

# **IQRA IAS**



## **CURRENT AFFAIRS**

### **JUNE 2020**

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# **AAD ON NOTES**

IORA IAS

# **POLITY AND GOVERNANCE**

**Paper II: This section is relevant to Polity and Governance Section of GS  
Paper II**

## 1.1 INNER LINE PERMIT (ILP) SYSTEM

**Why in News:** In response to a petition filed by some Assamese groups against 'The Adaptation of Laws (Amendment) Order, 2019' issued by the President of India, the Supreme Court sought government response on the matter. However, the Court has declined to stay the operation of the Presidential Order

The petitioners claimed that the Presidential order deprived Assam of the powers to implement the Inner Line system in its districts and limit the applicability of the Citizenship (Amendment) Act in Assam.

### Inner Line Permit (ILP) system

- An Inner Line Permit is a document that is required by an Indian citizen to visit or stay in a state that is protected under the ILP system.
- An ILP is issued by the state government concerned and can be obtained after applying either online or physically.
- It states the dates of travel and also specifies the particular areas in the state which the ILP holder can travel to.
- No Indian citizen can visit any of these states unless he or she belongs to that state, nor can he or she overstay beyond the period specified in the ILP.
- The system was in force in three North eastern states — Arunachal Pradesh, Nagaland and Mizoram and it was extended to Manipur through the above mentioned presidential order.

### How did the ILP system come about?

- The concept comes from the colonial era. Under the Bengal Eastern Frontier Regulation Act, 1873, (BEFR) the British framed regulations restricting the entry and regulating the stay of outsiders in designated areas.
- This was to protect the Crown's own commercial interests by preventing "British subjects" (Indians) or foreign citizens from trading within these regions. In 1950, the Indian government replaced "British subjects" with "Citizen of India".
- This was to address local concerns about protecting the interests of the indigenous people from outsiders belonging to other Indian states.

### Background

### Citizenship Amendment Act and the ILP

- The Citizenship (Amendment) Act, 2019 makes it easier for refugees of minority religions from Bangladesh, Pakistan, and Afghanistan to obtain Indian citizenship.

- However, the Act exempts certain categories of areas, including those protected by the Inner Line system, from application. This means that beneficiaries under CAA can become Indian citizens but will not be able to settle in these areas.

### **The Adaptation of Laws (Amendment) Order**

- In December, 2019, the President of India issued the Adaptation of Laws (Amendment) Order, 2019 in exercise of the powers conferred by clause (2) of Article 372 of the Constitution of India.
- As per the this clause, to bring the provisions of any law in force in the territory of India into accord with the provisions of this Constitution, the President may by order make such adaptations and modifications of such law.
- The order amended the Bengal Eastern Frontier Regulations (BEFR), 1873, and extended the ILP regime to Manipur, making it is the fourth state after Arunachal Pradesh, Nagaland and Mizoram where the ILP regime is applicable.

### **News Update**

- Assamese groups like the Asom Jatiyatabadi Yuba Chatra Parishad (AJYCP) and All Tai Ahom Students' Union (ATASU) filed a petition in the Supreme Court against the Presidential order.
- They stated that the original BEFR included the then Assam districts of Kamrup, Darrang, Nowgong (now Nagaon), Sibsagar, Lakhimpur, and Cachar, and that they were moved from the purview of BEFR just before the grant of assent to CAA. They further claimed that the BEFR empowered the state to bring most districts in Assam under the inner line area.
- If these districts had come under the inner line area, the Citizenship (Amendment) Act, 2019 could not be implemented to grant citizenship to illegal immigrants in Assam.
- They noted that the three states in the northeast that have seen the highest migration are Assam, Tripura and Meghalaya, none of which has an ILP system.
- The petition stated that BEFR could have been the answer to tackle the problems of illegal immigrants which Assam and its citizens have been facing for long.

### **Court's response**

- The Supreme Court has declined to stay the operation of the Presidential Order.
- The Court sought government response on the matter.

## 1.2 ELECTION POLL AFFIDAVIT

**Why in News:** The Election Commission of India (ECI) has recently decided to robustly address the challenge of false information in election affidavits.

### What is Election/Poll Affidavit?

- A poll affidavit is submitted by the candidate at the time of filing nominations for election.
- A candidate in his/her affidavit is required to disclose:
  - his criminal antecedents;
  - assets and liabilities; and
  - educational qualifications
- In 2013, ECI had decided that assets and liabilities of the candidates, as filed in their affidavits, would be verified by the Central Board of Direct Taxes (CBDT).

### Update

- The Election Commission has been receiving complaints regarding false information in affidavits filed by some candidates.
- This is a matter of concern as it adversely affects the rights of voters and impinges on the purity of electoral process.
- Election Commission has decided to now scrutinise the complaints received against candidates who furnish false information in their affidavits filed at the time of nomination, and refer the matter to relevant investigative agencies on case to case basis.
- In case the investigating authorities find the candidate has lied about her/his affidavit, the Commission will publicise the information in the interest of transparency.
- However, people can still approach courts with their complaints on such matters.

### Existing Provisions in Case of False Information

- As per the existing provisions, individuals are required to file such complaints in the competent courts under Section 125A of the Representation of People Act, 1951.
- Though complaints were also received by EC against false affidavits, the poll panel so far was not taking cognizance of such complaints.
- Under Section 125A of the Representation of the People Act, the total punishment for filing a false affidavit at the time of filing nomination is six months of imprisonment, or fine or both.

### Section 125A of RPA 1951

- It deals with penalty for filing false affidavit, etc

- It has provisions to punish a candidate who himself or through his proposer, in his nomination papers, with intent to be elected in an election-
  - fails to furnish all the required information, or
  - gives false information which he knows or has reason to believe to be false; or
  - conceals any information,
- Such candidates shall be punishable with imprisonment for a term which may extend to six months, or with fine, or with both
- Put Simply- Under Section 125A of RP Act, a person found guilty of lying in her affidavit can face a six-month prison term, or fine, or both.
- This punishment is short of the requirement of minimum of two years of sentence for attracting disqualification under Section 8A of the election law.
- Section 8A of the Representation of Peoples Act, 1951 deals with disqualification of candidates on ground of corrupt practices.

Electoral Reforms Proposed by ECI- As a part of electoral reforms, the ECI had recommended to the central government in 2011 to amend Section 125A of the Act and enhance the sentence for filing a false affidavit to two years. However, the matter has been pending with the Union Law Ministry.

#### **Reasons for the Latest Decision of the ECI**

- As per Article (19)(a) of the Constitution, voter has a fundamental right to know about candidates at an election
- Also, the foundation of a healthy democracy is based upon well-informed the citizens.
- The latest decision by the ECI is a move to ensure fair, free and ethical elections.

#### **Key Provisions of Representation of People's Act (1951)**

- It deals with the actual conduct of elections in the country.
- It provides for the detailed rules for the mode of conduct of elections.
- The act also deals with rules for qualification and disqualification of members of Lok Sabha, Rajya Sabha and the state legislatures.

#### **Key Provisions of Representation of People's Act (1950)**

- Its objective is to regulate elections in the country.
- It lays down procedures for delimitation of constituencies of both Lok Sabha and Legislative Assemblies' elections.
- It provides for the allocation of seats in the Lok Sabha; in the Legislative Assemblies and Legislative Councils of States.

## 1.3 ARTICLE 371 AND 371 (A)

**Why in News:** Nagaland Governor R N Ravi has written a letter to Chief Minister Neiphiu Rio on June 16 expressing his concern over the deteriorating law and order situation in the State. As per the Governor, over half a dozen armed gangs have challenged the legitimacy of the constitutionally established state government of Nagaland on a daily basis resulting in collapse of law and order in the State.

### News Update

- The current Nagaland's Governor Mr. Ravi exercised his powers provided under Article 371 (A) of the Constitution, since the government has "failed miserably" in a sensitive border-state.
- The Governor has taken full charge of the important law and order decisions, including transfer and posting of officials.

### Article 371

- It is in Part XXI of the Constitution, titled 'Temporary, Transitional and Special Provisions'.
- Article 371 of the Constitution includes "special provisions" for 11 states, including six states of the Northeast.
- Articles 370 and 371 were part of the Constitution at the time of its commencement on January 26, 1950.
- Articles 371(A) through 371(J) were incorporated subsequently.

### Article 371 (A) of Constitution

#### Objective

- It deals with special powers given to Nagaland.
- Special provisions under Article 371 are accorded to northeast states to preserve their tribal culture.

#### Origin

- It came into being after the 13th Amendment Act, 1962.
- It was inserted after a 16-point agreement between the Centre and the Naga People's Convention in 1960, which led to the creation of Nagaland in 1963.
- It has 3 clauses- Article 371 (A)- Clause 1, 2 & 3. These clauses are further divided into sub-clauses.

### **Article 371 (A) - Clauses 1a**

- It restricts the powers of Parliament over Nagaland in certain matters.

Parliament cannot legislate in matters of

- Naga religion or social practices;
- Naga customary law and procedure;
- Administration of civil and criminal justice involving decisions according to Naga customary law;
- Ownership and transfer of land without concurrence of the state Assembly.
- It shall apply to Nagaland only after the state Assembly passes a resolution to do so.

### **Article 371 (A) - Clauses 1b**

- It provides immense powers to the Governor of the state.

**Main Provisions of the Clause are**

- Governor of Nagaland shall have special responsibility with respect to law and order in the State of Nagaland for so long as in his opinion internal disturbances occurring in the Naga Hills-Tuensang Area immediately before the formation of that State continue.
- In the discharge of his functions, the Governor shall, after consulting the Council of Ministers, exercise his individual judgment as to the action to be taken.
- If any question arises about the Governor exercising his individual judgement as per Clause 1b, the decision of the Governor in his discretion shall be final, and the validity of anything done by the Governor shall not be called in question on the ground that he ought or ought not to have acted in the exercise of his individual judgment.
- If the President on receipt of a report from the Governor or otherwise is satisfied that it is no longer necessary for the Governor to have special responsibility with respect to law and order in the State of Nagaland, he may direct that the Governor shall cease to have such responsibility.

## **1.4 TENTH SCHEDULE AND SPEAKER POWERS**

**Why in News:** Manipur Speaker Y Khemchand disqualified the Congress MLA turned BJP lawmaker Thounaojam Shyamkumar on grounds of anti-defection law ahead of the Rajya Sabha election last week.

The decision was taken by the Speaker almost three years after the member's disqualification was sought under the anti-defection law. (Manipur Assembly elections were held in 2017.

### **Alleged misuse of Anti Defection Law in Manipur Assembly**

- In 2017, the BJP was able to form the government in Manipur after seven legislators who won on a Congress ticket switched sides to BJP. (Congress MLA turned BJP lawmaker Thounaojam Shyamkumaron was one of them).
- The Congress party asked the Speaker to disqualify these seven, but the petitions were kept pending by the Speaker for three long years. Thus, Manipur Assembly has come to represent the most recent example of failings of constitutional post of the Speaker.
- The opposition finally took the matter to the Supreme Court.

### **Recent Update**

- As discussed earlier, in 2017, after the Manipur Assembly elections, 7 Congress MLAs had defected from their party to the BJP.
- Recently, before the Rajya Sabha elections, the Speaker of the Manipur Assembly disqualified three of those seven defected MLAs. It is claimed that all of them were expected to vote for the Congress Rajya Sabha candidate.
- Four other defected MLAs were allowed to enter the House. Three of them voted for the BJP, and the BJP candidate won.
- This led to controversy about who ought to have been allowed to vote or barred from voting from Manipur in Rajya Sabha elections.
- It once again raised questions over the misuse of powers under anti-defection law by the speaker.

### **Anti Defection Law or Tenth Schedule**

- According to paragraph 2(1)(a) of the Tenth Schedule of the Constitution, an elected member of the house shall be disqualified from being a member if they win the election as a candidate of one party and then join another.
- The Tenth Schedule is also called as anti-defection law and was added to the Constitution through the Fifty-Second (Amendment) Act, 1985.

### **Objective of the Law**

The purpose of the anti-defection law was to weed out corruption and money power from politics.

**Decision Making Power under Anti-Defection Law:** The decision on question of disqualification on ground of defection is referred to the Chairman or the Speaker of such House (i.e, the Presiding Officer), and his decision is final (but open to judicial review).

## **Applicability of the Law**

The law applies to both Parliament and State Assemblies of the country.

## **Grounds of Disqualification under Anti-defection Law**

If a member of a house belonging to a political party shall be disqualified under the anti-defection law if-

- He voluntarily gives up the membership of his political party;
- He votes, or does not vote in the legislature, contrary to the directions of his political party. However, if the member has taken prior permission, or is condoned by the party within 15 days from such voting or abstention, the member shall not be disqualified;
- If an independent candidate joins a political party after the election;
- If a nominated member joins a party six months after he becomes a member of the legislature.

## **Exceptions under Anti-Defection Law**

- Legislators may change their party without the risk of disqualification in certain circumstances.
- The law allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger. In such a scenario, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.

## **Issues with the Anti Defection Law**

### **Power vests with the Speaker**

- As per the Tenth Schedule, the power for disqualification is vested in the Presiding Officer/ Speaker, who is usually a nominee of the ruling party.
- As per the Supreme Court, the Speaker is the “sole and final arbiter” of the disqualification petitions. However, the Speaker also continues to belong to a particular political party either de jure or de facto. This raises question marks on whether Speaker should be entrusted as a quasi-judicial authority in defection cases of MPs or MLAs.

### **No Time- Limit for Decision**

- Moreover, there is no time limit as per the law within which the Speaker should decide on a plea for disqualification.
- There have been several cases where the Courts have expressed concern about the unnecessary delay in deciding such petitions.

## **Decision of the Presiding Officer and Judicial Review**

### **Initial Position**

The law initially stated that the decision of the Presiding Officer is not subject to judicial review.

### **Court's Objection**

- The court found this provision to be unconstitutional and held that while deciding a question under the 10th Schedule, the presiding officer should function as a tribunal.
- Thus, the decision of the Presiding Officer was subject to judicial review on the grounds of malafides, perversity, etc like that of any other tribunal.

### **1993 Supreme Court Ruling**

- Therefore, in 1993, the Supreme Court allowed appeals against the Presiding Officer's decision in the High Court and Supreme Court.
- However, it held that there may not be any judicial intervention until the Presiding Officer gives his order.

### **Supreme Court Judgements on the Powers of the Speaker**

- In January 2020, a three judge bench of the Supreme Court expressed its displeasure with the Speakers' lack of urgency in deciding the disqualification petitions.
- The bench ruled that Speakers of Assemblies and the Parliament must decide disqualification pleas within a period of three months except in extraordinary circumstances.
- This settled the law for situations where the timing of the disqualification is meddled to manipulate floor tests.

### **General Recommendations of the Supreme Court on Tenth Schedule**

#### **Amending the 10th Schedule**

- The court also recommended the Parliament to consider taking a relook at the powers of the Speakers citing instances of partisanship.
- The Supreme Court asked Parliament to amend the Constitution to strip Legislative Assembly Speakers of their exclusive power to decide whether legislators should be disqualified or not under the anti-defection law.
- In another case in November 2019, the Supreme Court had urged Parliament to "reconsider strengthening certain aspects of the Tenth Schedule, so that such undemocratic practices are discouraged".

### **An Independent Tribunal for Defection Cases**

- As per the Supreme Court, the disqualification petitions under the Tenth Schedule should be adjudicated by a mechanism outside Parliament or the Legislative Assemblies.
- The court suggested a permanent independent tribunal headed by a retired Supreme Court judge or a former High Court Chief Justice to decide on disqualification cases of MPs and MLAs.

## **1.5 SECTION 309 OF IPC**

**Why in News:** Section 309 of the IPC is in news in the backdrop of actor Sushant Singh Rajput's suicide.

### **Section 309 of Indian Penal Code (IPC)**

- Section 309 IPC deals with "attempt to commit suicide".
- As per the Section 309, "whoever attempts to commit suicide and does any act towards the commission of such offence shall be punished with simple imprisonment for a term which may extend to one year (or with fine, or with both)".
- Anyone who survives an attempted suicide can be booked under this Section of the law.

### **Law is very old in origin and is not in line with modern times**

- It was brought in by the British in the 19th century.
- Back in the 19th century, the thinking of the time was that killing or attempting to kill oneself is a crime against the state and against religion.
- However, this doesn't reflect the contemporary understanding of suicide which is more about the mental health issues.
- Only 24 countries around the world have a section such as this in their laws in the current times.
- Thus, Section 309 is an archaic law and needs to be repealed. Unfortunately, it still exists in the statute book and is sometimes misused.

### **Concerns with use of Section 309 IPC**

- The use of this Section can potentially deprive a victim of treatment in the crucial hour, as hospitals wait for a go-ahead from police in what would be seen as a "medico-legal case".
- It is possible that unscrupulous hospital authorities may misuse this situation and charge extra to "hush up" the case by not informing the police; similar extortion is possible on the part of corrupt police personnel as well.

- All of this is in addition to the trauma and harassment that an already severely distressed individual and people around him/her would likely be going through.

### **Reasons given by those in favour of Section 309 IPC today**

- There are a few cases when someone may use suicide as a threat in front of government officials to get their demands met.
- Such person does not intend to commit suicide but is using the threat to unfairly pressure or blackmail the system.
- Using Section 309 becomes essential in such cases.

### **Attempts to Repeal Section 309**

#### **Over the years:**

- In 1971, the Law Commission in its 42nd Report recommended the repeal of Section 309 IPC.
- The IPC (Amendment) Bill, 1978, was even passed by Rajya Sabha, but before it could be passed by Lok Sabha, Parliament was dissolved, and the Bill lapsed.
- The Constitution Bench of Supreme Court upheld the constitutional validity of Section 309 in 'Gian Kaur vs State of Punjab', 1996 case.
- Later in 2008, the Law Commission observed in its 210th Report that an attempt to suicide needed medical and psychiatric care and not punishment.
- In 2011, the Supreme Court too recommended to Parliament that it should consider the feasibility of deleting the section.
- In 2014, the Central Government had decided to drop Section 309 from the IPC after 18 states and 4 Union Territories had backed the recommendation of the Law Commission.
- The matter hasn't yet reached its logical conclusion.

### **Mental Healthcare Act, 2017 is a recent effort to dilute Sec 309 IPC**

- In July 2018, the Mental Healthcare Act (MHCA), 2017, came into force.
- As per the Section 115(1) of the MHCA, "Notwithstanding anything contained in section 309 of the Indian Penal Code any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code."
- Section 115(2) of the MHCA says that "The appropriate Government shall have a duty to provide care, treatment and rehabilitation to a person, having severe stress and who attempted to commit suicide, to reduce the risk of recurrence of attempt to commit suicide."

### **It helped reduce use of 309 but not ended it**

- The Mental Healthcare Act, 2017 has significantly reduced the scope for the use of Section 309 IPC and made the attempt to commit suicide punishable only as an exception.
- Thus, it has put restrictions on the use of Section 309 of IPC.
- However, there are continued reports of its use by police forces across the country.

### **Way Ahead**

- Attempt to suicide is a mental health issue and needs professional medical and psychiatric help at the earliest.
- However, attempt to suicide can also be misused in some cases as already discussed.
- Therefore, Section 309 of IPC can be redefined in such a manner where it can still be leveraged in law and order situations, and not be used against those who are suffering from genuine mental health issues.

## **1.6 POSTAL BALLOTS**

**Why in News:** Election Commission (EC) of India has decided that the Covid patients will be allowed to vote through postal ballots in the Bihar elections which are to be held later this year. EC wants to ensure that the pandemic does not affect voter turnout in the Bihar polls later this year.

### **Postal Ballot System in India**

- Voting through postal ballot is held as per the Conduct of Election Rules, 1961.
- Postal voting is a type of voting in elections whereby Electronically Transmitted Postal Ballot Papers (ETPB) are distributed to electors and returned by post.
- This is in contrast to electors voting in person at a polling station via an electronic voting system aided by Electronic Voting Machines (EVMs).
- Postal voting refers only to the means, by which the ballots are submitted, not to the method by which the votes are counted. These are counted first but along other votes at the time of counting during the elections.

### **Restricted Postal Ballot System in India**

India's system for postal ballots is restricted to certain categories of people.

According to the Election Commission (EC) of India, the facility is available to a service voter—that is a voter having a service qualification.

### **Following are eligible to cast their votes through postal ballots**

- Service Voter- According to the provisions of sub-section (8) of Section 20 of Representation of People Act, 1950, service qualification means the persons working in Central Forces under Arms Act and Government officials deployed in Embassies outside the country are classified as Service Voters and are provisioned for online enrolment.
- The wife of a Service Voter who ordinarily resides with him.

### **Overseas Voters**

- A person having service qualification can get enrolled as 'service voter' at his native place even though he actually may be residing at a different place (of posting).
- He also has an option to get himself enrolled as a general elector at the place of his posting where he factually, at the point of time, is residing ordinarily with his family for a sufficient span of time.
- While prisoners are not allowed to vote, people under preventive detention can cast their votes through postal ballots as well.
- As of now, there is no provision for voters who have migrated inside the country to cast their votes through postal ballots.
- Last year in October, the Government also allowed the disabled and people over 80 years of age to cast their vote through postal ballot.

### **Electronically Transmitted Postal Ballot System (ETPBS)**

- In the Lok Sabha Elections of 2019, ECI introduced the Electronically Transmitted Postal Ballot System (ETPBS).
- In 2019 General Elections, a record highest number of 18, 02,646 were enrolled as Service Electors in 2019.
- For the first time, postal ballot was enabled through the dedicated online portal and registration.
- The service voters were sent postal ballots electronically one way to save processing time, resources and avoid human errors.

### **Coverage of Postal Ballot System**

- In case the coverage of the postal ballot has to be extended, the Election Commission asks the Union Law Ministry to expand the ambit of postal ballots.
- This requires an amendment to the Representation of the People's Act, 1951 (RP Act), and the Conduct of Election Rules, 1961.

### **Update**

- Law Ministry has accepted the EC's proposal on this issue, following which a new category of "Covid-19 suspect or affected persons" has been added under Rule 27A of the Conduct of Election Rules, 1961.
- To be eligible under the new category, the voter should have tested positive in a government healthcare facility or one designated by the government as a Covid hospital.
- Voters under "home quarantine or institutional quarantine" can also avail the postal ballot option.
- There will be an SOP for the Covid-positive voter to notify the Returning Officer.
- Once the application is accepted, the voter will not be allowed to vote at his or her polling booth.
- This facility will be extended to all future elections, including bye-elections.

### **Voting during Pandemic**

- To ensure social distancing, the EC has decided to limit the number of voters at each polling booth to 1,000, instead of 1,600 under normal circumstances.
- Regarding the voters in containment zones who are not infected, the EC has sought inputs from the state Chief Electoral Officer (in Bihar), and is considering a few options, including advance voting.

## **1.7 SANSAD ADARSH GRAM YOJANA**

**Why in News:** The Common Review Mission (CRM)-2019, an audit of rural schemes commissioned by the Ministry of Rural Development, has released its findings on Sansad Adarsh Gram Yojana (SAGY).

### **Latest Development**

- The Common Review Mission (CRM)-2019 audit has found Sansad Adarsh Gram Yojana (SAGY) to be ineffective in bringing about development in chosen gram panchayats.
- It also expressed concern over Pradhan Mantri Gram Sadak Yojana.

### **Findings of the audit on Sansad Adarsh Gram Yojana**

- In many of the SAGY villages, MPs did not give any significant money from MPLADS. In isolated cases, where MPs have been pro-active, some infrastructure development has taken place, but the scheme has not made any noticeable impact.

- With each passing year, fewer MPs have been adopting villages under SAGY. In Phase-1 of SAGY, 703 MPs had adopted gram panchayats but that number went down to 497 in Phase-2 and 301 in Phase-3, showing a gradual decline in subsequent phases.
- Till the end of December 2019, only 252 MPs have adopted gram panchayats under Phase-4 of SAGY — 208 members of Lok Sabha and 44 members of Rajya Sabha.

### **The reasons for low adoption are two-fold**

- Concerns that picking one village may lead to losing out on votes from other villages in their constituencies
- Absence of separate budgetary allocation for the scheme
- The CRM is of the opinion that in the current format, the scheme is not achieving the desired purpose and recommended the ministry to review the scheme for enhancing its impact.

### **Findings of the audit on rural roads scheme**

- The CRM has expressed concern over the quality of roads constructed under schemes of state governments and maintenance of rural roads under central Pradhan Mantri Gram Sadak Yojana (PMGSY) after the end of five-year warranty period.
- The audit has urged the Centre to frame a “National Rural Road Policy” to ensure uniform norms of construction and maintenance, irrespective of whether the road belongs to a state scheme or PMGSY.
- It has also urged the Centre to examine if the finance commission can provide funds for maintenance of rural roads, as many states have requested that the Centre should share cost of maintenance.

### **Sansad Adarsh Gram Yojana**

- Launched in 2014, Sansad Adarsh Gram Yojana is a rural development programme broadly focusing upon the development in the villages.
- The scheme offers each MP to select a village in his constituency for development. It has no budgetary allocation and aims to bring about convergence in government schemes to improve developmental parameters in the selected village.
- The goal was for each MP to develop three Adarsh Grams (model villages) by March 2019, of which one was to be achieved by 2016. Thereafter, five such Adarsh Grams (one per year) were to be selected and developed by 2024.
- Far beyond mere infrastructure development, SAGY aims at instilling certain values, such as people’s participation, gender equality, social justice, spirit of community service, eco-friendliness, local self-government, transparency and accountability in public life.

## **Objectives**

- The development of model villages, called Adarsh Grams, through the implementation of existing schemes, and certain new initiatives to be designed for the local context, which may vary from village to village.
- Creating models of local development which can be replicated in other villages.

## **Identification of villages**

- MPs can select any gram panchayat, other than their own village or that of their spouse, to be developed as an Adarsh Gram.
- The village must have a population of 3000-5000 people if it is located in the plains, or 1000-3000 people if located in hilly areas.
- Lok Sabha MPs can choose a village from their constituency, and Rajya Sabha MPs from the state from which they are elected. Nominated members can choose a village from any district of the country.
- MPs representing urban constituencies can identify a village from a neighbouring rural constituency.

## **Funding**

No new funds have been allocated for the Yojana.

## **Resources can be raised through**

Funds from existing schemes, such as the Indira Awas Yojana, Pradhan Mantri Gram Sadak Yojana, Mahatma Gandhi National Rural Employment Guarantee Scheme, and Backward Regions Grant Fund, etc.

- The Member of Parliament Local Area Development Scheme (MPLADS)
- The gram panchayat's own revenue
- Central and State Finance Commission Grants
- Corporate Social Responsibility funds

## **Implementation**

A Village Development Plan must be created for each Adarsh Gram. While each village will develop a list of activities to be carried out, based on its own resources and requirements, possible activities have been listed in the guidelines for the scheme.

- For example, Adarsh Grams can work towards providing universal access to basic healthcare facilities, promoting diversified livelihoods through agriculture related livelihoods and skill development, providing pension for all eligible families, housing for all, and promoting social forestry.
- Examples of villages developed under Sansad Adarsh Gram Yojana
- Sachin Tendulkar had adopted PuttamrajuKandriga in Nellore district of Andhra Pradesh and has done a great job at developing this village.
- Jayapur village in Varanasi adopted by Prime Minister Narendra Modi, got new roads, solar electricity provisions, toilets and piped water.
- **Note:** Despite the initial good work, it was short-lived due to a lack of administrative follow-up.

## 1.8 RAJYA SABHA ELECTIONS

**Why in News:** One more round of Rajya Sabha elections have recently been concluded. Polls to some seats were earlier postponed due to the Covid 19 outbreak.

### Update

- There is some controversy about who ought to have been allowed to vote or barred from voting in Manipur.
- Such issues arise mainly due to the interpretation of rules and features peculiar to the Rajya Sabha elections.

### Objections were raised mainly on the following grounds:

- Cross-voting
- Breach of confidentiality by showing the ballot/vote to a person other than the member's own party's agent
- Eligibility to vote under certain conditions

### Rajya Sabha

- Rajya Sabha is a permanent house and is not subject to dissolution.
- However, one-third of its members from each State retire once in two years and polls are held to fill up the vacancies.
- Thus, new members are elected to the Upper House every two years for a six-year term.
- In addition, vacancies can arise due to resignation, death or disqualification. These are filled up through by polls after which those elected serve out the remainder of their predecessors' term.

### **The Electorate of RS Polls**

Only elected members of the State Legislative Assemblies can vote in Rajya Sabha elections.

### **Can a Legislator Vote without taking Oath as a Member of the Assembly?**

- The Supreme Court has ruled that a member can vote in a Rajya Sabha election even before taking oath as legislator as it's a non-legislative activity.
- A person becomes a member of the legislative assembly as soon as the list of elected members is notified by the ECI.
- Further, a member can also propose a candidate before taking oath.
- The Delhi and Puducherry Assemblies elect members to the Rajya Sabha to represent the two Union Territories.

### **Single Transferable Vote and System of Proportional Representation in RS Elections**

- Voting in the RS elections is by single transferable vote and the election is held on the principle of proportional representation.
- A single transferable vote means electors can vote for any number of candidates in order of their preference.
- A candidate requires a specified number of first preference votes to win.
- Each first choice vote has a value of 100 in the first round.
- To qualify, a candidate needs one point more than the quotient obtained by dividing the total value of the number of seats for which elections are taking place plus one.
- For instance, if there are four seats and 180 MLAs voting, the qualifying number will be  $180/5 = 36$  votes or a value of 3,600.
- If more than one candidate fails to get the specified number then counting may go to the second round.
- In such a situation, the second preference polled by the candidates (in ballots where the first preference has gone to those already qualified) will be transferred to their kitty, but with a diminished value.
- The total value of the votes polled by the remaining candidates both as first and subsequent preferences would be used to decide the winner.
- This is to avoid the principle of majority, which would mean that only candidates put up by ruling parties in the respective States will be elected.

### **Voting Process for Rajya Sabha Elections**

- Polling for a Rajya Sabha election will be held only if the number of candidates exceeds the number of vacancies.

- As the strength of each party in the Assembly is known, it is not difficult to estimate the number of seats a party would win in the Rajya Sabha poll.
- For example, if there are four seats to be filled up, and the ruling party and its allies command a two-thirds majority, and the Opposition a third, it will mean that the election will go three seats to one in favour of the ruling party.
- In many States, parties avoid a contest by fielding candidates only in respect to their strength. Where an extra candidate enters the fray, voting becomes necessary.
- Candidates fielded by political parties have to be proposed by at least 10 members of the Assembly or 10% of the party's strength in the House, whichever is less.
- For independents, there should be 10 proposers, all of whom should be members of the Assembly.

### **Open Ballot System for RS Polls**

- The Rajya Sabha polls have a system of open ballot, but it is a limited form of openness.
- Open ballot is used as a measure to check rampant cross-voting, which implies that the vote had been purchased by corrupt means.
- Under open ballot system, each party's MLA shows his or her marked ballots to the party's authorised agent before they are put into the ballot box.
- Vote becomes invalid if a marked ballot is shown to anyone other than one's own party's authorised agent.
- Not showing the ballot to the authorised agent will also mean that the vote cannot be counted.
- Independent candidates are barred from showing their ballots to anyone.

### **NOTA and RS Polls**

- The Election Commission of India (ECI) issued two circulars, in 2014 and 2015, giving Rajya Sabha members the option to press the NOTA button in the Upper House polls.
- However, in 2018, the Supreme Court of India struck down the provision, holding that the 'none of the above' option is only for general elections held on the basis of universal adult suffrage, and cannot be applied to indirect elections based on proportional representation.

### **Does Cross-Voting Attract Disqualification in RS Polls?**

- The Supreme Court has ruled that not voting for the party candidate, i.e, cross-voting, will not attract disqualification under the anti-defection law. As per the Court, MLAs as voters retain their freedom to vote for a candidate of their choice.
- The Court also observed that since the party would know who voted against its own candidate, it is free to take disciplinary action against the legislator concerned.

# INTERNATIONAL RELATIONS

- ❖ **Paper II (GS): All the Articles of this section are relevant to the following topics:**
  - **India and its Neighbourhood – Relations**
  - **Bilateral, Regional and Global Groupings and Agreements involving India and / or affecting India's Interests**
- ❖ **Prelims Oriented Questions and Places in News for Maps/ Matching**

## 2.1 G-7

**Why in News:** G-7's 46th Summit was scheduled to happen in June 2020 in USA. However, US President Trump postponed the summit (to September or later) saying G-7 doesn't fully represent the current state of global politics and economics.

### G-7

- G-7 or 'Group of Seven' is the group of the largest advanced economies of the world comprising of the United States (US), United Kingdom (UK), France, Germany, Italy, Canada and Japan.
- G-7 has its origins in an intergovernmental organization that was formed in 1975 by the US, UK, France, Germany, Italy and Japan. Canada joined the group in 1976.
- The European Union began attending the G-7 Summits in 1977. It holds all the rights and responsibilities of full members except to chair or host the meeting.
- The G-7 does not have a formal constitution or a fixed headquarters.

### Scope

- The initial scope of this group was to discuss economic issues.
- With time, the scope of deliberations was expanded to other critical challenges, like financial crises, terrorism, arms control and drug trafficking etc.

### G7 to G8 to G7

- Russia joined the G-7 in 1997 and now, G-7 was named as G-8.
- However, Russia was expelled from G-7 in 2014 after it annexed Crimea region of Ukraine. This was seen by other members as violation of sovereignty and territorial integrity of the Ukraine.
- Thus, G-8 again became G-7.

### Summits

- Annual summits of G-7 are organised and presided over by leaders of member countries on a rotational basis.
- The decisions taken by leaders during annual G-7 summits are non-binding.
- In the recent decades, the global relevance of G-7 has reduced with rise of other economies like China, India and Brazil. Moreover, the share in global GDP of G-7 countries has now fallen to around 40% from about 70% when it was formed.

### India and G-7

- India attended the extended G-7 meet in 2019 which was held in France. Indian PM was invited as a special guest by the French President.
- This was the recognition of India as a major economic power globally.
- From 2004 to 2014, India attended the G-8 Summit five times.

### **Latest Development**

- US President Trump has postponed the G-7 meet in the backdrop of increasing US- China tensions.
- Tensions have increased between the two major powers over range of issues like Hong Kong's autonomy; Taiwan; origin of Covid-19; South China Sea aggression by China and trade issues between the two countries.
- While postponing the Summit, Trump called G-7 as an outdated international group, and that the G7 does not properly represent what's going on in the world.
- He wants to include 4 more countries- India, Australia, South Korea and Russia in it. This grouping will be called as G-10 or G-11 depending upon whether Russia is included or not.
- However, Russia's admission will depend on many factors.
- For example, some of the G7 countries like Germany are opposed to Russia rejoining the group.
- Geopolitically, Russia is also seen as an ally of China and has been critical of the US in recent times.
- But, some sections of the strategic community in the US want the US to develop tactical ties with Russia to balance China.
- The September summit (or whenever it takes place) is expected to focus on how to deal with China.

### **Significance of Trump's Statement**

- The world economy has seen reconfiguration in recent decades with China, India and Brazil emerging as large economies.
- G-7 doesn't include any country from global South as its member. Thus, US President Trump rightly observed that it doesn't represent the contemporary realities fully.
- The potential expansion of G-7 to G-10 (or 11) signifies greater economic and geo-political significance of India at the international forum.

### **G-20**

- The G-20 is a larger group of countries, which also includes G7 members.

- The G-20 comprises of G-7 members- US, UK, France, Germany, Italy, Canada and Japan and also other countries like Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, and Turkey.
- The G-20 countries make up around 80% of the world's economy.
- The G-20 was formed in 1999, with the objective to have more countries on board to address global economic concerns.
- Unlike G-7, the deliberations at the G-20 are limited to the global economy and financial markets.
- India will host a G-20 summit in 2022.

## 2.2 INDIA AUSTRALIA VIRTUAL SUMMIT

**Why in News:** Virtual Summit was held between the Prime Ministers of two countries on 4th June 2020. During the Summit, the two leaders elevated the bilateral Strategic Partnership concluded in 2009 to Comprehensive Strategic Partnership (CSP).

India and Australia have signed Mutual Logistics Support Agreement (MLSA) on defence and six other agreements.

### Logistics Agreements

- Logistics agreements are administrative arrangements which help to facilitate the replenishment of fuel, rations, spares (where required), and berthing and maintenance for the other nations' warships, military aircraft and troops during routine port calls, joint exercises and training carried out in each other's countries as well as during humanitarian assistance and disaster relief (HADR).
- These agreements reduce overall operational costs and save on time.
- These agreements feed into the Indian Navy's requirement to maintain its primary areas of interest, the Indian Ocean Region (IOR) and, going forward, the Indo-Pacific.

### Background

- The US, Australia, Japan and India are together called as Quadrilateral Security Dialogue (QSD) which is an informal strategic dialogue between India, USA, Japan and Australia.
- Quad- Its objective is to ensure and support a "free, open and prosperous" Indo-Pacific region.
- The informal strategic Quadrilateral Security Dialogue (QSD) was initiated by Japan's Prime Minister Shinzo Abe in 2007 because of China's growing power and influence.
- Later Australia chose to withdraw from Quad since it did not want to be a part of an anti-China alliance at the time.

- However, Australia rejoined the dialogue in 2017 on the sidelines of the ASEAN Summit, signalling a re-ignition in Australia's interest in the dialogue.
- From 2016-18, the armies of the countries conducted a joint military exercise dubbed "AUSTRA HIND".
- For the first time in 2017, Australia's Foreign Policy White Paper identified India as being at the "front rank" of Australia's international partnerships, on par with the US, Japan, Indonesia, and China.
- In April 2019, India and Australia conducted their biggest-ever naval exercise off the Visakhapatnam called "AusIndEx" to build inter-operability. It reaffirmed that both countries were committed to consolidating their relationship.

### **Latest Development**

- India and Australia announced a roadmap for maritime cooperation in the Indo-Pacific region to harness opportunities and meet challenges together as comprehensive strategic partners.
- Other agreements signed by the two countries are:
  - Framework Arrangement on Cyber and Cyber-Enabled Critical Technology Cooperation.
  - MOU on cooperation in the field of mining and processing of Critical and Strategic minerals.
  - Arrangement concerning Mutual Logistics Support (MLSA). This is for grain management and minimizing post harvest losses in agriculture.
  - Implementing Arrangement concerning cooperation in Defence Science and Technology to the MoU on Defence Cooperation.
  - Memorandum of Understanding on Co-operation in the field of Public Administration and Governance Reforms.
  - Memorandum of Understanding on Cooperation in Vocational Education and Training.
  - Memorandum of Understanding on Water Resources Management.
- They also announced a Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific.

### **Mutual Logistics Support Agreement (MLSA) with Australia**

- The objective of MLSA to increase military inter-operability through defence exercises between two countries.
- The Agreement will allow the two countries to use each other's military bases for logistics support, including food, water, and petroleum. Put simply, it will enable Indian warships to get re-fuelling from Australian tankers on the high seas and vice-versa.

- Both countries will also be able to avail berthing, maintenance and storage facilities at each others' naval basis.
- Other such Agreements- India has signed similar agreements with the USA (2016), France (2018), South Korea (2019) and Singapore (2018) and is expected to sign a similar agreement with Japan in near future.
- The Agreement between India and US is called as Logistics Exchange Memorandum of Understanding (LEMOA, 2016).
- The Agreement between India and Singapore is called as Implementing Arrangement Concerning Mutual Coordination, Logistics and Services Support (2018).
- The Agreement between India and France is called as Agreement for the Provision of Reciprocal Logistics Support between the Armed Forces (2018).
- The Agreement between India and Korea is called as Agreement to Extend Logistical Support to each other's navies with the Republic of Korea (2019).

### **Significance of the MLSA**

- India and Australia are strategic partners because of the geographic inter-connectedness of Indian Ocean and Pacific Ocean. Thus, cooperation between them enables them for effective "maritime domain awareness" over a large expanse of the Indo-Pacific.
- The bilateral relationship between India and Australia is to be understood in the backdrop of China's military expansion and economic influence in the Indo-Pacific region. While Australia is worried about China's presence in the Pacific, India is worried about China's increasing activities and influence in the Indian Ocean.
- China's first overseas military base at Djibouti became operational in August 2017. China also has access to Karachi and Gwadar ports in Pakistan for turnaround facilities for its warships and submarines. This makes the regional security scenario of Indo-Pacific as dynamic.
- As a counter to China's expansionist behavior, it's crucial for India to align with like-minded countries which share its security concerns, democratic values and principles.
- Indo-Australia bilateral partnership is based on transparency and rules-based maritime order with respect for sovereignty and international law, particularly the United Nations Convention on the Law of the Sea (UNCLOS).

### **Significance of the Indo- Australia Bilateral Ties**

- Australia is the 13th largest economy in the world with a GDP of more than US \$1.4 trillion.
- Australia is rich base of natural resources which India's growing economy needs.

- Australia offers potential for partnerships in higher education, scientific and technological research.
- Australia has deep economic, political and security connections with the ASEAN which is another diplomatic domain of interest for India.
- The Indian Diaspora in Australia is now estimated at nearly 7,00,000. It is the fastest growing in Australia and has become an unexpected positive factor in bilateral relations.
- India and Australia share common membership of many groupings like the G-20, East Asia Summit, IORA, and the Quad
- Both countries share common concerns over reforms of World Health Organisation; 5G technology; strengthening the International Solar Alliance (ISA) to building resilience against climate change and disasters.
- All this has increased the possibilities for diplomatic cooperation on regional and global issues and the full potential of Indo- Australia relationship is yet to be achieved.

### **The Future Possibilities**

- Japan has close ties with both India and Australia. Their current trilateral dialogue can be expanded from the diplomatic level to practical maritime cooperation on the ground.
- France is a resident power with territories in the Western Indian Ocean and the South Pacific. France and Australia are eager to develop a trilateral arrangement with India that will supplement the bilateral cooperation among the three nations.
- The sea lines of communication between the Indian and Pacific oceans run through the Indonesian archipelago. Thus, the maritime and naval cooperation can grow from bilateral (between India & Australia) to tri-lateral (among India, Australia and Indonesia). Australia already is a strategic partnership with one of the leading non-aligned nations, Indonesia.

### **2.3 GAVI SUMMIT**

**Why in News:** A \$2 billion procurement fund aimed at ensuring that poorer countries can access doses of a potential corona virus vaccine has been announced at the third Gavi vaccine alliance replenishment summit, hosted by the UK.

- The fund is modeled on previous work Gavi has done with pneumococcal and Ebola vaccines. More than 50 countries, including business leaders, UN agencies, civil society, ministers and Heads of State participated in the summit.
- The summit, took on an extra significance as world leaders battle to set up a mechanism to ensure that any effective corona virus vaccine is produced at a scale possible to ensure its equitable distribution.

- This global cooperation is necessary to prevent a worldwide rush for the Covid vaccine (similar to masks and ventilators), which can negatively impact the availability of vaccine in poor countries.

### **GAVI (The Vaccine Alliance)**

- Gavi, the Vaccine Alliance is a public-private global health partnership with the goal of increasing access to immunization in poor countries.
- The Alliance brings together countries which introduce vaccines, donors, the WHO which sets standards for vaccines, manufacturers, UNICEF which manages procurement, the World Bank which manages funds and civil society which holds others to account.
- GAVI's approach to public health has been described as business-oriented and technology-focused, using market-oriented measures and seeking quantifiable results.
- It has been praised for being innovative, effective, and less bureaucratic than multilateral government institutions like the WHO.
- Gavi now vaccinates almost half of the world's children, giving it tremendous power to negotiate vaccines at prices that are affordable for the poorest countries and to remove the commercial risks that previously kept manufacturers from serving them.
- Due to these market shaping efforts, the cost of fully-immunizing a child with all 11 WHO-recommended childhood vaccines now costs US\$ 28 in Gavi-supported countries, compared to about US\$ 1,100 in the US.

### **GAVI and COVID-19**

- With COVID-19 now reported in almost all Gavi-eligible countries, GAVI is providing immediate funding to health systems, enabling countries to protect health care workers, perform vital surveillance and training, and purchase diagnostic tests.
- Gavi is using its unique expertise to help identify and rapidly accelerate development, production and delivery of COVID-19 vaccines so that anyone that needs them, gets them.
- Gavi is also working in partnership with the Coalition for Epidemic Preparedness Innovation (CEPI), which has been supporting several of the COVID-19 vaccine candidates.

### **GAVI's Advance Market Commitment for COVID**

- Building upon its two decades of experience in accelerating the availability of billions of doses of vaccines, **Gavi has proposed a new mechanism – an Advance Market Commitment (AMC) for COVID-19 vaccines.**
- The new AMC will speed up availability of vaccines by efficiently managing the supply and demand of vaccines, with supporting incentives and financing capabilities.

- It will agree to buy large quantities of vaccines at established and equitable prices, to provide incentives to manufacturers to invest in large scale capacity.
- This in turn will increase supply availability and reduce the amount of time it takes for licensed vaccines to become available, particularly to the poorest countries around the world.

### **India's contribution on the Covid front**

- India also pledged \$15 million to Gavi, the international vaccine alliance, with Prime Minister Narendra Modi making the announcement during the virtual Global Vaccine Summit.
- The Prime Minister said the Covid-19 pandemic, in some ways, has exposed the limitations of global cooperation and that for the first time in recent history, humankind faces a clear common enemy.
- He shared how India has played its part during this pandemic by sharing available stocks of medicines with over 120 countries, developing a common response strategy in its immediate neighbourhood and providing specific support to countries.
- He also highlighted that India's support to Gavi is not only financial but the country's huge demand also brings down the global price of vaccines for all.

## **2.4 ETHIOPIA- SUDAN DISPUTE**

**Why in News:** Sudan recently alleged that there is a cross-border attack by the Ethiopian army in the eastern province of al-Qadarif which killed one Sudanese soldier and a child dead. This is in the backdrop of long standing border dispute between the two countries. Ethiopia-Sudan disputes

### **Border dispute**

- Ethiopia and Sudan have a long standing border dispute. The two countries share a common boundary that stretches over 1,600 kilometers.
- The border between Sudan and Ethiopia was drawn following a series of treaties between Ethiopia and the colonial powers of Britain and Italy. However, to date, this boundary lacks clear demarcation lines.
- The dispute is mainly about al-Fashqa region of about 600 sq. km in southern part of Sudan. It is a rich fertile land conducive for agriculture in the southern part of al-Qadarif.
- For decades, Ethiopian farmers have planted their crops there. As per Sudan, the Ethiopian farmers currently occupy over a million acres of some of Sudan's most fertile land.



- The phenomenon began decades ago. Ethiopian farmers began to move into the Al-Fashqa region in 1957, a year after Sudan won its independence. The encroachments persisted as the two sides were unable to reach an agreement over this border area.
- Ethiopia has not denied Sudan's legal title to this land in accordance with the 1902 Nile Waters Agreement followed by a border protocol signed in 1903, but it has continually imposed a de facto reality on the ground by facilitating the settlement of Ethiopian farmers in Al-Fashqa.
- Sudan always averted confrontation with Ethiopia, whether out of fear that this might escalate into military conflict or in order to preserve strategic interests that it regards as more important. Former Sudanese President Omar al-Bashir largely turned a blind eye to his country's territorial incursion.
- However, later transitional authorities came to power in Sudan by ousting of al-Bashir after popular protests in the country. They initiated talks with Ethiopia in a bid to have Ethiopian farmers withdraw.
- For the first time in nearly 25 years, Sudan deployed its troops along the al-Fashqa border strip at in March 2020.
- Sudan's military has vowed that it is willing and ready to protect its citizens and territory.

### **Ethiopia's Mega Dam Project**

- Grand Ethiopian Renaissance Dam (GERD) has recently been the chief issue in bilateral relationship between the two countries. It is an Ethiopian dam on the Blue Nile River and is under construction since 2011.
- The border dispute could complicate Ethiopia's plan to construct the Grand Ethiopian Renaissance Dam (GERD).
- Sudan has recently written to the UN Security Council calling on it to urge Ethiopia and Egypt, not to take unilateral action on the dam.
- Sudan had initially backed Ethiopia's project but later refused to sign on an initial agreement which would have paved the way for Ethiopia to begin filling the dam.

### **Recent Update**

- There has been a recent flare-up in the border dispute between Ethiopia and Sudan, apparently due to incursions into the Sudanese territory by the Ethiopian farmers.
- This happened even as the diplomatic talks are on-going between the two countries for peaceful resolution of the long-standing border dispute.
- The recent border clashes can adversely affect the second round of talks to be held in near future for resolving the border dispute.

## 2.5 NEPAL'S AMENDMENT FOR NEW POLITICAL MAP

**Why in News:** The Lower House of Nepal's Parliament unanimously voted for the Second Constitution Amendment Bill, which guarantees legal status for the new political map of the country.

The amendment updated the national emblem by incorporating Limpiyadhura, Lipulekh and Kalapani that are part of Indian territory in Uttarakhand. India has rejected Nepal's claim saying the region lies completely within Indian borders.



### Background to Kalapani dispute

#### After Sugauli Treaty, areas to the west of Kali river in Nepal

- The Sugauli Treaty was signed by Nepal with the British in March 1816, when Britain ruled over India.
- As part of the treaty, the British took back the Kumaon and Garhwal regions that were earlier annexed by the Nepali Gurkha kings.
- Under the treaty, Nepal renounced all claims to the areas lying to the west of river Kali (at the border of Uttarakhand and Nepal).
- The land east of the Kali thus remained with Nepal.

- This claim is reinforced by some old revenue records and gazette notifications.
- The treaty underwent some revisions to accommodate Nepal in the Terai (southern part) and was finally endorsed by the British government on November 15, 1860.

### **India accepts this position**

India accepts this position that the land east of the Kali is with Nepal.

### **Dispute is over the uncertainty regarding the origin of Kali River**

There is ambiguity in the Sugauli treaty on the identification of the Kali River and its origin.

#### **For India, it originates at Lipu Lekh**

According to India, the river originates from Lipu Lekh and then merges into other streams and tributaries to become the Mahakali.

#### **For Nepal, it originates at Limpiyadhura**

Nepal's contention is that Kali originates from Limpiyadhura and the stream originating from Lipu Lekh is called Lipu Khola.

#### **Kalapani is the area between the two claims**

- The area between these two streams is Kalapani.
- This is the basis of the dispute over the Kalapani region.

#### **Historically Indians have always used this area and route**

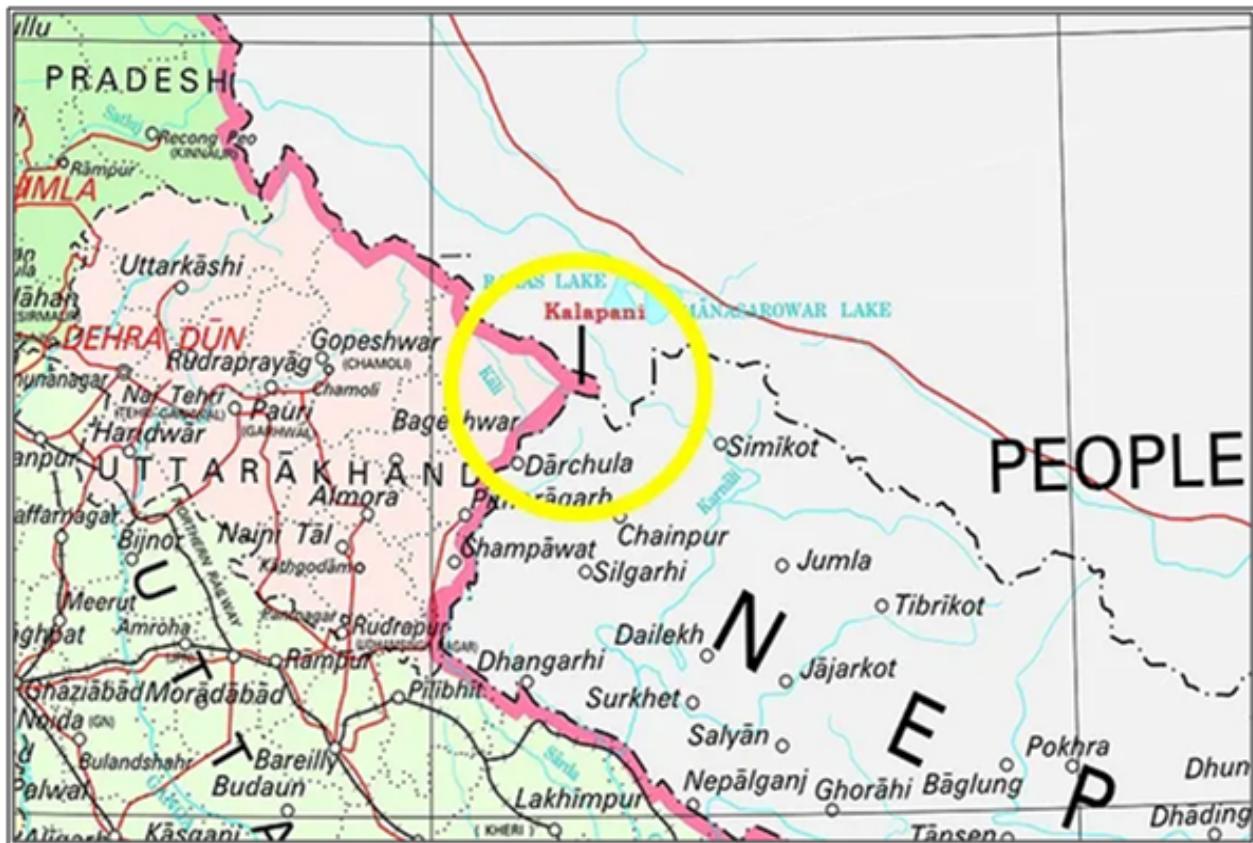
- British handed over Kalapani to India at the time of independence:
- However, it is important to note that even much before the British came, Indians were using this route (via Kumaon in Uttarakhand to Lipu Lekh pass) for the pilgrimage to Kailash Mansarovar.
- The route has deep spiritual and civilisational significance for India.

#### **Even China accepted India's position**

- China accepted Lipu Lekh as one of the cultural and commercial transit points with India under its 1954 Peaceful Co-Existence Agreement.
- This was reiterated in 2015 in a joint statement during Prime Minister Narendra Modi's visit to China.

#### **Nepal has always endorsed India's position on this**

- Nepal has endorsed India's position for nearly 150 years.
- It used Indian maps showing Kalapani, Limpiyadhura and Lipu Lekh in India.



### Recent events surrounding Kalapani

#### India published map showing Kalapani in India, as always

- The dispute was triggered in November 2019 when India issued a new map to indicate the changed status of Jammu and Kashmir into a Union Territory.
- Nepal raised objections because the Kalapani area was shown as being in India.
- Indian maps have always shown it that way; therefore, there was no change in the map.

#### India inaugurated road to Lipu Lekh Pass

- India recently inaugurated a road from Darchula to Lipu Lekh Pass, aimed at strengthening India's defence supply lines as well as facilitating smooth passage for pilgrims to Kailash Mansarovar in Tibet.
- Nepal's objected to it, saying the road is an encroachment on its sovereignty.

### **Nepal is now raising outcry due to domestic political issues**

- The fact that the Nepal government has turned up the heat on the Kalapani issue should be seen in the context of Nepal's domestic political instability.
- Prime Minister KP Oli faces serious internal opposition at the moment, including from within his ruling Nepal Communist Party (NCP).
- This is largely on account of his governance failures and lack of action on combating the Covid pandemic.
- He is hoping that the anti-India outcry on Kalapani will extend his term in power.

### **China also has much to gain from nudging Nepal against India**

- It also seems that Nepal is also being prompted by China to get India out of Kalapani, as hinted by Indian Army chief General MM Navrane.
- Oli is seen as close to China, and China's diplomats recently even intervened when Oli was in a position to get ousted from the office of Prime Minister.
- China has also objected to India's defence infrastructure upgradation projects all along the border. The Darchula-Lipu Lekh road is one such project.

### **Significance of Lipulekh (Kalapani)**

- Kalapani's significance is centuries-old for its location on the trade and pilgrim route to Tibet.
- Nepal has always sought that the old trade route be a major node for India-China trade.
- The high Lipulekh mountain pass in Kalapani is currently also of strategic interest to India.
- It helps India track Chinese movements in the region.
- Since 1962, it's been manned by the Indo-Tibetan Border Police.

### **Latest Development**

The Lower House of Nepal's Parliament made constitutional amendment to update the national emblem by incorporating Limpiyadhura, Lipulekh and Kalapani that are part of Indian territory in Uttarakhand.

### **India rejected the amendments to Nepal map**

- India rejected Nepal's constitutional amendment to change its map on the national emblem to include Indian territories.
- The Indian Ministry of External Affairs noted that the artificial enlargement of claims is not based on historical fact or evidence and is not tenable.

- India told Nepal it would refuse to hold boundary talks after the passage of this amendment, as it violated the understanding that talks should sort out boundary issues.
- India noted that Nepal's current claims are also incompatible with its own boundary Treaty with China.

## 2.6 INTERNATIONAL CRIMINAL COURT

**Why in News:** US President Donald Trump authorized sanctions against ICC officials involved in investigations into possible war crimes by US troops or those of its allies.

### International Criminal Court (ICC)

- The International Criminal Court (ICC) is an intergovernmental organisation and international permanent tribunal headquartered in The Hague, Netherlands.
- The ICC was created by the 1998 Rome Statute of the International Criminal Court (its founding and governing document), and began functioning on 1 July 2002 when the Statute came into force.
- It has jurisdiction over four main crimes: genocide, crimes against humanity, war crimes, and the crime of aggression.
- The jurisdiction of the court is complementary to jurisdictions of domestic courts of the State Parties.

### Functions of the ICC

- The ICC aims to end impunity and hold those individuals responsible for heinous crimes against humanity to face justice.
- It also aims to prevent crimes from happening through the proper dispensation of justice.
- The ICC intends to complement national courts and not replace them.
- The forum was established as a court of last resort to prosecute offences that would otherwise go unpunished.

### Members of ICC

- 123 nations are States Parties to the Rome Statute and recognize the ICC's authority.
- US, China, Russia, and India are major countries which are not a State Party to the Rome Statute.

### International Court of Justice (ICJ)

- It is the primary judicial branch of the United Nations and settles legal disputes and provides advisory opinions submitted to it by its member states. ICJ is a civil court.

- The United Nations Security Council (UNSC) enforces its court's rulings.
- International Court of Justice (ICJ) is one of the most important guarantors of peace, security and co-operation among states.

### Differences between ICJ and ICC

S No.	International Court of Justice (ICJ)	International Criminal Court (ICC)
1	The ICJ is a part of the United Nations and among UN's 6 principal organs.	ICC is not part of the United Nations system. The UN-ICC relationship is governed by a separate agreement.
2	The ICJ mainly hears disputes between nations.	The ICC prosecutes individuals— its authority extending to offences committed in a member state or by a national of such a state.
3	The ICJ is a civil court.	The ICC is a civil court.
4	Its funding is the responsibility of UN.	Its funding is from state parties to the Rome Statute. It also accepts voluntary contributions from the U.N; governments, international organizations, individuals, corporations and other entities.

### Criticisms of ICC

- The ICC has been criticised for not pursuing investigations in Western countries. Till date, all 4 of its guilty verdicts pronounced by it are in trials from Africa.
- The work of ICC is dependent upon the cooperation and funding by the State Parties. This creates inconsistency in selection of its cases.

### Relationship between US and ICC

- The Clinton administration (1993-2001) was involved in Rome Statute negotiations, and signed the document in 2000.
- In 2002, US unsigned the Statute under the next US president, George W. Bush.
- US also signed into law the American Service-Members' Protection Act to protect US nationals from the ICC's reach.
- However, later Washington adopted a positive approach towards the forum during several instances. For example, in 2011 voted for Libya's referral to the court; the US also provided critical support in transferring suspects from Africa to the ICC for trial.

- Under the Presidency of Donald Trump, the relations between both have again soured. The Trump administration has long considered the international law forum a threat to US sovereignty.
- At the UN General Assembly in 2018, US declared that it will not provide support or recognition to the International Criminal Court.

## 2.7 UNSC

**Why in News:** India has been elected a non-permanent member of the UN Security Council for the term 2021-22.

### United Nations Security Council

- The United Nations Security Council (UNSC) is one of the six principal organs of the United Nations (UN), charged with ensuring international peace and security, accepting new members to the United Nations and approving any changes to its charter.
- Its powers include the establishment of peacekeeping operations and international sanctions as well as the authorization of military actions through resolutions.
- Like the UN as a whole, the Security Council was created following World War II to address the failings of a previous international organization, the League of Nations, in maintaining world peace.
- The UN Charter gives all three powers of the legislative, executive, and judiciary branches to the Security Council.
- The Security Council consists of 15 members, which include 5 permanent members viz, Russia, the United Kingdom, France, People's Republic of China and the United States.

### Non-permanent members

- In addition to permanent members, the council has 10 non-permanent members, elected on a regional basis to serve a term of two years.
- The number of non-permanent members of the Security Council was increased from 6 to 10 following an amendment to the UN Charter which came in to force in 1965.

### Election procedure for non-permanent members

- Every year, the General Assembly elects five non-permanent members out of the total 10.

- The Assembly also decided that the non-permanent members of the Council should be elected according to the following pattern:
  - Three from African Group
  - Two from Asia-Pacific Group
  - One from Eastern European Group
  - Two from Latin American and Caribbean Group of States
  - Two from Western European and Others Group
- The non-permanent members of the Security Council are elected by a two-thirds majority and there are no nominations.
- The elections are conducted by secret ballot,
- A retiring member is not eligible for immediate re-election.

### **Latest Update**

- India has been elected a non-permanent member of the UN Security Council, with 184 of the 192 votes polled.
- The 2/3 required majority to be elected was only 128.
- India begins its term in the beginning of 2021, and will hold the position until the end of 2022.
- Previously, India was elected as a non-permanent member of the Council for seven times, most recently in 2011-2012.
- India was the endorsed candidate of the Asia-Pacific Group of UN member countries and faced no competition in the elections.
- India Prime Minister said that India was deeply grateful for the overwhelming support shown by the global community for India's membership of the UN Security Council. He said that India will work with all member countries to promote global peace, security, resilience and equity.
- India noted that the strong support by almost the entire UN membership for India's election demonstrates the goodwill India enjoys in the UN and the confidence of the international community in India's capability to contribute to the work of the Council.
- India said it will act as a voice of reason and moderation and a firm believer in respect for international law and peaceful settlement of disputes.

### **Others elected**

- Along with India, Ireland, Mexico and Norway also won the Security Council elections.
- Neither Kenya nor Djibouti -- both competing for a seat representing the Africa region -- achieved enough votes to gain a place on the council. A second round of voting will be done to determine the winner.

### **Focus Areas for India during its stint**

- Finding innovative and inclusive solutions to the Covid-19 crisis
- Reforming multilateral forums and organizations
- India noted that the UN system needs reform urgently, and all its bodies, including the Security Council and World Health Organization, need to change to reflect contemporary realities.
- Enhancing counter-terror cooperation
- During its last stint in the body in 2011-12, India had chaired the UN Counter-Terrorism Committee and brought in the concept of zero tolerance for terror.
- During the coming term, India will work to enhance the global action against terrorism, their supporters and sympathisers and safe havens. To achieve this, India will seek the streamlining of the process of sanctioning of the terrorists and terrorist entities.
- India will also work for the finalisation of the Comprehensive Convention on International Terrorism it had proposed in 1996.

### **Approach**

India will follow the Five-S approach of

- Samman (Respect)
- Samvad (Dialogue)
- Sahyog (Cooperation)
- Shanti (Peace)
- To create conditions for universal Samriddhi (Prosperity)



# **SECURITY AND DEFENCE**

❖ **Paper III: This section is relevant to the following topics:**

- **Linkages between development and spread of extremism.**
- **Role of external state and non-state actors in creating challenges to internal security.**
- **Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention**
- **Security challenges and their management in border areas; linkages of organized crime with terrorism**
- **Various Security forces and agencies and their mandate**

❖ **Prelims Oriented Questions**

### **3.1 INDIA CHINA BORDER ISSUE ( GALWAN VALLEY)**

**Why in News:** Twenty Indian soldiers, including a colonel, were killed and several others grievously injured in a violent physical skirmish with Chinese troops in the Galwan Valley region of eastern Ladakh. This marks a massive escalation of the continuing military confrontation in the high-altitude region since early May even though no bullets were fired.

#### **Background**

##### **India-China stand-off along the border**

- India and China are currently in stand-off at several areas along the LAC in Ladakh and Sikkim, as Chinese troops have moved in large numbers into Indian territory at points in Pangong Tso, Galwan and Gogra in Ladakh and Naku La in Sikkim, besides the massive build-up on its side.
- Since India first accepted the concept of LAC in 1993, 23 “disputed and sensitive” areas along the LAC were identified through various mechanisms.
- Eleven of the 23 contested areas on the LAC were identified in Ladakh under the western sector, four in the middle sector and eight in the eastern sector.
- However, the areas of Galwan and Hot Spring, sites for the current tensions between the two armies, do not figure in this list of 23. Naku La in Sikkim also does not figure on the list.
- Despite that, China has done a troop build-up in areas near Galwan valley in Ladakh even as India was building strategic road connectivity in the region.

##### **Areas alongside LAC that have been witnessing minor clashes**

###### **Galwan valley in Ladakh region**

- India’s key “strategic asset” in the area is the 255-km Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road which was completed last year.
- It provides access to Daulat Beg Oldie where the IAF re-activated an Advanced Landing Ground (ALG) in 2008.
- The ALG at DBO, the highest such airstrip in the world at an altitude of 16,614-feet, for instance, overlooks the strategic Karakoram Pass and is just a few kilometers away from the LAC and the China-occupied Aksai Chin region beyond.
- The DSDBO road, which has 37 bridges, runs almost parallel to the LAC to provide easier access to the Depsang and Galwan Valley areas while ending near the strategically-important Karakoram Pass.
- It is linked at several places to troop and logistics bases in depth areas.
- Galwan valley is closest to this road from the LAC.

- China has objected to construction of a new road which branches off the Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road along the riverbank towards the LAC.
- This, despite the fact that the road in the Galwan river area being built by India is well within Indian Territory.
- The site of the current construction is near the junction of Shyok and Galwan rivers.

### **Pangong Lake**

- The northern bank of Pangong lake has been a point of contention where there are differing perceptions of the LAC.
- Beginning early May Chinese troops moved in large numbers into Indian territory at Pangong Tso in eastern Ladakh.
- Chinese have built-up at Finger 4 (a section of the lake) of Pangong Tso up to where India has always held territory, while it claims areas as far as Finger 8.

### **Naku La**

The contours of the LAC in Sikkim are broadly agreed to in this sector. However, the broader context for the tensions appears to be a changing dynamic along the LAC, as India plays catch-up in improving infrastructure there.

### **Talks held at Corps Commander level talks**

- India and China held crucial talks between senior military commanders at the level of Corps Commander level talks (Indian side led by XIV Corps Commander Lt General Harinder Singh) in an effort to ease the tension along the border.
- Post the talks, the India Army chief said that the Indian and Chinese troops are “disengaging” in a phased manner from the stand-off areas along the border following a series of ground talks.
- He noted that a lot of disengagement has happened in the Galwan river valley.
- The Corps Commander level talks were followed up by a number of meetings at the local level between commanders of equivalent ranks.

# 1ST CLASH INVOLVING FATALITIES SINCE 1975

Triggered by Chinese troops, who came back to erect a temporary post on Indian side and were challenged by Indian troops

- ▶ Brawl broke out in evening, went on till midnight. Many men from both sides fell into rivulet
- ▶ Col Babu, Havildar K Palani and sepoy Kundan Kumar Ohja died on spot. Others succumbed later to injuries, hypothermia
- ▶ Violent face-off result of attempt by Chinese to unilaterally change status quo in the region, says MEA
- ▶ Senior commanders had productive meeting on June 6 and agreed on process for such de-escalation. Ground commanders had series of meetings thereafter
- ▶ An Indian Army statement said Indian and Chinese troops have disengaged in Galwan areas where they clashed on June 15-16

## BUILD-UP

- ▶ Indian and Chinese troops have been engaged since May 5 following a clash at Pangong lake
- ▶ Aggressive posturing by Chinese troops in disputed areas of Pangong, Galwan Valley, Demchok and Daulat Beg Oldi in eastern Ladakh along LAC
- ▶ Both countries moved soldiers & equipment as LAC situation continued to be volatile
- ▶ China has been opposed to Indian construction of air strips and roads in the area, including one Darbuk-Shayok-Daulat Beg Oldie road in Galwan Valley
- ▶ After weeks of face-off resulting in injuries, friction eased following talks between Indian and Chinese military commanders in Galwan Valley area and Hot Springs



**1967** A total of 80 Indian soldiers and about 400 Chinese soldiers were killed in action at Nathu La in Sept 1967, during the bloodiest clashes since the 1962 war

**1975** 4 Assam Rifles jawans were killed when their patrol was ambushed by Chinese soldiers at Tulung La in Arunachal Pradesh on Oct 20, 1975

## News Summary

- 20 Indian soldiers, including a colonel, were killed and several others grievously injured in a violent physical skirmish with Chinese troops in the Galwan Valley region of eastern Ladakh, even though no bullets were fired.
- Colonel Babu, and two soldiers, Havildar K Palani and sepoy Kundan Kumar Ohja, died on the spot.
- After the attack on Colonel and co, additional Indian troops rushed forward, while the PLA also brought in more reinforcements for what proved to be an extended clash.
- 17 other Indian soldiers who were critically injured and exposed to sub-zero temperatures in the high-altitude terrain later succumbed to their injuries, taking the total that were killed in action to 20.
- The Indian casualties could go up further because several soldiers have been injured in the clashes, while a few are still reported to be missing.
- The Chinese side is also learnt to have seen casualties. As per some unconfirmed reports based on radio and other intercepts, there were 43 casualties in the PLA ranks, which include both the dead and seriously injured.

## Chain of Events

- Colonel Santosh Babu and his team were stationed at PP-14 — one of the three face-off sites in the Galwan Valley and Gogra-Hot Springs area.
- Colonel Babu, the commanding officer of 16 Bihar Regiment, had led the disengagement talks with his Chinese counterpart in the area.
- The team was there to monitor the pullback of PLA troops around 5 km eastwards to their ‘Post-1’ within their own territory.
- The skirmish was triggered by Chinese soldiers, who after initially pulling back a little, came back to erect a ‘temporary post’ near ‘Patrolling Point 14 (PP-14)’ on the Indian side of the Galwan region along the LAC.
- The small contingent of Indian troops led by Col Babu stationed there challenged the Chinese for flouting the phased disengagement agreement, as worked out by the rival commanders on the ground.
- In response, the PLA soldiers, present in far greater numbers and armed with nail-studded iron rods and stones, suddenly attacked them.
- In the ensuing “free-for-all” brawl that began in the evening and went on till around midnight, rival soldiers attacked and chased each other, with many falling into the Galwan rivulet in the area located at an altitude of over 14,500 feet with steep ravines and gorges.

#### **India's position**

- India fully blamed China for starting the violent clashes in the Galwan Valley, resulting in deaths in a border clash for the first time since Tulung La in 1975
- The Indian Ministry of External Affairs (MEA) rejected the charge that Indian troops had acted in a provocative manner and accused China of refusing to respect the agreement on de escalation reached on June 6.
- MEA noted the need for maintenance of peace and tranquility in the border areas and resolution of differences through dialogue.
- At the same time, it noted that India was strongly committed to ensuring its sovereignty and territorial integrity.

### **3.2 INDIA CHINA (CONT)**

**Why in News:** In the latest official statement released by China on June 19, it has claimed the whole of Galwan Valley and stated that “China always owned sovereignty over the Galwan Valley region.”

India has described these claims as untenable and not in accordance with China’s own position in the past.

#### **Latest Development**

- On June 15, the worst violence on the India-China border since 1967 claimed the lives of 20 Indian soldiers.
- The clash occurred at Point 14 of the Galwan Valley which is of strategic importance.
- China has claimed that Indian troops entered the Chinese territory by crossing the Galwan estuary on 15th
- However, Chinese claims in the past had never extended up till the estuary.
- As per the Ministry of External Affairs' statement, Indian troops are fully familiar with the alignment of LAC in all the sectors of India- China border and abide by it scrupulously.



### Galwan Valley

- The Galwan valley is the land that sits between steep mountains that buffet the Galwan River.
- The valley is strategically located between Ladakh in the west and Aksai Chin in the east. (Aksai Chin is currently controlled by China as part of its Xinjiang Uyghur Autonomous Region.)

- At its western end are the Shyok river and the Darbuk-Shyok-Daulet Beg Oldie (DSDBO) road.

### **Darbuk Shyok Daulat Beg Oldie (DSDBO) Road**

- It's newly built by India and leads to the base of the Karakoram Pass.
- Galwan Valley's eastern mouth lies not far from China's vital Xinjiang Tibet road, now called the G219 highway.

### **Galwan River**

- The Galwan River has its source in Aksai Chin which is on China's side of the LAC.
- The Galwan River flows from the east to Ladakh, where it meets the Shyok river on India's side of the LAC.

### **Importance of Darbuk-Shyok-Daulet Beg Oldie (DSDBO) road and Point 14**

- China is increasingly uneasy about India's infrastructure development as India has built the Darbuk-Shyok-Daulet Beg Oldie (DSDBO) road in this region.
- If China manages to build an observation tower in this area or Point 14 to be specific, they can disrupt traffic over an under-construction bridge along the DSDBO road.
- The recent clashes between two armies are to be understood in the backdrop of China's objection since early May to India's road construction activities at the western end of the valley in the area between the Galwan-Shyok confluence and the LAC.

### **Where does the Line of Actual Control lie?**

- The LAC lies east of the confluence of the Galwan and Shyok rivers in the valley.
- After the June 15 clash, China has claimed that the entire Galwan valley lies on its side of the LAC which pegs the line further west near the Shyok river.

- **1956** Map of China It showed the entire Galwan Valley as a part of India.
- **June 1960** Map of China- It claimed sovereignty over the valley.
- **November 1962** Map of China- It also claims the entire valley.
- Subsequent maps have not shown the western tip of the river as a part of China.

# Contested valley

For the first time since 1962, the Galwan Valley has emerged as a site of dispute



## Earlier Agreements between India and China

### Border Peace and Tranquility Agreement (BPTA), 1993

- According to it, India and China agreed to "strictly respect and observe the LAC between the two sides". This referred to the LAC at the time, rendering irrelevant the line of actual control in 1959 or 1962.
- It also says that "when necessary, the two sides shall jointly check and determine the segments of the line of actual control where they have different views as to its alignment."
- The BPTA also said "the two sides agree that references to the line of actual control in this agreement do not prejudice their respective positions on the boundary question."

### 1996 Agreement on Confidence- Building Measures

- The LAC was also explicitly codified in the 1996 agreement on confidence-building measures and subsequent agreements.
- China, however, has refused to exchange maps in the western sector to take this process forward.

### Difference between Territorial Claims and the Line of Actual Control (LAC)

- Territorial claims and LAC claims are not the same, but the distinction between them is sometimes blurred.
- The LAC refers to territory under the effective control of each side, not to their entire territorial claim.
- For instance, India's territorial claims extend 38,000 sq km on the other side of the LAC across all of Aksai Chin, but the LAC India observes runs through the valley.
- The LAC has never been demarcated and there are differences in perception of where it lies in more than a dozen spots, but there have not been previous incidents in the valley.
- By now staking a claim to the entire Galwan Valley and up to the confluence of the Galwan and Shyok rivers, China is unilaterally altering the LAC.



# ECONOMY

❖ **Paper III: The articles in this section are relevant to the following topics:**

- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.
- Inclusive growth and issues arising from it.
- Government Budgeting.
- Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
- Investment models.

## 4.1 FOREX RESERVE

**Why in News:** India's foreign exchange (forex) reserves hit an all-time high of \$490 billion in the week-ended May.

### Foreign Exchange Reserves

- Foreign exchange reserves are the foreign currencies held by a country's central bank. The reserves in India are managed by the Reserve Bank of India for the Indian government and the main component is foreign currency assets.
- Reserve Bank of India accumulates foreign currency reserves by purchasing from authorized dealers in open market operations.
- Reserve Bank of India Act and the Foreign Exchange Management Act, 1999 set the legal provisions for governing the foreign exchange reserves.
- The demands on forex reserves are determined by the size of the external sector to GDP ratio, the degree of openness of the economy, and liquidity requirements.

### Components of India's Foreign exchange reserves

#### (1) Foreign Currency Assets (FCA)

- FCA is maintained as a multi-currency portfolio comprising major currencies such as the dollar, euro, pound sterling, Japanese yen, etc, and is valued in terms of dollars.
- Additionally, it also comprises investments in US Treasury bonds, bonds of other selected governments, deposits with foreign central and commercial banks.
- This is the largest component of the Forex Reserves.
- The variations in the FCA occur mainly on account of purchase and sale of foreign exchange by RBI, income arising out of the deployment of forex reserves, external aid receipts of the central government and changes on account of revaluation of assets.

#### (2) Gold

Gold reserve is the gold held by the Reserve Bank of India with the intention to serve as a guarantee to redeem promises to pay depositors, note holders (e.g. paper money), or trading peers, or to secure a currency.

#### (3) Special Drawing Rights (SDRs)

- Special drawing rights (SDR) refer to an international type of monetary reserve currency created by the International Monetary Fund (IMF) in 1969 that operates as a supplement to the existing money reserves of member countries.

- Created in response to concerns about the limitations of gold and dollars as the sole means of settling international accounts, SDRs augment international liquidity by supplementing the standard reserve currencies.
- SDRs are allocated by the IMF to its member countries and are backed by the full faith and credit of the member countries' governments.

### **Value of SDR**

- The value of the SDR is calculated from a weighted basket of major currencies, including the U.S. dollar, the euro, Japanese yen, Chinese yuan, and British pound.
- The SDR basket is reviewed every five years, and sometimes earlier if warranted. Reviews take place to ensure that the SDR reflects the relative importance of currencies in the world's trading and financial systems.

Weightage of various currencies in SDR as determined in the 2015 review:

- S. Dollar: 41.73
- Euro: 30.93
- Chinese Yuan: 10.92
- Japanese Yen: 8.33
- Pound Sterling: 8.09

### **(4) Reserve Tranche Position (RTP)**

- The primary means of financing the International Monetary Fund is through members' quotas. Each member of the IMF is assigned a quota, part of which is payable in SDRs or specified usable currencies ("reserve assets"), and part in the member's own currency.
- The difference between a member's quota and the IMF's holdings of its currency is a country's Reserve Tranche Position (RTP).
- It is basically an emergency account that IMF members can access at any time without agreeing to conditions or paying a service fee. In other words, a portion of a member country's quota can be withdrawn free of charge at its own discretion.
- The reserve tranches that countries hold with the IMF are considered their facilities of first resort, meaning they will tap into them before seeking a formal credit tranche that charges interest.

### **Weightage of various components**

As on December 20, 2019, the proportion of various components in India's forex reserves is:

- FCA - 93% of total Forex
- Gold - 6%

- SDR - 0.32%
- RTP in the IMF - 0.8%

### Update

- As per the latest RBI data, India's foreign exchange (forex) reserves swelled by \$3 billion to a lifetime high of \$490 billion in the week to May 22, mainly on account of a rise in foreign currency assets (FCA).
- The reserves increased on account of foreign direct investments (FDI), net inflow of funds by FPIs in domestic equities over the last couple of weeks and a sharp decline in import expenditure following impact of pandemic on global trade.
- The gold reserves declined in the reporting week (by \$127 million), while growth was seen in both the SDRs with the IMF (by \$8 million) and the reserve position with the IMF (by \$89 million).

### Impact

- The rise in foreign exchange reserves have resulted into strengthening in the value of the rupee against the US dollar.
- The rupee closed at 75.6 on May 29, up from a low of 76.97 on April 21.

## 4.2 OPPORTUNITY IN CRISIS

**Why in News:** Given India's population density and modest health infrastructure, the government had no option but to order a complete lockdown when corona virus reached India's shores. As the country stayed indoors, the economy was dealt a crushing blow.

### Preparing for post- Covid world

- While both the central government and the Reserve Bank of India (RBI) have announced mega stimulus packages to revitalize the economy, their impact will only be known later.
- It is clear that the world will not be the same post covid-19 and even on the economic front there will be a "new normal".
- Like every crisis, this will also create opportunities and open new horizons, which if leveraged can help strengthen our economy.

### Utilizing the Covid crisis to create new opportunities

- Impetus for our domestic manufacturing through conducive business climate
- The Prime Minister's call for Atmanirbhar Bharat (self-reliant India), can be just the right impetus for our domestic manufacturing.

- The world including India is currently overly dependent on China for raw materials.
- With companies now looking for alternative manufacturing hubs in their bid to de-risk, India could be their destination of choice, provided we offer a conducive environment.
- A conducive business climate with better infrastructure and logistics, simplified land and labour laws and single window clearances can enable India to develop a robust manufacturing ecosystem.
- This will help attract foreign capital, latest technology, create jobs and boost our exports.
- We must also focus on Skill and Scale to be both quality and cost competitive and serve a global customer base.
- Huge scope exists in sectors such as pharma, electronics, automobiles and defence machinery, not only to be self-reliant but also capture a decent slice of the global supply chain.

#### **Move to regime of empowerment by shifting fully to DBT**

- The government announced some useful economic reforms like amendments to the Essential Commodities Act.
- We should also consider phasing out fertilizer and power subsidies that distort the market.
- It is time to move to a direct benefit transfer (DBT) model instead of the appeasement tools like various farm and non-farm subsidies.
- We should utilize this momentum to shift to a regime of empowerment rather than entitlement, as this will bring about a fundamental change for the better.

#### **Use of technology and digitized lending models to boost credit growth**

- With the financial sector reeling under the burden of bad loans, it is time to introduce new digitized lending models using artificial intelligence (AI).
- For example, it could disburse credit basis business flows such as invoices of Goods and Services Tax (GST) and not assets.
- This will be a boon for many startups and small enterprises who would otherwise be denied funding due to lack of collaterals.
- Technology will also enable a more accurate determination of credit risk leading to more realistic pricing of loans, for our banks.

#### **Scale up digital services**

- The current crisis underlines the tremendous utility of social security programmes such as Jan Dhan accounts, Ayushman Bharat and insurance scheme in India, where migrant labourers, daily wage earners and other vulnerable sections form a significant chunk of the population.

- The Jan Dhan scheme in particular enables them to get cash directly from the government bypassing any middlemen or red tape.
- This has tremendous potential to empower the marginalized and bring them under a safety net, especially women and senior citizens.
- The government must scale up the Jan Dhan program by shifting focus from an account for every household to an account for every adult.
- To help holders derive maximum benefit, along with accounts, we need financial literacy drives, introduction to mobile and digital banking, account linked insurance, custom financial products etc through a seamless integration with Aadhar.

### **Expand healthcare infrastructure with public-private partnership**

This pandemic has highlighted the pressing need to expand our healthcare infrastructure to be able to handle emergencies.

- Improved coordination between the Centre and different states
- Strong disease surveillance systems
- A ready stock of critical lifesaving drugs and medical equipment
- More diagnostic labs and modern hospitals in every district
- Fast tracking of telemedicine/e-consultations
- In health, the private sector needs to step up and partner with the Government more actively so that basic healthcare is accessible and affordable for all.
- The Government's decision to provide Viability Gap Funding (VGF) could facilitate their entry.

### **Digital boom**

- Covid-19 will also induce some long term changes in consumption patterns that will help drive expansion and diversification of various digital business channels.
- This could be a boon for e-retailers, online education services, home broadband and virtual private network (VPN) services, digital entertainment etc.
- As the economy reboots, we may see the emergence of a new generation of entrepreneurs.
- This is also the time for the economy to go cash light as digital payments may become the norm, creating a boom for Fintech payment companies.

### **Conclusion**

Winston Churchill famously said after World War II, "Never let a good crisis go to waste". The current pandemic will test the resilience and agility of the Indian economy, but it will also throw up some new opportunities. It is up to us to capitalize on them and emerge stronger on the other side of this pandemic.

## 4.3 MSME (EMERGENCY CREDIT LINE SCHEME)

**Why in News:** The Union Cabinet has approved various measures for micro, small and medium enterprises, which have been badly hit by the lockdown. MSMEs make up the heart of the larger industrial ecosystem, acting largely as ancillary units for the big enterprises, and employ, across 5 crore units, an estimated 11 crore persons.

At stake are not only these jobs but the future of what makes up 45 per cent of the country's total manufacturing output, 40 per cent of exports — and almost 30 per cent of the national GDP.

### Expanded definition of MSMEs

- The Union Cabinet approved an expanded definition of MSMEs, as per which the medium enterprises in the manufacturing and services sectors will now include companies with investment of Rs 50 crore in plant and machinery and turnover up to Rs 250 crore.
- Likewise, for micro enterprises, the investment limit will be Rs 1 crore and turnover Rs 5 crore, while for small enterprises, the investment limit will be Rs 10 crore and the turnover Rs 50 crore.
- As margins in certain sectors are so low that an increase in investment in plant and machinery would not have been of much use unless accompanied by an increase in turnover limit to Rs 250 crore.
- Thus, the enhancement of the turnover limit for medium units will help the units to increase technological investments in their companies.
- It has also been decided that the turnover with respect to exports will not be counted in the limits of turnover for any category of MSME units.
- Exclusion of exports from turnover will benefit a lot of gems and jewellery companies, which would have breached the MSME criteria due to the cost of their inputs.

### Emergency Credit Line Guarantee Scheme (ECLGS)

- As announced earlier, a total of Rs 3 lakh crore of collateral free loans will be provided to MSMEs, through the Emergency Credit Line Guarantee Scheme (ECLGS).
- Under the said scheme, borrowers with up to Rs 25 crore outstanding and Rs 100 crore turnover are eligible, which could help nearly 45 lakh units to resume business activity.
- Banks will provide them additional 20 per cent credit, backed by 100 per cent government guarantee against these loans.

### Details of the scheme

- The National Credit Guarantee Trustee Company (NCGTC) will provide 100 per cent guarantee against losses on loans given to eligible micro, small, and medium enterprise (MSMEs) and MUDRA borrowers under the scheme which is open till October 31 2020.
- Interest rates under the Scheme are 25 per cent for banks and financial institutions and 14 per cent for non-banking financial companies (NBFCs).
- The tenor (duration) of the loan under the scheme shall be four years with a moratorium period (authorized delay) of one year on the principal amount.
- No Guarantee Fee shall be charged by NCGTC from the Member Lending Institutions (MLIs) under the Scheme.

#### **Fund of Funds for equity support**

- The Cabinet also approved setting up of a Rs 50,000 crore Fund of Funds to provide equity support to growth oriented MSMEs, with an aim to help them enhance capacity, while also encouraging them to get listed on stock exchanges.
- This would help growing companies with good track record get equity funding from the government at initial stages, which they can then capitalise while listing on stock exchanges.
- After the companies get listed on the stock exchange and their prices eventually go up, the government will sell its stake after a particular level and reinvest those funds in other companies.
- The proposed Fund will also benefit from such eventual listing of the MSMEs, as listing of companies will help free up capital of the Fund which can be further used for equity infusion.

#### **Distressed Asset Fund**

- A Distressed Asset Fund will be set up to support MSMEs in significant stress, and the corpus of this fund can rise up to Rs 20,000 crore.
- The government will provide a support of Rs 4,000 crore to the CGTMSE (Credit Guarantee Fund Trust for Micro and Small Enterprises) which will help in facilitating Rs 20,000 crore of subordinate debt to nearly 2 lakh enterprises.
- Stressed small companies whose loans have been classified as NPAs will be given subordinate debt by banks against a partial credit guarantee provided by the government.

#### **Hike in MSP**

- The government announced higher minimum support price of 14 kharif (summer sown) crops for 2020-21, based on recommendation of the Commission for Agricultural Costs and Prices (CACP). The return over cost for these 14 crops ranges from 50 per cent to 83 per cent.

- The increase in support prices for kharif crops is in line with the 2018-19 Budget announcement of fixing MSPs at a level of at least 1.5 times of the all-India weighted average cost of production, aiming at fair remuneration for farmers.
- The hike is, however, primarily in favour of coarse cereals (bajra and maize) and pulses (arhar and urad) in terms of percentage of return to farmers over their cost of production.
- The move has been in sync with the central government's policy to encourage farmers to go for less water consuming crops such as coarse cereals than paddy, which consumes a lot of water.
- The focus on oilseeds is, on the other hand, aimed at reducing import bills as the country's production doesn't meet its demand.

#### **Extension of repayment date for Agri loans**

- In another decision, the Cabinet approved extending the repayment date for short term loans up to Rs 3 lakh for agriculture and allied activities to August 31 from May 31.
- Farmers will continue to benefit from the 2 per cent interest subvention and 3 per cent prompt repayment incentive during the extended repayment period.
- This will help the farmers to repay/ renew such loans up to the extended repayment date at 4 per cent a year interest without attracting any penalty.

#### **Loans for street vendors**

- The cabinet said that street vendors can avail loans of Rs 10,000, repayable in one year monthly installments.
- The government will provide interest subsidy of 7 per cent annually on a six-monthly basis on timely/ early repayment of the loan.

### **4.4 MOODY'S RATING**

**Why in News:** Global ratings agency Moody's Investors Service has downgraded India's sovereign ratings to "Baa3" from "Baa2", with the outlook of the country remaining "negative".

#### **Moody's ratings**

- Moody's Investors Service, often referred to as Moody's, is the bond credit rating business of Moody's Corporation.
- It provides international financial research on bonds issued by commercial and government entities. Moody's, along with Standard & Poor's and Fitch Group, is considered one of the Big Three credit rating agencies.

- The company ranks the creditworthiness of borrowers using a standardized ratings scale which measures expected investor loss in the event of default.
- In Moody's ratings system, securities are assigned a rating from Aaa to C, with Aaa being the highest quality and C the lowest quality. To each of these ratings Moody's adds numerical modifiers 1, 2 and 3, with a lower number signifying a better rating.

### How are ratings done

- Credit rating agencies rate the financials and business models of companies, as well as economic management by sovereign governments.
- It analyses official and other data and interacts with government officials, business leaders, and economists, while doing so.
- The agencies then rate instruments such as bonds, debentures, commercial papers, deposits, and other debt offerings of companies or governments to help investors make informed decisions.
- The agencies do this on a continuous basis, either upgrading or downgrading the instrument based on performance, prospects, or events likely to have an impact on the balance sheet or the fiscal position.

### Significance of ratings

- From a company's or a government's perspective, a better rating helps raise funds at a cheaper rate.
- It has an impact on companies planning to borrow overseas through bonds or foreign loans, as investors or banks abroad may well seek higher interest rates because of weak prospects.
- Hence, firms and many governments that borrow from the international markets are mindful of rating downgrades.

### Latest Development

- Moody's has downgraded India's sovereign ratings to "Baa3" from "Baa2", with the outlook of the country remaining "negative".
- The downgrade by Moody's comes against the deterioration in the country's growth prospects as the national lockdown has significantly reduced economic activity.
- Moody's went on state that while this downgrade is taking place in the context of the COVID-19 pandemic, it was not driven by the impact of the pandemic.
- As per Moody's the pandemic has increased the vulnerabilities in India's credit profile that were already present and building prior to the shock.
- **Note:** In November 2019, Moody's had changed the outlook on India's Baa2 rating from "stable" to "negative" as it felt these risks were increasing.

- The negative outlook reflects the risks from deeper stresses in the economy that could lead to a more severe impact on fiscal strength than Moody's current projections. In other words, a “negative” implies India could be rated down further.

### **Reasons for the downgrade**

There are four main reasons why Moody's has taken the decision.

- Weak implementation of economic reforms since 2017
- Relatively low economic growth over a sustained period
- A significant deterioration in the fiscal position of governments (central and state)
- And the rising stress in India's financial sector

### **Weak economic reforms and low growth**

- More than two years ago, in November 2017, Moody's had upgraded India's rating to “Baa2” with a “stable” outlook.
- Since that upgrade in 2017, implementation of reforms has been relatively weak and has not resulted in any significant improvements, which indicates limited policy effectiveness.
- The low effectiveness of policy and the resulting loss of growth momentum can be seen in the sharp reduction in India's GDP growth rates.
- The provisional GDP estimates for 2019-20 were at 4.2% — the lowest annual growth in a decade — and even these estimates are likely to be revised down further.

### **Deterioration in the fiscal position**

- Poor growth has been made worse by worsening government (both Centre and state-level) finances.
- In the recent past, the central government has regularly failed to meet its fiscal deficit (essentially the total borrowings from the market) target, which has led to a steady accumulation of total government debt.
- Even before the corona virus outbreak, at an estimated 72% of GDP in fiscal 2019, India's general government (combined central and state governments) debt burden was 30 percentage points larger than the Baa median. In other words, government debt was already quite high.
- This already high number is expected to go up to 84% of the GDP in 2020 itself, as governments are forced to borrow even more, due to a significant reduction in revenues.

### **Implications of the downgrade**

- Ratings are based on the overall health of the economy and the state of government finances.
- A rating downgrade means that bonds issued by the Indian governments are now “riskier” than before, because weaker economic growth and worsening fiscal health negatively impact a government’s ability to pay back.
- When India’s sovereign rating is downgraded, it becomes costlier for the Indian government as well as all Indian companies to raise funds because now the world sees such debt as a riskier proposition.
- The downgrade is likely to put pressure on the rupee and impact investor sentiment which is already quite low due to the impact of the pandemic on all major global economies.

#### **Moody's future outlook**

- Moody's expects India's real GDP to contract by 4.0% in the current financial year, after which it expects a sharp recovery in 2021-22.
- However, over the longer term, it expects growth rates to lower than in the past due to weak private sector investment, low job creation and an impaired financial system.
- Further, a prolonged period of slower growth may also slow down the pace of improvements in living standards, negatively impacting consumption in the economy.

#### **4.5 TULIP SCHEME**

**Why in News:** The Centre has launched an urban learning internship program — The Urban Learning Internship Program (TULIP) — for fresh graduates.

The union ministers of Human Resource Development and Housing & Urban Affairs have jointly launched this online portal, developed by The All India Council for Technical Education (AICTE).



## **Background**

- TULIP has been conceived pursuant to the Budget 2020-21 announcement by the Finance Minister under the theme 'Aspirational India'.
- In it, the Government proposed to start a program whereby the urban local bodies across the country would provide internship opportunities to fresh engineers for a period up to one year.
- Such a program will help reap the benefits of India's demographic dividend as it is poised to have the largest working-age population in the world in the coming years.
- India has a substantial pool of technical graduates for whom exposure to real world project implementation and planning is essential for professional development.

## **Latest update**

- TULIP is a program for providing internship opportunities to fresh graduates in 4,400 Urban Local Bodies (ULBs) and 100 Smart Cities across the country.
- It will allow applicants internship for up to one year in areas like urban planning, financing, environmental engineering, sanitation and infrastructure.
- According to the TULIP portal, there are currently a total of 295,200 internships under 23,970 companies.
- This launch is also an important stepping stone for fulfillment of MHRD and AICTE's goal of 1 crore successful internships by the year 2025.

## **Who are eligible?**

- Students having a degree of B. Tech, B planning, B. Arch, BA, BSc, BCom, LLB can register for internships as per their interest.
- Not more than 18 months should have passed from the date of declaration of final year results to the date from which the internship is sought.
- It is only open to Indian citizens.

## **Duration**

The duration of the internship will be a minimum of 8 weeks up to 1 year.

## **Stipend and other Allowances**

Amount of stipend/subsistence allowance/expenses would be payable at the discretion of the ULB/ smart city. There shall be no liability of providing any employment on the ULB or smart city, whatsoever.

## 4.5 INDIAN GAS EXCHANGE

**Why in News:** Indian Gas Exchange (IGX), which is India's first nationwide online delivery-based gas trading platform was recently launched by the Ministry of Petroleum and Natural Gas.

### Background

- Domestic production of gas has been falling over the past two fiscals as current sources of natural gas have become less productive.
- Domestically produced natural gas currently accounts for less than half the country's natural gas consumption and imported LNG accounts for the other half.
- Thus, LNG imports are set to become a larger proportion of domestic gas consumption as India moves to increase the proportion of natural gas in the energy basket from 6.2% in 2018 to 15% by 2030.
- Indian Energy Exchange (IEX), the country's largest electricity trading platform, had been planning to set up the natural gas exchange to tap into the increasing demand for clean fuel.

### Latest Update

- Indian Gas Exchange (IGX), India's first nationwide online delivery-based gas trading platform, has now been launched.
- Indian Energy Exchange (IEX) is the parent of the gas exchange,
- Through its membership drive launched in March this year, IGX already has 12 members and more than 350 registered clients from prominent industrial segments.

### Functioning of the exchange

- Incorporated as a wholly owned subsidiary of the IEX, IGX will enable market participants to trade in standardised gas contracts.
- The exchange will allow buyers and sellers of natural gas to trade both in the spot market and in the forward market for imported natural gas across three hubs —Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh.
- The exchange also allows much shorter contracts – for delivery on the next day, and up to a month – while ordinarily contracts for natural gas supply are as long as six months to a year. This, will allow buyers and sellers greater flexibility.

### Benefits of the exchange

- The exchange is expected to facilitate transparent price discovery in natural gas, and facilitate the growth of the share of natural gas in India's energy basket.

- The competitive price discovery will facilitate availability of gas at lower prices for industries across India and facilitate greater investments in domestic gas exploration.
- The exchange will also play an instrumental role in transforming India's gas markets, positioning India as a sustainable economy and enhancing industry's competitiveness.

### **Required regulatory change**

- Currently, the pipeline infrastructure necessary for the transportation of natural gas is controlled by the companies that own the network. State-owned GAIL owns and operates India's largest gas pipeline network, spanning over 12,000 km.
- Thus, an independent system operator for natural gas pipelines would help ensure transparent allocation of pipeline usage, and build confidence in the minds of buyers and sellers about neutrality in the allocation of pipeline capacity.
- Experts have also called for natural gas to be included in the Goods and Services Tax (GST) regime. This will help in reducing the buyers burden of having to deal with different levies such as VAT across states, when purchasing natural gas from the exchange.

### **Domestically produced natural gas will not yet be sold on the exchange**

- As the price of domestically produced natural gas is decided by the government, it will not be sold on the gas exchange.
- Various appeals have been made by domestic producers that the prices set by the government are not viable due the cost of exploration and production in India.
- The Petroleum Ministry has indicated that a new gas policy will include reforms in domestic gas pricing, and will move towards more market-oriented pricing.
- IGX officials also believe that a highly liquid gas exchange, which prices gas fairly may lead to the government moving away from pricing domestically produced gas.

## **4.6 NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY**

**Why in News:** Urjit Patel has been appointed as the chairman of the National Institute of Public Finance and Policy (NIPFP). He replaces former bureaucrat Vijay Kelkar, who chaired NIPFP for almost six years.

### **National Institute of Public Finance and Policy (NIPFP)**

- The National Institute of Public Finance and Policy (NIPFP) is a centre for research in public economics and policies and is India's premier economic think tank.
- It was founded in 1976, as an autonomous body set up jointly by the Ministry of Finance, the erstwhile Planning Commission, and several state governments and distinguished academicians.

- It is registered under the Societies Registration Act, 1860.

### **Main Functions**

- The institute undertakes research, policy advocacy and capacity building in areas related to public economic and advises the Central and the state governments of India.
- The institute receives an annual grant from the Ministry of Finance, Government of India, and various State governments.
- Despite receiving annual grant from the Ministry of Finance, it maintains an independent non-government character.

### **Governing Body of NIPFP**

The governing body of NIPFP comprises of the following:

- Three representatives of the Ministry of Finance including the Revenue Secretary, Economic Affairs Secretary and the Chief Economic Advisor.
- One representative of the Niti Aayog.
- One representative of the Reserve Bank of India.
- Representatives of sponsoring State governments.
- Also distinguished economists and members of other sponsoring agencies and invitees.
- The NIPFP chairman's role is advisory in nature and he does not interfere in day today functioning of the institution.
- He chairs the board meetings which are held at least three to four times in a year
- The institute has made significant research contribution in the area of
  - revenue and taxation
  - fiscal management
  - public expenditure
  - macro-economic policies
  - fiscal federalism
  - other public finance and policy issues both at the Central and the State-level
- Most of the studies are undertaken at the instance of Central and State governments in India, and bilateral and multilateral lending institutions.
- The institute has also undertaken research for a few other countries at the request of the Government of those countries.

## **4.8 GARIB KALYAN ROJGAR ABHIYAAN**

**Why in News:** Prime Minister Narendra Modi has launched the Garib Kalyan Rojgar Abhiyaan, a skill-based employment scheme aimed primarily at migrant workers who have returned to their

villages to escape the Covid lockdown distress.

### **Garib Kalyan Rojgar Abhiyaan (GKRA)**

- A total of 116 districts (including 27 aspirational districts) across Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha have been chosen for the campaign.
- The jobs selected in the campaign will enable proper utilisation of the strength and skill of the people and will enable the country to convert Covid crisis into an opportunity.

### **Convergence of various ministries**

- The Ministry of Rural Development is the nodal Ministry for the campaign and the campaign will be implemented in close coordination with the State Governments.
- The Abhiyaan will be a convergent effort between 12 different Ministries/Departments, namely; Rural Development, Panchayati Raj, Road Transport & Highways, Mines, Drinking Water & Sanitation, Environment, Railways, Petroleum & Natural Gas, New & Renewable Energy, Border Roads, Telecom and Agriculture.

### **Scheme details**

- The mission mode campaign will involve intensified and focused implementation of 25 different types of works to provide employment to migrant workers on one hand and create infrastructure in the rural regions of the country.
- It will aim to provide each migrant worker an opportunity of employment according to his/her skill, in the coming 125 days. The program will also prepare for expansion and development of livelihoods over a longer term.
- Rs 50,000 crore will be spent on the campaign to enable migrant workers to perform public works such as rural houses, drinking water and sanitation, rural roads, community toilets, panchayat bhawans etc.
- The campaign will also contribute towards provision of modern facilities, such as internet connectivity, laying of optic fiber cables, to increase internet speed in villages, so that children in villages are able to study and learn like those in cities.

## **4.9 H1B VISA**

**Why in News:** The US President Donald Trump signed an executive order extending the ban on immigrant and non-immigrant worker visas until the end of this year. In April this year, President Trump had signed an executive order banning the entry of workers on non-immigrant visas for a period of 60 days.

## **H1B and other Work Visas**

- The US administration issues a certain number of work visas each year which allows companies from outside the US to send employees to work on client sites.
- This facilitates to fill a vacuum of highly-skilled low-cost employees in IT and other related domains. It is a kind of win-win for both the employer and the employee.
- However, it has since often been criticized for sending low cost workers to the US at the expense of domestic workers.

### **H-1B Visa**

- It is given to a person who is in a Specialty Occupation. It requires a higher education degree of its equivalent.
- Of all the work visas, the H-1B remains the most popular among Indian IT companies.
- The US issues 85,000 H1B visas annually. Of these, 65,000 are issued to highly skilled foreign workers; the other 20,000 can be additionally allotted to highly skilled foreign workers who have a higher education or Masters degree from an American university.
- The visas are generally approved for three years, after which holders often change employers and continue working for other companies based in the US.

### **L1 Visa**

It allows companies to transfer highly skilled workers to US for a period of up to seven years.

### **H-2B Visa**

It allows food and agricultural workers to seek employment in the US.

## **Indian IT Sector and H-1B Visas**

- Indian IT companies are amongst the biggest beneficiaries of the US H-1B visa regime, and have since 1990s cornered a lion's share of the total number of visas issued each year.
- As of April 1 2020, Indians had applied for 67 per cent of the total H-1B work visas for the current financial year ending March 2021.
- However, the dependence of Indian companies on H-1B visas has been reducing in recent years. For example, as per US government data, in 2018-19, the top five Indian IT companies (TCS, Cognizant, Infosys, Wipro, and HCL Tech) together sent about 5,000 high-skill IT workers to the US on H1B visas, far fewer than the nearly 16,000 they sent in 2014-15.

- Despite the large Indian IT companies cutting down their dependency on H-1B and other worker visas by hiring as much as 50 per cent of staff locally, they still rely on these visas to keep costs in check.

### **The new Work Visa Order**

- As per the US official release, work visas, including H1B and H2B, as well as certain other categories of H4, J, and L visas too shall remain suspended until December 31, 2020.
- The order also replaced the current system of awarding H1B visas by lottery with a system that privileges applicants who are paid higher than others.

### **Implications of US President's Work Visa Order**

- Since the ban is effective immediately, the processing of all new H-1B, H-2B, J, and L visa categories stand suspended.
- This implies that those who do not have a valid non-immigrant visa as of June 23, and are outside of the US, will not be allowed to enter the country until December 31.
- H-1B, H-2B, J and L visa holders, and their spouse or children already present in the US shall not be impacted by the new worker visa ban.

### **Reasons of the Decision**

- This move is to be seen in the backdrop of slowing down economy and rising unemployment levels in the US due to Covid-19 pandemic.
- As per the White House, many American workers have been hit by the pandemic and should not remain on the sidelines while being replaced by new foreign labour.
- Thus, the objective of this decision was to protect domestic workers who had been impacted due to a contraction in the economy in the wake of the Covid-19

### **Impact on India's IT Companies**

- The ban on the entry of non-immigrant workers with H-1B visas is likely to have the biggest impact globally, and especially on Indian information technology (IT) companies and workers.
- This could result in a significant impact on margins and worker wages of Indian IT companies which send thousands of low-cost employees to work on client sites in the US.

### **Reactions to Trump's Decision**

Thousands of US corporations, universities, medical facilities, research institutions, aren't in favour of such action because of the harm it would do now and later as the country reopens and recovers

# SCIENCE AND TECHNOLOGY

❖ **Paper III: The articles in this section are relevant to the following topics:**

- Science and Technology- developments and their applications and effects in everyday life
- Achievements of Indians in science & technology; indigenization of technology and developing new technology.
- Awareness in the fields of IT, Space, Computers, robotics, Nano-technology, bio-technology and issues relating to intellectual property rights.

## 5.1 SPACEX

**Why in News:** US based private space company SpaceX's Crew Dragon spacecraft with two NASA astronauts successfully docked with the International Space Station (ISS) after a historic launch from the Kennedy Space Center in Florida, US.

### International Space Station (ISS)

- The International Space Station (ISS) is a modular space station (habitable artificial satellite) in low Earth orbit (LEO). It is the largest artificial object in space and the largest satellite in low Earth orbit, regularly visible to the naked eye from Earth's surface.
- The ISS is a multi-national collaborative project between five participating space agencies viz. NASA (United States), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada).
- The ownership and use of the space station is established by intergovernmental treaties and agreements.
- Its main construction was completed between 1998 and 2011 and has been continuously occupied since Nov. 2, 2000.
- The station is suited for testing the spacecraft systems and equipment required for possible future long-duration missions to the Moon and Mars.

### Rationale for America's private collaboration

- America decided that it no longer made sense for NASA to build and operate spaceships, as it was not just costly, but was also consuming a lot of scientific resources.
- The transportation needs could easily be fulfilled by space vehicles that some private companies were promising to make.
- Accordingly, it was decided to help and support these companies in building these spaceships that can be hired by other agencies as well, and even private individuals. The NASA collaboration with SpaceX and Boeing was a result of this.
- The option of collaborating with private operators is not only expected to be cheaper, but it also offers the comfort of operating from home soil and eliminating dependence on a foreign country.
- The freeing up of scientific resources will also allow NASA to concentrate on deep space exploration, and work actively towards taking humans to moon and Mars.

### Latest Update

- With this mission, SpaceX became the first private company to launch people into the orbit, a feat achieved previously by only three governments: the U.S., Russia and China. The event is widely seen as the beginning of a new era in space exploration.

- The rocket, named Falcon 9, which carried the spaceship into the orbit, was also built by SpaceX.
- The two astronauts will board the International Space Station (ISS) and become members of the Expedition 63 Crew, and will perform tests on the Crew Dragon and conduct research.
- The mission is expected to last 30-90 days, following which the two astronauts will depart from the International Space Station by boarding the Crew Dragon.

### **Highlights global collaboration in space research**

- The recent take-off also underlines the fact that space research and exploration is now a much more collaborative enterprise than earlier.
- Space agencies of different countries are not just sharing data and resources, but increasingly getting together to carry out joint missions as well.
- The International Space Station itself is a good example of international cooperation in the space sector.
- The current space facility is set to retire somewhere around 2028, but its replacement being planned is likely to have participation from at least ten countries, and possibly private players as well.

### **Space and Private Sector**

#### **Status of private sector participation in the space domain**

- The involvement of private industry in the space sector is not new, as world over, more and more work of space agencies is being done in collaboration with private companies. There are hundreds of private entities building commercial satellites for their clients.
- Launch services are however, still a restricted zone, as it requires elaborate facilities and strong financial capability, but here too, there are several players apart from SpaceX and Boeing.
- Many, like Virgin Galactic, have already made space flights and hope to start offering passenger rides to space.
- Last year, a spacecraft built by Scaled Composites, a US company, even took a human being for a very short ride into space, becoming the first private spacecraft to do so.

#### **Private participation in Indian space sector**

India also has a decent strength of private companies operating in the space sector. Most of them collaborate with the Indian Space Research Organisation (ISRO), in building and fabricating the components that go into making rockets and satellites.

## 5.2 DRONE

**Why in News:** The Ministry of Civil Aviation has issued the draft set of Unmanned Aircraft System (UAS) Rules, 2020, for importing, manufacturing and owning drones as well as for drone ports, or airports for drones.

- The aviation ministry has invited public comments on the draft rules within 30 days after which the final rules will be issued.
- Currently drones are used for surveillance, photography and were recently allowed to curb the locust menace.
- So far there were no rules for UAS and they were covered by a section of the Aircraft Act. Now the entire spectrum of drones has been covered with the proposed new rules.
- The rules come at a time the COVID pandemic has highlighted the role technology can play in reducing human interface and costs.
- Drones offer low-cost, safe and quick aerial surveys for data collection and are useful for industries such as power, mining, realty, oil and gas exploration, railways and highways. They are also effective in relief and rescue work and in policing.

### Unmanned Aircraft System (UAS) Rules, 2020

#### Classification of drones

- The draft rules have three categories of UAS: Remotely Piloted Aircraft System (RPAS); Model Remotely Piloted Aircraft System and Autonomous Unmanned Aircraft System.
- Unmanned Aircraft are further classified on the basis of maximum all-up-weight (including payload) as: Nano (upto 250 gram); Micro (250 gram to 2 kg); Small: (2-25 kg); Medium (25-150 kg) and Large (over 150 kg).

#### Approval of drones

- Each drone importer, manufacturer, trader, owner and operator will need to take approval from the Directorate General of Civil Aviation (DGCA).
- An authorised manufacturer or importer can sell its devices only to an individual or entity approved by the aviation regulator DGCA.
- Only Nano class drones, which are less than 250 grams, will be allowed to operate in India in general, and only a "qualified remote pilot" will be permitted to operate heavier drones.
- A "Certificate of Manufacture" for drones will be issued by testing laboratories or organisations approved by the DGCA for both made in India and imported drones. Drones weighing over 300 kilograms will only need to apply for this certificate.

- However, no drone in India will be allowed to fly without a Unique Identification Number (UIN).

### **Owning and using drones**

- For owning and using a drone, one has to be at least 18 years old. In the case of companies, the requirement is that their main place of business has to be in India and the chairman and at least two thirds of directors have to be Indian citizens.
- Also, businesses operating drones have to be substantially owned and effectively controlled by Indian nationals.
- The ministry has also made it mandatory for all the operators to insure their drones via third-party drone insurance companies. This will cover the liability that may arise in case of accidents.

### **Drone Ports**

- The rules also propose setting up of drone ports which will be similar to airports.
- For using these ports, drone operators will have to take necessary permissions for the arrival, departure, surface movement and associated maintenance or commercial activities of drones.
- Interestingly, government drone operators don't need any approval from DGCA for using the ports.

### **Carriage of payload**

- The draft has prohibited carriage of payload and dropping of articles by unmanned aerial vehicles, except specified by the director-general.
- As many as 13 consortia, including SpiceJet, have received permissions for these trials. The trials for these 13 companies could take up to six months to conclude.
- Each of these companies will then submit a report to the DGCA, which will then examine the feasibility of remote operations of drones.
- It is likely that a separate set of rules which will enable use of drones for e-commerce or delivering medical supplies may be drafted.

### **Miscellaneous provisions**

- The draft has set up a maximum speed limit for drones at 15 meters/second. Further, the drones are only allowed to fly at a maximum height of 15 meters and within the range of 100 meters from the remote pilot.
- The ministry has allowed the drone operators to capture images in permissible areas while ensuring that there is no breach of privacy of individuals or their property.

### Way Ahead

- While calling the draft as a great step, Drone Federation of India said that the regulators and the industry need to keep working hand-in-hand to operationalise these rules and regularise drone activity in India as soon as possible.
- Meanwhile, DGCA is expected to come up with an Unmanned Aircraft Traffic Management System, which will work towards the prevention of drone collision.
- Keeping safety and security concerns in mind, the rules once finalised will progressively pave the way for using drones for e-commerce.

## 5.3 COVID TESTING

**Why in News:** The Indian Council of Medical Research (ICMR) recently approved ELISA test kits for Covid-19 developed by two companies - Transasia Bio Medicals (based in Mumbai) and Euroimmun US Inc. Transasia Bio Medicals claims that it can produce 3 crore kits in a month.

These were the first ELISA test kits approved other than those that use the ICMR's own technology, and add to the various choices for testing for Covid-19.

In May, ICMR had designed a Covid Kavach ELISA test through the National Institute of Virology in Pune. Seven companies are manufacturing kits using this technology in India.

### Testing technologies available in India for Covid

#### ELISA:

- Developed in 1974, ELISA stands for enzyme-linked immune-sorbent assay. It detects whether a person's immune system has produced antibodies against a particular infection — such as HIV.
- The test is called "enzyme-linked" because it uses enzymes to detect presence of antibodies in a blood sample.
- An ELISA test is of two types depending on the antibodies it is testing for - immunoglobulin G (IgG) and immunoglobulin M (IgM).
- IgG detects antibodies developed in later stage of infection, and IgM detects antibodies produced in early stages of infection. Currently only IgG testing kits have been approved in India.
- While ELISA is expected to relatively inexpensive and is fast, its use is limited to making population-based estimates that can inform policy decisions.

- Thus, in India, the ELISA test for Covid-19 is only approved for Sero surveys— which estimate the proportion of the population exposed to infection— and for surveys in high-risk areas, containment zones, and for frontline health workers.

### RT-PCR

- For individual diagnosis and treatment of Covid-19, the test used worldwide is RT-PCR (real time-polymerase chain reaction). Earlier it was also used for Ebola and Zika diagnosis.
- In India, RT-PCR remains the final confirmatory test for Covid-19. The test involves taking swabs from the nasal and oral tracts, extracting the viral RNA in a printer-like machine and amplifying it to detect SARS-CoV-2, the virus that causes Covid-19.
- Another option for RT-PCR is the **bronchoalveolar lavage (BAL) method**, in which a bronchoscope is passed to obtain fluid from lungs or sputum. Sputum or BAL has a higher viral load, so there is a higher chance of virus detection than nasal or oral swab.
- Although free in government labs, RT-PCR is an expensive test. Until May end, the ICMR had capped the cost of a test at Rs 4,500 for private laboratories, but has since removed the cap for private labs, allowing states to fix their own prices.
- ICMR has evaluated 97 kits of various manufacturers for RT-PCR testing, of which 40 have so far been approved.

### Rapid antibody test

- Rapid antibody test also looks for antibodies in the blood, takes only around 20-30 minutes, and is the cheapest test, as it costs only Rs 600. It involves taking a blood sample from the finger and putting it in a testing template. Plasma or serum can also be used to test instead of blood.
- However, a rapid test involves a high risk of false results, as it may detect antibodies developed against some other infection and show that the sample is positive for Covid-19. Hence this test is only used for population surveys.
- Further, according to ICMR, a person may test positive for antibodies 7-10 days after contracting Covid-19 infection and may continue to show positive results for several weeks.
- While a positive result indicates the person has been exposed to the corona virus, a negative result may not entirely rule out Covid-19.
- If a person tests positive through a rapid test, he/she has to undergo a confirmatory RT-PCR test before treatment.
- Though the antibody tests on ELISA take a little more time than rapid tests to give results, they have better specificities and are thus are more reliable in diagnosis than rapid tests.

### TrueNat

- TrueNat is a privately designed test by MolBio Diagnostics Pvt Ltd and works on the same principle as RT-PCR, but with a smaller kit and with faster results (within 60 minutes).
- The test involves taking nasal or oral swabs. If a sample tests negative, it has to be treated as negative; if it tests positive, a second test called RdRp gene confirmatory assay has to be performed.
- It is commonly used for tuberculosis and HIV testing and across India there are already over 800 machines to test for TB. Thus, the government will not have to invest further in TrueNat machines.
- The ICMR has already approved TrueNat for screening and confirmation for Covid-19.

### Appropriateness of a test

- A person may test positive in these tests at different point of time during an infection, hence, in order to understand which test should be used at what time, the purpose has to be clearly defined.
- After the person is exposed, the viral load may be high in the respiratory tract within a few days, and an RT-PCR or TrueNat test may give a positive result, but if the person has not developed antibodies, both a rapid test and ELISA will give a negative result.
- In a few days, say over a week later, antibodies start getting produced, at which point RT-PCR may show negative but ELISA and Rapid antibody test will show positive.
- To diagnose and treat, doctors rely on RT-PCR, which implies active infection. Once confirmed the person has to be isolated, and treated if symptoms emerge.
- However, a positive result from ELISA or rapid antibody test may not mean the person needs isolation or is infectious; it may simply mean the person was exposed to the virus and has developed antibodies.
- Thus, these two tests, being cheaper than RT-PCR, are employed in large-scale population surveys to know how widespread the infection is.
- Depending upon the level of sero prevalence of infection, matching public health interventions can be implemented for prevention and control of the disease.

## 5.4 COVID VACCINES IN NEWS

**Why in News:** As the world deals with the Covid-19 pandemic, the global scientific community has shown an unprecedented response to develop a vaccine. The fact that the novel corona virus is from a family on which work is already being done worldwide after SARS and MERS, has also helped the research process.

The World Health Organization's (WHO) Solidarity Trial, the UK's RECOVERY Trial and the US' Operation Warp Speed are three of the leading scientific research efforts in the battle against Covid-19.

- According to the World Health Organization's latest count, 13 experimental vaccines are being tested in humans and more than 120 others are in earlier stages of development.
- If all goes well, the world may have a vaccine for emergency use by November. However, experts believe that getting regulatory approval followed by mass production and supply chain issues may push the development into next year.

### **Stages in development of a vaccine**

#### **Pre-clinical tests**

In this primary stage, scientists test the vaccine on animals such as mice or monkeys to see if it produces an immune response.

#### **Phase I trials**

This is the first step where the experimental vaccine is given to humans, usually between 20-80 subjects, to test safety and dosage and check whether it activates the immune system.

#### **Phase II trials**

In this stage, a larger group of several hundred individuals are enrolled for testing and they are split into age-wise groups, such as children and elderly. The Phase II testing studies the candidate vaccine's safety, immunogenicity (ability to produce an immune response), proposed doses, schedule of immunisations and method of delivery.

#### **Phase III trials**

- Since certain side effects of the vaccine may not have come up in the smaller groups of humans tested in earlier phases, the vaccine candidate is given to thousands of people in this stage.
- Here, the scientists check how many become infected compared with volunteers who receive a placebo. These trials can determine if the vaccine protects against the corona virus.
- A placebo is a substance or a procedure given to a person that has no physical effect on that person, even though they may think that it does.
- Placebos are used in studies in order to find out whether or not the pharmacological effect of a drug actually includes pain relief or whether the effects produced by the drug might be related to psychological processes that are generically called the placebo effect.

## Approval of the vaccine

- After Phase III trials, the vaccine developer submits a license application to the regulatory authority in their respective country.
- The regulator then inspects the factory where the vaccine will be made and approves its labeling.
- During a pandemic, a vaccine may receive emergency use authorization before a formal green signal.

## Types of Covid-19 vaccines under development

- **Genetic vaccines:** These are the vaccines that use the genes of the coronavirus (in the form of DNA or RNA) to provoke an immune response.
- **Viral vector vaccines:** These vaccines use a virus to deliver coronavirus genes into cells and provoke an immune response. For this, these viruses are weakened so they cannot cause disease.
- **Protein-based vaccines:** These vaccines use a corona virus protein or a protein fragment to provoke an immune response by imitating the outer coat of the coronavirus.
- **Whole-virus vaccines:** Such vaccines use a weakened or inactivated version of the virus, to create immunity to the virus. These vaccines are created by inactivating a pathogen, typically using heat or chemicals, which destroy the pathogen's infectivity while retaining its immunogenicity.

## Vaccine candidates that have shown promise

### Oxford-AstraZeneca vaccine (Phase II/III)

- Jointly developed by British-Swedish company AstraZeneca and the University of Oxford, the AZD1222 vaccine is based on a weakened version of a common cold virus (adenovirus - called ChAdOx1) that causes infections in chimpanzees.
- The combined Phase II/III testing will soon begin in the UK and Brazil. AstraZeneca has already started to mass-produce the vaccine and plans to roll out up to two billion doses of the coronavirus vaccine in September.

### mRNA-1273 vaccine developed by Moderna (Phase II)

- Part of US' Operation Warp Speed, the firm Moderna is developing a vaccine, using messenger RNA to produce viral proteins.
- Final-stage trials of the mRNA-1273 vaccine is set to begin next month on 30,000 people and the firm hopes to have vaccine doses ready by early 2021.

### **Imperial College London vaccine (Phase II)**

- The vaccine candidate developed by Imperial College London researchers is based on self-amplifying RNA technology and over 300 healthy people have been immunised with two doses.
- A further trial involving 6,000 people is planned for October and if it proves successful, Imperial College hopes the vaccine could be distributed in the UK and abroad early next year.

### **Sinovac Biotech vaccine (Phase II)**

- The Beijing-based company is testing an inactivated vaccine called CoronaVac and is preparing Phase III trials in China and Brazil.
- Preliminary findings from phase I and II trials in China have shown that it is safe and capable of obtaining an immune response from human trials.

### **Pfizer-BNTech vaccine (Phase II)**

- Pharmaceutical giant Pfizer, which is co-producing a Covid-19 vaccine with the help of German company BNTech, has started the process of dosing patients.
- Four vaccine candidates based on messenger RNA (mRNA) format are being tested on volunteers. Pfizer believes that a Covid-19 vaccine could be ready by the end of October 2020.

## **5.5 COVID-19 TERMINOLOGY**

**Why in News:** Over the past few months, we have learnt about many scientific terms in relation to COVID-19. This is like a revision of glossary of terms that are being used now regularly.

### **The disease and its spread**

#### **COVID-19**

- It is name given by the World Health Organization (WHO) to the disease, that has become a global pandemic.
- The coronavirus disease 2019 was abbreviated as COVID-19, where CO stands for corona, VI for virus, and D for disease, while the numerals – 19 refer to the year in which the first case was detected.

#### **SARS-CoV-2**

- The International Committee on Taxonomy of Viruses (ICTV) announced “severe acute respiratory syndrome corona virus 2 (SARS-CoV-2)” as the name of the new virus.
- This name was chosen because the virus is genetically related to the coronavirus responsible for the Severe Acute Respiratory Syndrome (SARS) outbreak of 2003. The two viruses, though related, are different.

### **Epidemic**

- When the incidence of a disease rises above the expected level in a particular community or geographic area, it is called an epidemic.
- The outbreak started in Wuhan city in Hubei province in China, with what seemed then as a cluster of pneumonia-like cases.

### **Pandemic — A global epidemic**

- When the epidemic spreads over several countries or continents, it is termed a pandemic.
- On January 30, WHO announced that COVID-19 was a Public Health Emergency of International Concern.
- On March 11, WHO decided to announce COVID-19 as a Pandemic.

### **R0 (or R-Naught)**

- It is the basic reproduction number.
- This is the number of new infections caused by one infected individual in an entirely susceptible population. If R0 is 2, then one individual will infect two others.
- It helps determine whether an epidemic can occur, the rate of growth of the epidemic, the size of the epidemic and the level of effort needed to control the infection.
- As of end May, India's R0 value was in the range of 1.22.

### **Transmission**

- It is the method by which the disease spreads.
- In COVID-19, it is through respiratory droplets, expelled while talking, laughing, coughing and sneezing.
- This makes mask wearing and physical distancing the main tools for protection against the virus.
- Washing hands with soap and water is an effective way to kill the virus.

### **Community transmission**

- When you can no longer tell how someone contracted the disease, or who the source of infection was.
- As numbers climb, this tracing becomes next to impossible.

### **Super spreader**

- Some individuals seem to have the capacity to cause more infections in a disproportionately large number of people, than others.
- The current pandemic has recorded some super spreaders who have had a huge role in the transmission.

### **Severe Acute Respiratory Infection (SARI)**

- A respiratory disease also caused by a corona virus, and spread through the same transmission method, i.e. respiratory droplets.
- The symptoms (fever, cough, body ache, difficulty in breathing) are also similar.
- The government has begun surveillance of SARI patients, as well as patients with Influenza-like Illness (ILI) admitted in hospitals.

### **Cytokine storm**

- An immune reaction triggered by the body to fight an infection, when it turns severe, is known as a cytokine storm.
- The body releases too many cytokines, proteins that are involved in immunomodulation, into the blood too quickly.
- While normally they regulate immune responses, in this case they cause harm and can even cause death.
- Experts have noticed a violent cytokine storm in several individuals who are critical with COVID infection.
- These cytokines dilate blood vessels, increase the temperature and heartbeat, besides throwing blood clots in the system, and suppressing oxygen utilisation.
- If the cytokine flow is high and continues without cessation, the body's own immune response will lead to hypoxia, insufficient oxygen to the body, multi-organ failure and death.
- Experts say it is not the virus that kills; rather, the cytokine storm.

### **Co-morbidities**

- Co-morbidity means more than one disease or condition is present in the same person at the same time.
- Several health conditions including uncontrolled diabetes and hypertension, cancer, lung diseases, compromised immune systems put patients at greater risk for contracting the Covid-19 disease, leading to co-morbidities.
- Clinical outcomes for such people are poor. Many of deaths from Covid-19 are known to be of people with co-morbidities.
- Special attention to prevent the disease and prevent mortality in these groups is the concern of health managers.

### **Testing**

#### **RT- PCR (Reverse Transcription-Polymerase Chain Reaction)**

- It is the primary test to detect COVID-19 infection across the globe.
- It is a sensitive test that uses swab samples drawn from the nasal/oral cavity to test for the presence of viral RNA (ribonucleic acid).
- It has got better sensitivity (ability to correctly identify those with the disease) and specificity (ability to correctly identify those without the disease) rates in current diagnostic tests for COVID.

### **Antibody tests**

- These tests check your blood by looking for antibodies, and that just means you have had a past infection of SARS-CoV-2.
- Antibodies are proteins that help fight off infections, and are specific to every disease, granting immunity against getting that particular disease again.
- An antibody test, with poor specificity, is not believed to be effective in detecting new infections.
- States have been asked to commence testing sero-prevalence in the community, using antibody tests, that are blood tests.

### **Treatment related**

#### **Convalescent plasma therapy**

Convalescent plasma therapy means using neutralising antibodies from the blood of people who have recovered from the COVID-19 infection to treat patients with COVID-19.

Researchers are examining the efficacy of this method.

#### **Contact tracing**

- Identifying and monitoring people who may have come into contact with an infectious person.
- In the case of COVID-19, monitoring usually involves self-quarantine as an effort to control the spread of disease.

### **Flattening the curve**

- Reducing the number of new COVID-19 cases, day on day.
- The idea of flattening the curve is to ensure that the health infrastructure is not overwhelmed by a large number of cases.

### **Positivity rate**

- It is the percentage of people who test positive among all those who are tested. If positivity rate is high, it is possible that only high risk groups are being tested.
- A low positivity rate can also indicate that not enough testing is being done.

### **Infection fatality rate**

- It is the number of deaths occurring in all infected people in a particular population.
- This includes those who might have the COVID-19 infection, but have not been tested for it.
- Given that the number of tests is not high, experts have clarified that this is not a useful metric to have in this pandemic.

### **Case fatality rate**

- This is the number of deaths occurring among confirmed cases of COVID-19.
- Since these two figures are available with a certain amount of reliability, it is actually CFR that is being referred to when there is a loose reference to fatality rate.

### **Herd immunity**

- This is also known as community immunity, and constitutes the reduction in risk of infection within a population, often because of previous exposure to the virus or vaccination.
- If sufficient population gets infected, then recovers and becomes immune, then the overall spread of the disease reduces.
- However, its efficacy has not been seen anywhere in relation to Covid-19 disease.

# ECOLOGY and ENVIRONMENT

❖ **Paper III: The articles in this section are relevant to the following topics:**

- Conservation, environmental pollution and degradation, environmental impact assessment
- Disaster and disaster management.

❖ **Prelims Oriented Questions**

## 6.1 TROPICAL CYCLONE

**Why in News:** A cyclonic storm, named as Nisarga, formed in the Arabian Sea made landfall between Raigad district (in northern Maharashtra) and Daman by 3rd

### Different Types of Low Pressure Systems

The Indian Meteorological Department (IMD) categories the low pressure systems of North Indian Ocean based upon the wind speeds in circulation.

S No.	Type	Associated Wind Speed in Circulation
1	Low Pressure Area	Less than 17 knots ( < 31 kmph)
2	Depression	17 to 27 knots ( 31 to 49 kmph)
3	Deep Depression	28 to 33 knots ( 50 to 61 kmph)
4	Cyclonic Storm	34 to 47 knots ( 62 to 88 kmph)
5	Severe Cyclonic Storm	48 to 63 knots ( 89 to 118 kmph)
6	Very Severe Cyclonic Storm	64 to 119 knots ( 119 to 221 kmph)
7	Super Cyclonic Storm	120 knots and above ( 222 kmph and above)

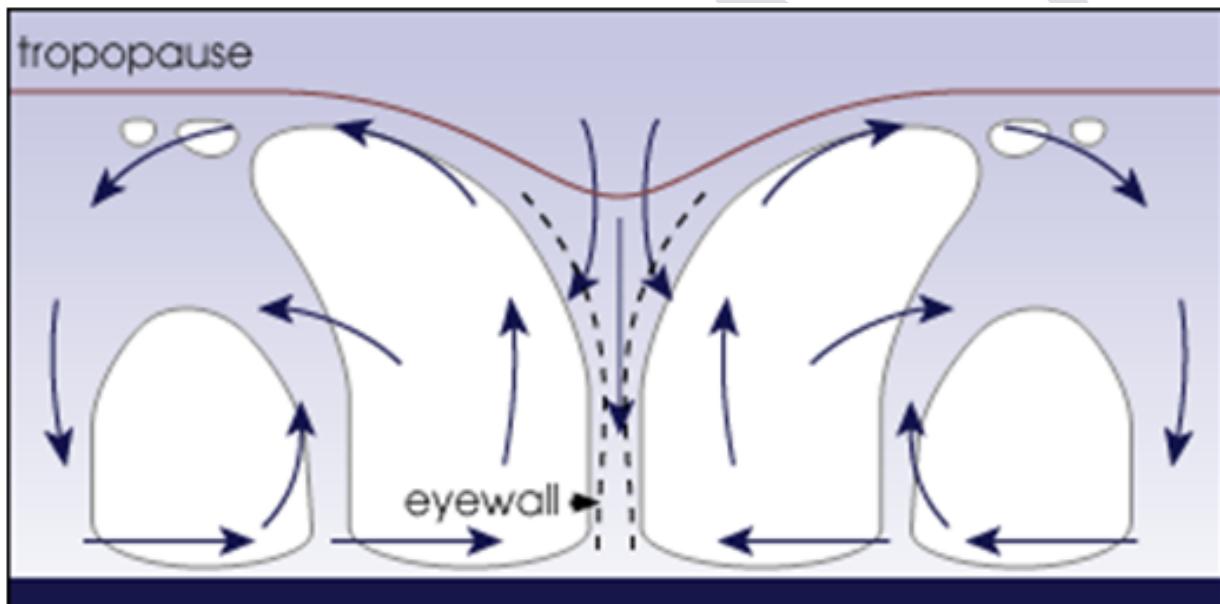
### Tropical Cyclones

- Tropical cyclones are intense low pressure systems formed over oceanic waters in tropical latitudes.
- The conditions for formation of tropical cyclone are-
  - Sea surface temperature of about  $27^{\circ}\text{C}$
  - Coriolis force to create a cyclonic vortex
  - Small variations in the vertical wind speed
  - A pre-existing weather disturbance or weak low-pressure area

### Mechanism of a Tropical Cyclone

- To form a cyclone, warm, moist air over the ocean surface rises upward. Remember the basic tenet that "warm air goes up, cool air goes down."
- As this air moves up and away from the ocean surface, it leaves less air near the surface, causing an area of lower air pressure below.
- Air from surrounding areas with higher air pressure rushes in to the low pressure area. Then this new cool air becomes warm and moist and rises, too. And this cycle continues.

- As the warm moist air rises up, the water vapour cools down and condenses. During this latent heat of condensation is released back to the air. This heat further warms up the rising air, making it move further up. The whole system of clouds and wind spins and grows, fed by the ocean's heat and latent heat of condensation of water.
- The process continues with energy and precipitation accumulating further and the winds speeding up. Once the winds reach a certain speed, it then becomes a tropical cyclone.
- The winds move in spiral pattern (instead of straight lines) due to the Coriolis effect.
- As the storm system rotates faster and faster, an eye forms in the centre. It is very calm and clear in the eye, with very low air pressure. Higher pressure air from above flows down into the eye.



### Features of a Tropical Cyclone

- In a tropical cyclone, the pressure is lowest at the centre of the cyclone and increases outwards.
- These systems comprise of a vortex or whirl in the atmosphere with very strong winds circulating around it in anti-clockwise direction in the Northern Hemisphere and in clockwise direction in the Southern Hemisphere.

### West Coast vs. East Coast Cyclones in India

- The cyclonic activity is more frequent in Bay of Bengal affecting the eastern coast of India, than in Arabian Sea and western coast of India.
- The National Cyclone Risk Mitigation Project (NCRMP) analysis of cyclones during 1891-2000 shows that while 308 cyclones affected the east coast while only 48 tropical cyclones crossed the west coast. **It is because of many factors-**

### **Relatively warmer waters of Bay of Bengal**

- The Bay of Bengal region experiences sluggish and warm (as in tropical latitudes) winds keeping the temperatures of its waters relatively warm at about 28 degree Celcius.
- This region also receives constant inflow of fresh water from the Ganga and Brahmaputra rivers.
- As the Bay's surface water keeps getting refreshed, it makes it difficult for the warm surface water to mix with the cooler water below.
- These two factors make conditions ideal for development of a depression.
- On the other hand, the Arabian Sea receives stronger winds that help dissipate the heat, and the lack of constant fresh water supply helps the warm water mix with the cool water, reducing the temperature.

### **Cyclones from Pacific Ocean entering Bay of Bengal**

- Bay of Bengal can also host to cyclones that are formed in the Pacific Ocean and move towards Bay of Bengal.
- Due to the lack of any such presence between the Pacific and the Bay, cyclonic winds from Pacific can easily move into the Bay of Bengal.
- Typhoons originating in near Philippines, China, Thailand and Malaysia enter the Andaman Sea of Bay of Bengal after they weaken in their native regions.

### **Eastern Ghats vs. Western Ghats**

- The hills of Eastern Ghats are not high enough to stop cyclones which make much inroad into the coastal states.
- The Western Ghats are higher in comparison and run almost the entire distance of the western coasts preventing the cyclonic storms to go in the hinterland.

### **Impact of Climate Change on Cyclones of Indian Ocean**

- Climate change and warming seas are contributing to increased frequency and intensity of cyclones in all the tropical oceans including Indian Ocean. For example, in case of both Amphan and Nisarga, the warm ocean temperatures contribute to intensification of the cyclonic storms.
- Climate change is also altering the trend of lesser cyclones in the Arabian Sea. For example, in 2019, Arabian Sea witnessed its most frequent and intense cyclonic activity in more than 100 years. Five cyclones originated in Arabian Sea in 2019 — Vayu, Hikka, Kyarr, Maha and Pavan; but normally only one or two are formed in these waters.

## 6.2 OIL SPILL IN ARCTIC

**Why in News:** Russia has declared a state of emergency, five days after a power plant fuel leak in its Arctic region caused 20,000 ton of diesel oil to escape into a local river.

The metals giant company, Norilsk Nickel, tried to contain the damage on its own for two days before specialists were called in from companies and agencies across Russia. The power plant located near Norilsk city was built on permafrost, which has weakened over the years owing to climate change. This caused the pillars that supported the plant's fuel tank to sink, leading to the fuel leak. Permafrost is ground that continuously remains frozen for two or more years, located on land or under the ocean.



**Extent of the damage**

- As per environmentalists, the oil spill was the worst such accident ever in the Arctic region and the second worst in modern Russian history in terms of volume.
- It is only exceeded by a crude oil spill in the north western region of Komi that took place over several months in 1994.
- The Ambarnaya river, which is affected by the spill, is part of a network that flows into the environmentally sensitive Arctic Ocean.

- Environmentalists have said the river would be difficult to clean, given its shallow waters and remote location, as well as the magnitude of the spill.
- As per the environmental oversight agency of the Russian government, the overall damage could run into several dozens or hundreds of billions of rubles.

### **Remedial steps**

- As burning the fuel is considered to be risky, which might lead to other problems, reagents might be used to dilute the layer.
- The emergencies ministry has said that it had removed more than 200 tones of the fuel, however Russia's fisheries agency has said that the barriers are unable to stop the majority of the pollution, which can quickly dissolve or sink.
- The Russian President has said that it is necessary to carry out all the compensatory measures to restore biodiversity and expected the metals giant to fully restore the environment.
- A national state of emergency has been declared to bring in more resources for the cleanup effort.

### **Review of structures on permafrost**

- Russia is vulnerable to climate change because much of its economic infrastructure is located in areas that have been locked by permafrost but are starting to melt amid warmer temperatures.
- Sixty-five percent of Russia's territory is covered by permafrost, and the environment ministry had warned in 2018 that the melt threatens pipes and structures, as well as buried toxic waste, which can seep out and endanger waterways.
- Thus, to prevent a similar situation on hazardous structures on territories prone to melting of permafrost, Russia has ordered a comprehensive review of such objects.

## **6.3 ASSAM OIL WELL BLOWOUT**

**Why in News:** Natural gas has been continuously flowing out of a gas well in Assam since 27th May after a sudden and uncontrolled release of gas/oil, also called as “gas blowout”.

### **Gas Well**

- The gas well is named as Baghjan 5 well. It is a purely gas-producing well in Tinsukia district of Assam and drilled by Oil India Limited (OIL) in 2006.
- It produces around 80,000 standard cubic meters per day (SCMD) of gas from a depth of 3,870 meters.

- It is one of the rich gas reservoirs of OIL.
- It is in physical proximity of Dibrugarh National Park with an aerial distance of 900 meters from the National Park.

### **Gas/Oil Blowouts**

- A blowout is defined as a sudden and uncontrolled release of oil or gas from their natural reservoir.
- It happens because of changes in pressure and disturbance of pressure balance in a gas or oil well. The changes in pressure are also called as “kicks”. If these are not controlled in time, the ‘kicks’ can turn into a sudden blowout.

### **Other Examples of Blowouts**

- Before the current blowout, there was one at an OIL-owned oil well in Dibrugarh, Assam in 2005.
- In 1970s, at an ONGC-owned oil well in Rudrasagar, Assam, a blowout happened that took three months to contain.

### **Causes of Blowouts**

There are many reasons for such blowouts like:

- Poor workmanship during operations
- Bad maintenance of oil/ gas well
- Old age and associated wear and tear
- Geomorphic and tectonic factors which can change the pressure in underlying rocks

### **Impacts of Oil/ Gas Blowouts**

- High likelihood of fire due to release of huge amounts of gas/ oil.
- Adverse impact on the health of locals due to hydrocarbon pollution. For example, the locals in proximity of Baghjan well are complaining of burning of eyes and headache.
- Loss of biodiversity due to prolonged exposure to hydrocarbon fumes. For example, the fishes and Gangetic Dolphin got killed due to the present blowout.
- The fumes can travel huge distances with blowing winds and condensate upon plants and natural vegetation in proximity. For example, the gases blowing are mostly falling on bamboo, tea gardens, banana trees and betel nut trees affecting plantation agriculture in nearby areas.

### **Controlling the Blowouts**

- Controlling a blowout is a highly specialised job and requires expertise of technical staff.
- In the initial step, water is pumped in to control a blowout, so that the gas does not catch fire.
- Some blowouts can collapse on their own after release of sufficient pressure but this may take months to happen.

### **It depends upon following factors**

- The size of the reservoir
- The pressure at which the gas/oil is flowing out
- A device called a blowout preventer (BOP) is usually installed in wells for controlling blowouts.

### **Post-Control Restoration of Blowout**

- Once the blowout has been controlled, it's important to rehabilitate the people affected and restore the natural environment.
- For this, OIL has engaged a study carry out Environment Impact Assessment (EIA) study in and around Dibru-Saikhowa National Park, Maguri Motapung Beel and the surrounding villages to assess-
- The effects of blow out on terrestrial and aquatic Ecosystems and;
- Socio-Economic impact assessment on lives of locals in consultation with the stakeholders.
- Post blowout, usually bioremediation of the site affected is carried out.
- Bioremediation is a technique which makes use of living organisms like microbes and bacteria to remove contaminants, pollutants, and toxins from soil and water.
- It is generally used to clean up environmental problems such as oil spills, or contaminated groundwater.

### **Statutory Provisions in Cases of Blowouts**

Such types of blowouts are a kind of industrial accident which can cause loss of lives and also destroy environment. Therefore, these are governed by multiple Central and State laws.

### **Major Central legislations For Protection of Environment and Regulation**

- Environmental Protection Act, 1986
- The Air (Prevention and Control of Pollution)Act, 1981
- The Water (Prevention and Control of Pollution) Act, 1974
- Factories Act, 1948

# **SOCIAL ISSUES**

❖ **Paper I: The articles in this section are relevant to the following topics:**

- **Salient features of Indian Society, Diversity of India.**
- **Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.**
- **Effects of globalization on Indian society**
- **Social empowerment, communalism, regionalism & secularism.**

## 7.1 WHEAT PRODUCTION IN INDIA

- **Madhya Pradesh is set to surpass Punjab to become the largest wheat-procuring state for the central pool during the 2020-21 Rabi marketing season.**
- While Punjab has produced surplus food grains for the country for decades, MP has joined the high procurement states very recently.
- The Union Ministry of Consumer Affairs, Food and Public Distribution has set a wheat procurement target of 407 LMT for the Rabi season in 2020-21 against which 369.51 LMT has been procured until June 6.

### Latest Update

- In 2010-11, Haryana and Punjab jointly contributed about 73.5 per cent to the central pool but their share has come down to 54 per cent in the current year.
- Meanwhile, MP's contribution has increased to 33.98 per cent in 2020-21 from 15.71 per cent a decade ago.
- MP's current wheat procurement figure (125.59 LMT wheat) is just below that of Punjab's 127.12 LMT — the biggest contributor to the central pool.
- Madhya Pradesh is soon set to surpass Punjab to become the largest wheat-procuring state for the central pool
- MP is a “decentralized procurement” state, where wheat is procured by state agencies.
- Only surplus wheat stocks over and above the state's requirement, are taken over by FCI for dispatching to other consuming regions, under the Targeted Public Distribution System or National Food Security Act, 2013.
- The reason for this could be the lower participation of private players. Usually, private players go to buy MP wheat, which is considered of better quality, but this year, the private participation has been less, due to Covid lockdown restrictions.

### National Food Security Act (NFSA), 2013

- The National Food Security Act, 2013 was notified in 2013 with the objective to provide for food and nutritional security, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity.
- The act converted the existing food security programmes of the government into legal entitlements.

**Features of NFSA:** The Act provides for coverage of up to 75% of the rural population and up to 50% of the urban population for receiving subsidized food grains under Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population.

- The eligible persons are entitled to receive 5 Kgs of food grains per person per month at subsidised prices.
- Further, the Antyodaya Anna Yojana (AAY) households or the poorest of the poor group, receive 7 kg of subsidised food grains per person per month i.e. 35 kg of food grain/family/month.
- In case of non-supply of entitled food grains or meals, the beneficiaries receive a food security allowance.
- The Act also contains provisions for setting up of grievance redressal mechanism at the District and State levels.

### **Benefits for women and children**

- Pregnant women and lactating mothers are entitled to meals and maternity benefits of not less than Rs 6000. It is however restricted to two children only.
- The eldest woman of the household of age 18 years or above is the head of the household for the purpose of issuing ration cards.
- Further, children up to 14 years of age are entitled to nutritious meals as per the prescribed nutritional standards.

### **FCI**

The Food Corporation of India is a statutory body under the Ministry of Consumer Affairs, Food and Public Distribution. Since its inception, FCI has played a significant role in India's success in transforming the crisis management oriented food security into a stable security system.

### **Objectives**

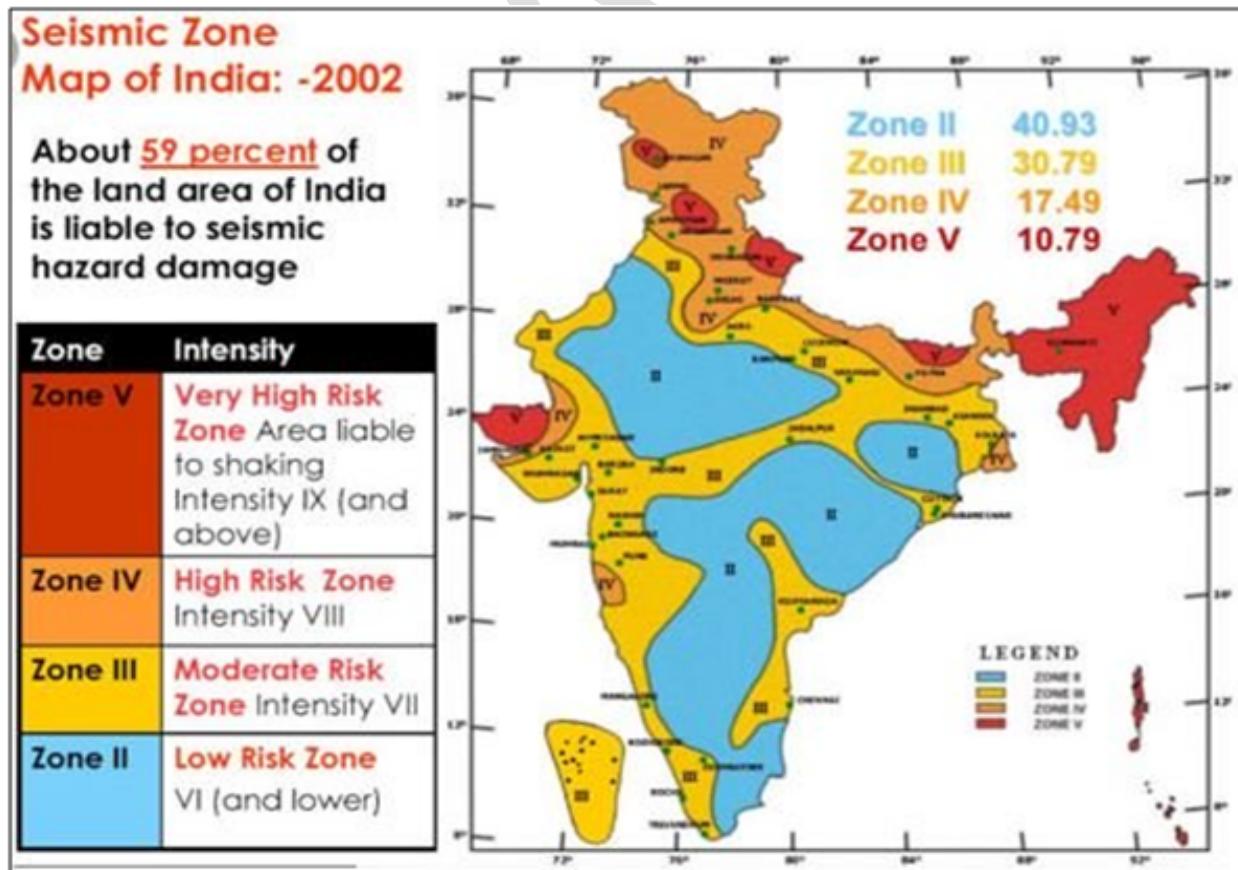
- FCI was set up in 1965 to implement the following objectives of the National Food Policy:
- Effective price support operations for safeguarding the interests of the poor farmers.
- Distribution of food grains throughout the country for Public Distribution System (PDS).
- Maintaining a satisfactory level of operational and buffer stocks of food grains to ensure National Food Security.
- Regulation of market price to provide food grains to consumers at a reliable price.

## **7.2 EARTHQUAKES**

**Why in News:** Delhi NCR has been hit by a series of low and medium intensity earthquakes in the last two months. Since April, Delhi-NCR has recorded more than 14 quakes of low and medium intensity.

## Seismic Zonation of India

- Bureau of Indian Standards has prepared the Seismic Zone Map of India which divides the country into 4 seismic zones based upon earthquake intensity.
- Earthquake Magnitude of an earthquake is defined as the amount of energy released at the point of origin of an earthquake.
- Earthquakes of magnitude four or below hardly cause any damage anywhere and are mostly inconsequential for practical purposes.
- A magnitude 6 earthquake is typically associated with the kind of energy that was released by the atom bomb in Hiroshima.
- The magnitude of earthquakes is measured on a Moment Magnitude Scale which is logarithmic scale. Thus, magnitude 7 Earthquake is about 32 times more powerful than a magnitude 6 earthquake. And, a magnitude 8 earthquake would be almost 1,000 times more powerful than a magnitude 6 event.
- Earthquake Intensity measures the impact of earthquakes due to ground shaking on human lives and property.
- It is measured on Mercalli Intensity Scale.



### **Seismicity of Himalayan Region**

- Himalayan region is an active plate boundary region and falls in seismic zone V of the country.
- As per scientists, a massive earthquake of magnitude higher than 8 is due in the Himalayan region. This can severely affect the Delhi-NCR region as well.
- This is based upon the measurements of energy that is getting trapped under the surface as a result of one tectonic plate trying to move beneath the other one.
- As more and more stresses built up with trapped-in energy, the likelihood of a higher magnitude earthquake increases.
- However, scientists have no idea when this big earthquake will occur.
- Some have argued that the smaller quakes are helping release the energy bit by bit so that a big one would not be necessary also does not hold. But these arguments are baseless as 1,000 earthquakes of magnitude 4 are needed to release the energy equivalent of a magnitude 6 earthquake.

### **Earthquake Risk Management**

- Earthquake prediction is neither possible as of now nor it will be helpful as the entire city population of Delhi cannot be evacuated.
- Viable solution, therefore is, to construct earthquake resistant structures are a solution for densely populated regions like Delhi and high risk zones like Zone V.

### **Seismic Hazard Zonation of Delhi- NCR**

- Delhi falls under seismic zone IV of the country.
- The Delhi-NCR and its surrounding areas which extend till Jaipur, Ajmer, Mount Abu and the Aravallis have several localised faultlines (but not plate boundaries) that generate two and three earthquakes of magnitude 2.5 and above every month. But there are monthly and annual variations as well as geological and seismological processes are not very smooth.
- Delhi also feels the impact of quakes that are epicentred in Himalayas and as far as the Hindu Kush mountains in Afghanistan.

### **Seismic Record of Delhi**

- Two and three earthquakes of magnitude 2.5 and above every month are common for Delhi and surrounding areas upto Mt. Abu. However, there are monthly and annual variations as well as geological and seismological processes are not very smooth.
- Recording tremors depend upon placement of seismometers. The area around Delhi has the most dense concentration of seismometers in the country, even more than the Himalayan region which is seismically much more active.

- Out of the 115 detectors installed in the country, 16 are in or around Delhi.
- Therefore, even the earthquakes of smaller magnitude which are not even felt by most people, are recorded for Delhi-NCR region.

Too many recent earthquakes led to lot of anxiety and speculation about the possibility of a large earthquake in Delhi and these smaller ones being just foreshocks. Foreshocks are relatively smaller earthquakes that precede the largest earthquake in a series, which is termed the main shock. Not all main shocks have foreshocks. However, as per the scientists, it is not an unusual or abnormal seismic activity which is happening in Delhi. Thus, these tremors don't indicate a bigger earthquake necessarily.

Scientists know for sure the earthquake prone regions of the world and India which are at the plate boundaries; however, there is no seismic science as of now which can predict when and where exactly an earthquake will occur. Scientists have been working for years to identify "precursors" to an earthquake, but haven't been able to find any precursors as of now. Some special earthquakes like the ones that are triggered by volcanic activity, can be predicted to some extent. Predicting earthquakes for Delhi isn't possible as of now as it does not lie on a plate boundary. It is located on a single plate, and the seismic activity is generated by internal deformities and localised faults.

#### **National Centre for Seismology (NCS)**

- It is the nodal agency of the Government of India for monitoring of earthquake activity in the country.
- NCS maintains National Seismological Network of 115 stations spread all across the country.
- NCS monitors earthquake activity all across the country through its 24x7 round the clock monitoring centre.
- It also monitors earthquake swarm and aftershock through deploying temporary observatory close to the affected region.
- Apart from earthquake monitoring, NCS is also actively involved in the Seismic Hazard Micro-Zonation and seismological research.

### **7.3 NATIONAL INSTITUTION RANKING FRAMEWORK**

**Why in News:** The National Institution Ranking Framework (NIRF) 2020 has been released.

#### **NIRF Rankings**

- The National Institutional Ranking Framework (NIRF) was approved and launched by the Ministry of Human Resource Development (MHRD) in September 2015.
- The NIRF rankings were first published in 2016 and since then the rankings are published annually.
- The NIRF outlines a methodology to rank institutions across the country based on the broad parameters for ranking various universities and institutions.

#### **The parameters broadly cover**

- Teaching, Learning & Resources (TLR)
- Research and Professional Practice (RP)
- Graduation Outcomes (GO)
- Perception (PR)

Through the NIRF, the educational institutions across the country are ranked in nine categories; these are overall, universities, engineering, colleges, management, pharmacy, medical, architecture and law.

#### **Latest Update**

- The Union Minister of Human Resource Development released “India Rankings 2020” of Institutions of Higher Education in various categories on the basis of their performance on five broad categories of parameters
- In 2020, in addition to nine categories earlier, one domain “Dental” has been introduced for the first time bringing the total tally to 10 categories / subject domains.
- A total number of 3771 unique institutions offered themselves for ranking under “Overall”, category-specific and / or domain-specific rankings for India Rankings 2020.

#### **Overall**

- The Indian Institute of Technology (IIT)-Madras is still the country’s best in the field of higher education, according to the NIRF 2020 report. IIT Madras topped in 2019 rankings also. The Indian Institute of Science (IISc), Bengaluru, stands at the second place, followed by IIT-Delhi.

#### **University**

IISc, Bengaluru topped this list, followed by Jawahar Lal Nehru University (JNU) and Banaras Hindu University (BHU).

## **MISCELLANEOUS and SCHEMES**

### **❖ IFLOWS (Source: Indian Express)**

It is a joint initiative between the Ministry of Earth Sciences (MoES) and Brihanmumbai Municipal Corporation (BMC). It will be able to relay alerts of possible flood-prone areas anywhere between 6 to 72 hours in advance.

The system will provide information like:

- Possible flood-prone areas
- Likely height the floodwater could attain
- Location-wise problem areas across all 24 wards
- Calculate the vulnerability and risk of elements exposed to flood

### **❖ DEXAMETHASONE (Source: Hindu)**

- Dexamethasone is a steroid that has been used since the 1960s to reduce inflammation in a range of conditions, including inflammatory disorders.
- It has been listed on the WHO Model List of Essential Medicines since 1977 in multiple formulations, and is currently off-patent and affordably available in most countries.
- It is used in the treatment of rheumatic problems, skin diseases, severe allergies, asthma, chronic obstructive lung disease, brain swelling, eye pain following eye surgery and along with antibiotics in tuberculosis.
- It may be taken by mouth or as an injection into a muscle or intravenously. The effects of dexamethasone are frequently seen within a day and last for about three days.

### **❖ Randomised Controlled Trial (RCT) (Source: The Hindu)**

- It is a type of study experiment that aims to reduce certain sources of bias when testing the effectiveness of new interventions like offers, medicines, schemes etc.
- This is accomplished by randomly allocating subjects to two or more groups, treating them differently, and then comparing them with respect to a measured response.
- The study design randomly assigns participants into an experimental group or a control group.
- As the study is conducted, the only expected difference between the control and experimental groups in a randomized controlled trial (RCT) is the impact of the intervention being studied.