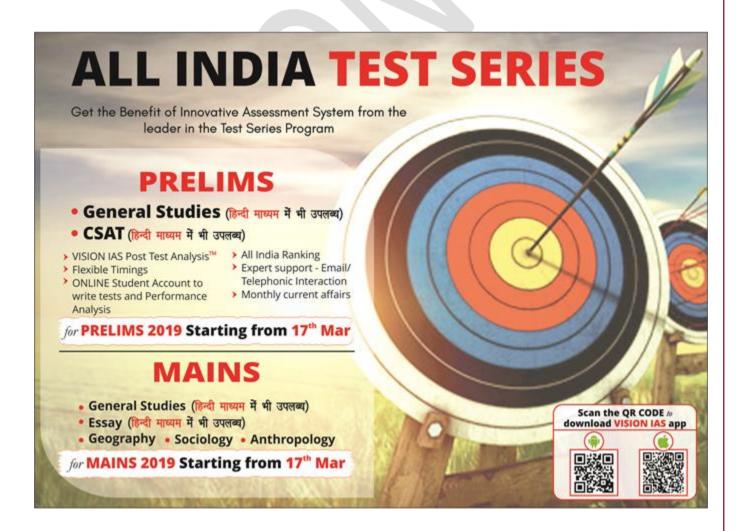
- It aims to set up one digital and interactive board per classroom in government and government-aided schools by 2022.
- It will be introduced in schools from class
   9<sup>th</sup> onwards as well as in higher education institutions.
- It aims to make the learning as well as the teaching process interactive and popularize flipped learning as a pedagogical approach.
- University Grant Commission will be the implementing agency of ODB for higher education.

#### **Flipped Learning**

 It is a pedagogical approach in which the conventional notion of classroom-based learning is inverted, so that students are introduced to the learning material before class, with classroom time then being used to deepen understanding through discussion with peers and problemsolving activities.

#### Other digital initiatives for Education

- SWAYAM: A Web portal where Massive Open Online Courses (MOOCs) will be available free of cost on all kinds of subjects with a provision of certificate / credit-transfer.
- **Swayam Prabha:** It is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.
- Diksha: National Digital Infrastructure for Teachers portal, to help teachers to create training content, profile, in-class resources, assessment aids, news and announcement and connect with teacher community.



## 8. CULTURE

## 8.1. INDIA'S NATIONAL WAR MEMORIAL

#### Why in news?

India's national war memorial (first proposed in 1960) was inaugurated at the India Gate complex in Delhi by the PM.

#### **About the Memorial**

- Spread across 40 acres, it is built to honor soldiers who laid down their lives defending the nation, post-independence.
- It also commemorates the sacrifices made by Indian soldiers sent on peace-keeping missions of the United Nations, Humanitarian Assistance Disaster Relief (HADR) and counter-insurgency operations.
- The Memorial has four concentric circles, a central stone obelisk (15.5m), and an eternal flame built at a cost of 176 crore.
- The concentric circles are designed as a Chakravyuh (an ancient Indian war formation) and are called:
  - Amar Chakra or Circle of Immortality: innermost circle, at its centre stands the obelisk topped by a bronze lion capital. It has a hollow centre where the eternal flame is situated.
  - Veerta Chakra or Circle of Bravery: a covered gallery, with bronze murals depicting Battles of Gangasagar, Longewala, Tithwal, Rizangla, and Operation Meghdoot (1984), Trident (1971).
  - Tyag Chakra or Circle of Sacrifice: two circles within Raksha Chakra consisting of 16 walls made of 25,942 granite tables dedicated to soldiers who fell in China and Pakistan wars and operations such as that of the Indian Peace Keeping Force in Sri Lanka.
  - Rakshak Chakra or Circle of Protection: outermost circle comprising of 600 trees symbolises soldiers who ensure the territorial integrity of the nation, round the clock.
- The Param Yodha Sthal has the busts of 21 recipients of the Param Vir Chakra, India's highest military honour, with short descriptions of their acts of valour.

## 8.2. MAITHILI LANGUAGE

#### Why in news?

The Ministry of Human Resource Development has decided to implement the recommendations of a committee for the promotion and protection of Maithili language and its scripts.

## **About Maithili**

- Mithilakshar or Tirhuta is the script of the language Maithili.
- It is mainly spoken in India (Bihar, Jharkhand etc.) and Nepal.
- The oldest form of Mithilakshar is found in the Sahodara stone inscriptions of 950 AD.
- Vidyapati Thakur, was the first writer to use Maithili as a literary language, his poetic works and songs are full of devotion to the God Shiva
- In the 14th century, **Jyotishwar** enriched the literature in a holistic way. His work Dhurt Samagam is very popular in Maithili.
- In the 20th century, Baba Nagarjun, Ramanand Renu contributed in the field of prose writing.
- In 1910 the first Maithili organization, the Maithili Mahasabha came into being for the development of Maithili and Maithils.
- The language has been accorded a constitutional status in the 8th Schedule of the constitution.
- The lack of use of Mithilakshar script has become the reason for the decline in the Maithli language.
- The committee has suggested establishing a **Script and Manuscript Centre at Darbhanga** and creating of audio-visual teaching material for mithilashkar script.

**The Eighth Schedule** of the Constitution includes 22 major languages:

Assamese, Bengali, Bodo, Dogri, Gujarathi, Hindi, Kananda, Kashmiri, Konkani, Maithili, Punjabi, Sanskrit, Santhali, Sindhi, Tamil, Telugu, Urdu, Malayalam, Manipuri, Marathi, Nepali and Oriya.

## 8.3. BAGRU BLOCK PRINTING

## Why in news?

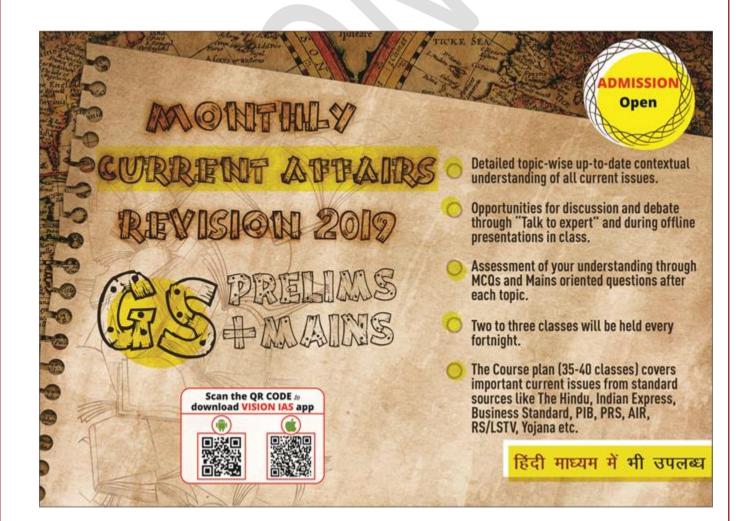
The 'Titanwala Museum' in Bagru, Rajasthan was inaugurated to preserve the art of traditional Bagru block printing.

### **About Bagru Block printing**

 It is a traditional technique of printing with natural colour done by the Chippa community in Bagru village of Rajsthan.

#### Some other important traditional block printing techniques in India

- Gujarat: Ajrakh Print
- Rajasthan: Sanganeri, Ajrakh, Dabu
- Madhya Pradesh: Bagh Print, Bherogarh Print (Batik)
- Andhra Pradesh: Kalamkari
- Calcutta, Serampur (West Bengal), Varanasi and Farrukabad (Uttar Pradesh) are also important centres of block printing in India.
- Traditionally, motifs printed at Bagru are large with bold lines. The motifs include wild flowers, buds, leaves and printed geometrical patterns.
- The main colors used in Bagru are Red and Black.



### 9. ETHICS

### 9.1. SOCIAL ACCOUNTABILITY

#### Why in news?

The Rajasthan government has started the process for bringing the legislation on social accountability.

### What is Social Accountability?

- Social Accountability in public service delivery is defined as an approach towards ensuring accountability that relies on civic engagement.
- It is a product of 2 things working together: a system of institutions that makes accountability structurally possible and an informed & mobilized citizenry that can draw upon platforms of engagement to make accountability demands from the system.
- The need for the state to be accountable to its citizens stems out of the 'social contract' that the citizens share with the state. In a democracy, this contract is operationalised when citizens elect a government and invest the elected representatives with the power to govern them.
- Social accountability can ensure increased development effectiveness, improved governance and empowerment.

#### **Realizing Social Accountability**

- There are mechanisms for external accountability (accountability directly to the citizens) like periodic elections, citizen consultations & participation in design, implementation & monitoring of state's services.
- Alongside, there are also provisions for internal accountability - institutional checks and balances like constitutional separation of powers into Judiciary, Executive & Legislature, delegation of tasks & responsibilities, internal performance monitoring, and official oversight through bodies like Auditor General, Anti Corruption Bureaus and Vigilance Commissions are some examples.
- Social accountability is ensured when these two aspects of accountability are realized together.

### **Objectives of Social Accountability**

- Ensure transparency, free flow of information and sharing of the information with public
- Monitor programs & policies through community score cards, citizens report card, expenditure tracking & social audits
- Seek accountability of public functionaries and authorities for timely delivery of goods & services as per citizens' entitlements and job charts of the functionaries
- Setup a well-structured feedback & grievance redress mechanism, starting from the Village Panchayats
- **Enable public hearings** in delivery system with widest possible scope so as to cover not only welfare measures and policies by the state but also regulatory, symbolic and extractive functions of the state at grass root level.

### Challenges

- **Resistance to reform, risk of collusion and co-option:** Since Social Accountability initiatives upset the vested interests who have an incentive to maintain the status quo, there is much resistance to reform
  - o Bureaucracy withholding data or providing inadequate information for conduct of social audits
  - Collusion between NGOs & government agencies that can reduce the initiative to a fraudulent, ghost exercise
- **Inadequate infrastructure** such as lack of space for public hearing, lack of digital connectivity at common service centre / information & facilitation centre etc. and absence of **skilled workforce**.
- **Involvement of multiple stakeholders:** Public service delivery in many developing countries often includes multiple agencies such as government bodies, charitable or other aid organisations, the private sector and citizens. It is questionable to what extent the social accountability approaches applies to such unorthodox but nonetheless widespread organisational arrangements.

#### **Way Forward**

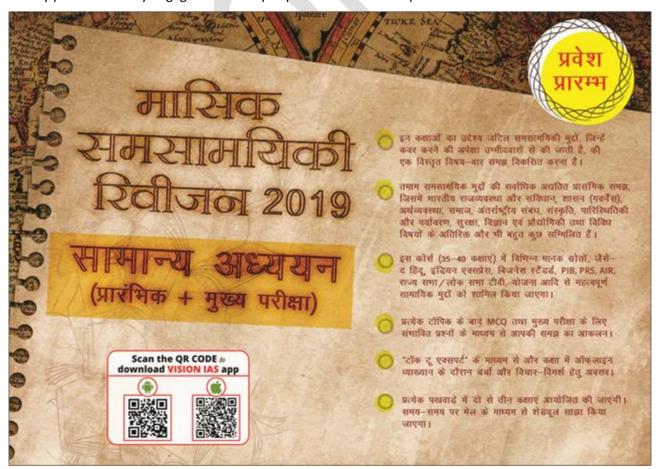
- Making Social Accountability mandatory in policy design: Participation and collective action by the citizens
  is especially forthcoming when people have a legal right to participate, which provides a greater degree of
  legitimacy to their actions.
  - The Right of Citizens for Time Bound Delivery of Goods and Services and Redressal of their Grievances Bill, 2011 should be taken up for the consideration immediately.
- Developing and monitoring norms and guidelines on Social Accountability initiatives: Clear and precise guidelines in conducting Social Accountability initiatives can go a long way in preventing ghost initiatives and

minimizing collusion. Independent agencies / NGOs need to play a bigger role to ensure that guidelines are being adhered to.

- Strengthening section 4 of the RTI: Access to information is a critical precondition for any Social Accountability initiative to be successful.
  - The compliance on Section 4 of the RTI Act, that mandates proactive disclosure of information, needs to be incentivized through rankings and making funds contingent on compliance. CAG can take up auditing of compliance on Section 4 as a part of its regular financial audit of the departments.
  - Moreover, quality of information reported also needs to be improved so that it is relevant and reliable.

"Citizens Charter" is a document declaring:

- **entitlements** of citizens to a specific service
- standards of service & time limits
- conditions to be met by users
- remedy available to the latter in case of non-compliance
- functions, obligations, duties & commitments of a public authority for providing goods & services effectively & efficiently
- specific **designation** of public servants for delivery & grievance redressal
- Capacity Building: Training people and community based organisations (CBOs) about the process of social audits would make their participation more meaningful.
  - Every public authority must appoint a Grievance Redressal Officers (GRO) along with creation of National Social Accountability Commission, as an apex grievance redressal body.
- Every public authority engaged in delivery of public services must publish and adhere to citizens' charter.



### 10. NEWS IN SHORT

### 10.1. NATIONAL COMMISSION FOR SAFAI KARAMCHARIS

- Recently, government approved the proposal for extension of tenure of the National Commission for Safai Karmacharis (NCSK) for next three years.
- NCSK was constituted in 1994 as a statutory body under National Commission for Safai Karamcharis Act, 1993.
- With the lapse of this Act from 2004, the Commission is now acting as a non-statutory body of the Ministry of Social Justice and Empowerment whose tenure is extended from time to time through Government Resolutions.
- It serves as a recommendatory body to Central Government, regarding specific programmes or action towards elimination of inequalities in status, and opportunities for Safai Karamcharis.
- The commission is also monitoring the implementation of The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013.

### 10.2. NATIONAL PRODUCTIVITY COUNCIL

- Recently, National Productivity Council (NPC) celebrated its 61st Foundation Day.
- It is an autonomous registered society under Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.
- It aims to promote the cause of productivity in all sectors of the Indian economy.
- It is a multipartite organization with equal representation from employers' & workers' organizations and Government, apart from technical & professional institutions and other interests.
- It is a constituent of the Tokyo-based Asian Productivity Organization (APO), an Inter-Governmental Body, of which the Government of India is a founder member.

### 10.3. SAMADHAN PORTAL

- Recently, the Ministry of Labour and Employment launched Samadhan (Software Application for Monitoring and Disposal, Handling of Industrial Disputes) portal.
- It is a dedicated web portal for conciliation, arbitration and adjudication of the industrial disputes.
- It brings all stakeholders Government, Industry and Labour - involved in industrial disputes on single integrated platform.
- Workers have the option to go to the labour court directly in case no action is initiated within 45 days

of raising a dispute online, putting a time limit on the process which presently is missing.

### 10.4. NYAYA BANDHU

- Recently, Union Minister for Law and Justice and IT launched a mobile app for the 'tele-law' service and its dashboard (to monitor the usage of the app).
  - Tele Law app aims to Mainstream Legal Aid through Common Service Centres.
  - It will benefit 73,000 Para Legal Volunteers (PLVs) of National Legal Service Authority and State Legal Services Authorities in the country who will be associated under Tele-Law service.
  - It will enable the PLVs to perform on field pre registration of cases with a facility to seek appointment from the Panel lawyer on preferred date and time, in coordination with Village Level entrepreneur (VLE) at the CSC.
- He also launched an app Nyaya Bandhu for solidifying the pro bono (providing legal services without charge) culture in the country.
  - It provides a platform to connect the registered eligible beneficiaries with the practicing advocates who are willing to volunteer their time and money in providing their services as a pro bono.
- Both initiatives are in pursuance of Constitutional commitment under **Article 39A**.

### **10.5. INSTEX SAS**

- France, Germany and the United Kingdom (E3), announced the creation of INSTEX SAS (Instrument for Supporting Trade Exchanges).
- It is a Special Purpose Vehicle aimed at facilitating legitimate trade between European economic operators and Iran.
- US pulled out of the 2015 Joint Comprehensive Plan of Action (JCPOA) or the Iran nuclear deal and re imposed sanctions last year. However, E3, in accordance with their commitment to preserve the deal decided to open this mechanism.
- It will function as a non- dollar, euro-denominated clearing house or payments channel that avoids monetary transfers in dollars between the EU and Iran with E3 as shareholders.
- It would be based in France with a German banker heading it and UK will head the supervisory board.
- It will focus initially on sectors such as pharmaceutical, medical devices and agri-food goods which are not the target of the US's sanctions.

 It is not expected to address oil-related transactions, which are Iran's primary source of foreign currency.

### 10.6. NORTH MACEDONIA SIGNS ACCORD TO JOIN NATO

- North Macedonia recently became 30th member of North Atlantic Treaty Organisation (NATO).
- It is a country in the Balkan Peninsula in Southeast Europe.
- It is one of the successor states of the former Yugoslavia.
- Macedonia was prevented from joining NATO or EU over its name as Greece cited historical concerns and opposed the use of the name "Macedonia" as cultural appropriation.
- Under Prespa Agreement, 2018 between Greece and Macedonia, the changed name North Macedonia was adopted.

#### **NATO**

- It is a peacetime military alliance, established in 1949.
   It consists of members from North America and Europe,
- Twelve countries were part of the founding of NATO: Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.
- Article Five of the treaty states that if an armed attack occurs against one of the member states, it shall be considered an attack against all members, who can use military force against the attacking state.

### 10.7. WORLD GOVERNMENT SUMMIT

- The World Government Summit was held in Dubai, UAE recently.
- It is a global platform dedicated to shaping the future of governments worldwide.
- Each year, the Summit sets the agenda for the next generation of governments, focusing on how they can harness innovation and technology to solve universal challenges facing humanity.
- It comprises a wide network of leaders of the public and private sectors, and inspires them to think collectively and creatively about disruptive intersections between government and innovation.

# 10.8. HINDI AS OFFICIAL COURT LANGUAGE IN ABU DHABI

- Abu Dhabi has recently included Hindi as the third official language used in courts alongside Arabic and English.
- It is aimed at helping Hindi Speakers to learn about litigation procedures, their right and duties without a language barrier, in addition to facilitating registration procedures via unified forms.

- According to official figures, UAE has around 2.6 million Indians constituting 30% of population and is the largest expatriate community in the country.
- Other than UAE, Fiji also has Hindi as official language.

# 10.9. WOMEN'S GLOBAL DEVELOPMENT AND PROSPERITY (W-GDP) INITIATIVE

- The White House has launched the W-GPD Initiative, a government project led by Ivanka Trump.
- It aims to coordinate current programs and develop new ones to assist women in areas such as job training, financial support, and legal or regulatory reforms.
- Its goal is to reach 50 million women in the developing world by 2025.
- The effort will draw on public and private resources, with the U.S. Agency for International Development initially setting up a USD 50 million fund.

# 10.10. NATIONAL HOUSING BANK (NHB)

- Cabinet approved payment of ₹1,450 crore to Reserve Bank of India to acquire its stake in National Housing Bank.
- RBI held 100 percent stake in the NHB. To transfer RBI's stake in the NHB to the government, the Finance Bill 2018 amended the National Housing Bank Act, 1987.
- The change in ownership from RBI to government will segregate RBI's role as banking regulator and as owner of NHB.
- The wholesale financing role of NHB will get strengthened with the transfer of ownership to government, thereby making possible augmented funding support to housing finance companies.

#### NHB

- It is a statutory body set up to operate as the principal agency to promote and regulate housing finance institutions in India both at local and regional level.
- It **launched NHB Residex**, the first official residential housing price index in 2007.

# 10.11. AGRI-MARKET INFRASTRUCTURE FUND

- Union cabinet has recently approved creation of a Rs, 2,000 crore Agri- Market Infrastructure Fund (AMIF) for development and upgradation of rural agriculture markets.
- It will be created with NABARD and will provide the state/ UT governments subsidized loans for their proposal for developing marketing infrastructure in

- 585 Agriculture Produce Market Committees (APMCs) and 10,000 villages.
- States can access AMIF for innovative integrated market infrastructure projects, including through public private partnerships.

### 10.12. ESTABLISHMENT OF RASHTRIYA KAMDHENU AAYOG

- The Union Cabinet has approved the proposal for the establishment of Rashtriya Kamdhenu Aayog.
- The Aayog will work in collaboration with Animal Sciences or Agriculture University or departments or organizations of the Central or State Government engaged in the task of research in the field of breeding and rearing of the cow, organic manure, biogas etc.
- It would help in providing a policy framework for conservation of indigenous cow breeds. It would lead to increased growth of livestock sector which is more inclusive, benefitting women, and small and marginal farmers.

### 10.13. NEW INITIATIVES FOR KHADI AND VILLAGE INDUSTRIES

- Recently, 8 different schemes of Khadi & Village Industries have been merged under 2 umbrella heads i.e. 'Khadi Vikas Yojana' and 'Gramodyog Vikas Yojana'
  - Khadi Vikas Yojana subsumed Market Promotion
     Development Assistance (MPDA), Interest
     Subsidy Eligibility Certificate (ISEC), Workshed,
     Strengthening Weak Infra, Aam Aadmi Bima
     Yojana, Khadi Grant and Khadi & VI S&T.
  - Gramodyog Vikas Yojanaa comprise of Village Industries Grant.
- CCEA has also brought in a new component of 'Rozgar Yukt Gaon' to introduce enterprise-based operation in the Khadi sector and to create employment opportunities for thousands of new artisans in the current and next financial year (2018-19 and 2019-20).
  - It aims to introduce an 'Enterprise-led Business Model' in place of conventional 'Subsidy-led model' for khadi industries.
  - It will be rolled out in 50 Villages and special focus shall be on agro-based and food processing, handmade paper and leather, and pottery industries.
  - For this, advanced skill development programmes will be launched at various centre of excellence institutes.

### 10.14. SWAYATT & START-UP RUNWAY

 Recently, Minister of Commerce and Industry launched 'SWAYATT' initiative and GeM Start-up Runway initiative.

- SWAYATT is an initiative to promote Start-ups,
   Women and Youth Advantage Through e-Transactions on Government e Marketplace (GeM).
  - It will bring together the key stakeholders within the Indian entrepreneurial ecosystem to Government e-Marketplace, the national procurement portal.
- GeM Start-up Runway is an initiative of GeM in association with Start -up India to facilitate Start-ups registered with Start -up India to access the public procurement market and sell innovative products and services to government buyers.
  - It would provide an opportunity to start-up to conduct market trials, seek time-bound feedback, gain realistic product, price comparison and market valuation.

### 10.15. WOMEN'S LIVELIHOOD BOND

- World Bank, UN Women, and Small Industries Development Bank of India (SIDBI) have joined hands to launch Women's Livelihood Bonds (WLBs), with an initial corpus of Rs 300 crore.
- It will enable individual women entrepreneurs in sectors like food processing, agriculture, services and small units to borrow around Rs 50,000 to Rs 3 lakh at an annual interest rate of around 13-14 per cent or less.
- It will have a tenure of five years and SIDBI will act as the financial intermediary and channel funds through participating financial intermediaries like banks, NBFCs etc.
- It will be unsecured, unlisted bonds and offer fixed coupon rate of 3 per cent per annum to bond investors. They will be backed by a corpus fund to be mobilised through Corporate Social Responsibility (CSR) contributions and through grant support from UK's Department for International Development (DFID).

#### 10.16. E-AUSHADHI PORTAL

- Ministry of AYUSH recently launched e-AUSHADHI portal for Online Licensing System of AYUSH Medicine.
- It will provide real time information of the licensed manufactures and their products, cancelled and spurious drugs and contact details of the concerned authority for specific grievances.

### 10.17. SELA TUNNEL

 Recently, the foundation stone for the Sela Tunnel Project was laid. It is being built by the Border Roads Organization to provide all weather connectivity to Tawang in Arunachal Pradesh and other forward areas.

### 10.18. ARUN-3 HYDRO PROJECT

- Cabinet approved ₹1236 crore investment for Arun-3 Hydroelectric project (900 MW) in Nepal.
- The project is located on Arun River in Sankhuwasabha District of Eastern Nepal. It is a run of the river project.

### 10.19. PETROTECH -2019

- Recently the 13th edition of PETROTECH 2019, India's flagship hydrocarbon Conference was organized under the aegis of the Ministry of Petroleum & Natural Gas.
- PETROTECH conference is a biennial International Oil & Gas Conference which provides a platform for national and international experts in the oil and gas industry to exchange views and share knowledge, expertise and experience.

#### 10.20. MILITARY EXERCISES

Exercise	Indian Armed Forces	Countries involved	Description
Cutlass Express 2019	Indian Navy	Maritime forces from East Africa, West Indian Ocean nations, Europe, and the United States	<ul> <li>It aimed to build capacity for preventing illegal maritime activity in the Western Indian Ocean.</li> <li>It is sponsored by U.S. Africa Command (AFRICOM) and conducted by U.S. Naval Forces Africa.</li> <li>INS Trikand, a Talwar-class frigate of the Indian Navy, participated in this exercise.</li> </ul>
Cobra Gold' exercise	Indian Army	Thailand, United States, Singapore, Japan, China, India, Indonesia, Malaysia and South Korea.	<ul> <li>It is an Asia-Pacific military exercise held in Thailand every year.</li> <li>It contains three main components: military field training, humanitarian assistance and disaster relief training.</li> </ul>
Exercise Topchi	Indian Army	-	It was held at Deolali Camp near Nashik, Maharashtra     It showcased the artillery

			firepower using ultra light Howitzer M-777, self-propelled gun K-9 Vajra and indigenous Swathi weapon- locating radar.
Exercise Rahat	Indian Army	•	The Joint exercise in coordination with NDMA is conducted to synergise efforts for humanitarian assistance and disaster relief operations.

# 10.21. MILAN-2T ANTI-TANK MISSILES

- The Defence Acquisition Council gave approval for acquisition of 5,000 Milan 2T anti-tank guided missiles (ATGM) from France.
- Milan-2 is a French 2nd-generation man-portable ATGM which is produced in India by Bharat Dynamics Limited (BDL) in partnership with a French firm.
- It has a range of 2 Km.
- Some of the indigenous anti-tank missiles include: NAG, HELINA, SANT (Stand-off Anti-Tank) Missile, Cannonlaunched Laser Guided Missile (CLGM), SAMHO, AMOGHA-1, AMOGHA-2, AMOGHA-3.

### **10.22. LCA TEJAS**

- Recently, India's Light Combat Aircraft (LCA) Tejas
  has received the final operational clearance for
  induction into the Indian Air Force (IAF) as a
  weaponised fighter jet.
- It is indigenously built fighter aircraft and has been designed by Aeronautical Development Agency (ADA) and produced by Hindustan Aeronautics Limited (HAL).
- It is single-seat multi-role jet fighter, powered by single engine and can also carry out mid-air refueling. It is pegged as world's smallest and lightest supersonic fighter aircraft in its class.
- It has limited reach of little over 400-km and will be mainly used for close air-to-ground operations (unlike Russian-origin Sukhoi-30MKIs or Rafale which have deep strike capability into enemy territory due to their long range).
- It is equipped with state-of-the-art Satellite aided Inertial Navigation System.
- It is **not the first indigenous fighter** to be inducted into the IAF. In April 1967, IAF had formed the first operational squadron with the indigenous HF-24 Marut fighter.

### 10.23. ARTILLERY GUN 'DHANUSH'

- It is the **first long-range artillery** gun to be produced in India.
- It is an upgraded version, based on the original design of the Swedish 155-mm Bofors howitzers, which India procured in the mid-1980s.
- It is the product of joint efforts by the Ordinance Factory Board and the Army with contributions from the DRDO, DGQA etc. and several private enterprises.

### 10.24. CHINOOK HELICOPTERS

- India received Boeing Co.'s Chinook helicopters that are expected to bolster the heavy-lift capabilities of its air force and further strengthen the fastexpanding defence ties with the US.
- It is a multi-role, vertical-lift platform, which is used for transporting troops, artillery, equipment and fuel. It is also used for humanitarian and disaster relief operations and in missions such as transportation of relief supplies and mass evacuation of refugees.
- It is also expected to give a significant boost to infrastructure development along India's borders given the Chinook has the capability to ferry heavy cargo like road construction equipment over difficult terrain.

#### 10.25. OPPORTUNITY ROVER MISSION

- The **Opportunity rover mission** of **NASA** has been recently declared as complete.
- The robot has been missing since the U.S. space agency lost contact during a dust storm in June last year.
- It operated for 14 years on Mars and confirmed that water once flowed on the red planet.

### **10.26. SPHEREX**

- NASA has announced the launch of a new telescope Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer (SPHEREX) in 2023.
- It is part of NASA's Explorer Program and is planned as a two-year mission with a twofold aim: to understand the evolution of the universe and how common the ingredients for life are in our galaxy.
- It will also study the **origin of water and organic molecules** in planetary systems.
- It will survey the entire sky every 6 months in optical as well as near-infrared light, creating the first spectral all-sky survey at infrared wavelengths.
- The mission will create a map of the entire sky in 96 different colour bands, far exceeding the colour resolution of previous all-sky maps.
- It will accomplish its mission from a low-Earth polar orbit, also known as a Sun-synchronous orbit.

 It will also help in identifying targets for more detailed study by future missions, such as NASA's James Webb Space Telescope and Wide Field Infrared Survey Telescope.

### 10.27. NEPTUNE'S MOON HIPPOCAMP

- The International Astronomical Union has assigned the name Hippocamp to Neptune's smallest moon S/2004 N1 discovered in 2013 through Hubble Space Telescope.
- "Hippocamp" is a horse-headed, fish-tailed creature in Greek mythology.
- IAU is an International Association of Professional astronomers active in professional research and education in astronomy.
- With the exception of Earth, all of the planets in our solar system have names from Greek or Roman mythology.
- Similarly, the natural satellites of planets are mostly given names based on Greek or Roman mythology.
   Satellites of Uranus are an exception as they are named after literary characters and not mythological characters.

### 10.28. IAF COMMISSIONS HYPER SPECTRAL PROGRAMME

- The Indian Air Force (IAF) has commissioned the development of a Hyper Spectral Programme for monitoring suspicious moments along the international border and some parts within the country.
- This hyper spectral programme, a first for the nation, will help detect or identify the presence of a human below trees, dense foliage, shrubs or inside a structure, whether it is day or night.
- It can detect human presence from air even if there is clouds cover, dense fog or snow cover.
- Data/images will be captured through optical and infrared sensors — to be most likely mounted on an unmanned aerial vehicle — and processed through deep learning algorithms.
- Hyper spectral imaging (HSI) combines the power
  of digital imaging and spectroscopy to attain both
  spatial and spectral information from an object.
  Every pixel in the image contains a continuous
  spectrum (in radiance or reflectance) and can be
  used to characterize the objects in the scene with
  great precision and detail.

For more details on Hyperspectral imaging refer November, 2018 Vision IAS Current Affairs.

### 10.29. IPRISM

 Recently, Cell for IPR Promotion and Management (CIPAM) in collaboration with ASSOCHAM and ERICSSON India, launched the second edition of 'IPrism'.

- IPrism is an Intellectual Property (IP) competition for students of schools, polytechnic institutes, colleges and universities. This competition is for residents of India only.
- This year, IPrism will be based on IP in Daily Life in two categories – film making and comic book making. Earlier edition of IPrism was based on film on Piracy and Counterfeiting and mobile gaming app.

#### **About CIPAM**

- It has been created under the aegis of Department for Promotion of Industry and Internal Trade to take forward the implementation of the National IPR Policy 2016.
- It assists in simplifying and streamlining of IP processes, apart from undertaking steps for furthering IPR awareness, commercialization and enforcement.

### 10.30. INCLUSIVE INTERNET INDEX 2019

- Recently, India ranked 47<sup>th</sup> in Inclusive Internet Index 2019.
- It is the third edition of Inclusive Internet Index, prepared by The Economist Intelligence Unit.
- It covers 100 countries, representing 94 per cent of the world's population and 96 per cent of global GDP. Sweden has topped the ranking and Congo is on the last spot.
- It measures inclusiveness based on four categories: Accessibility (network coverage), Affordability (pricing), Relevance (availability of local-language content) and Readiness (capability to access internet).

### 10.31. DELHI DECLARATION' ON DIGITAL HEALTH

- Recently, the Delhi Declaration on digital health for sustainable development was adopted at the 4th Global Digital Health Partnership Summit.
- The declaration called for WHO's leadership in digital health and for it to establish a specific mechanism to centrally coordinate digital health to assist its Member States.
- The Declaration committed to accelerate and implement the appropriate digital health interventions to improve health of the population at national and sub-national levels by 2023.
- The Global Digital Health Partnership Summit was hosted by the Ministry of Health and Family Welfare in collaboration with World Health Organization (WHO) and the Global Digital Health Partnership (GDHP).
  - The Global Digital Health Partnership (GDHP) is a collaboration of governments and territories, government agencies and the World Health Organization, formed to support the effective implementation of digital health services.

### 10.32. STARS SCHEME

- Recently, Ministry of Human Resource Development launched STARS Scheme (Scheme for Translational and Advanced Research in Science) on National Science Day.
  - Under this, 500 science projects would be funded.
  - The project will be coordinated by the Indian Institute of Science (IISc), Bangalore.

#### **National Science Day**

- It is celebrated every year on February 28 to mark the discovery of Raman Effect by physicist Chandrasekhara Venkata Raman (honoured with Bharat Ratna, Nobel Price and Lenin Peace Prize)
- Theme: This year theme was 'Science for the People and the People for Science'.

#### 10.33. INDIA'S FIRST ESG FUND

- India's first ESG (environment, social and governance) based fund – Avendus India ESG Fund has been launched by Avendus Capital Public Markets Alternate Strategies.
- The open-ended fund seeks to raise \$1 billion from the domestic and international markets. It will invest in the listed Indian equities based on pre-determined ESG factors.
- ESG investing is an umbrella term for investments that also consider and evaluate the long-term impact that business practices have on society and the environment.

### 10.34. SUPER-EFFICIENT AIR CONDITIONING PROGRAMME

- Recently, Energy Efficiency Services Limited (EESL) launched its Super-Efficient Air Conditioning Programme for residential and institutional customers.
- Initially, EESL in collaboration with private discom -BSES Rajdhani Delhi, will jointly implement a 12 month of the programme
- Under the program, Super-Efficient Air Conditioners are distributed which are 40% more efficient than, but priced comparably with, the 3-star ACs currently available in the market.
- It will reduce energy consumption as well as help in phasing out Hydrofluorocarbons (HFCs) as envisioned in Kigali Agreement.
- It will also reduce refrigerant demand as per India Cooling Action Plan (ICAP).
- EESL investment is partially supported by a grant from the **Global Environment Facility (GEF)**.
- Asian Development Bank (ADB) is also providing necessary grant support and loan while United Nations Environment (UNEP) is providing technical assistance.

#### About EESL

- It is a joint venture of four national Public-Sector Undertakings under Ministry of Power— NTPC Limited, Power Finance Corporation Limited, Rural Electrification Corporation Limited and POWERGRID Corporation of India Limited.
- It leads the market-related activities of the National Mission for Enhanced Energy Efficiency (NMEEE), one of the eight national missions under National Action Plan on Climate Change.
- It also aims to provide consultancy services in the field of Clean Development Mechanism (CDM) projects, carbon markets, demand side management, energy efficiency, climate change and related areas.
- Its other programs include:
  - Unnat Jyoti by Affordable LEDs for All (UJALA)
  - Street Light National Programme (SNLP)
  - Agriculture Demand Side Management (AgDSM) Programme
  - o Energy efficient Buildings Program
  - Smart Meter National Program

### 10.35. INDIA'S FIRST DISTRICT COOLING SYSTEM

- A UAE-based international cooling provider has entered into a 30-year concession with Andhra Pradesh government to build, own, operate and transfer India's first district cooling system (with a capacity up to 20,000 refrigeration tonnes) in the state's new capital Amaravati.
- District cooling systems produce chilled water, steam
  or hot water at a central plant and then pipe that
  energy out (either underground or over rooftops) to
  buildings for air conditioning, space heating and
  water heating. As a result, these buildings don't
  require their own chillers, air conditioners, boilers or
  furnaces.
- District cooling uses only 50% of primary energy consumption for cooling urban building, compared to other cooling systems. This also reduces carbon emissions and generate less noise as compared to traditional air conditioning systems.

# 10.36. TECHNOLOGY COLLABORATION PROGRAMME ON BIOENERGY

- Recently the India joined IEA Bioenergy TCP as its 25<sup>th</sup> member.
- It is an international platform with the aim of improving cooperation and information exchange between countries that have national programmes in bioenergy research, development and deployment.
- The primary goal of joining IEA Bioenergy TCP by Ministry of Petroleum & Natural Gas (MoP&NG) is to facilitate the market introduction of advanced biofuels with an aim to bring down emissions and reduce crude imports.

 The R&D work in IEA Bioenergy TCP is carried out carried out within well-defined 3-years programmes called "Tasks".

### 10.37. BRAMBLE CAY MELOMYS

- Recently, Scientist have confirmed that Bramble Cay melomy, island rodent, is first mammal to be officially driven extinct as a result of human-driven climate change.
- It was considered the **Great Barrier Reef's** (Australia) **only endemic mammal**.

### 10.38. WALLACE'S GIANT BEE-REDISCOVERED

- This species of bee has been rediscovered in a remote part of Indonesia in its first sighting in nearly 40 years.
- The bee (Megachile Pluto), aka 'flying bulldog' is the world's largest bee, with a wingspan more than six centimeters (2.5 inches).
- It is named after Alfred Russel Wallace, the codiscoverer of the theory of evolution alongside Charles Darwin.
- These are resin bees, they don't make honey.
- They make their nest in termite mounds.
- IUCN status-Vulnerable.

### 10.39. GHUMOT: GOA'S HERITAGE INSTRUMENT

- Ghumot, a membranophone type percussion instrument has been notified as a heritage instrument of Goa.
- It is also known as **Ghumat**, **Dakki or Budike**.
- It is part of the Mando, a musical form of the Goan Catholics that combines elements of both Indian and Western music. It is also part of the Zagor folk dance and Dulpod (Goan dance song).
- A smaller form of ghumot is generally used as the main accompaniment to the 'Burrakatha' a folk, storytelling tradition of Andhra Pradesh.

### 10.40. ATTUKAL PONGALA

- Recently, annual 10-day Attukal Pongala festival was held at Attukal Temple in Thiruvananthapuram (Kerala).
- Pongala (meaning- 'to boil over') is the ritual in which women prepare sweet payasam (a pudding made from rice, jaggery, coconut and plantains) and offer it to the Goddess.
- The Goddess is fondly referred to as 'Attukalamma'.
- Attukal temple is also popularly known as women's Sabarimala - where only women are allowed to take part in the rituals.
- It was listed in the Guinness World Records in 2009 for being the largest religious gathering of women on a single day.

# 10.41. INDIAN COUNCIL OF HISTORICAL RESEARCH

- Recently, government reconstituted Indian Council
  of Historical Research (ICHR), an autonomous
  organization under Ministry of Human Resources
  Development (MHRD), registered under Societies
  Registration Act 1972.
- Its objective is to promote and give direction to historical research and to encourage and foster objective and scientific writing of history.
- It also provides fellowships and financial assistance to the young teachers in colleges, universities and also assists to promote scientific research, both in India and abroad.
- o The composition of council is:
  - An eminent historian nominated by the Government of India (Chairman);
  - Eighteen historians nominated by the Government of India;
  - A representative of the University Grant Commission;
  - o Director General of Archaeology
  - Director of National Archives;
  - Four persons nominated by the Government of India with one representative each of the Ministry of Education, the Department of Culture and the Ministry of Finance, and Member Secretary.

# 10.42. CULTURAL HERITAGE YOUTH LEADERSHIP PROGRAMME (CHYLP)

- It aims to promote, understand and develop fondness for India's rich cultural heritage amongst the youth with a view to develop appropriate leadership qualities amongst youth.
- It focusses on the less privileged children residing in backward areas by interacting with them in vernacular languages for their better understanding.
- Centre for Cultural Resources and Training, an autonomous organization under the Ministry of Culture, is the implementation agency for this programme.

### 10.43. KNOW INDIA PROGRAMME

- Recently, 40 Indian Origin youth from 8 countries visited the country under the 53rd Edition of "Know India Programme". The partner states of this edition are Maharashtra and Daman & Diu.
- It is a diaspora engagement programme through a three-week orientation, organised by the Ministry of External Affairs, Government of India.
- Its objective is of familiarizing the India Diaspora Youth, in the age group of 18-30 years, with developments and achievements made by the

country and bringing them closer to the land of their ancestors.

### 10.44. SWACHH SHAKTI-2019 PROGRAMME

- It is a **convention of Women Sarpanches**, aimed at empowering the women, which was held in Kurukshetra.
- It aims to bring in to focus the leadership role played by rural women in Swachh Bharat Mission.
- It is being organized by the Ministry of Drinking Water and Sanitation in association with the Government of Haryana.
- The Swachh Shakti program was **first held** in 2017 at **Gandhinagar, Gujarat**.

### 10.45. DARWAZA BAND CAMPAIGN

- Ministry of Drinking Water and sanitation has launched part two of the nation-wide campaign called Darwaza Band to promote toilet use and freedom from open defecation.
- It is promoted under the aegis of Swachh Bharat Mission (Grameen) and envisages to bring about a behavioral change in men who have toilets but are not using them.
- In part 2 of the campaign it aims to further promote the use of toilets and to sustain the open defecation free status of villages across India.
- World Bank is supporting the ongoing part two of the Darwaza Band campaign.

### 10.46. NATIONAL RURAL ECONOMIC TRANSFORMATION PROJECT

- The World Bank and the Government of India has recently signed a \$250 Million Agreement for the National Rural Economic Transformation Project (NRETP).
- The project is an additional financing to the \$500 million National Rural Livelihoods Project (NRLP) approved by the World Bank in July 2011.
- It would support enterprise development programmes for rural poor women and youth by creating a platform to access finance including startup financing options to build their individual and/or collectively owned and managed enterprises.
- It also includes **developing financial products** using digital financial services to help small producer collectives scale-up and engage with the market.
- It will also support youth skills development, in coordination with the Deen Dayal Upadhyaya Grameen Kaushalya Yojana. Peer-to-peer learning, a successful strategy under the NRLP will also continue to be used in this project.

### 11. GOVERNMENT SCHEMES IN NEWS

#### 11.1. MID-DAY MEAL SCHEME

Recently Cabinet Committee on Economic Affairs has approved the revision of norms under Mid-Day Meal (MDM) Scheme

Objectives of MDM Intended Beneficiaries		Salient features	
To enhance the	• School children	o It envisages to provide cooked mid-day meal with 450 calories and 12 g of	
enrollment,	studying in <b>Classes I</b>	protein to every child at primary level and 700 calories and 20 g of protein	
retention and	to VIII of	at upper primary level.	
attendance and	Government, Local	o It also involves providing nutritional support to children of <b>elementary</b>	
simultaneously	body and	stage in drought-affected area during summer vacation.	
improve	Government - aided	o It is a <b>Centrally-Sponsored Scheme</b> and the cost of the MDMS is shared	
nutritional levels	schools, Special	between the central and state governments.	
among school	Training centres (STC)	<ul> <li>The central government provides free food grains to the states.</li> </ul>	
going children.	and Madarasas and	<ul> <li>The cost of cooking, infrastructure development, transportation of</li> </ul>	
	<b>Maktabs</b> supported	food grains and payment of honorarium to cooks and helpers is	
	under the Sarva	shared by the centre with the state governments. The central	
	Shiksha Abhiyan	government provides a greater share of funds.	
	The Centres run under	<ul> <li>The contribution of state governments differs from state to state.</li> </ul>	
	Education Guarantee	<ul> <li>At national level, an Empowered Committee, headed by Minister of</li> </ul>	
	Scheme	Human Resource Development and also a National level Steering-cum-	
	(EGS)/Alternative &	Monitoring Committee (NSMC) as well as Programme Approval Board	
	Innovative Education	(PAB) monitor the scheme and suggest measures for its smooth and	
	(AIE) and <b>National</b>	effective implementation.	
	Children Labour	<ul> <li>At the State level, a State Level Steering—cum-Monitoring Committee</li> </ul>	
	Project (NCLP) schools	headed by the State <b>Chief Secretary</b> and, at the District Level, a <b>District</b>	
	of all areas across the	Level Committee under the Chairpersonship of the senior-most Member	
	country are also	of Parliament of Lok Sabha of the district monitors the implementation of	
	included under the	the scheme	
	MDM.		

#### **Recent revised norms**

- Annual increase in Cooking cost linked to Inflation Index to offset the impact of inflation on the food items under Mid Day Meal Scheme.
- Revision of the transportation rate from Rs 75 per quintal, for other than NE & Himalayan States to PDS rate (subject to maximum of Rs.150 per quintal).
- Revision of Management Monitoring and Evaluation (MME) rate from 2% to 3% of the total admissible recurring Central Assistance. This would enable the States and UTs for better supervision and monitoring of the scheme.
- o The **assistance for kitchen devices has been enhanced** from Rs 5,000 per school to Rs 10,000 Rs 25,000 based on enrolment to enable the schools for procuring/replacing adequate kitchen devices.
- Two new components have also been approved
  - Repair of kitchen-cum stores: Assistance of Rs. 10000 for the kitchen-cum-stores constructed ten years ago on sharing basis between Center and States
  - Fortification of food items in a systematic manner through Food Corporation of India (FCI) starting with rice Kitchen gardens in each school will be encouraged.
- Delegation of power of implementing the scheme with minor modifications from the existing guidelines to District Level Committee Chaired by the District Magistrate.
  - Also, The States and UTs have been given flexibility to utilize, with the prior approval of MHRD, 5% of their Annual Work Plan & Budget for new interventions.
- Other norms include:
  - Use of Pulses from buffer stock -The States and UTs may procure pulses as per their local taste for the Mid-Day Meal from the Central buffer stock created by the Government of India.
  - Monitoring of attendance All States and UTs are required to ensure that daily data from 100% schools is uploaded through Automated Monitoring System (AMS).
  - Menu under MDM States and UTs are required to adopt ways to develop a menu that reflects local taste and local produce that is different on different days.
  - Tithi Bhojan: to encourage people from the community to celebrate important days such as child birth, marriage, birthdays etc. by contributing to the MDM Scheme. Tithi Bhojan is not a substitute to MDM but it supplements or compliments MDM.
  - O Usage of Jails, Temples, Gurudwaras etc. for MDM- All States and UTs are being advised to involve community and other agencies such as Jails, Temples, Gurudwaras etc. in the Mid Day Meal Scheme.

### 11.2. PRADHAN MANTRI AWAAS YOJANA- GRAMIN

#### Why in news?

The Union Cabinet has approved the implementation of Pradhan Mantri Awaas Yojana — Gramin (PMAY-G) beyond March, 2019.

#### Objective

### Provide a pucca house, with basic amenities, to all houseless householder and households living in kutcha and dilapidated house in rural areas by 2022.

- Immediate objective was to cover 1 crore households which are houseless or living in kutcha house in three years from 2016-17 to 2018-19
- Total target for constructionof 1.95 crore houses under PMAY-G Phase-II upto 2022.
- The scheme originally was meant to cover people in the EWS (annual income not exceeding Rs. 3 lakh) and LIG (annual income not exceeding Rs. 6 lakh) sections, but now covers the mid-income group (MIG) as well

#### **Salient Features**

- Identification of beneficiaries- Done using information from Socio Economic and Caste Census (SECC) subject to 13 point exclusion criteria.
- Role of Gram Sabha- The list will be presented to Gram Sabha to identify beneficiaries who
  have been assisted before or who have become ineligible due to other reasons.
- Cost Sharing- The cost of unit assistance to be shared between Central and State Governments in the ratio 60:40 in plain areas and 90:10 for North Eastern and hilly states.
- **Use of Technology** Inspection and uploading of geo referenced photographs will be done though a mobile app.
- It allows for construction using local materials and local house design.
- Unit assistance of Rs. 1.20 lakh in plain and Rs 1.30 lakh in hilly states, difficult areas and IAP district. Beneficiaries can also avail loan upto Rs. 7000 from financial institutions.
- **Provision of assistance for toilets** (Rs. 12000) for construction of toilets though convergence with Swacch Bharat Mission-Gramin, MGNREGS or any other dedicated the source of funding.
- Beneficiary is entitled to 90/95 person day of unskilled labour from MGNREGS.
- A pan-India training and certification programme of Masons has been launched in the States/UTs.
- The programme implementation is to be monitored through community participation (Social Audit), Member of Parliament (DISHA Committee), Central and State Government officials, National Level Monitors etc.
- Reduction has been done in administrative expenses from 4% to 2% of programme funds.

### 11.3. SHREYAS SCHEME

The Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS) was launched by the Ministry of Human Resources Development.

### Objective

### To improve employability of students by introducing employment relevance into the learning process of the higher education system.

- To forge a close functional link between education and industry/service sectors on a sustainable basis
- To provide skills which are in demand, to the students in a dynamic manner
- To establish an 'earn while you learn' system into higher education
- To help business/industry in securing good quality manpower
- To link student community with employment facilitating efforts of the Government.

#### Features

- It is a programme basket comprising the initiatives of three Central Ministries, namely the
  - Ministry of Human Resource Development: introduction of BA/BSc/BCom (Professional) courses in the higher educational institutions.
  - Ministry of Skill Development & Entrepreneurship: National Apprenticeship Promotion Scheme (NAPS).
  - Ministry of Labour& Employment: National Career Service (NCS)
- It will be implemented by the Sector Skill Councils (SSCs).
- It aims to cover 50 lakh students by 2022.
- The programme would witness simultaneous implementation along three tracks:
  - Add-on Apprenticeship: The students who are currently completing the degree programme would be invited to choose a job role of their choice from a selected list of apprenticeship job roles given by the Sector Skill Councils
  - Embedded Apprenticeship: The existing B.Voc programmes would be restructured to include a mandatory apprenticeship ranging from 6 to 10 months depending on the requirement of the skill.
  - Linking National Career Service with Colleges: National Career Service (NCS) portal of Ministry of Labour& Employment would be linked with the Higher Education institutions.
- Financing: Under the NAPS scheme, Central Government shares 25% of the stipend per month subject to a maximum of Rs.1500 p.m during the period of the apprenticeship. Apart from that, an amount upto Rs.7500 will be met towards basic training cost, where needed.

### 11.4. NORTH EAST SPECIAL INFRASTRUCTURE DEVELOPMENT SCHEME (NESIDS)

The guidelines for the scheme were recently released.

Objective	Features	
It aims to ensure focused development of the	• It is a scheme under Ministry of Development of North Eastern Region.	
North East region by providing financial	• The funds under the scheme, will be distributed among eight North Eastern	

assistance for projects of:

- Physical infrastructure relating to water supply, power and connectivity and projects enhancing tourism.
- Social sector for creation of infrastructure in areas of primary and secondary sectors of education and health.
- States on the basis of well-defined criteria on certain parameters e.g. Area, Population, Human Development Index, Road density, etc.
- Under the scheme 100% centrally funding is provided to the State Governments of North Eastern Region.
- It will be over and above the existing schemes of government of India and state governments of the NE region.
- The schemes of the Ministry of DoNER, including NLCPR, have been restructured and placed under this scheme.

### 11.5. ATAL JAIANUSANDHAN BIOTECH MISSION- UNDERTAKING NATIONALLY RELEVANT TECHNOLOGY INNOVATION (UNATI)

The Department of biotechnology, Ministry of Science and Technology has launched the Atal JaiAnusandhan Biotech Mission - Undertaking Nationally Relevant Technology Innovation (UNaTI).

Objective	Features
To transform Health, Agriculture	This mission includes:
and Energy sectors during the	o GARBH-ini: A Mission to promote Maternal and Child Health and develop prediction tools
next 5 years.	for pre-term berth,
	<ul> <li>IndCEPI: A Mission to develop affordable vaccines for endemic diseases,</li> </ul>
	<ul> <li>Development of Biofortified and Protein Rich wheat contributing to POSHAN Abhiyan,</li> </ul>
	<ul> <li>Mission on Anti Microbial Resistance for Affordable Diagnostics and Therapeutics</li> </ul>
	<ul> <li>Clean Energy Mission- Innovative Technology interventions for Swachh Bharat.</li> </ul>







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