



**MAY**  
**2021**

# CURRENT AFFAIRS

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Monthly Contemporary Issues for  
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# **CURRENT AFFAIRS**

## **MAY 2021**

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# POLITY AND GOVERNANCE

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

## 1.1 MARATHA RESERVATION

**Why in News:** A five-judge Constitution Bench of the Supreme Court declared the Maharashtra law which provides reservation benefits to the Maratha community, as unconstitutional.

### Background

#### Indira Sawhney case:

In 1992, in the Indira Sawhney case the Supreme Court said that the criteria for a group to qualify for reservation is “social and educational backwardness”. Additionally, the court strictly held that reservation cannot exceed the 50% limit.

The Supreme Court also directed the government to constitute a permanent body to assist in issues related to inclusion of other backward classes in the Central List. Following the judgment, the Parliament passed The National Commission for Backward Classes Act, 1993 to constitute the National Commission for Backward Classes (NCBC). This gave NCBC a statutory status.

### Timeline

**2017:** A 11-member commission headed by Retired Justice N G Gaikwad recommended Marathas should be given reservation under Socially and Educationally Backward Class (SEBC).

**2018:** The Maharashtra State government had framed a law in 2018 called, Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act. The law granted 16% quota for the Maratha community in government jobs and admissions in educational institutions. However, with the implementation of the law, the overall reservation in the state could go up to 68%.

The law was challenged before Bombay high court, which upheld the validity of the law, but reduced the quota to 12 percent in educational institutions and 13 percent in jobs.

**2018:** The Bombay High Court while upholding the reservation pointed out that instead of 16% it should be reduced to 12% in education and 13% in jobs. 2020: The SC stayed its implementation and referred the case to Chief Justice of India for a larger bench.

### Challenge in the Supreme Court

- The High Court ruling was challenged in the Supreme Court on the ground that the implementation of the law violated the 50% limit in reservations set in Indira Sawhney case. After which, the Supreme Court applied an interim stay on the law providing reservation to the Maratha community in Maharashtra.
- The SC had said that it would examine whether the law providing reservation to the Maratha community, was enacted under “extraordinary circumstances”.
- The SC bench examining the validity of the Maharashtra law had also agreed to include questions related to reservations in all the States and Union Territories, under the case proceedings of the Maratha law.
- This was done to resolve the issue of 50% limit in reservations in various states. The cases of Patels in Gujarat, Jats in Haryana, and Kapus in Andhra Pradesh, are similar to the Maratha reservation issue.

### **News Update**

In the process of its decision on the issue of Maratha reservation, Indira Sawhney ruling and other matters, the five judge Constitution bench made various rulings.

### **On Revisiting the Indira Sawhney ruling**

- One of the key issues before the court was to examine whether the 1992 landmark ruling in Indira Sawhney case had to be revisited.
- Various state governments had argued that the Indira Sawhney verdict must be referred to a 11-judge Bench for reconsideration since it laid down an arbitrary ceiling (of 50%), which is not mentioned in the Constitution.

### **SC's Judgement on revisiting Indra Sawhney ruling**

The Supreme Court has declined to re-visit the Indira Sawhney Judgement and has refused to change the 50% rule. It held that the 50% cap on reservation was fixed to achieve the principle of equality as mentioned in Article 14 of the Constitution and cannot be said to be arbitrary or unreasonable.

Something that has proven to be beneficial in maintaining equality in the society should not be changed in the name of change alone. Changing the 50% limit would lead to a society that would be based on caste rule and not based on equality.

### **Whether Maratha law falls under ‘exceptional circumstances’**

Since the 50% ceiling is held valid, the court looked into whether the Maratha quota law falls under the exceptional circumstances provided under Indra Sawhney case.

The court also looked into the Maharashtra State Backward Commission report that the Maharashtra government had relied on to see if Marathas could be provided reservation under exceptional circumstances.

The state government's argument was that since the population of backward class is 85% and reservation limit is only 50%, an increase in reservation limit would qualify as an exceptional circumstance.

### **SC's Judgement on Maratha reservation**

- All the five judges of the SC bench disagreed with the state government's argument and held that the reservation for Marathas does not come under exceptional circumstances. Instead, the SC held that the Marathas are dominant forward class and are in the main stream of National life.
- It pointed that the representation of Marathas in public services in Grade A, B, C and D comes to 33.23%, 29.03%, 37.06% and 36.53%, calculated out of the open category filled posts, and is adequate representation of the community.
- One community holding such number of posts in public services is a matter of pride for the community and is adequate representation of the community in public services. Thus, the SC struck down the Maratha reservation law by calling it unconstitutional.
- The SC, however, made it clear that people who have taken benefit of Maratha quota in government jobs and admission in educational institutions during pendency of the case will not be affected.

### **State's power to identify SEBCs and 102nd Amendment**

- The SC also examined whether the 102nd Constitutional Amendment Act of 2018 interfered with the authority of State Legislatures to provide benefit to the social and educationally backward communities (SEBCs) in the State List.
- The 102nd Amendment made NCBC a constitutional body. It also introduced Articles 338B and 342A in the Constitution.
- Article 338B deals with the structure, duties and powers of the NCBC. Article 342A, empowers the President to specify socially and Educationally Backward Classes (SEBC) in various States and Union Territories, after consultation with the Governor. However, Parliament has to

enact a law to include or exclude a particular class in the Central List of socially and educationally backward classes.

- SC's decision on State's power to identify SEBCs and 102nd Amendment. The Supreme Court upheld the constitutional validity of the 102nd constitutional amendment.
- It also declared through a majority decision (3 out of 5 judges) that only the President can take decisions on declaring SEBCs for granting reservation.
- The majority judgement also concluded that the 102nd amendment has taken away the power of states to decide on designating SEBCs in their states and now only the President can take a decision.
- In the task of identification of SEBCs, the President will be guided by the NCBC set up under Article 338B. The States can only make "suggestions" and the final exercise of including castes and communities should be done by the President alone.

### **Demands of opposition parties**

Opposition leaders have demanded that the Centre should amend the 102nd amendment Act to restore the exclusive powers of states to identify backward castes in their respective states.

### **Way Ahead**

The court said that the reservation route is not the only way to bring marginalised sections in the national mainstream. The court said that providing reservation in public services is not the only means of advancement for backward classes.

The state should work on other measures like providing free educational facilities and providing opportunities for skill development to enable the backward classes to be self-reliant.

### **Way Ahead for Maratha reservations**

Top bureaucrats in the Maharashtra government have advised the state government to undertake a fresh study which shows the Maratha community to be a socially and economically backward group. This can then be submitted to the National Commission for Backward Classes.

However, the state would have to show extraordinary circumstances to prove that the community needs reservations.

## **1.2 OVERSEAS CITIZENS OF INDIA (OCI)**

**Why in News:** The Ministry of Home Affairs (MHA) had notified a consolidated list of rights for the Overseas Citizens of India (OCI) card-holders in March, 2021. After the MHA notification, OCIs such as students, journalists, engineers and researchers are facing several issues.

### **Overseas Citizenship of India**

Overseas Citizenship of India (OCI) is an immigration status permitting a foreign citizen of Indian origin to live and work in India indefinitely. It was introduced by The Citizenship (Amendment) Act, 2005, in response to the demands for dual citizenship by the Indian diaspora, particularly in developed countries.

#### **Eligibility**

- To apply for and use an OCI document, a holder must be a citizen of and hold a passport of another country. The Government of India, on application, may register any person as an Overseas Citizen of India, if the person:
  - Was a citizen of India on or after January 26, 1950 or was eligible to become a citizen of India on January 26, 1950.
  - Belonged to a territory that became part of India after 15 August 1947.

#### **Based on parenthood**

- Is a child or a grandchild or a great-grandchild of such a citizen
- Is a minor child of such persons mentioned above
- Is a minor child and whose both parents are citizens of India or one of the parents is a citizen of India.

#### **For a Spouse**

Is a spouse of foreign origin of a citizen of India or spouse of foreign origin of an Overseas Citizen of India Cardholder registered under section 7A of the Citizenship Act, 1955. The said marriage should have been registered and subsisted (in existence) for a continuous period of not less than two years before the application.

#### **Ineligibility**

An applicant is not eligible for the OCI card if he, his parents, grandparents or great grandparents have ever been a citizen of Pakistan or Bangladesh. Persons who served as a member of any foreign military are also ineligible to receive an OCI card.

## Privileges under OCI

- Multiple-entry, multi-purpose lifelong visa to visit India.
- Exemption from reporting to Police authorities for any length of stay in India.
- Parity (Equality in status) with non-resident Indians in financial, economic and educational fields except in the acquisition of agricultural or plantation properties.
- They can open special bank accounts in India and also apply for a driver's license and PAN card.
- If an individual is registered as an OCI for a period of five years, he/she is eligible to apply for Indian citizenship.

## Restrictions under OCI

As the Constitution of India prevents Indian citizens from holding dual citizenship, the OCI is not actual citizenship of India according to Indian law and has the following limitations:

- OCIs do not have the right to vote.
- OCIs do not have the right to hold the offices of Prime Minister, President, Vice-President, Judge of Supreme Court and High Court, member of Lok Sabha, Rajya Sabha, Legislative Assembly, or Council.
- OCIs do not have the right to any public services (government jobs).
- OCIs do not have the right to hold farmland (agricultural property).

## Background

In March, 2021, the Ministry of Home Affairs (MHA) had notified a consolidated list of rights for the Overseas Citizens of India (OCI) card-holders.

## Details of the MHA notification

- OCI card-holders will have to take special permission from Foreigners Regional Registration Officer (FRRO) or the Indian Mission concerned, for missionary or Tablighi or mountaineering or journalistic activities.
- Additionally, they will need permission if they want to undertake research, internship or employment in any foreign diplomatic missions, foreign government organisations in India.
- Apart from these, a special permit will also be required to visit any place that falls in the protected or restricted or prohibited areas as specified by the government.

## Parity with Non Resident Indians (NRIs) in some aspects

OCIs will also enjoy parity with NRIs in adoption of children, appearing in competitive exams, purchase or sale of immovable property except agricultural land and farmhouses.

OCIs can appear for all-India entrance tests such as National Eligibility cum Entrance Test (NEET), Joint Entrance Examination (Mains), Joint Entrance Examination (Advanced) or such other tests for admission only against an NRI seat. However, the OCI cardholder will not be eligible for admission against any seat reserved exclusively for Indian citizens.

OCIs will also have parity with NRIs for pursuing professions such as doctors, lawyers, architects, and chartered accountants.

### **News Update**

After the MHA notification, OCIs such as students, journalists, engineers and researchers are facing several issues.

### **Issues associated with the MHA notification**

- A portal was supposed to be set up to facilitate the permissions as per the notification but the portal is not yet operational due to Covid-19. As per the MHA, the OCIs can intimate the Foreigners Regional Registration Office (FRRO) through e-mail till the portal is activated.
- Further, the need to take permission to conduct research activities will place undue burden on scientific, pharmaceutical, medical, biotechnology and other research fields. Moreover, the notification does not mention IT professionals. A large number of OCIs are engineers, so it is not clear whether they have to apply for an employment visa.

### **Uncertainty in admissions"**

- As per the notification, OCI cardholders can take admissions only under NRI quota seats in educational institutions. However, the exorbitantly high fees under the NRI quota cannot be afforded by many OCIs who live and work in India.
- Further, India-domiciled OCI students are deprived of domicile status both in India [country of residence] as well as the country of their citizenship.
- Even if an OCI student has secured a high rank in an exam like NEET, several institutions of repute do not have NRI seats.

The Association of Resident OCI and Families (AROCIF), believes that the MHA notification is discriminatory and is planning to challenge it in the court.

### 1.3 PARTICULARLY VULNERABLE TRIBAL GROUPS

**Why in News:** As many as 21 tribals across eight different PVTGs (Particularly Vulnerable Tribal Groups) in Odisha have so far tested positive for Covid-19, including two from the Bonda tribe, known for its secluded lifestyle.

#### Scheduled Tribes in India

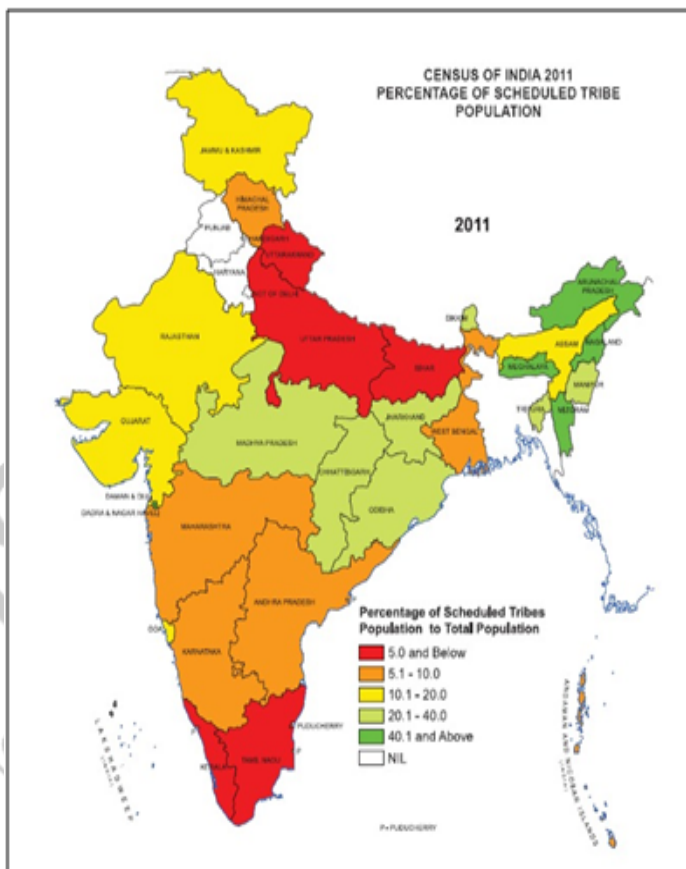
- According to the 2011 Census, the Scheduled Tribes account for 104 million representing 6% of the country's population.
- These Scheduled Tribes are spread throughout the country largely in forest and hilly regions.
- The essential characteristics of these communities are:
  - Primitive Traits
  - Geographical isolation
  - Distinct culture
  - Shy of contact with community at large
  - Economically backwards

Government of India set up Ministry of Tribal Affairs in 1999 after the bifurcation of Ministry of Social Justice and Empowerment.

**Objective:** To provide a more focused approach towards the integrated socio-economic development of the Scheduled Tribes (the most underprivileged section of the Indian Society) in a coordinated and planned manner. As in the case of the Scheduled Castes, the Plan objective of empowering the tribals is being achieved through a three-pronged strategy of:

- Social empowerment
- Economic empowerment
- Social justice

#### Particularly Vulnerable Tribal Group (PVTG)



PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.

**In this context, in 1975, the Government of India declared 52 tribal groups as PVTGs on the recommendation of Dhebar commission.** Currently, there are 75 PVTGs out of 705 Scheduled Tribes. The PVTGs are spread over 18 states and one Union Territory (UT), in the country (2011 census). Odisha has the highest number (more than 2.5 lakh) of PVTGs.

Characteristics of PVTGs:

- Population: stagnant/declining
- Technology: pre-agricultural
- Literacy Level: extremely low
- Economy: Subsistence level

### **Government schemes for PVTGs**

Ministry of Tribal Affairs implements a scheme in the name of 'Development of Particularly Vulnerable Tribal Groups (PVTGs)'. It is a Centrally Sponsored Scheme having a provision of 100% Central assistance to 18 states and Union territory of Andaman & Nicobar Islands.

The scheme of Development of PVTGs aims at socio-economic development of PVTGs in a comprehensive manner, while retaining their culture and heritage. As a part of the scheme, State Governments undertake projects that are tailored to cater to sectors like education, health and livelihood schemes for the PVTGs.

### **Bondas Tribe**

- **Austroasiatic Tribes:** Bondas are members of a group of Austroasiatic tribes, they are believed to be part of the first wave of migration out of Africa about 60,000 years ago. They are the first forest settlers in India.
- **Culture:** The Bondas have retained their identity and culture despite external interventions over the years. Primarily forest dwellers, the Bondas used to hunt and forage for food in the wild.
- **Matriarchal society:** The women prefer to marry men who are younger by at least 5-10 years, so that the men can earn for them when they grow old.
- **Unique dressing style:** Women are semi clad and wear various types of rings and necklaces around their bodies, while the men carry lethal bows and arrows.

- **Language:** They continue to speak in their language, Remo, which comes under the Austroasiatic language belonging to the Mundari group. The Mundari group of languages are spoken by Munda people.
- **Division:** The Bonda tribe is divided into two groups based on their settlement: The Upper Bondas living in the inaccessible forests. The Lower Bondas in the plains.

### Tribes in Odisha

- **Odisha is home to 62 tribal communities: the largest diverse groups of tribal population in India.**
- Thirteen of them are PVTGs— Bonda, Birhor, Chuktia Bhunjia, Didayi, Dungaria Kandha, Hill Kharia, Juang, Kutia Kondh, Lanjia Saora, Lodha, Mankirdia, Paudi Bhuyan and Saora.
- Tribal populations are found in the entire seven districts of Kandhamal, Mayurbhanj, Sundargarh, Nabarangpur, Koraput, Malkangiri and Rayagada, and in parts of six other districts.

## 1.4 LEGASTIVE COUNCIL

**Why in News:** Recently, the Government of West Bengal approved the setting up of a Legislative Council in the state. West Bengal's Legislative Council was abolished 50 years ago by a coalition government of Left parties.

### Legislative Councils

#### Origin of Legislative Council in India

- Legislatures with two Houses, Legislative Assembly and Legislative Council, have a long history in India.
- This bicameral legislative system was first introduced in India by the Government of India Act of 1919, also known as Montagu-Chelmsford reforms, with the formation of Council of State at the national level. Later, the Government of India Act of 1935 set up bicameral legislatures in Indian Provinces. It was under this law that a Legislative Council first started functioning in Bengal in 1937.

#### Legislative Councils in independent India:

India follows a bicameral system at both the Centre and State level. Under this system, the state's legislature is divided into two parts:

- Legislative Assembly or Vidhan Sabha
- Legislative Council or Vidhan Parishad

**Creation or Abolition of a Legislative Council is defined in Article 169 of the Constitution of India.** Constitution of independent India provided that in the beginning, the states of Bihar, Bombay, Madras, Punjab, the United Provinces and West Bengal would have a Legislative Council.

### **How is a Legislative Council formed?**

- Legislative Council is a permanent body, which can be formed or abolished when the Legislative Assembly passes a special resolution. Accordingly, the Legislative Assembly of a concerned state can pass a resolution to abolish a Council (where it already exists) or create it (where it doesn't exist).
- Such a resolution must be passed by the State Assembly by a special majority i.e. a majority of the total membership of the assembly and a majority of not less than two-thirds of the members of the assembly present and voting.
- Subsequently, the Parliament may pass a legislation to create/abolish Legislative Council in the concerned state. Such legislation has to be passed by both the Houses of the Parliament by simple majority i.e. majority of members present and voting. This provision of creating or abolishing a Council was introduced to enable a state to have a second chamber according to its own willingness and financial strength.

### **Composition of Legislative Council**

#### **Strength**

The maximum strength of the Council is fixed at one-third of the total strength of the Assembly and the minimum strength is fixed at 40. This is done to ensure the predominance of the directly elected House (Assembly) in the legislative affairs of the state. The actual strength of any Council is fixed by the Parliament.

#### **Manner of Election**

Unlike the members of the Legislative Assembly, the members of the Legislative Council are indirectly elected. Of the total number of Members of a Legislative Council (MLCs):

- 1/3 are elected by the members of local bodies in the state like municipalities, district boards, etc.

- 1/12 are elected by graduates of three years standing and residing within the state,
- 1/12 are elected by teachers of three years standing in the state, not lower in standard than secondary school,
- 1/3 are elected by the members of the Legislative Assembly of the state from amongst persons who are not members of the assembly, and

The remaining members are nominated by the Governor from amongst persons who have a special knowledge or practical experience of literature, science, art, cooperative movement and social service.

The members are elected in accordance with the system of proportional representation by means of a single transferable vote. The tenure of MLCs are six years. One-third of the members of State Legislative Council retire after every two years. Elections to the Council are conducted by the Election Commission of India.

#### **Presiding Officer of the Legislative Council**

- The Chairman, elected by the Council itself, functions as the presiding officer of the Council.
- Along with Chairman, Deputy Chairman is also elected from amongst the MLCs only.
- Chairman and Deputy Chairman enjoy the status of Cabinet Ministers in the State.

**Role of a Legislative Council:** Legislative Council is considered important for two reasons:

- It can keep an eye on hasty decisions taken by the Legislative Assembly.
- It can ensure individuals who might not be cut out for the elections are able to contribute to the legislative process (like artists, scientists, etc).

**Limitations:** The Constitution of India has given limited powers to the Legislative Council.

- It cannot pass a no-confidence motion against the Government.
- It cannot reject a Money Bill.
- The final power of passing an ordinary Bills also lies with the Assembly.
- The Council can only discuss the budget but cannot vote on the demands for grants.

Currently, six states have Legislative Council: Bihar, Uttar Pradesh, Maharashtra, Andhra Pradesh, Telangana, Karnataka.

### **1.5 FOREIGN CONTRIBUTION REGULATION ACT (FCRA)**

**Why in News:** The Ministry of Home Affairs (MHA) has extended the deadline for Non-Governmental Organizations (NGOs) to activate accounts with the State Bank of India's (SBI) main branch in New Delhi.

### **Foreign Contribution Regulation Act (FCRA)**

The FCRA was first enacted in 1976 in order to maintain strict control over voluntary organisations and political associations that received foreign funding. In 2010, the Act was repealed and a new Act with strict provisions was enacted.

- **Objective:** To regulate foreign donations and ensure that such contributions do not adversely affect internal security of India.
- **Nodal Ministry:** Ministry of Home Affairs

It is applicable to all associations, groups and NGOs which intend to receive foreign donations.

### **Major provisions under the FCRA, 2010:**

It is mandatory for all such NGOs to register themselves under the FCRA. The registration is initially valid for five years and it can be renewed subsequently if they comply with all norms. For such NGOs, filing of annual returns, on the lines of Income Tax, is compulsory.

In 2015, the MHA notified new rules, which required NGOs to give an undertaking that the acceptance of foreign funds:

- Does not affect the sovereignty and integrity of India
- Does not impact the friendly relations with any foreign state
- Does not disrupt communal harmony

All such NGOs would have to operate accounts in either nationalised or private banks which have core banking facilities to allow security agencies access on a real time basis. A registered NGO can receive foreign contributions for the following five purposes:

- Social
- Educational
- Religious
- Economic
- Cultural

### **Following individuals/organizations cannot receive foreign funding:**

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- A candidate contesting elections
- Media persons
- Judges
- Government employees

### **Foreign Contribution Regulation Amendment Bill, 2020**

- The Bill adds Public Servants to the list of people who cannot accept foreign contributions. The Bill prohibits the transfer of foreign contribution to any other person. The term 'person' under the Act includes an individual, an association, or a registered company.
- The Bill makes it mandatory to provide Aadhar number for any person seeking prior permission, registration or renewal of registration.
- The Bill provides that the government may conduct an inquiry before renewing the certificate.
- The Bill adds a provision allowing the central government to permit a person to surrender their registration certificate.
- The Bill makes it mandatory for all NGOs receiving foreign aid to open an account in State Bank of India's New Delhi branch.

### **News Update**

The Ministry of Home Affairs has made two important announcements regarding FCRA rules for NGOs: It has extended the deadline for NGOs to activate accounts with the SBI's main branch in New Delhi (NDMB), from March 31 to June 30, 2021.

It has also extended the deadline for the renewal of FCRA registration certificates of NGOs whose certificates expired between September 2020 and May 31, 2021 to September 2021. After June 30, 2021, NGOs will not be able to receive foreign contributions in any account other than the 'FCRA account' opened in the SBI NDMB.

### **Reasons for the extension**

Extension has been provided following multiple petitions by NGOs in various Courts stating that the poor implementation of the recently amended FCRA had tied their hands in the middle of the Covid-19 pandemic. The NGOs had argued in court that the process to open the accounts was so cumbersome that despite a large number of the organisations applying with SBI before the due date, they had not been opened and the necessary approvals from the MHA had not arrived.

## **1.6 EPIDEMIC DECLARATION**

**Why in News:** Recently, the Union government has asked the States to declare mucormycosis (Black Fungus) - the fungal infection being reported in COVID-19 patients, an epidemic.

**The Epidemic Diseases Act, 1897:** The law is meant for containment of epidemics by providing special powers that are required for the implementation of containment measures to control the spread of the disease.

Under the Act, temporary provisions or regulations can be made to be observed by the public to tackle or prevent the outbreak of a disease.

**The Act contains four sections.**

- **Section 1: Describes the title and extent of the Act.** It extends to the whole of India.
- **Section 2: Powers to take special measures. It empowers the state governments to tackle special measures and formulate regulations to contain the outbreak.** The State may prescribe regulations for the inspection of persons traveling by railway or otherwise, and the segregation, in hospital, temporary accommodation of persons suspected by the inspecting officers to be infected.
- **Section 2A of the Act empowers the central government** to take steps to prevent the spread of an epidemic.

Health is a State subject, but by invoking Section 2 of the Epidemic Diseases Act, advisories and directions of the Ministry of Health & Family Welfare will be enforceable. It allows the government to inspect any ship arriving or leaving any port and the power to detain any person intending to sail or arriving in the country.

- **Section 3: Penalty for Disobedience**

The penalties for disobeying any regulation or order made under the Act are according to section 188 of the Indian Penal Code (disobedience to order duly promulgated by a public servant).

- **Section 4: Legal Protection to Implementing Officers:**  
It gives legal protection to the implementing officers acting under the Act.

**The Epidemic Diseases (Amendment) Ordinance 2020:** Amended the 1897 Act, allowing for up to seven years of jail for attacking doctors or health workers (including ASHA workers).

The offense will be cognizable and non-bailable among other things.

**COVID-19 pandemic:** Following the COVID-19 pandemic the Cabinet Secretary of India announced that all States and Union territories should invoke provisions of Section 2 (Power of Central and State Governments) of the Epidemic Diseases Act, 1897.

**Significance:** Declaring an epidemic would lead to health facilities screening for the disease and reporting all such cases to the Integrated Disease Surveillance Program (IDSP), which will help in knowing the exact case burden.

**Integrated Disease Surveillance Program (IDSP):** It was launched by the Union Health & Family Welfare Ministry in 2004 :

- To strengthen or maintain decentralized laboratory-based IT enabled disease surveillance systems for epidemic prone diseases.
- To monitor disease trends.
- To detect and respond to outbreaks in early rising phase through trained Rapid Response Team (RRTs)

Under this, a Central Surveillance Unit (CSU) at Delhi, State Surveillance Units (SSU) at all State or UT headquarters and District Surveillance Units (DSU) at all Districts in the country have been established.

### News Update

A new challenge in the form of a fungal infection (Black Fungus or Mucormycosis), has emerged and is reported from many States amongst COVID-19 patients, especially those on steroid therapy and have severe diabetes. This infection is leading to prolonged morbidity and mortality amongst COVID-19 patients.

### Dealing with Black Fungus

**What is mucormycosis |** It is an aggressive and invasive fungal infection that can affect various vital organs such as the brain and cause internal damage to the ear, nose, throat, and mouth. It is not contagious but can be fatal if not detected early

**Prevalence:** The Center for Disease Control and Prevention, U.S., calls it a serious but rare disease. A computational model by Arunaloake Chakrabarti et al. estimated a prevalence of 0.14 cases per 1,000 individuals in India

**Underlying cause:** Diabetes mellitus is the most common underlying cause. According to doctors, "an

indiscriminate use of a high dose of steroids in patients" could trigger the disease post-COVID-19 infection

**Cure:** The main line of treatment is an anti-fungal drug called Amphotericin B, which is given over an extended period of time under strict observation. Surgery might also be warranted

- **To control this, the Union Ministry of Health and Family Welfare has requested the States to declare Black Fungus an epidemic by making it a notifiable disease under the Epidemic Diseases Act 1897.**
- A notifiable disease is any disease that is required by law to be reported to government authorities. The collation of information allows the authorities to monitor the disease and provides early warning of possible outbreaks.
- The World Health Organization's International Health Regulations, 1969 require disease reporting to the WHO in order to help with its global surveillance and advisory role.
- The onus of notifying any disease and the implementation lies with the State government. Any failure to report a notifiable disease is a criminal offence and the State government can take necessary actions against defaulters.



# 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 MEA INDIA- US SECRETARY OF STATE MEET

**Why in News:** External Affairs Minister S Jaishankar recently met US Secretary of State Antony Blinken in London. Both were in London to attend the G-7 foreign ministers' meeting, where India has been invited as a guest country.

The meeting covered ways to deal with the COVID-19 pandemic, climate change, situation in the strategic Indo-Pacific region and cooperation in multilateral forums.

### Highlights of the meeting

- The ministers exchanged views on the Indo-Pacific strategic landscape and reviewed the progress in practical cooperation in recent months.
- They also noted that climate action and clean energy can be areas of cooperation and early operationalization of the 2030 Clean Energy Agenda was important.
- US - India Climate and Clean Energy Agenda 2030 Partnership, intends to create stronger bilateral cooperation on actions in the current decade to meet the goals of the Paris Agreement.
- The Partnership will aim to mobilize finance; speed clean energy deployment; and build capacity to measure, manage, and adapt to the risks of climate-related impacts.

### Multilateral cooperation

The ministers discussed ways to deepen cooperation in multilateral forum, including at the UN Security Council. They further underlined that India and the US will collaborate bilaterally, in Quad format and through multilateral initiatives.

### Dealing with the Covid challenge

- The two ministers had in depth discussion on the Covid challenge and the immediate requirements of India. Blinken assured Jaishankar that the US was monitoring developments closely and would respond positively to any Indian requirements.
- India expressed appreciation for the strong US support to India at this difficult time, especially oxygen and Remdesivir. The ministers discussed how greater Indian vaccine production can address both India's own needs and the requirement of global public health.

### India US relations

- India-US bilateral relations cover the major pillars of strategic partnership, including security, energy and technology. Over the years, the relationship has deepened with greater bilateral economic engagement and increasing people-to-people contacts.
- In the last few years, the bilateral relationship also expanded into a global partnership with sharing of views on issues such as international terrorism and a rules-based order in the Indo-Pacific region.

## **Defence Cooperation**

**India-US defence cooperation is based on New Framework for India-US Defence Cooperation, which was renewed for a period of ten years in 2015.**

**In order to increase the pace and quality of defence cooperation, the Defence Technology and Trade Initiative [DTTI] was also launched in 2012.** Bilateral dialogue mechanisms in the field of defence include Defence Policy Group (DPG), Defence Joint Working Group (DJWG), Defence Procurement and Production Group (DPPG) and Military Cooperation Group (MCG) among others.

## **Defence pacts**

**The three defence pacts (LEMOA, COMCASA & BECA) together form the foundation of defence cooperation between India and the US.**

- The LEMOA (Logistics Exchange Memorandum of Agreement), signed in 2016, allows the militaries of both nations to use each other's bases for repair and replenishment (restoration) of supplies.
- The COMCASA (Communications Compatibility and Security Agreement), signed in 2018 allows 'interoperability' between the two militaries through the transfer of communication security equipment from the US to India.
- The BECA (Basic Exchange and Cooperation Agreement), signed in 2020, is related to geo-spatial cooperation, which includes sharing classified information on maps and satellites for defence purposes.

## **Defence Trade**

Defence procurements from the US has been an area of significant growth in the last decade. India has procured around \$ 18 billion worth of defence items from the US since 2008. India already has several US military platforms and equipments and many such proposals for new

acquisitions are under processing. The defence procurement activities are monitored through the Defence Production and Procurement Group (DPPG).

### **Military to Military cooperation**

- The two countries now conduct more bilateral exercises with each other than they do with any other country. Bilateral exercises held annually include Malabar (between the two Navies and also include Japan), Cope-India (Air Force), Yudh Abhyas (Army) and Vajra Prahar (Special Forces).
- India also participates in annual RIMPAC exercises as well as in Red Flag exercises which are US led multinational exercises.

### **Counter Terrorism Cooperation**

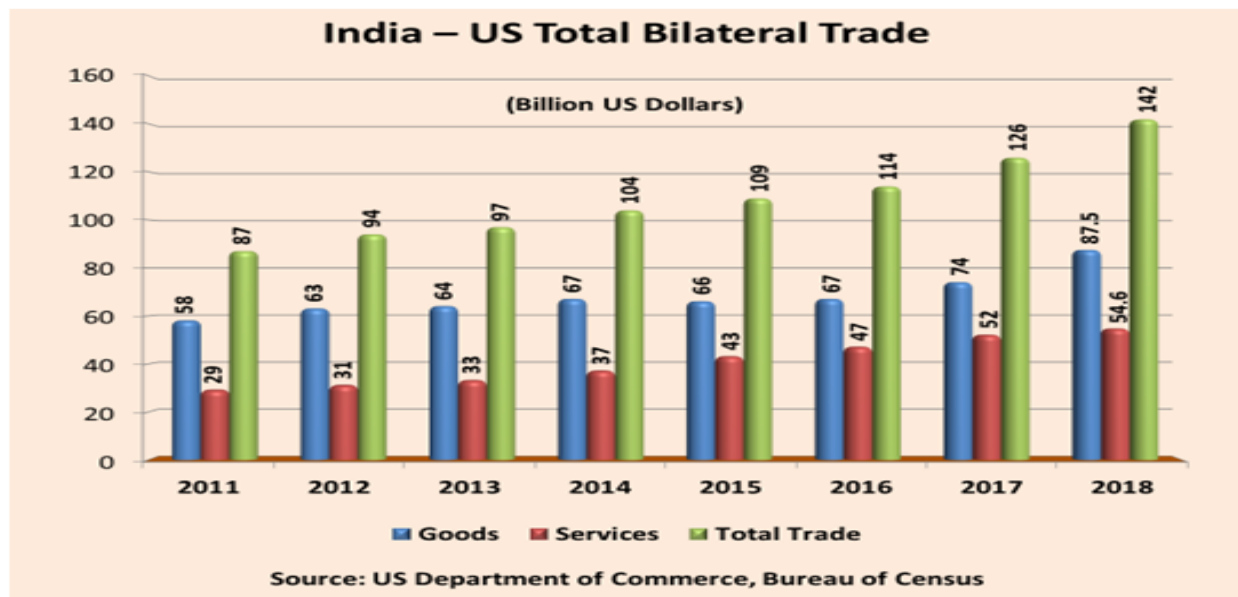
- India-U.S. counter-terrorism cooperation is carried out through the India-U.S. Joint Working Group on Counter-Terrorism.
- Cooperation in counter-terrorism has seen considerable progress with intelligence sharing, information exchange, operational cooperation and sharing of counter-terrorism technology and equipment.

### **Trilateral Dialogue and QUAD**

Cooperation on Indo-Pacific issues is carried out in the trilateral format between India, USA and Japan and in the QUAD, where Australia is also a member. Sharing views on security threats from maritime challenges to counter terrorism and non-proliferation are part of these dialogues. More recently, a new area of cooperation on infrastructure and connectivity has been added to the trilateral mechanism.

### **Bilateral Trade Relations**

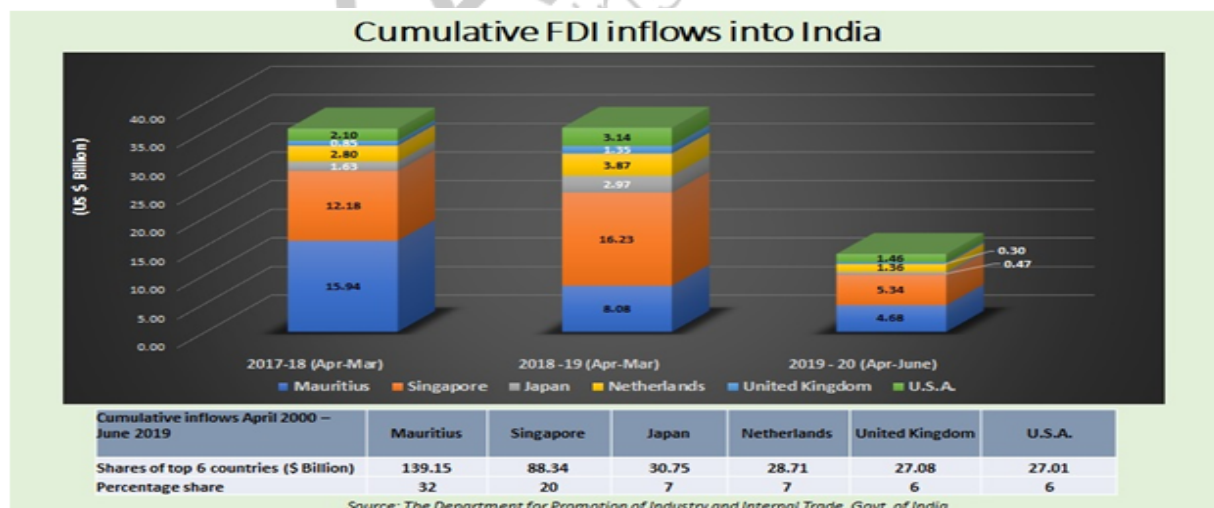
- Rapidly expanding trade and commercial linkages between India and U.S. form an important component of the partnership between the two countries.
- US is India's largest trading partner in goods and services. The overall India-US bilateral trade in goods and services has increased from US\$126 billion in 2017 to US \$146.1 billion in 2019.
- **The top exports of goods from India in 2019 were,** precious metal and stone (diamonds) pharmaceuticals, machinery, mineral fuels and organic chemicals.
- **Top services exports from India to the U.S. were** in the telecommunications, computer, and information services, professional and management services, and research and development



sectors.

### Investment data

Total FDI from US to India till the year 2019 amounted to \$45.9 billion. USA is one of the top 5 investment destinations for FDI from India. A survey done by CII in November 2017 found that 100 Indian companies have invested \$ 17.9 billion in the United States creating 113,000 jobs in the US.



## People-to-People Contact

- The 3-million strong Indian American community is an important ethnic group in the U.S., accounting for about 1% of the total population in the country. It is the 3rd largest Asian ethnic group in the US after the Chinese and the Filipinos.
- Almost 40% of all Indians in the United States have a master's, doctorate or other professional degree, which is about five times the national average.
- The Indian American community with its large number of professionals, business entrepreneurs and educationalists, has a significant influence on the American society and polity.

## 2.2 INDIA-EU MEET

**Why in News:** Prime Minister Narendra Modi recently participated in the India-European Union (EU) Leaders' Meeting.

The meeting was held in a hybrid format with the participation of leaders of all the 27 EU Member States as well as the President of the European Council and the European Commission. This is the first time that the EU hosted a meeting with India in the EU+27 format.

### Highlights of the meeting

- During the meeting, the leaders expressed their desire to further strengthen the India-EU Strategic Partnership based on a shared commitment to democracy, fundamental freedoms, rule of law and multilateralism.
- The meeting gave a fresh boost for implementing the ambitious India-EU Roadmap 2025 adopted at the 15th India-EU Summit held in July 2020.

### Trade and investment related outcomes

- **India and the European Union agreed to re-launch free trade negotiations by resuming talks for the Bilateral Trade and Investment Agreement (BTIA).** Discussions on BTIA started in 2007 and were suspended in 2013.
- The suspension was due to major differences on issues such as market access, tariffs by India on products like wine, dairy and automotive parts, as well as EU resistance over visas for Indian professionals.
- India and EU also agreed to launch negotiations for an investment protection agreement and a separate agreement on geographical indications related to intellectual property rights.

- India and the EU also announced dedicated dialogues on WTO issues, regulatory cooperation, market access issues and supply chain resilience, demonstrating the desire to deepen and further diversify economic engagement.

### **Connectivity related outcomes**

- India and the EU launched an ambitious and comprehensive 'Connectivity Partnership' which is focused on enhancing digital, energy, transport and people-to-people connectivity.
- This is only the second such partnership from EU, after a similar arrangement with Japan. The partnership is seen as a response to China's Belt and Road Initiative.
- The partnership is based on the shared principles of social, economic, fiscal, climate and environmental sustainability, and respect for international law and commitments.
- It will accelerate private and public financing for connectivity projects. It will also support connectivity initiatives in Africa, Central Asia and the Indo-Pacific.
- A finance contract of Euro 150 million for the Pune Metro Rail Project was signed between India's Ministry of Finance and European Investment Bank.

### **Climate Change cooperation**

- The leaders reiterated their commitment to achieving the goals of the Paris Agreement.
- They also agreed to strengthen joint efforts for mitigation, adaptation and resilience to the impacts of climate change, as well as providing means of implementation including finance.
- India welcomed the EU's decision to join Coalition for Disaster Resilient Infrastructure (CDRI).
- The CDRI is an international coalition that aims to promote disaster-resilient infrastructure.

### **Technological cooperation**

The two sides also discussed how technology should be used for the welfare of the people while being rooted in democratic values. They also emphasised the need for secure networks and agreed to cooperate on global standards in new and emerging technologies such as 5G, Artificial Intelligence, Quantum and High-Performance Computing.

### **Discussion on Regional and Global issues**

The leaders highlighted the growing collaboration on regional and global issues, including counterterrorism, cyber security and maritime cooperation. They acknowledged the importance of a free, open, inclusive and rules-based Indo-Pacific.

They also agreed to closely engage in the Indo Pacific, including in the context of India's Indo-Pacific Ocean's Initiative and the EU's new strategy on the Indo-Pacific.

### **Covid related discussion**

The leaders discussed Covid recovery plans and vaccine cooperation in the meeting. PM Narendra Modi sought support for a waiver for vaccine production-related patents at the World Trade Organisation. United States also supports the idea of waiving intellectual property rights on vaccines for the duration of the pandemic. However, EU did not support India's proposal and expressed doubts whether such a move will help global access to vaccines.

Instead, the EU asked countries currently manufacturing vaccines to increase production and delivery. The EU, however, shared that it will monitor the situation and continues to discuss the issue.

### **India-EU Relations**

- India-EU relations go back to the early 1960s, with India being amongst the first countries to establish diplomatic relations with the European Economic Community.
- A cooperation agreement signed in 1994 took the bilateral relationship beyond trade and economic cooperation. At the 5th India-EU Summit at The Hague in 2004, the relationship was upgraded to 'Strategic Partnership'.
- The two sides adopted a Joint Action Plan in 2005 (which was reviewed in 2008) that provided for strengthening dialogue and consultation mechanisms in the political and economic spheres.
- With the new EU-India Strategy (2018) coming into place, strong emphasis is made on the importance of common responses to global and regional challenges which can broaden the EU-India cooperation.
- The EU and India have regular foreign policy and security consultations and pursue cooperation on security issues such as counter-terrorism, cyber-security, counter-piracy/maritime security, non-proliferation and disarmament. Further, there are close contacts in multilateral forums and interactions during regional or international events.

### **Trade relations**

The EU is India's largest trading partner, accounting for €80 billion worth of trade in goods in 2019 or 11.1% of total Indian trade, on par with the USA and ahead of China (10.7%). India is the EU's 10th largest trading partner, accounting for 1.9% of EU total trade in goods in 2019, well

behind the USA (15.2%), China (13.8%) and the UK (12.6%). The EU is the second-largest destination for Indian exports (over 14% of the total) after the USA. Trade in goods between the EU and India increased by 72% in the last decade. Trade in services between the EU and India increased rapidly from €22.3 billion in 2015 to €29.6 billion in 2018. Telecommunications, computer and information services, travel, transport and other business services account for ~86% of the EU's services exports to India.

### 2.3 3<sup>rd</sup> ARCTIC SCIENCE MINISTERIAL

**Why in News:** Recently, India participated in the 3rd Arctic Science Ministerial (ASM3) - the global platform for discussing research and cooperation in the Arctic region.

#### The Arctic Science Ministerial (ASM)

- In order to increase cooperation in Arctic science the United States organized the First Arctic Science Ministerial (ASM1) in Washington in 2016.
- **Participants:** Science Ministers from 25 governments, the European Union and representatives from Arctic indigenous peoples' organizations gathered to discuss increased international collaboration on Arctic science.
- **Second Arctic Science Ministerial (ASM2):** In follow-up to the first Arctic Science Ministerial (ASM1), the European Commission, the Republic of Finland and the Federal Republic of Germany co-hosted the Second Arctic Science Ministerial (ASM2) in Berlin in 2018.

#### The Arctic Region

The Arctic is a polar region located at the northernmost part of Earth. **The Arctic consists of the Arctic Ocean, adjacent seas, and parts of Alaska (United States), Canada, Finland, Greenland (Denmark), Iceland, Norway, Russia, and Sweden.**

**The Arctic ecosystem:** Land within the Arctic region has seasonally varying snow and ice cover, with predominantly treeless permafrost (permanently frozen underground ice) containing tundra.



In physical geography, tundra is a type of biome where the tree growth is hindered by low temperatures and short growing seasons. Arctic seas contain seasonal sea ice in many places.

**Life in the Arctic:** Includes zooplankton and phytoplankton, fish and marine mammals, birds, land animals, plants and human societies. The cultures in the region and the Arctic indigenous peoples have adapted to its cold and extreme conditions.

### **The Arctic Council**

- The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on issues of sustainable development and environmental protection in the Arctic.
- It was formally established in 1996 and is headquartered in Tromsø, Norway (since 2012).
- **Members:** The eight countries with sovereignty over the lands within the Arctic Circle constitute the members of the council: Canada, Denmark (Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden, and the United States. Outside these, there are some observer states.
- **Background:** The first step towards the formation of the Council occurred in 1991 when the eight Arctic countries signed the Arctic Environmental Protection Strategy (AEPS).
- **The 1996 Ottawa Declaration established the Arctic Council.** The Arctic Council has conducted studies on climate change, oil and gas, and Arctic shipping.

In 2011, the Council member states concluded the Arctic Search and Rescue Agreement, the first binding treaty concluded under the Council's auspices.

### **India's engagement with the Arctic**

It dates back to 1920 with the signing of the Svalbard Treaty in Paris. The Svalbard Treaty (originally the Spitsbergen Treaty) recognises the sovereignty of Norway over the Arctic Archipelago of Svalbard. The treaty regulates the demilitarization of the archipelago. The signatories were given equal rights to engage in commercial activities (mainly coal mining) on the islands.

### **India's permanent research station in the Arctic**

- India has Himadri (since 2008) at Ny Ålesund, Svalbard Area in Norway. It has also deployed a multi-sensor moored observatory called IndARC (since 2014) in the Kongsfjorden fjord.

- **National Centre for Polar and Ocean Research (NCPOR):** The research in the Arctic region from India is coordinated, conducted, and promoted by the NCPOR, Goa, under the Ministry of Earth Sciences, Government of India.
- **India in the Arctic Council:** Since 2013, India enjoys 'Observer' status in the Arctic Council with twelve other countries - Japan, China, France, Germany, UK, Italy, Switzerland, Poland, Spain, Netherlands, Singapore, and South Korea.
- As an Observer, India contributes to the international deliberations to develop effective cooperative partnerships towards a safe, stable, and secure Arctic.

India recently participated in the 3rd Arctic Science Ministerial (ASM3).

### Third Arctic Science Ministerial (ASM3)

- It was jointly organised by Iceland and Japan, and is the first Ministerial meeting being held in Asia (Tokyo, Japan).
- **Objective of the meeting:** To enhance collective understanding of the Arctic region, emphasize and engage in constant monitoring and strengthen observations.
- **The theme: Knowledge for a Sustainable Arctic.**
- Participating from India, Union Minister of Earth Science, proposed (during the ASM3 meeting) that India may be given an opportunity to host the next or future ASM.

### India's vision and long-term plans in the Arctic

- To contribute observing systems in the Arctic, both in-situ and by remote sensing.
- To deploy open ocean mooring in the Arctic for long-term monitoring of upper ocean variables and marine meteorological parameters.
- The launch of NISAR (NASA-ISRO Synthetic Aperture Radar) satellite mission, in collaboration with the USA, is underway.
- It aims to conduct global measurements of the cause and consequences of land surface changes using advanced radar imaging.
- India's contributions to the Sustained Arctic Observational Network (SAON) would continue. **The SAON is a joint initiative of the Arctic Council and the International Arctic Science Committee (IASC) that aims to strengthen multinational engagement in pan-Arctic observing and monitoring of Arctic environmental change**

Arctic warming and its ice melt are global concerns as they play a pivotal role in regulating climate, sea levels, and maintaining biodiversity. Moreover, there is growing evidence of connection between the Arctic and the Indian Ocean (which modulates the Indian monsoon).

## 2.4 BRICS EMPLOYMENT WORKING GROUP

**Why in News:** Recently, India hosted the first BRICS Employment Working Group (EWG) meeting. The prime agenda for the discussion was the promotion of Social Security Agreements amongst BRICS Nations.

### BRICS

- BRICS is the acronym coined to associate five major emerging economies: Brazil, Russia, India, China, and South Africa.
- It was established when the four foreign ministers of the initial four BRIC General states (Brazil, Russia, India, and China) met in New York City in September 2006 at the margins of the General Debate of the UN Assembly. In 2010, South Africa became the fifth member of the organization after being invited by China.

**Objective:** To deepen, broaden and intensify cooperation within the grouping and among the individual countries for more sustainable, equitable and mutually beneficial development.

### BRICS Summits

- 12th BRICS summit was held virtually due to the Covid-19 pandemic. Russia was the host and chair of the summit.
- India has assumed Presidency of the 13th BRICS summit. The Chairmanship of the forum is rotated annually among the members, in accordance with the acronym B-R-I-C-S. Bangladesh has been formally invited to join the grouping in 2020.

### New Development Bank

- The New Development Bank (NDB), formally referred to as the BRICS Development Bank, is a multilateral development bank operated by the five BRICS states. It was established under the Fortaleza Declaration during the 6th BRICS summit in Fortaleza, Brazil. NDB's key areas of operation are clean energy, transport infrastructure, irrigation, sustainable urban development and economic cooperation among the member countries.
- **Headquarters:** Shanghai, China

**News Update:** At the first Employment Working Group (EWG) meeting, the representatives of the BRICS nations have expressed willingness to have a multilateral social security framework in order to safeguard workers' rights.

### **The prime agenda for the discussions were**

- Promoting Social Security Agreements amongst BRICS nations
- Formalization of labor markets
- Participation of women in the labor force and
- Gig and Platform workers' role in the labor market

### **Social Security Agreement**

The agreement will help the international workers to port their benefits to their home countries thereby preventing the loss of their hard-earned money. Further, they are exempted from contributing (towards social security schemes) both in their home as well as host countries

The framework would help international workers to avoid double contributions in a cluster of such nations. Apart from representatives of BRICS member nations, the representatives of International Labor Organization (ILO) and International Social Security Association (ISSA) also made valuable interventions and suggestion on the agenda issues.

### **On participation of women in the labour force**

On participation of women in the labour force, the member countries resolved to promote participation of women in remunerative, productive and decent work and to extend social security cover to the women workers engaged in informal sector.

### **International Labor Organization (ILO)**

- The ILO is the oldest agency of the United Nations, established in 1919.
- **Objective:** To ensure accessible, productive, and sustainable work worldwide in conditions of freedom, equity, security and dignity.
- Headquarters: Geneva, Switzerland

### **International Social Security Association (ISSA)**

- The ISSA was founded in 1927 under the auspices of the ILO, and today has over 320 member institutions from over 160 countries. It is an international organization bringing together national social security administrations and agencies.
- **Objective:** To promote excellence in social security administration through professional guidelines, expert knowledge, services and support to enable its members to develop dynamic social security systems and policy throughout the world.
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## 2.5 ISRAEL – PALESTINE and INDIA'S STAND

**Why in News:** India, the United States and several other countries have called for calm and restraint amid escalating tensions and violence between Israel and Palestinian militants.

Dozens of people have been killed in clashes and airstrikes since the violence broke out, including a 30-year-old Indian woman in Israel who was killed in a rocket attack by Palestinian militants from Gaza.

### Israel - Palestine

- The Conflict is linked to the age-old tussle over identity and land starting with Jerusalem. In the first Arab Israel war of 1948, the Israelis captured the western half of the city, and Jordan took the eastern part which Israel later captured and annexed.
- Since then, Israel has expanded settlements in East Jerusalem. The Palestinians want to make East Jerusalem the capital of their yet to be formed state.
- Israel sees the whole city as its “unified, eternal capital”, whereas the Palestinian leadership denies for any compromise unless East Jerusalem is recognised as the capital of future Palestinian state.
- The Palestinians are facing the threat of eviction from Sheikh Jarrah, a neighbourhood in east Jerusalem. Their land is to be given to the Jewish settlers.
- Moreover, the Israeli armed forces have recently attacked the Al-Aqsa Mosque ahead of a march by Zionist nationalists.
- The Al Aqsa Mosque is the third holiest shrine for Islam after Mecca and Medina. It created a fear for the followers, all over the region and the radicals began to call for defending the Al Aqsa Mosque.
- Also, earlier this year (2021), the Central Court in East Jerusalem upheld a decision to evict four Palestinian families from their homes in Sheikh Jarrah in favor of Jewish settlers.
- The issue remains unresolved and potentially inflammable. The current outbreak of violence is the most severe one since 2014 involving the rocket-firing by the Palestinians and the air-strikes conducted by Israelis in retaliation.

### Factors Triggering the Conflict

**Hamas in Rule in Palestine:** Hamas, found in 1987, is a violent offshoot of Egypt's Muslim Brotherhood seeking "to raise the banner of Allah over every inch of Palestine" through violent jihad. The Palestinian President is quite old age and hence, senile and unable to fight for the cause. So, Hamas is the more radical faction of the Palestinians which has now started retaliating.

The so-called president authority of Palestine is neither conducting elections, nor functioning properly, the dictatorship of the Hamas and Israeli seizure of territories and limitations is aggravating the Palestinians.

**Political Instability in Both the States:** There is incapability and stagnation in the leadership structures on the both sides thus leading to too many groups getting out of control, who are resorting to maximum violence.



Moreover, Israel has had 4 elections in the last two years and all of them were inconclusive. The Prime Minister of Israel has retained his post but only in a caretaker form.

**Divided Israel:** The Arabian Israelis and the far-right community of Israel are engaging in civil war like activities inside the country. The ground sentiments of the Palestinians are also changing, the majority of them saying they do not want a two state solution. It is also not decided if Hamas will rule over the Palestinian state or the Fatah or neither of these.

The Palestinians have been a divide lot between the Hamas and the Fatah and the two are moving on the different tracks which are the main reason for the defeat of the ultimate Palestinian cause.

### **News Update**

Recently, Israeli armed forces stormed Al-Aqsa Mosque in the Old City of Jerusalem, after altercation with the worshippers. Israeli police fired rubber bullets inside the compound, while Palestinians sheltering inside threw stones and rocks.

### **Jerusalem, Sheikh Jarrah and Al-Aqsa Mosque**

**Jerusalem - The centre of the Israeli-Palestinian conflict:** An international city; According to the original 1947 UN partition plan, Jerusalem was proposed to be an international city.

**Arab-Israel wars:** In the first Arab Israel war of 1948, the Israelis captured the western half of the city and Jordan took the eastern part. Israel also captured East Jerusalem (including the Old City) from Jordan in the 1967 Six-Day War and annexed it later.

**Both Israeli and Palestinian sides have declared Jerusalem as their capital:** In July 1980, the Israeli Parliament passed the Jerusalem Law declaring it the country's capital. Israel sees the whole city as its "unified, eternal capital", a claim endorsed by the former U.S. President Donald Trump but not recognised by most other countries.

The 1988 Palestinian Declaration of Independence also declared Jerusalem as the capital. The Palestinian side declared Jerusalem the capital of the commonly accepted state of Palestine by a law passed by the Palestinian Authority in 2000. The Palestinian leadership has maintained that they would not accept any compromise formula for the future Palestinian state unless East Jerusalem is its capital. For the present, the Palestinian Authority has its headquarters in Ramallah (West Bank).

**Sheikh Jarrah:** It is a predominantly Palestinian neighborhood (2 Km north of Old City) in East Jerusalem, founded in 1865 and gradually became a residential center of Jerusalem's Muslim elite.

**About the Sheikh Jarrah dispute:** After the 1948 Arab-Israeli War, Sheikh Jarrah bordered the no-man's land area between Jordanian-held East Jerusalem and Israeli-held West Jerusalem. Most of its present Palestinian population there is said to have come from refugees expelled from Jerusalem's Talbiya neighbourhood in 1948.

Since it was occupied by Israel in the 1967 Six-Day War, a number of Israeli settlements have been built in and adjacent to Sheikh Jarrah and the Israeli nationalists have been working to replace the Palestinian population in the area since 1967.

Earlier this year, the Central Court in East Jerusalem upheld a decision to evict some Palestinian families from their homes in Sheikh Jarrah in favor of Jewish settlers. Pending in the Israeli Supreme Court, the issue remains unresolved and potentially inflammable.

**Al-Aqsa Mosque:** Al-Aqsa Mosque, Islam's third holiest site, is located in the Old City of Jerusalem. One side of the compound, called Temple Mount by the Jews, which is believed to be the remains of the Second Jewish Temple, the holiest site in Judaism. Al-Aqsa Mosque is central to the rival claims over Jerusalem.

### News Update

- The current escalation: On the last Friday of Ramzan on 07-May, more than 150 people were injured when Israeli forces broke up a massive gathering of Palestinian worshippers who had gathered to pray at the Al-Aqsa mosque, revered as Islam's third holiest site.
- There were also clashes in the area over the weekend over the eviction of Palestinian residents from two neighbourhood of East Jerusalem, Sheikh Jarrah and Silwan. Israel said that people inside the mosque compound were planning to attack the May 10 processions.
- May 10 is observed as Jerusalem Day by Jewish groups with processions through the Old City of East Jerusalem to mark the day the territory was captured by Israeli forces during the 1967 Arab-Israeli war.
- Hamas - the Islamist militant group that runs Gaza, launched rockets at Israel. In response, the Israeli side launched an airstrike on Gaza, killing at least 21 Palestinians, including nine children.

### INDIA' STAND

**Recently, India's permanent representative to the United Nations (UN) appealed for an open debate at the United Nations Security Council (UNSC) on the escalating Israel-Palestine violence.**

India's first such statement on the issue, appears to implicitly hold Israel responsible for triggering the current cycle of violence by locating its beginnings in East Jerusalem rather than from Gaza. The request that both sides refrain from attempts to unilaterally change the existing status quo seems to be a message to Israel about its settler policy. However, the statement made

by India appears to maintain balance between India's historic ties with Palestine and its blossoming relations with Israel.

The balancing was evident in the pointed condemnation of the indiscriminate rocket firings from Gaza on civilian targets in Israel, but not of the Israeli strikes inside Gaza.

India's policy on the longest running conflict in the world has gone from being unequivocally pro-Palestine for the first four decades to a tense balancing act with its three-decade-old friendly ties with Israel. In recent years, India's position has also been perceived as pro-Israel.

### **History of India's Policy Towards Israel-Palestine Conflict**

#### **India-Israel relations from Nehru to Rao:**

**India against the creation of Israel:** In 1948, India was the only non-Arab-state that voted against the UN partition plan of Palestine in the General Assembly that led to the creation of Israel. Reasons for this:

- India's own Partition along religious lines.
- Solidarity with the Palestinian people who would be dispossessed.
- To ward off Pakistan's plan to isolate India over Kashmir.
- India's energy dependence on the Arab countries also became a factor later, as did the sentiments of India's own Muslim citizens.

**India officially recognized the State of Israel in 1950:** The reasoning for the decision to recognise Israel was that not doing so would create bitterness between two UN members. In the name of the bilateral relationship, there was only a Israeli consulate established in 1953 in Mumbai, mainly for issuing visas to the Indian Jewish community and to Christian pilgrims.

This was shut down in 1982, when the Consul General criticized India's foreign policy and was permitted to reopen only six years later.

**The beginning of balancing: The balancing began with India's decision to normalise ties with Israel in 1992,** against the backdrop of the break-up of the Soviet Union and massive shifts in the geopolitics of West Asia on account of the first Gulf War in 1990.

The same year, the Palestinian Liberation Organisation (PLO) lost much of its clout in the Arab world by taking side with Iraq in the occupation of Kuwait. Full diplomatic ties between India and

Israel began with the opening of an Indian embassy in Tel Aviv in 1992, marking an end to four decades of ignoring Israel.

**Relations prosper without official acknowledgement:** Between 1992 and 2017, the India-Israel relationship continued to grow, mostly through defence deals and in sectors such as science and technology and agriculture. But India never acknowledged the relationship fully. There were few high-profile visits under Prime Minister Atal Bihari Vajpayee government.

The Indian government then admires the Israeli idea of a “strong state” that deals firmly with terrorists. The two countries set up a joint anti-terror commission and in 2003 Ariel Sharon became the first Israeli Prime Minister to visit India. The balancing act intensified in the following years.

### **India-Palestine relationship**

An article of faith in Indian foreign policy for over four decades:

- At the 53rd UN session, India co-sponsored the draft resolution on the right of the Palestinians to self-determination.
- In the 1967 and 1973 wars, India lashed out at Israel as the aggressor. In 1975, India became the first non-Arab country to recognise the PLO as the sole representative of the Palestinian people.
- In 1988, when the PLO declared an independent state of Palestine with its capital in East Jerusalem, India granted recognition immediately.
- In 1996, India opened a Representative Office in Gaza, which later moved to Ramallah as the Palestinian movement split between the Hamas and the PLO.
- New Delhi remained firmly on the side of the PLO, which was seen as ready for a political solution and had accepted the two-state solution.
- In 2011, India voted for Palestine to become a full member of UNESCO in 2011.
- In 2012, India co-sponsored the UN General Assembly resolution that enabled Palestine to become a “non-member” observer state at the UN without voting rights.

### **Changes after 2014**

An abstention by India at the UN Human Rights Council (UNHRC) on a resolution welcoming a report that alleges war crimes committed by Israeli forces and Hamas during the 2014 airstrikes against Gaza. In 2016, India abstained again on a UNHRC resolution against Israel.

## **On the status of East Jerusalem**

Until 2017, with its expression of support for a two-state solution, India had always included a line in support of East Jerusalem as the capital of a Palestinian. During the visit of PLO chief Mahmoud Abbas (in 2017), the reference to East Jerusalem went missing in the Prime Minister of India's statement.

## **Current Situation - De-hyphenation or a Careful Balancing Act?**

### **De-hyphenation:**

- It was after 2017 that the Indian government decided to take full ownership of the relationship with Israel. In 2018, the Prime Minister Narendra Modi became the first Indian Prime Minister to visit Israel.
- The visit excluded Ramallah, de facto administrative capital of the Palestinian National Authority (PNA), the interim self-government body that exercises partial civil control over the Gaza Strip and West Bank areas.
- **The experts called this as de-hyphenation (meaning dealing with the two entities separately than together)** while dealing with Israel and Palestine, and assumed that India would henceforth deal with each separately.
- **Improving ties with Arab countries:** Meanwhile, India continues to improve ties with Arab countries, especially Saudi Arabia and the UAE, and feels clear of any blame (of improving ties with Israel) as some Arab states themselves try to improve ties with Israel

### **A Careful Balancing Act:**

#### **India shifting sides as the situation demands:**

- For instance, India voted in favour of a resolution in the General Assembly opposing the Trump administration's recognition of Jerusalem as the Israeli capital.
- At the UNHRC's 46th session, India voted against Israel in three resolutions - on the right of self-determination of the Palestinian people, on Israeli settlement policy and on the human rights situation in the Golan Heights.
- It abstained on a fourth, which asked for an UNHRC report on the human right situation in Palestine, including East Jerusalem.

Recently, the International Criminal Court (ICC) claimed jurisdiction to investigate human rights abuses in Palestinian territory including West Bank and Gaza and named both Israeli security

forces and Hamas as perpetrators. Israel wanted India (does not recognise the ICC), to take a stand against it on the issue and was surprised when it was not forthcoming.

India's own balancing act is a constant work of progress: The latest statement is no different, with India neither being pro-Palestine or pro-Israel.

## 2.6 OPEN SKIES TREATY

**Why in News:** US President Joe Biden's administration announced it will not return to the Open Skies Treaty, which allows the signatories to monitor each other's arms development by conducting unarmed surveillance flights over member territories.

### Open Skies Treaty

#### Background

- The treaty was initially proposed to in 1955 by US President Dwight D. Eisenhower but was rejected by the Soviets (USSR).
- In 1989, the Open Skies concept was reintroduced by President George H. W. Bush as a means to build confidence and security between all North Atlantic Treaty Organisation (NATO) and Warsaw Pact countries.
- In February 1990, an international Open Skies conference involving all NATO and Warsaw Pact countries opened in Ottawa, Canada. Subsequent rounds of negotiations were held and in 1992, the Open Skies Treaty was signed in Helsinki. The treaty entered into force in 2002, after Russia and Belarus completed ratification procedures.

#### About the Treaty

- The Open Skies Treaty establishes a program of unarmed aerial surveillance flights over the entire territory of its participants. The treaty is not related to civil-aviation open skies agreements.
- It is designed to enhance mutual understanding and confidence by giving all participants, regardless of size, a direct role in gathering information about military forces and activities of concern to them.
- It is one of the most wide-ranging international efforts to date promoting openness and transparency of military forces and activities.
- The Open Skies Consultative Commission is the implementing body for the Treaty on Open Skies.

- It comprises representatives from each state party to the treaty and meets monthly at the Vienna headquarters of the Organization for Security and Co-Operation in Europe.

### **Territory Covered**

The Open Skies regulations covers the territory over which the parties exercise sovereignty, including mainland, islands, and internal and territorial waters. The treaty specifies that the entire territory of a member state is open to observation and observation flights may only be restricted for reasons of flight safety and not for reasons of national security.

### **State parties to the Treaty**

The treaty which is one of unlimited duration, currently has 34 party states (excluding US which has withdrawn, and including Russia which has not yet formally withdrawn) and is open to accession by other states. Republics of the former Soviet Union (U.S.S.R.) that have not already become state parties to the treaty may join it at any time. Applications from other interested countries are subject to a consensus decision by the Open Skies Consultative Commission (OSCC).

### **Background**

In May 2020, the US announced its withdrawal from the Open Skies Treaty (OST), and left the treaty in November. It cited Russia's continuous violation of the treaty as the reason for its withdrawal. However, the then US President Donald Trump said that the deal could be amended or a new agreement could be made, to put a similar arrangement back together.

In January 2021, Russia has announced that it is pulling out of the Open Skies treaty. Giving reasons for its decision, Russia said that the pact had been seriously compromised by the withdrawal of the United States. Russia has raised concerns that despite leaving the treaty, the US could potentially retain access to over flight intelligence gathered by allies who remain members in the treaty.

### **News Summary**

After US withdrew in 2020, and Russia's announcement of withdrawal in 2021, US President Joe Biden's administration has now announced that it will not return to the Open Skies Treaty. However, the US said that it is open to generally working with Russia on international security issues.

### **Way ahead**

Arms control tensions have been rising between Moscow and Washington in the recent years. With the exit of both the US and Russia from the Open Skies Treaty, there are fears of a burgeoning arms race once again between the two military powers.

## 2.7 INDIA-UK VIRTUAL MEET

**Why in News:** Prime Ministers of India and United Kingdom recently held a virtual bilateral summit. India and the UK enjoy long standing friendly ties and share a Strategic Partnership based on mutual commitment to democracy, fundamental freedoms and the rule of law.

**Highlights of the Summit:** At the Summit Indian and UK adopted an ambitious 'Roadmap 2030', that will elevate bilateral ties to a "Comprehensive Strategic Partnership".

The Roadmap will provide a framework for a deeper and stronger engagement over the next ten years in the areas of people to people contacts, trade and economy, science and technology, defence and security, climate action and health.

### Measures to enhance trade

- The two PMs launched an 'Enhanced Trade Partnership' (ETP) to increase the trade potential between the 5th and 6th largest economies of the world. The ETP has set an ambitious target of more than doubling bilateral trade by 2030.
- As part of the ETP, India and the UK agreed on a roadmap to negotiate a comprehensive and balanced Free Trade Agreement, including consideration of an Interim Trade Agreement for delivering early gains.
- The two leaders also agreed to continue removing trade barriers on the path to an FTA. The enhanced trade partnership will generate several thousands of direct and indirect jobs in both the countries.

### Partnership on migration and mobility

India and the UK also launched a comprehensive partnership on migration and mobility. This will enhance the migration relationship between the two countries, and make it easier for British and Indian students and professionals to live and work in each other's countries.

### Innovation cooperation

- A new India-UK 'Global Innovation Partnership' was announced that aims to support the transfer of inclusive Indian innovations to select developing countries, starting with Africa.

- Both sides agreed to enhance cooperation on new and emerging technologies, including Digital and Information and Communications Technology (ICT) products, and work on supply chain strengthening.

### **Defence and security ties**

- The two leaders agreed to strengthen defence and security ties, including in the maritime, counter-terrorism and cyberspace domains. They agreed to build on existing government-to-government collaboration on India's future combat air engine requirement.
- They stressed on the benefits of closer cooperation in a free and open Indo-Pacific, recognising their shared interest in regional prosperity and stability.
- The two leaders agreed to a significant new cooperation on Maritime Domain Awareness, which includes new agreements on maritime information sharing.
- It also includes an invitation to the UK to join India's Information Fusion Centre in Gurgaon and an ambitious exercise program which includes joint trilateral exercises.
- The two countries are also working to conclude a Logistics Memorandum of Understanding that will enhance joint ability to tackle shared challenges.

### **Climate change cooperation**

- Both leaders reaffirmed their commitment to take ambitious climate action to achieve the goals of the Paris Agreement.
- This includes accelerating the development of clean energy and transport and new technology, protecting nature and biodiversity and helping developing countries adapt to the impact of climate change.
- They also agreed to work together to ensure an ambitious outcome at the 26th Conference of Parties of United Nations Framework Convention on Climate Change (UNFCCC).

### **COVID cooperation**

- The two leaders discussed the COVID situation and ongoing cooperation in the fight against the pandemic, including the successful partnership on vaccines. Both leaders thanked each other for the mutual support during the pandemic.
- They agreed to expand partnership on vaccines, therapeutics and diagnostics on COVID-19 and beyond through joint research including on nasal vaccines, regulatory and clinical trial cooperation.

## 2.8 UNHRC

**Why in News:** Recently, India abstained on a resolution at the UN Human Rights Council (UNHRC) to set up a Commission of Inquiry on human rights violations blamed on Israel in Palestinian territory.

India was joined by 13 other members who abstained. With 24 voting in favour of the resolution and nine against, the resolution was adopted. Those voting in favour of the resolution are Pakistan, China, Bangladesh, Russia, while Germany, the UK, Austria, among others, voted against it.

### India's stand on Israel-Palestine conflict

In the past, India has always given its support for the Palestinian cause in an explicit manner. Recently, on May 16, India had made a statement at the UN Security Council in which it expressed strong support to the just Palestinian cause and its commitment to the two-State solution. However, India's current stand to abstain on a resolution to set up a Commission of Inquiry on human rights violations against Israel, signals a shift away from Palestine and towards Israel.

In its recent statement at UNHRC on May 27, India also dropped the phrase "just Palestinian cause" which used to be part of Indian statements in the past. This indicates a slight shift to balance its traditionally strong support to the cause of Palestine and its growing relations with Israel.

### United Nations Human Rights Council (UNHRC)

- UNHRC is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the world.
- The UNHRC was established by the United Nations General Assembly in 2006, to replace the United Nations Commission on Human Rights (UNCHR). The headquarters of UNHRC is in Geneva, Switzerland.
- Members meet around three times a year to debate human rights issues and pass non-binding resolutions and recommendations by majority vote. It responds to human rights emergencies and is responsible for investigating alleged human rights violations.

### Structure of UNHRC

The UNHRC has 47 members elected for three-year terms on a regional group basis. The members of the United Nations General Assembly elect the members of the UNHRC. The seats are distributed along the following lines:

- 13 for the African Group
- 13 for the Asia-Pacific Group
- 6 for the Eastern European Group
- 8 for the Latin American and Caribbean Group
- 7 for the Western European and Others Group

### **Functioning of UNHRC**

- In 2007, the UNHRC adopted its 'Institution Building Package' to guide its work and set up its procedures and mechanisms. It includes the Universal Periodic Review, Advisory Committee and the Complaint Procedure.
- The Universal Periodic Review mechanism is used to assess the human rights situations in all United Nations member states.
- The Advisory Committee serves as the Council's "think tank" and provides expertise and advice on thematic human rights issues.
- The Complaint Procedure allows individuals and organizations to bring human rights violations to the attention of the UNHRC.
- The UNHRC also works with the UN Special Procedures established by the former Commission on Human Rights.
- These are made up of special representatives, independent experts and working groups that monitor, examine, advice and publicly report on thematic issues or human rights situations in specific countries.

### **Criticisms of UNHRC**

The main criticism against UNHRC is that it is made up of states not known for their human rights records and some of them are even frequent violators of human rights. The UNHRC has also been accused of anti-Israel bias, on its stand on the Israel- Palestine conflict.

Merely a debate forum: It has also been criticised as a mere debate forum with no impact on the actual ground scenario. However, it is important to note that accountability for human rights start by exposing these problems.

# 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 CYBER SECURITY IN INDIA

**Why in News:** Recently there were many instances of Chinese led cyber-attacks on Indians and India based companies. A US-based cyber group has informed about Chinese hackers targeting Indian companies that developed Covid-19 vaccines (Covaxin and Covishield). Similarly, another US report informed about a Chinese firm (Red Echo) that was using malware called ShadowPad to target India's power sector.

Recently, Air India disclosed that a cyber-attack on its data servers affected about 4.5 million customers around the world.

#### Cyber Security

It is the practice of defending computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks. There are 4 main types of threat to cyber security:

- **Cyber espionage:** It is an Intelligence gathering and data theft activity. The data theft will occur without the user's permission/knowledge.
- **Cyber warfare:** It refers to the use of digital attacks (like computer viruses and hacking) by one country to disrupt the computers or information networks of another country.
- **Cyber terrorism:** It refers to the convergence of terrorism and cyberspace. In this, the terrorists will use the internet to conduct violent activities such as threats, loss of life etc. Terrorists will use cyberspace to achieve their political and ideological gains.
- **Cyber crime:** It is any criminal activity that involves a computer, networked device or a computer network.

#### Government initiatives to strengthen Cyber Security in India

The Indian government has taken many steps to strengthen cyber security. They are:

**Information Technology Act (IT) 2000:** It is the primary law for dealing with cyber-crime and digital commerce in India. The act covers a broad range of offences including child pornography, cyber terrorism etc. Section 75 of the Act empowers the government to punish people located outside India who is accused of the offence.

**National Cyber Security Policy, 2013:** The policy provides the vision and strategic direction to protect the national cyberspace. Some objectives of the policy are:

- To create a secure and robust cyber-ecosystem and building adequate trust and confidence in electronic transactions.

- The policy aims to guide stakeholder's (users) actions for ensuring protection in cyberspace.
- To strengthen the regulatory framework in India for ensuring secure cyber ecosystem.
- To develop suitable indigenous technologies in the ICT sector.

### **National Critical Information Infrastructure Protection Centre (NCIIPC)**

- The NCIIPC was created by Section 70A of the IT Act.
- It is designated as a national nodal agency in respect of critical information infrastructure protection.
- It aims to protect and safeguard critical information infrastructure (CII) against cyber-terrorism, cyber-warfare and other threats.

**CERT-In (Cyber Emergency Response Team – India):** It was created by Section 70B of the IT Act. It is the national nodal agency to respond against computer security threats as and when required.

**National Cyber Security Coordination Centre (NCCC):** The NCCC is mandated to perform real-time threat assessment. Further, they also create situational awareness of potential cyber threats to the country. It was made operational in 2017.

**Cyber Swachhta Kendra:** It is a platform for users to analyse and clean their systems by removing various viruses, bots/ malware, Trojans, etc. It was launched in 2017.

**Cyber Surakshit Bharat Initiative:** It was launched in 2018. The initiative aims to spread awareness about cybercrime. The initiative also focus on the capacity building of Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.

### **Challenges in tackling cyber offences**

- **Poor cyber security infrastructure:** Very few cities in India have cyber crime cells and the establishment of dedicated cyber courts is also very less in India.
- **Awareness issue:** People don't report cyber crimes either due to low awareness or fear of harassment.
- There are many data-related problems in ensuring cyber security. Such as, The majority of Indian data is stored in data centers located outside India. So, the data storing companies not report cyber attacks to India.
- Growing online transactions have generated bigger incentives for cybercriminals. A recent cyber attack on Zomato (food delivery app) is an example of that.

- **Capacity deficit of officials:** The law enforcement agencies who are required to conduct cyber investigation often lack the requisite cyber skills and training.
- **Anonymity:** Cyberspace allows individuals to hide or misrepresent one's profile using encrypting tools. This creates a larger challenge during the investigation.
- **Jurisdictional concern:** In cyber offences, an individual can conduct a crime from sitting in a remote location of anywhere in the globe. Even if the person gets identified it requires global cooperation to bring the person and conduct a trial in court.

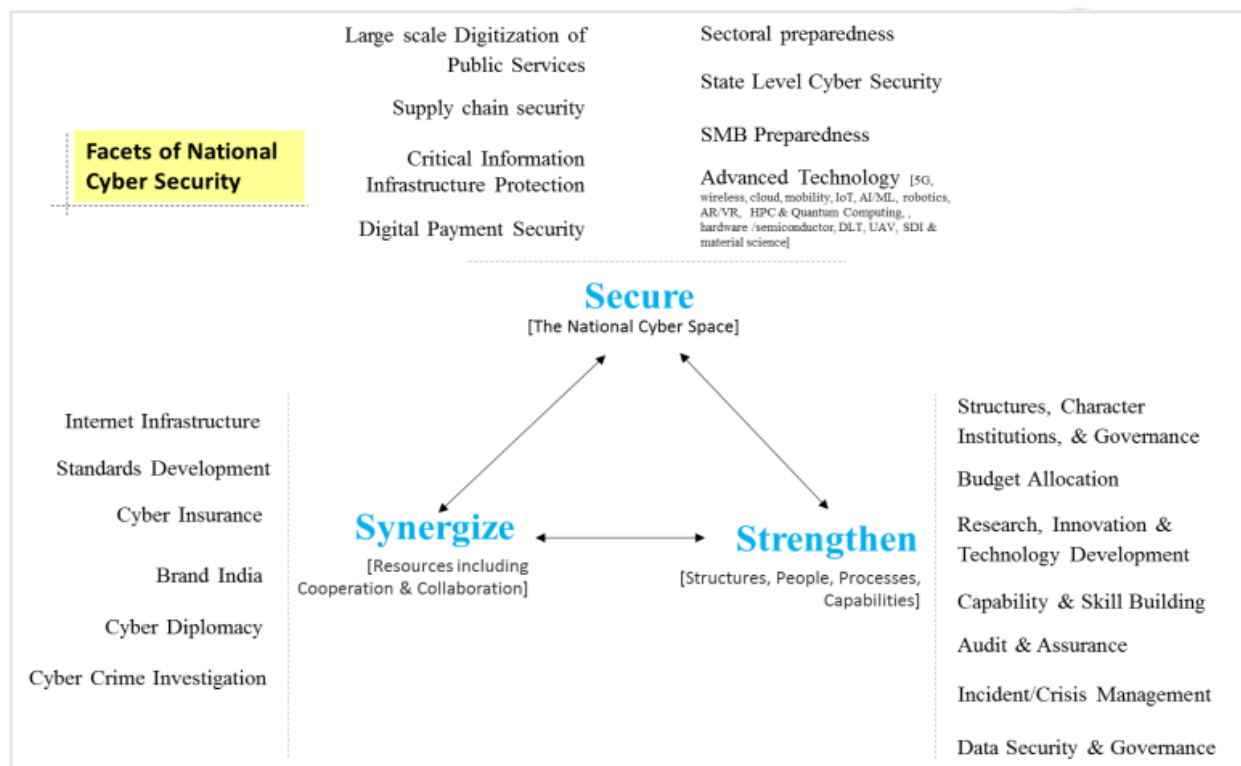
### **Suggestions to improve cyber security**

- **Coordination Enhancement:** There is a need to improve coordination at international, national, state and local levels. An important step in this regard could be the signing of the Budapest Convention on Cyber-crime by the Indian government.
- **Budapest Convention on Cyber-crime:** It is the first international treaty attempting to address cybercrime. The convention addresses cybercrime by steps such as harmonizing national laws, increasing cooperation among nations and improving investigative techniques in cybercrime.
- **Robust Training of law enforcement agencies** is the need of the hour. The government will have to provide continuous, robust and effective training to law enforcement agencies and individuals with a special focus on cyber security and safe internet handling techniques.
- **Infrastructure Development:** This would involve creating more cyber cells, cyber courts and cyber forensic labs so that the violators are duly punished.
- **Inculcating Digital Literacy:** This can be done by addressing the vulnerabilities of the masses towards cyber offences.
- **Responsibility on Service providers:** Website owners must be made more cautious towards traffic on their sites and report any irregularity. This will ensure large scale data collection on cyber attacks. These data can be used to create a new cyber security strategy in future.
- **Amending of the Information Technology Act:** There is a need to put a legal responsibility on companies to conduct regular cyber security audits. For that, the IT Act can be amended to include mandatory cyber security audit by independent agencies.

### **National Cyber Security Strategy 2020**

**Aim:** To improve cyber awareness and cyber security through more stringent audits. Empanelled cyber auditors will look more carefully at the security features of organisations than are legally necessary now.

- There will be table-top cyber crisis management exercises regularly to reinforce the idea that cyber attacks can take place regularly.
- It does call for an index of cyber preparedness, and attendant monitoring of performance.
- A separate budget for cyber security is suggested, as also to synergise the role and functions of various agencies with the requisite domain knowledge.



The recent pandemic has once again shown the importance of cyberspace for mankind. Considering the need for cyber security the government needs to fast pace the National Cyber Security Strategy 2020 and its implementation.

India is the second-fastest digital adapter among 17 of the most-digital economies globally, and rapid digitisation does require forward-looking measures to boost cyber security. It is important for the corporate or the respective government departments to find the gaps in their organisations and address those gaps and create a layered security system, wherein security threat intelligence sharing is happening between different layers. There is a need for an apex body to ensure operational coordination amongst various agencies and ministries.

# 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.
  - Agriculture

## 4.1 Codex Committee on Spices and Culinary Herbs (CCSCH)

**Why in News:** The fifth session of the Codex Committee on Spices and Culinary Herbs (CCSCH) established under Codex Alimentarius Commission (CAC), was recently concluded. 275 participants from 65 member countries, one member organization (European Union) and 11 international observer organizations participated in the virtual session.

### Codex standards

- The collection of food standards and related texts adopted by the Codex Alimentarius Commission is known as the Codex Alimentarius. The term "Codex Alimentarius" is Latin and means "food code".
- Codex standards are international food texts, i.e. standards, codes of practice, codes of hygienic practice, guidelines and other recommendations.
- Codex standards include provisions covering food hygiene, food additives, residues of pesticides and veterinary drugs, contaminants, labeling and presentation, methods of analysis and sampling, and import and export inspection and certification.
- Codex standards are not a substitute for, or alternative to national laws. Every country's laws and administrative procedures contain provisions with which it is essential to comply.

### Significance of Codex standards

- Codex standards aim at protecting consumers' health and ensuring fair practices in the food trade. Thus, the standards help to enhance trust among consumers regarding the safety and quality of the food products they buy.
- It also helps to build trust among importers as the food ordered by them, is in accordance with the required specifications.

### Codex Alimentarius Commission

- The Codex Alimentarius Commission (CAC) was established in 1963 by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) to implement the joint FAO/WHO Food Standards Program.
- The purpose of the Program is to protect the health of consumers, ensure fair practices in the food trade and coordinate international food standardization work.

- The CAC is an intergovernmental body, with 189 Codex Members made up of 188 Member Countries and 1 Member Organization (The European Union). India became the member in 1964.

### **Codex Committee on Spices and Culinary Herbs (CCSCH)**

- CCSCH was formed in 2013, to develop and expand worldwide standards for spices and culinary herbs.
- CCSCH is chaired by India and Spices Board India is its Secretariat.
- It is mandated to develop science-based quality standards for spices and culinary herbs.
- In its past four sessions, the committee developed and finalized Codex standards for four spices, viz. dried or dehydrated forms of black /white/green pepper, cumin, thyme, and garlic.

### **News Update**

- The fifth session of CCSCH recently finalised and recommended quality standards for four spices. The four spices are dried / dehydrated forms of cloves, oregano, basil and ginger.
- The recommendations for these four spices will be forwarded to Codex Alimentarius Commission for final adoption as Codex standards.
- These standards will join the other four standards adopted earlier, to form a body of reference for world spice trade and for member countries to align their national regulations.

## **4.2 VAN DHAN YOJANA**

**Why in News:** Recently, at the 'International Conference on Rural Transformation', the role of Van Dhan Yojana in changing the rural forest dwelling tribal economy was discussed. The Van Dhan Vikas Kendras under the Van Dhan Yojana are playing a transformational role in turning around the rural tribal economy.

### **Van Dhan Yojana**

Launched on: 14th April, 2018, to improve tribal incomes through value addition of tribal products.

### **Objective**

- The Van Dhan Yojana is a program for value addition, branding & marketing of Minor Forest Produces (MFPs) by establishing VDVKs to facilitate creation of sustainable livelihoods for the forest-based tribes.
- It further complements Minimum Support Price (MSP) as it has emerged as a source of employment generation for tribal gatherers and forest dwellers and tribal artisans.

## **Implementation of the scheme**

### **Establishment of Van Dhan Vikas Kendra**

- At unit level, aggregation of produce would be done by Self Help Groups (SHGs) having about 30 members each forming Van Dhan Vikas 'Samuh' ('Samuh' means Group). A cluster of ten such SHGs within the same village shall form a Van Dhan Vikas Kendra (VDVK).
  - It is for providing skill up-gradation and capacity building training and setting up of primary processing and value addition facilities.
  - They are then trained and provided with working capital to add value to the products, which they collect from the forests.
  - Training and technical support is provided by Tribal Cooperative Marketing Federation Of India (TRIFED).

As sanctioned by TRIFED, 33,360 VDVKs, subsumed into 2224 Van Dhan Vikas Kendra Clusters (VDVKCs) of 300 forest dwellers each. As per TRIFED, the VDVKCs will provide the VDVKs economies of scale, livelihood and market-linkages, as well as entrepreneurship opportunities.

The stock after primary processing: Shall be supplied by these Kendras, for creation of secondary level value addition facility at district level and tertiary level value addition facility at State level, Big Corporate shall be involved under Public-Private Partnership (PPP) model.

### **Implementing agencies**

- At National level, TRIFED under the Ministry of Tribal Affairs, Government of India, is the implementing agency.
- At State level, the State Nodal Agency for Minor Forest Produces (MFPs) and the District collectors are envisaged to play a pivotal role in scheme implementation at grassroots level.
- State Nodal Agency is the administrative department of the State Government responsible for implementation, monitoring and evaluation of the program.
- Locally, the Van Dhan Vikas Kendras are proposed to be managed by a Managing Committee (an SHG) consisting of representatives of Van Dhan SHGs in the cluster.

### Significance of the scheme

- Will ensure tribal livelihood: Minor Forest Produce (MFP) is a major source of livelihood for tribals living in forest areas, as around 100 million forest dwellers depend on MFPs for food, shelter, medicines and cash income.
- Will ensure critical subsistence during the lean seasons: Particularly for primitive tribal groups such as hunter gatherers, and the landless.
- Will ensure women's financial empowerment: As most of the MFPs are collected and used or sold by women.

**Success story:** The North-East is leading the way with 80% of the established VDVks. Maharashtra, Tamil Nadu, Andhra Pradesh are other states where the scheme has been adopted with overwhelming results.

**"Sankalp se Siddhi" - Village & Digital Connect Drive:** TRIFED is organizing a 100 day "Sankalp se Siddhi" drive that has 150 teams visiting ten villages each. The main aim of this drive is to activate the VDVks in these villages.

### Tribal Cooperative Marketing Federation of India (TRIFED)

- It was established in 1987 under the Multi-State Cooperative Societies Act, 1984 by the Government of India as a National level Cooperative body.
- It now comes under the administrative control of the Ministry of Tribal Affairs, Government of India.
- It is mandated to bring about socio-economic development of tribals of the country by institutionalizing the trade of Minor Forest Produce (MFP) & Surplus Agricultural Produce (SAP) collected or cultivated by them.
- It plays the dual role of both a market developer and a service provider, empowering them with knowledge and tools to better their operations in a systematic, scientific manner.
- It is involved actively in capacity building of the tribal people through sensitization and the formation of Self Help Groups (SHGs).
- TRIBES India is the brand under which the sourced handcrafted products (marketed and developed by TRIFED) from the tribal people are sold.

## 4.3 TRIPS

**Why in News:** Recently, the Prime Minister of India spoke to his Australian counterpart and agreed on the importance of ensuring equitable access to vaccines and medicines for containing COVID-19 globally.

### News Update

- The Prime Minister of India sought Australia's support for the initiative taken at the World Trade Organization (WTO) by India and South Africa to seek a temporary waiver under Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In relation to the prevention, containment or treatment of COVID-19, India and South Africa submitted a proposal (October 2020) suggested a waiver for all WTO members on the implementation of certain provisions of the TRIPS Agreement.
- The Prime Minister of India also conveyed his appreciation for the prompt and generous support extended by the government and the people of Australia for India's fight against the second wave of COVID-19.
- The two leaders took note of the progress made in the India-Australia Comprehensive Strategic Partnership since the virtual summit held in June 2020 and discussed ways to further strengthen cooperation and foster people-to-people ties. Both leaders also reiterated the importance of working together for a rules-based international order and a free, open and inclusive Indo-Pacific region.

### Trade-Related Aspects of Intellectual Property Rights (TRIPS)

- It is an international legal agreement between all the member nations of the World Trade Organization (WTO).
- It came into effect on 1 January 1995 and is to date the most comprehensive multilateral agreement on intellectual property (IP).
- IP is a category of property that includes intangible creations of the human intellect.

TRIPS was negotiated at the end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and is administered by the WTO. The Uruguay Round was the 8th round of multilateral trade negotiations conducted (from 1986 to 1993) within the framework of the GATT. The Round, embracing 123 countries as "contracting parties", led to the creation of the WTO, with GATT remaining as an integral part of the WTO agreements.

**Outcome:** The TRIPS agreement introduced intellectual property law into the multilateral trading system for the first time and remains the most comprehensive multilateral agreement on intellectual property to date.

### **The areas of intellectual property that it covers are:**

- Copyright and related rights - the rights of performers, producers of sound recordings and broadcasting organizations;
- Trademarks including service marks;
- Geographical indications including appellations of origin;
- Industrial designs;
- Patents including the protection of new varieties of plants;
- The layout-designs of integrated circuits; and
- Undisclosed information including trade secrets and test data.

### **Main features of the Agreement**

**Standards:** It establishes minimum standards, which allows Members to provide more extensive protection of intellectual property if they so wish. The Agreement sets these standards by requiring that the substantive obligations of the main conventions of the World Intellectual Property Organization (WIPO):

- The Paris Convention for the Protection of Industrial Property (Paris Convention) and
- The Berne Convention for the Protection of Literary and Artistic Works (Berne Convention) in their most recent versions must be complied with.
- The TRIPS Agreement is thus sometimes referred to as a Berne and Paris-plus agreement.

Members are left free to determine the appropriate method of implementing the provisions of the Agreement within their own legal system and practice.

**Enforcement:** The second main set of provisions deals with domestic procedures and remedies for the enforcement of intellectual property rights. Unlike other agreements on intellectual property, TRIPS has a powerful enforcement mechanism. States can be disciplined through the WTO's dispute settlement mechanism.

**Dispute settlement:** The Agreement makes disputes between WTO Members about the respect of the TRIPS obligations subject to the WTO's dispute settlement procedures.

## **4.4 MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE**

**Why in News:** The Ministry of Agriculture and Farmers Welfare has provided an enhanced allocation of Rs. 2250 Crore for the year 2021-22 for 'Mission for Integrated Development of Horticulture' (MIDH). The allocation is significantly higher than the previous year allocation.

## **Horticulture**

Horticulture is a branch of plant agriculture dealing with garden crops, generally fruits, vegetables, and ornamental plants. It is the science of development, sustainable production, marketing and use of high-value, intensively cultivated food and ornamental plants.

### **Significance of Horticulture**

- Horticulture crops are a source of variability in farm produce and diets.
- These crops have aesthetic value and protect the environment.
- The crops are useful for cultivation in wasteland or poor quality soil.
- Horticulture crops are of high value, labour intensive and generate employment throughout the year.
- Horticultural produce serves as raw material for various industries, such as processing, pharmaceutical, perfumery and cosmetics, chemical, confectionery, oils and paints, etc
- They have national and international demand and are a good source of foreign exchange.

### **Mission for Integrated Development of Horticulture (MIDH)**

- Mission for Integrated Development of Horticulture (MIDH) is a Centrally Sponsored Scheme launched in 2014-15, for the holistic growth of the horticulture sector.
- MIDH covers fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.
- The Central Government contributes 85% of total outlay for developmental programs in all the states except the states in North East and Himalayas and 15% share is contributed by State Governments.

### **Objectives of MIDH**

- Promote holistic growth of horticulture sector, based on regionally differentiated strategies, which include research, technology promotion, post-harvest management, processing and marketing.
- Encourage farmers to form farmer groups like Farmer Producer Organizations (FPOs) to bring economy of scale.
- Enhance horticulture production, increase farmer income and strengthen nutritional security.
- Support skill development and create employment generation opportunities for rural youth in horticulture and post-harvest management, especially in the cold chain sector.

## Impact of MIDH

MIDH has played a significant role in increasing the area under horticulture crops. Area and production during the years 2014 – 15 to 2019 – 20 has increased by 9% and 14% respectively. Government intervention in the horticulture sector has led to a situation where horticulture production has surpassed the agriculture production in the country.

During the year 2019-20, the country recorded its highest ever horticulture production of 320.77 million tones from an area of 25.66 million hectares. Moreover, the mission has led to significant improvement in the quality of produce and productivity of farmland.

It has not only led to India's self-sufficiency in the horticulture sector but also contributed towards achieving sustainable development goals of zero hunger, good health and wellbeing, no poverty, gender equality

## Way Ahead

However, the horticulture sector is still facing a lot of challenges in terms of high post-harvest loss and gaps in post-harvest management and supply chain infrastructure. There is tremendous scope for enhancing the productivity of Indian horticulture which is necessary to address the country's estimated demand of 650 Million MT of fruits and vegetables by the year 2050.

Some of the new initiatives like focus on planting material production, cluster development program, credit push through Agri Infra Fund, formation and promotion of FPOs will help to address the issues in the sector.

## 4.5 EXPORT OF RICE AND WHEAT

**Why in News:** According to the Departments of Commerce and Food & Public Distribution, rice and wheat in India saw exports of 19.81 million tones (mt) (valued at Rs 69,331.45 crore) and a record 92 mt distribution from the central pool last fiscal, ending March 31, 2021.

## News Update

- **Distribution from the central pool:** The total grain channeled through the public distribution system (PDS) in 2020-21, at 92 mt, was nearly 50% higher than in normal years.
- The majority (60.32 mt) was channeled under the National Food Security Act (NFSA) and other regular welfare schemes.

- The other part (31.52 mt) was distributed under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY), Atmanirbhar Bharat Package (for returning migrant labourers) and other program launched in the wake of the Covid-19-induced lockdown. Among other things, it ensured no mass starvation or food related issues during India's worst pandemic.

**Exports:** Exports have been surging mainly on the back of international prices. The UN Food and Agricultural Organization's (FAO) global cereal price index is currently ruling at its highest since 2014. This helped India to offer its grain at competitive prices in the world market.

These twin records of the country exporting close to 20 mt of grain and also distributing 92 mt is a remarkable story of surplus production and stocks in public warehouses.

#### Some Facts and Figures:

##### Wheat:

- Areas of Cultivation:** Major wheat growing states in India are Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, Bihar and Gujarat.
- Exports:** Demand for India's wheat in the world shows a rising trend. The country has exported 2,17,354.22 mt of wheat to the world for the worth of Rs. 439.16 crores during the year of 2019-20.
- Major Export Destinations (2019-20):** Nepal, Bangladesh, UAE, Somalia, South Korea.

##### Rice:

- Areas of Cultivation:** The areas of Basmati Rice production in India are in the UT of J&K, and states of Himachal Pradesh, Punjab, Haryana, Delhi, Uttarakhand and western Uttar Pradesh.
- Exports:** India is the leading exporter of the Basmati Rice to the global market. The country has exported 44,54,656.70 mt of Basmati Rice to the world for the worth of Rs. 31,025.91 crores during the year 2019-20.
- Major Export Destinations (2019-20):** Iran, Saudi Arab, Iraq, UAE, Kuwait.

#### EXPORTS AND CENTRAL POOL OFFTAKE OF FOODGRAINS (in lakh tonnes)

	EXPORTS			CENTRAL POOL OFFTAKE	
	Wheat	Basmati	Non-basmati	Wheat	Rice
2012-13	65.15	34.60	66.88	332.09	326.37
2013-14	55.72	37.54	71.48	306.22	292.11
2014-15	29.15	37.02	82.26	252.54	306.73
2015-16	6.14	40.45	63.74	313.97	318.01
2016-17	2.62	40.00	68.13	289.98	327.80
2017-18	2.30	40.52	86.33	253.33	350.40
2018-19	1.83	44.15	75.34	314.71	344.35
2019-20	2.17	44.55	50.36	272.16	349.74
2020-21	20.86	46.32	130.88	360.56	557.78

Source: Departments of Commerce and Food & Public Distribution.

## **National Food Security Act (NFSA)**

**Objective:** The National Food Security Act, 2013 was notified 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.

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

**Benefits:** The eligible persons will be entitled to receive 5 Kgs of foodgrains per person per month at subsidised prices of Rs. 3/2/1 per Kg for rice/wheat/coarse grains. The existing Antodaya Anna Yojana (AAY) households, which constitute the poorest of the poor, will continue to receive 35 Kgs of food grains per household per month.

### **Special focus on the nutritional support to women and children**

- **Women:** It provides meals to pregnant women and lactating mothers during pregnancy and six months after the child birth. Such women will also be entitled to receive maternity benefits of not less than 6,000.
- **Children:** Up to 14 years of age will be entitled to nutritious meals as per the prescribed nutritional standards.
- **Food security allowance:** In case of non-supply of entitled food grains or meals, the beneficiaries will receive food security allowance.
- **Grievance redressal mechanism:** The Act also contains provisions for setting up of grievance redressal mechanisms at the District and State levels.

### **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)**

- It is a food security welfare scheme announced by the Government of India in March 2020, during the COVID-19 pandemic in India.
- It provides 5 kg of rice or wheat (according to regional dietary preferences) per person and 1 kg of dal to each family holding a ration card.
- The program is operated by the Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution.
- The scheme aims to feed the poorest citizens of India by providing grain through the Public Distribution System, to all the priority households (ration card holders and those identified by the Antodaya Anna Yojana (AAY)).

## 4.6 FERTILIZER SUBSIDY

**Why in News:** The Centre has increased its share of subsidy for di-ammonium phosphate (DAP) fertilizer so that the price for farmers does not increase.

### Fertilizer

- A fertilizer is any material that is applied to soil or to plant tissues to supply one or more plant nutrients essential to the growth of plants.
- Fourteen essential plant nutrients are known, and based on the amounts of nutrients that are required by plants, they are distinguished as macronutrients and micronutrients.
- Macronutrients are taken up in relatively large amounts (10 -100 kg or more per hectare), while the amount of micronutrients that is taken up by plants is mostly limited to several grams per hectare.
- Macronutrients are nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg) and sulphur (S).
- Micronutrients are Manganese (Mn), Boron (B), Copper (Cu), Iron (Fe), Zinc (Zn), Nickel (Ni), Molybdenum (Mo) and Chlorine (Cl).

### NPK fertilizers

- NPK stands for the initials of the essential chemical elements (N – Nitrogen, P – Phosphorous, K – Potassium) that make up plant fertilisers. They are vital for healthy plant growth, but not always available in the soil.
- Currently, there is excessive use of urea—a dominant source of 'N'—compared to other fertilizers such as di-ammonium phosphate (DAP).
- This has led to increasing imbalance in the NPK-use ratio, with adverse consequences on crop yield, soil and human health.

### DAP

- Di-ammonium Phosphate (DAP) is a popularly used fertilizer in India, as it contains both Nitrogen and Phosphorus which are primary macronutrients.
- It is manufactured by reacting Ammonia with Phosphoric acid under controlled conditions.
- It is highly soluble and thus dissolves quickly in soil to release the macronutrients.

### Background

Last year, the actual price of DAP was Rs 1,700 per bag, in which the Central Government was giving a subsidy of Rs. 500 per bag. So the companies were selling fertilizer to farmers for Rs 1200 per bag. Recently, the international prices of phosphoric acid, ammonia etc. used in DAP have increased by 60% to 70%. After this, the actual price of a DAP bag was coming around Rs 2400. Thus, fertilizer companies had to sell DAP at Rs 1,900 per bag as the Central subsidy was just Rs 500 per bag.

### **News Summary**

The Centre has increased its share of subsidy for di-ammonium phosphate (DAP) fertilizer by 140 per cent from Rs 500 to Rs 1,200 per bag. The amount of subsidy per bag has never been increased so much at once.

### **Impact of the current change**

With the government providing higher subsidy, the farmers will continue to get a bag of DAP at the old price of Rs 1200. The Central Government spends about Rs 80,000 crore on subsidies for chemical fertilizers every year. With the increase in subsidy in DAP, the Central Government will spend an additional Rs 14,775 crore as subsidy in Kharif season.

### **Fertilizer subsidy regime**

- Farmers buy fertilizers at MRPs (maximum retail price) below their normal market rates or what it costs to produce/import them.
- The MRP of neem-coated urea, for instance, is fixed by the government at around Rs 6000 per tonne, whereas its average price payable to domestic manufacturers and importers comes to around Rs 17,000 and Rs 23,000 per tonne, respectively.
- The difference, which varies according to plant-wise production cost and import price, is paid by the Centre as subsidy.
- The MRPs of non-urea fertilisers are decontrolled and are fixed by the companies. The Centre, however, pays a flat per-tonne subsidy on these nutrients to ensure they are priced at reasonable levels.
- Decontrolled fertilizers, are thus, costlier than urea and also get lower subsidy.

### **Functioning of the fertiliser subsidy**

Even though the ultimate beneficiary of the subsidy is the farmer who pays an amount less than the market rates, the subsidy is actually paid to fertilizer companies. Until recently, companies, were paid after their material had been dispatched (sent) and received at the approved go-down.

From March 2018, a new direct benefit transfer (DBT) system was introduced. Under this, subsidy payment to the companies is done only after fertilizer is actually sold to farmers by retailers.

Each retailer now has a point-of-sale (PoS) machine linked to the Department of Fertilisers' e-Urvarak DBT portal. To buy subsidised fertilisers, the buyer has to provide his/her Aadhaar unique identity or Kisan Credit Card number. The quantities of the individual fertilisers purchased, along with the buyer's name and biometric authentication, have to be captured on the PoS device. Only after the sale gets registered on the e-Urvarak platform can a company claim subsidy.

### **Benefits of DBT system**

The scope for leakage was more in the earlier system, right from the point of dispatch till the retailer end. In the DBT system, the leakage happens only at the retailer level, as there is no subsidy payment till sales are made through POS machines, along with the buyers' biometric authentication.

# 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.
- Prelims

## 5.1 Mucormycosis Fungal Infection

**Why in News:** Recently, doctors have witnessed increased cases of Covid-19 triggered Mucormycosis. The reduced immunity of Covid-19 patients makes them more susceptible to this fungal infection.

- **Mucormycetes**, the group of fungi that cause mucormycosis, are present throughout the environment, particularly in soil and in association with decaying organic matter, such as leaves, compost piles, and animal dung.
- Several different types of fungi can cause mucormycosis and belong to the scientific order Mucorales.
- The most common types that cause mucormycosis are Rhizopus species and Mucor species.
- They are more common in soil than in air, and in summer and fall than in winter or spring.
- These fungi are not harmful to most people but for people who have weakened immune systems, breathing in micromycetes spores can cause an infection.

**Mucormycosis is also called Black Fungus or Zygomycosis and is a serious but rare fungal infection caused by a group of molds called mucormycetes.**

### Types of Mucormycosis

- **Rhinocerebral (Sinus and Brain) Mucormycosis:** It is an infection in the sinuses that can spread to the brain. It is the most common in people with uncontrolled diabetes and in people who have had a kidney transplant.
- **Pulmonary (Lung) Mucormycosis:** It is the most common type of mucormycosis in people with cancer and in people who have had an organ transplant or a stem cell transplant.
- **Gastrointestinal Mucormycosis:** It is more common among young children than adults, especially premature and low birth weight infants less than 1 month of age, who have had antibiotics, surgery, or medications that lower the body's ability to fight germs and sickness.
- **Cutaneous (Skin) Mucormycosis:** It occurs after the fungi enter the body through a break in the skin (for example, after surgery, a burn, or other types of skin trauma). It is most common among people who do not have weakened immune systems.
- **Disseminated Mucormycosis:** It occurs when the infection spreads through the bloodstream to affect another part of the body. The infection most commonly affects the brain, but also can affect other organs such as the spleen, heart, and skin.

### Transmission

- It occurs through inhalation, inoculation, or ingestion of spores from the environment. For example, the lung or sinus forms of the infection can occur after someone inhales the spores from the air.
- Mucormycosis does not spread between people or between people and animals.
- It usually occurs in people who have health problems or take medicines that lower the body's ability to fight germs and sickness.

### **Symptoms**

- General symptoms are one-sided facial swelling and numbness, headache, nasal or sinus congestion, black lesions on nasal bridge or upper inside of the mouth, fever, abdominal pain, nausea and gastrointestinal bleeding.
- Disseminated mucormycosis typically occurs in people who are already sick from other medical conditions, so it can be difficult to know which symptoms are related to mucormycosis. Patients with disseminated infection in the brain can develop mental status changes or coma.

### **Diagnosis and Testing**

- Healthcare providers consider medical history, symptoms, physical examinations, and laboratory tests when diagnosing mucormycosis.
- If suspected of the infection, healthcare providers collect a sample of fluid from the respiratory system or may perform a tissue biopsy.
- In tissue biopsy, a small sample of affected tissue is analysed in a laboratory for evidence of mucormycosis under a microscope or in a fungal culture.

### **Prevention and Cure**

- There is no vaccine to prevent mucormycosis and it is difficult to avoid breathing in fungal spores because the fungi are common in the environment.
- For people who have weakened immune systems, there may be some ways to lower the chances of developing mucormycosis.
- These include avoiding areas with a lot of dust like construction or excavation sites, avoiding direct contact with water-damaged buildings and flood water after hurricanes and natural disasters and avoiding activities that involve close contact to soil.
- Early detection can prevent loss of eyesight, nose or jaw through clinical intervention.

**What is mucormycosis |** It is an aggressive and invasive fungal infection that can affect various vital organs such as the brain and cause internal damage to the ear, nose, throat, and mouth. It is not contagious but can be fatal if not detected early

**Prevalence:** The Center for Disease Control and Prevention, U.S., calls it a serious but rare disease. A computational model by Arunaloke Chakrabarti et al. estimated a prevalence of 0.14 cases per 1,000 individuals in India

**Underlying cause:** Diabetes mellitus is the most common underlying cause. According to doctors, "an

indiscriminate use of a high dose of steroids in patients" could trigger the disease post-COVID-19 infection

**Cure:** The main line of treatment is an anti-fungal drug called Amphotericin B, which is given over an extended period of time under strict observation. Surgery might also be warranted

## EVIDENCE BASED ADVISORY IN THE TIME OF COVID-19 (Screening, Diagnosis & Management of Mucormycosis)

### Mucormycosis - if uncared for - may turn fatal

Mucormycosis is a fungal infection that mainly affects people who are on medication for other health problems that reduces their ability to fight environmental pathogens.



Sinuses or lungs of such individuals get affected after fungal spores are inhaled from the air.

This can lead to serious disease with warning sign and symptoms as follows:

- Pain and redness around eyes and/or nose
- Fever
- Headache
- Coughing
- Shortness of breath
- Bloody vomits
- Altered mental status

### What predisposes

- Uncontrolled diabetes mellitus
- Immunosuppression by steroids
- Prolonged ICU stay
- Co-morbidities - post transplant/malignancy
- Voriconazole therapy

### How to prevent

- Use masks if you are visiting dusty construction sites
- Wear shoes, long trousers, long sleeve shirts and gloves while handling soil (gardening), moss or manure
- Maintain personal hygiene including thorough scrub bath

### When to Suspect

(in COVID-19 patients, diabetics or immunosuppressed individuals)

- Sinusitis - nasal blockage or congestion, nasal discharge (blackish/bloody), local pain on the cheek bone
- One sided facial pain, numbness or swelling
- Blackish discoloration over bridge of nose/palate
- Toothache, loosening of teeth, jaw involvement
- Blurred or double vision with pain; fever, skin lesion; thrombosis & necrosis (eschar)
- Chest pain, pleural effusion, haemoptysis, worsening of respiratory symptoms

### Dos

- Control hyperglycemia
- Monitor blood glucose level post COVID-19 discharge and also in diabetics
- Use steroid judiciously - correct timing, correct dose and duration
- Use clean, sterile water for humidifiers during oxygen therapy
- Use antibiotics/antifungals judiciously

### Don'ts

- Do not miss warning signs and symptoms
- Do not consider all the cases with blocked nose as cases of bacterial sinusitis, particularly in the context of immunosuppression and/or COVID-19 patients on immunomodulators
- Do not hesitate to seek aggressive investigations, as appropriate (KOH staining & microscopy, culture, MALDI-TOF), for detecting fungal etiology
- Do not lose crucial time to initiate treatment for mucormycosis

### How to manage

- Control diabetes and diabetic ketoacidosis
- Reduce steroids (if patient is still on) with aim to discontinue rapidly
- Discontinue immunomodulating drugs
- No antifungal prophylaxis needed
- Extensive Surgical Debridement - to remove all necrotic materials
- Medical treatment
  - Install peripherally inserted central catheter (PICC line)
  - Maintain adequate systemic hydration
  - Infuse Normal saline IV before Amphotericin B infusion
  - Antifungal Therapy, for at least 4-6 weeks (see the guidelines below)
- Monitor patients clinically and with radio-imaging for response and to detect disease progression

### Team Approach Works Best

- Microbiologist
- Internal Medicine Specialist
- Intensivist
- Neurologist
- ENT Specialist
- Ophthalmologist
- Dentist
- Surgeon (maxillofacial/plastic)
- Biochemist

### Detailed management guideline & information available on the following

Global guideline for the diagnosis and management of mucormycosis: an initiative of the European Confederation of Medical Mycology in cooperation with the Mycoses Study Group Education and Research Consortium. Lancet Infect Dis. 2019 Dec;19(12):e405-e421. doi: 10.1016/S1473-3099(19)30312-3.

[https://www.ijmr.org.in/temp/indian/MedRes1533311-3965147\\_110051.pdf](https://www.ijmr.org.in/temp/indian/MedRes1533311-3965147_110051.pdf)



[https://www.ijmr.org.in/temp/indian/MedRes192195-397834\\_110303.pdf](https://www.ijmr.org.in/temp/indian/MedRes192195-397834_110303.pdf)



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## 5.2 ISREAL IRON DOME DEFENCE SYSTEM

**Why in News:** In the ongoing conflict between Israel and Palestine, videos on social media showed rockets fired from Gaza being intercepted by the Israeli Iron Dome air defence system.

### The Israeli Iron Dome air defence system

- It is a short-range, ground-to-air, air defence system, which includes a radar and Tamir interceptor missiles that track and neutralise any rockets or missiles aimed at Israeli targets.
- It is used for countering rockets, artillery & mortars (C-RAM) as well as aircraft, helicopters and unmanned aerial vehicles.
- It is capable of being used in all weather conditions, including during the day and night.
- It was developed by the state-run Rafael Advanced Defense Systems and Israel Aerospace Industries and was deployed in 2011. Rafael claims a success rate of over 90%, with more than 2,000 interceptions, however experts agree the success rate is over 80%.
- It can protect deployed and maneuvering forces, as well as the Forward Operating Base (FOB) and urban areas, against a wide range of indirect and aerial threats.

**Components:** The Iron Dome has three main systems that work together to provide a shield over the area where it is deployed which are:

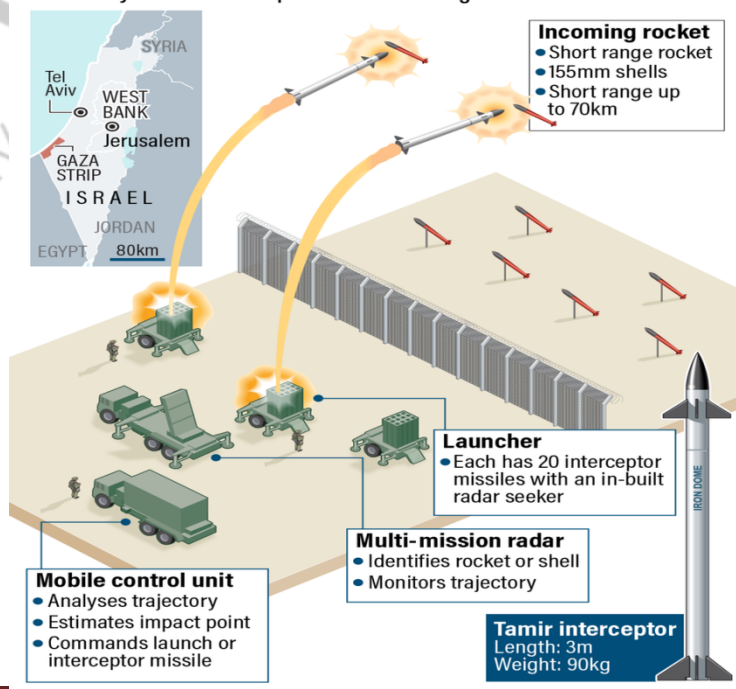
- **Radar:** It has detection and tracking radar to spot any incoming threats.
- **Weapon Control:** It has a battle management and weapon control system (BMC),
- **Missile Fire:** It also has a missile firing unit. The BMC basically liaises between the radar and the interceptor missile.

### Indian Alternatives:

#### S-400 TRIUMF:

### ISRAEL'S IRON DOME DEFENCE SYSTEM

Mobile system to intercept rockets with range of 4-70km



- India has S-400 TRIUMF, which also caters to the three threats (rockets, missiles and cruise missiles). But they have much longer range.
- It has a much larger air defence bubble to knock off threats. It is a mobile, surface-to-air missile system (SAM) designed by Russia.

### **Range & Effectiveness**

- The system can engage all types of aerial targets within the range of 400km, at an altitude of up to 30km.
- The system can track 100 airborne targets and engage six of them simultaneously.

### **Prithvi Air Defence and Advance Air Defence**

It is a double-tiered system consisting of two land and sea-based interceptor missiles, namely the Prithvi Air Defence (PAD) missile for high altitude interception, and the Advanced Air Defence (AAD) Missile for lower altitude interception.

**Range:** It is able to intercept any incoming missile launched 5,000 kilometres away. The system also includes an overlapping network of early warning and tracking radars, as well as command and control posts.

### **Ashwin Advanced Air Defence Interceptor Missile**

- It is also an indigenously produced Advanced Air Defence (AAD) interceptor missile developed by Defence Research and Development Organisation (DRDO). It is the advanced version of the low altitude supersonic ballistic interceptor missile.
- The missile also has its own mobile launcher, secure data link for interception, independent tracking and homing capabilities and sophisticated radars.

### **Range**

It uses an endo-spheric (within the Earth's atmosphere) interceptor that knocks out ballistic missiles at a maximum altitude of 60,000 to 100,000 feet, and across a range between 90 and 125 miles.

## **5.3 CRYPTOCURRENCY**

**Why in News:** In the backdrop of China announcing a crackdown on crypto currencies, the crypto currency market crashed with prices of major currencies (Bitcoin, Ethereum, etc) dropping as much as 30% within 24 hours.

### **Crypto currencies**

- A crypto currency is a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend.
- Many crypto currencies are decentralized networks based on blockchain technology - a distributed ledger enforced by a disparate network of computers. A distributed ledger is a database that is consensually shared and synchronized across multiple sites, institutions, or geographies, accessible by multiple people.
- Any changes or additions made to the ledger are reflected and copied to all participants in a matter of seconds or minutes.
- A defining feature of crypto currencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation. Today, the aggregate value of all the crypto currencies in existence is around \$1.5 trillion (60% Bitcoin).

### **Types of Crypto currency:**

**Bitcoin:** Launched in 2009, the first blockchain-based cryptocurrency was Bitcoin, which still remains the most popular and most valuable.

**Others:** Some of the competing cryptocurrencies spawned by Bitcoin's success, known as "altcoins," include Litecoin, Peercoin, Namecoin, Ethereum, Cardano and EOS.

### **Advantages of Crypto currency:**

- **Easier means to transfer funds:** By using Crypto currencies it is easier to transfer funds directly between two parties, without the need for a trusted third party like a bank or credit card company.
- **Secured:** These transfers are instead secured by the use of public keys and private keys, making it almost impossible to forge transaction histories.
- **Minimal processing fee:** Fund transfers are completed with minimal processing fees, allowing users to avoid the steep fees charged by banks and financial institutions.
- **Promotes privacy:** Due to their anonymity, it acts as a protection for whistleblowers or activists living under repressive governments.

## Disadvantages

**Well suited for illegal activities:** The anonymous nature of crypto currency transactions makes them well-suited for a host of illegal activities, such as money laundering and tax evasion.

**Highly volatile:** Since market prices for crypto currencies are based on supply and demand, the rate at which a crypto currency can be exchanged for another currency can fluctuate widely.

**Entire ecosystem is not secure:** Crypto currency block-chains are highly secure, but other aspects of a crypto-currency ecosystem, including exchanges and wallets, are not immune to the threat of hacking.

**Absence of regulation:** In countries like India where crypto currencies are not currently regulated (not recognized by RBI), it prompts the rise of black market.

On the nature of adoption of crypto currency, countries can be categorised under the four broad categories -

- Accommodative or liberal, like in Japan;
- Heavily regulated like in USA;
- Not currently regulated, like in India; and
- Prohibitive, like barring financial institutions within their borders from facilitating transactions involving crypto currencies, like in China.

In 2018, the Reserve Bank of India (RBI) had banned banks from conducting transactions related to crypto currency. However, in 2020, the Supreme Court of India lifted the ban, and crypto currencies have been operational in India ever since.

The Indian Government recently revealed that it will introduce a new bill on crypto currencies, to capture their potential and manage risks.

## 5.4 GENOME SEQUENCING

**Why in News:** Amid allegations of mishandling the second wave of the COVID19 pandemic by the government of India, members of the Indian SARSCoV2 Genomic Consortia (INSACOG), warned of a new and contagious form of the novel coronavirus recently.

### INSACOG

- INSACOG is a consortium (launched in December 2020) of 10 labs across the country acting as an advisory group to the Central government.
- It is tasked with genome sequencing of COVID19 samples, collected from swathes of patients and flagging the presence of SARS-CoV-2 variants.

The institutes involved were those with expertise in genome sequencing and included -

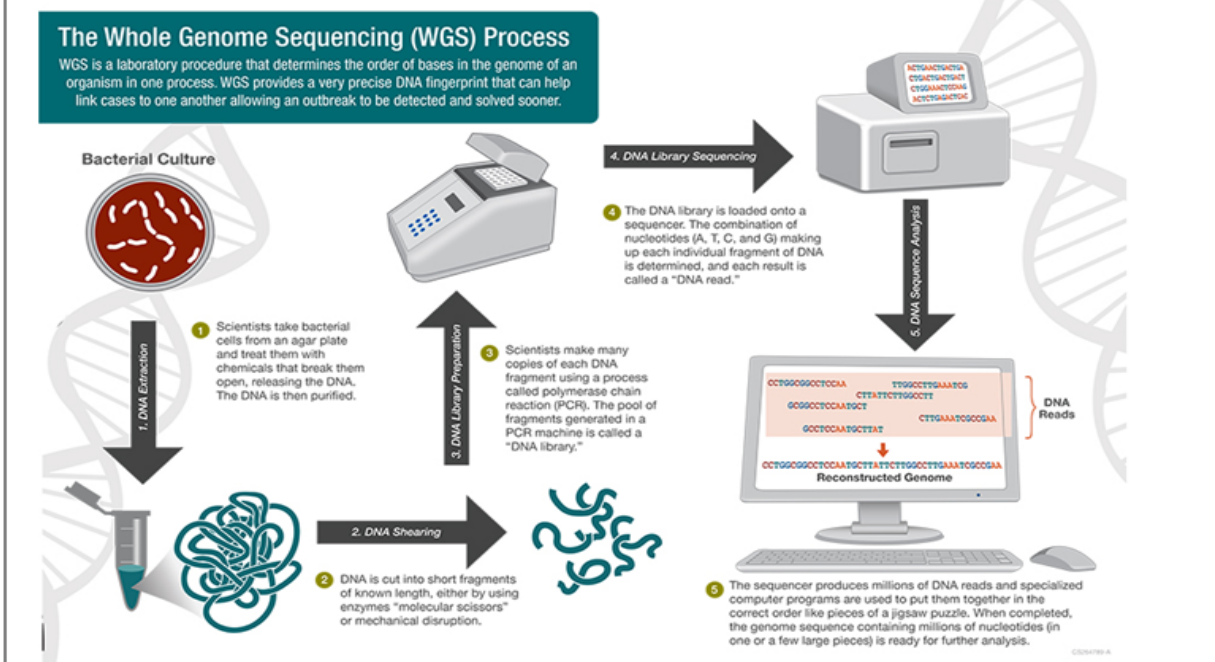
- Laboratories of the Department of Biotechnology (DBT)
- The Council of Scientific and Industrial Research (CSIR)
- The Indian Council of Medical Research (ICMR) and
- The Ministry of Health & Family Welfare (MoHFW).

**The National Centre for Disease Control (NCDC) under the MoHFW was tasked with coordinating collection of samples from the States as well correlating disease with the mutations.**

### **Genome Sequencing**

- Also known as DNA sequencing, it is the process of 'decoding' the Deoxyribonucleic acid (DNA) - determining the nucleic acid sequence, the order of nucleotides in DNA.
- The modern DNA sequencing technology has been instrumental in the sequencing of complete DNA sequences or genomes (genetic material of an organism) of numerous types and species of life (human, animal, plant and microbial species).
- Knowledge of DNA sequences has become indispensable for basic biological research and in numerous applied fields such as medical diagnosis, biotechnology, forensic biology, virology etc.

## The Whole Genome Sequencing (WGS) Process



### Genome sequencing of Covid-19 samples

- First, scientists extracted the virus from COVID19 positive samples and grew enough of it. Then, blood serum is drawn from people who are vaccinated and thereby have antibodies.
- Using different probes, scientists determine how much of the antibodies thus extracted are required to kill a portion of the cultured virus.

### Significance of sequencing Covid-19 samples

- To understand the role of certain mutations in increasing the virus's infectivity.
- To detect the virus's ability to evade antibodies (mutations have also been linked to immune escape), which has consequences for vaccines.
- To study if the vaccines developed so far are effective against such mutant strains of the virus.

### Findings of INSACOG

The Department of Biotechnology (DBT) has identified about 3,900 variants after sequencing 20000 samples. The foreign variants identified: The B.1.1.7 (first identified in the United

Kingdom) and the B.1.351 (first found in South Africa) and a small number of P2 variants (from Brazil).

**Double mutant:** Some labs have flagged the growing presence of the 'double mutant' variant, primarily due to two mutations - E484Q and L452R - on the spike protein.

**Effectiveness of vaccines:** In general, the antibodies generated after vaccination (Covaxin, Covishield, Pfizer and Moderna jabs), were able to neutralise variants. However, there were fewer antibodies produced against the South African, Brazil and the 'double mutant' variant.

**Limitation of antibody:** Antibody levels are not the only markers of protection and there is a parallel network of cellular immunity that plays a critical role in how vaccines activate immunity.

#### **Challenges faced by INSACOG**

- **Shortage of resources:** Though the aim of the group was to sequence at least 5% of the samples collected, only around 1% is done, primarily due to a shortage of funds, insufficient reagents and tools necessary to scale up the process.
- **Advisory nature of the group:** In spite of being manned by expert scientists, INSACOG is ultimately an advisory group to the Central government.

# 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 NAMING OF CYCLONES

**Why in News:** The Indian Meteorological Department (IMD) has predicted that a cyclonic storm, to be named Yaas, hit the eastern coast of India by May 26-27.

- This is the second cyclone to hit India in the month of May after Cyclone Tauktae (named by Myanmar) formed over the Arabian Sea which hit the western coast on May 17 and caused massive damage in Maharashtra and Gujarat.
- The present cyclone Yaas has been named by Oman. Yaas refers to a tree that has a good fragrance and in English, the word is similar to Jasmine.

### Tropical cyclone

- A tropical cyclone is an intense circular storm that originates over warm tropical oceans.
- It is characterised by low atmospheric pressure, strong winds followed by heavy rainfall.
- Tropical cyclones always have an eye, a central region of clear skies and warm temperatures.
- Cyclones are strengthened by available heat in the water bodies. The temperature required for the intensification of the cyclone is 28 degrees Celsius and above.
- The Bay of Bengal is usually warmer than the Arabian Sea, due to which it results in more cyclones being formed over it.

### Need for naming cyclones

- Adopting names for cyclones makes it easier for people to remember. Apart from the general public, it also helps the scientific community, the media, disaster managers etc. With a name, it is easy to identify individual cyclones, create awareness of its development and share warnings quickly to increase community preparedness.
- It also helps to remove confusion when there are multiple cyclones.

### Guidelines to adopt names of cyclones

While picking names for cyclones, there are some rules that countries need to follow. If these guidelines are followed, the name is accepted by the panel on tropical cyclones (PTC) that finalises the selection. The guidelines to adopt names of cyclones are as follows:

- The maximum length of the proposed name should be eight letters.

- It should be short, easy to pronounce and should be provided with its pronunciation and voice over.
- It should not be very rude and cruel in nature and should be chosen in such a way that it does not hurt the sentiments of any group of population over the globe.
- It should be neutral to politics and political figures, religious beliefs, cultures and gender.
- The names of tropical cyclones over the north Indian Ocean should not be repeated. Once used, it will cease to be used again, so the name suggested should be new.

### **Naming of cyclones**

- The World Meteorological Organisation (WMO) maintains rotating lists of names, which are appropriate for each tropical cyclone basin (region).
- Cyclones that form in every ocean basin across the world are named by the regional specialised meteorological centers (RSMCs) and Tropical Cyclone Warning Centers (TCWCs).
- There are six RSMCs in the world, including the India Meteorological Department (IMD), and five TCWCs.
- As an RSMC, the IMD names the cyclones developing over the north Indian Ocean, including the Bay of Bengal and Arabian Sea, after following a standard procedure.
- The IMD is also mandated to issue cyclone advisories to 13 countries in the region on the development of cyclones and storms.

### **WMO/ESCAP panel on tropical cyclones**

- The WMO/ESCAP (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific) panel on tropical cyclones was founded in 1972.
- It was formed to promote and coordinate the measures to minimize loss of life and material damage caused by tropical cyclones and associated floods and storm surges in the Bay of Bengal and the Arabian Sea.
- **In 2000, the WMO/ESCAP decided to start naming cyclones in the Asia Pacific region, when it comprised of Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand. After each country sent in suggestions, the WMO/ESCAP Panel on Tropical Cyclones (PTC) finalised the list. The WMO/ESCAP later expanded to include five more countries in 2018 — Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.**

### **Current cyclone list for North Indian Ocean**

- In 2018 it was decided to prepare a fresh list of names for tropical cyclones over the North Indian Ocean including the Bay of Bengal and the Arabian Sea.
- The new list of 169 names was adopted by WMO/ESCAP Panel on Tropical Cyclones in April 2020, for the naming of tropical cyclones over the North Indian Ocean including the Bay of Bengal and the Arabian Sea.
- The list of 169 cyclone names was provided by the 13 countries of WMO/ESCAP - 13 suggestions from each of the 13 countries.

### **Names of cyclones suggested by India**

The 13 names in the current list that have been suggested by India include: Gati, Tej, Mursu, Aag, Vyom, Jhar (pronounced Jhor), Probaho, Neer, Prabhanjan, Ghurni, Ambud, Jaladhi and Vega. Some of the names picked by India were suggested by the general public. An IMD committee is formed to finalise the names before sending it to the PTC.

## **6.2 CHIPKO MOVEMENT**

**Why in News:** Environmentalist Sunderlal Bahuguna, a founding member of the tree-hugging Chipko movement in the 1970s, died of Covid-19 on Friday.

### **Sunderlal Bahuguna**

Sunderlal Bahuguna was an environmentalist and Chipko movement leader. He helped bring the movement to prominence through about 5,000-kilometer trans Himalaya march undertaken from 1981 to 1983, travelling from village to village, gathering support for the movement.

One of Sunderlal Bahuguna's notable contributions to the Chipko movement, and to environmentalism in general, was his creation of the Chipko's slogan "Ecology is permanent economy".

As a Gandhian peace worker, he did not resort to violence to achieve the change he worked towards. He contributed globally through awareness raising measures concerning deforestation, the negative effects of liquor on mountain life, and the health of the Ganga River.

### **Tehri dam protests:**

- Sunderlal Bahuguna is most famous for his efforts to stop the creation of the Tehri Dam. Tehri dam is the tallest dam in India, located on the Bhagirathi river in Uttarakhand.

- He led the anti-Tehri dam protests for decades. Using satyagraha methods, he repeatedly went on hunger strikes at the banks of Bhagirathi as a mark of protest.

He was a passionate defender of the Himalayan people, working for temperance, the plight of the hill people (especially working women).

### **Chipko movement**

#### **Origin of the Chipko movement:**

The first Chipko movement/andolan dates back to the 18th century, started by Rajasthan's Bishnoi community. The name of the movement 'chipko' comes from the word 'embrace', as the villagers hugged the trees and encircled them to prevent being hacked. A group of villagers, led by a lady named Amrita Devi, laid down their lives while protecting trees from being felled on the orders of then King of Jodhpur. After this incident, the King, in a royal decree, banned cutting of trees in all Bishnoi villages.

#### **Chipko movement of 1973**

The movement was a non-violent agitation that was aimed at protection and conservation of trees. The uprising against the felling of trees and maintaining the ecological balance originated in Uttar Pradesh's Chamoli district (now Uttarakhand) in 1973. In no time, the movement spread to other states in north India.

## **6.3 RED EARED SLIDER**

**Why in News:** S. slider or red-eared slider, an American turtle is threatening to invade the natural water bodies across the Northeast, home to vulnerable native Indian species of freshwater turtles and tortoises.

### **Red-Eared Slider (*Trachemys scripta elegans*)**

- The turtle derives its name from red stripes around the part where its ears would be and from its ability to slide quickly off any surface into the water.
- It is native to the U.S. and northern Mexico and it is an extremely popular pet due to its small size, easy maintenance, and relatively low cost.

**Habitat:** Water bodies with a source of still, warm water, such as ponds, lakes, swamps, creeks, streams or slow-flowing rivers.

**Invasive species:** The red-eared slider is included in the list of the world's 100 most invasive species published by the International Union for the Conservation of Nature (IUCN).

### 'Invasive Species'

Species that grow and reproduce quickly and spread aggressively, with potential to cause harm, are given the label “invasive.” It can be any kind of living organism - an amphibian, plant, insect, fish, fungus, bacteria, or even an organism’s seeds or eggs - that is not native to an ecosystem and causes harm.

They can harm the environment, the economy, or even human health.

### News Update

Recently, a team of herpetologists (zoologists who study reptiles and amphibians) from NGO Help Earth found red-eared sliders in the Deepor Beel Wildlife Sanctuary and the Ugratara temple pond, both in Guwahati.

### Deepor Beel Wildlife Sanctuary

Deepor Beel (Beel means wetland or large aquatic body in Assamese) is located in the Southwest of Guwahati city, Assam. Deepor Beel is an open lake basin and is considered one of the large and important riverine wetlands in the Brahmaputra Valley of lower Assam, India. It was designated as a Ramsar Site in November 2002.

## 6.4 GREAT NICOBAR PLAN

**Why in News:** The Environment Appraisal Committee (EAC) has recommended the Great Nicobar Island project for grant of terms of reference (TOR) for Environmental Impact Assessment (EIA) studies.

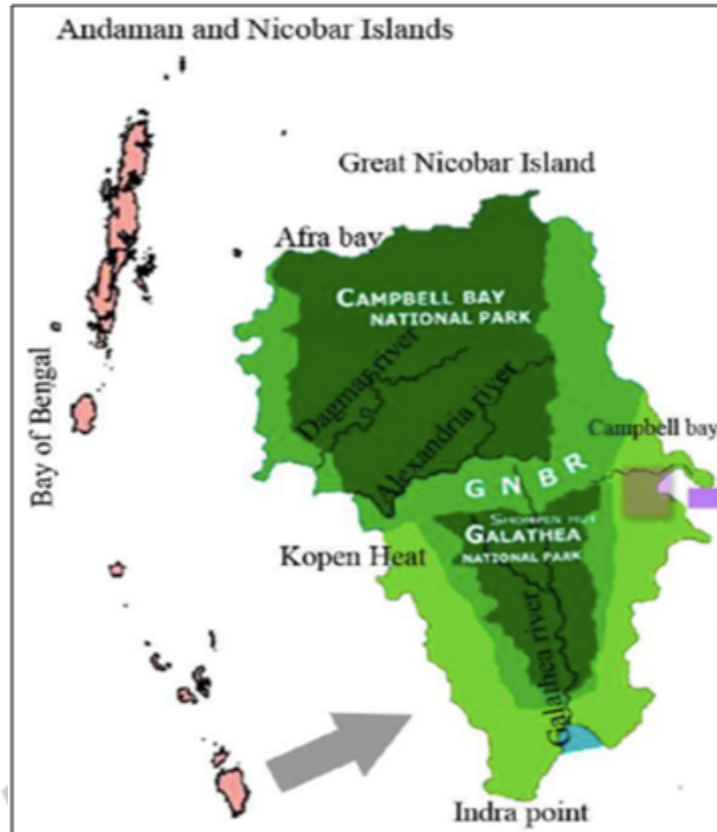
The purpose of TOR is to enable the project implementing authority for planning and designing EIA. The EIA studies in the first instance will include baseline studies over three months

### The Great Nicobar Island and its significance

- The Great Nicobar Island is an important region for the Giant leatherback turtle and the Nicobar megapode. The Nicobar megapode is a globally endangered bird unique to the

Nicobars. Around 90% of Nicobar megapode's nests are within a distance of 30 m from the shore.

- Large numbers of leatherback turtles have been recorded nesting in the Great Nicobar Island mainly on the wide beaches at the mouth of the Dagmar and Alexandira rivers on the west coast and at the mouth of the Galathea river along its south eastern coast.
- Galathea Bay was, in fact, proposed as a wildlife sanctuary in 1997 for the protection of turtles and was also the site of a long-term monitoring program. Ecological surveys in the last few years have reported a number of new species, many restricted to just the Galathea region.
- These include the critically endangered Nicobar shrew, the Great Nicobar crane, the Nicobar frog, the Nicobar cat snake, a new skink (*Lipinia* sp.), a new lizard (*Dibamus* sp.)
- The A&N Islands are also a prominent part of the National Marine Turtle Action Plan (NMTAP).



### Great Nicobar Island project

- More than 150 sq. km. of land is being made available for Phase I of NITI Aayog's holistic and sustainable vision for Great Nicobar Island, the southernmost island in the Andaman and Nicobar (A&N) group.
- This amounts to nearly 18% of the 910 sq. km. island, and will cover nearly a quarter of its coastline. The overall plan will use about 244 sq. km. – a major portion of this is covered by forest and coastal systems.
- Projects to be executed in Phase I of NITI Aayog's vision include a 22 sq. km. airport complex and a trans shipment port (TSP) at South Bay at an estimated cost of Rs 12,000 crore.

- A township complex, a mass rapid transport system, a free trade zone and a warehousing complex have also been planned.

### **Concerns related to development**

Developments in the A&N Islands indicate, that even as the NMTAP was being finalised, decisions were being made in violation of its basic concerns and premises. Moreover, the development plans have been pushed in spite of serious objections by the A&N Forest Department. The EAC had also noted that the site selection for the port had been done mainly on technical and financial criteria, ignoring the environmental aspects.

Significant changes have also been made to the legal regimes for wildlife and forest conservation. In January, 2021, the Standing Committee of the National Board for Wildlife (NBWL) de-notified the entire Galathea Bay Wildlife Sanctuary for the development of a port.

After that, another Environment Ministry expert committee approved a “zero extent” Ecologically Sensitive Zone (ESZ) for the Galathea National Park, to allow use of land for the NITI Aayog plan.

### **News Update**

- The latest recommendation by EAC of Ministry of Environment, Forest and Climate Change (MoEFCC) for EIA studies comes after it had earlier raised serious concerns about NITI Aayog’s project for Great Nicobar Island.
- The EAC has now given its recommendation after a ‘pre-feasibility’ report, (‘Holistic Development of Great Nicobar Island at Andaman and Nicobar Islands’), prepared for the NITI Aayog by a consulting agency Aecom India Private Limited. By giving its recommendation the EAC has removed the first hurdle faced by the project.

### **Studies proposed by EAC in the region**

- The EAC has now asked for an independent study/ evaluation for the suitability of the proposed port site with specific focus on Leatherback Turtle, Nicobar Megapod and Dugong. It has also asked for an independent assessment of terrestrial and marine biodiversity.
- A study on the impact of dredging, reclamation and port operations, including oil spills also has to be carried out by nationally recognised institutions such as the Wildlife Institute of India, and Indian Institute of Science (IISc).

- A study has to be conducted for alternative sites for the port with a focus on environmental and ecological impact, a seismic and tsunami hazard map, a disaster management plan and an assessment of the cumulative impact.

### **Corporate Environment Policy**

The EAC has also asked for details of the corporate environment policy of the implementing agency - ANIIDCO. Andaman and Nicobar Island Integrated Development Corporation (ANIIDCO), is a government undertaking involved in activities such as tourism, trading and infrastructure development for tourism and fisheries.

This will check whether the company has an environment policy, a prescribed standard operating procedure to deal with environmental and forest violations, and a compliance management system.

### **National Marine Turtle Action Plan**

- The National Marine Turtle Action Plan was recently released in February, 2021.
- Its vision is to create a viable and healthy marine ecosystem for marine turtles and associated species through a coordinated and participatory mechanism to ensure long term survival of marine turtles.
- The plan notes that India has identified all its important sea turtle nesting habitats as 'Important Coastal and Marine Biodiversity Areas'.
- South Bay and West Bay on Little Andaman and Galathea on Great Nicobar, along with other nesting beaches in the islands, are specifically mentioned as "Important Marine Turtle Habitats in India" and the largest Leatherback nesting grounds in India.
- The plan identifies coastal development, including construction of ports, jetties, resorts and industries, as major threats to turtle populations.

# 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 eSANJEEVANI

**Why in News:** Since last year, the eSanjeevani OPD, the flagship National Telemedicine Service of the Ministry of Health & Family Welfare (MoHFW), Government of India, has served more than 50 lakh patients.

### **The National Telemedicine Service (eSanjeevani) Initiative**

The National Telemedicine Service was set up by the Ministry of Health & Family Welfare. The Centre for Development of Advanced Computing (C-DAC) Mohali, is the creator of eSanjeevani.

#### **Two modules of eSanjeevani:**

- **eSanjeevani AB-HWC:** The doctor-to-doctor telemedicine platform, being implemented at all the Health and Wellness Centres (HWCs) in the country under Ayushman Bharat (AB) Scheme of Government of India. It was rolled out in 2019.
- **eSanjeevani OPD:** It is the Patient-to-Doctor remote consultation services rolled out in 2020 amid the first lockdown imposed to fight Covid-19 pandemic, while the Outpatient Departments (OPDs) in the country were closed. The initiative is a contactless and risk-free modality that enables delivery of health services to the citizens in the confines of their homes free of cost.

The C-DAC is working towards adding another innovative feature in eSanjeevani OPD that will enable roll out of National OPDs on eSanjeevani OPD, to offer remote health services to patients in any part of the country.

#### **Need for such telemedicine services:**

Since the onset of the pandemic, the National Telemedicine Service has witnessed rapid and widespread adoption amongst patients and doctors. For example, few States are working towards rolling out special Home Isolation OPDs wherein the patients will be screened for COVID-19.

eSanjeevani has been performing as a parallel stream of the country's healthcare delivery system that is already overburdened. This will, to some extent help in addressing the challenges like shortage and uneven distribution of doctors and specialists in various regions of the country. It also aims to make healthcare services equitable by bridging the digital divide that exists between the urban vs. rural, rich vs. poor etc. It can also be used to provide medical education to interns,

people across various Common Service Centers (CSCs), etc.

## 7.2 BLENDED LEARNING

**Why in News:** The University Grants Commission (UGC) has released a draft concept note on "blended mode of teaching and learning" in Higher Education Institutes (HEIs).

### Blended Learning

- Blended learning is not just a mix of online and face-to-face mode, but it refers to a well-planned combination of meaningful activities in both the modes.
- The blend demands consideration of several factors, mainly focusing on learning outcomes and the learner centered instructional environment.
- It intends to create a structure where students can pick teachers and timings; frame their own courses; design degrees; and study through any mode with learning and examinations on demand.

### Role of teachers in blended learning:

Traditionally, classroom instruction has largely been teacher-directed, top-down, and one-size-fits-all. However, with blended learning, it now becomes more student-driven, bottom-up, and customised.

Blended learning shifts the teacher's role from knowledge provider to coach and mentor. This shift does not mean that teachers play a passive or less important role in students' education. In fact, with blended learning, teachers can have a deeper influence and effect on students' learning.

### Benefits of blended learning

- Advantages of blended learning for students include increased learning skills, greater access to information, improved satisfaction and learning outcomes.
- It will provide students the opportunity to learn with others and also to teach others.

### News Update

The UGC has released a draft concept note on "blended mode of teaching and learning" in Higher Education Institutes (HEIs), and sought suggestions and feedback from various stakeholders.

As per the concept note, HEIs should be allowed to teach up to 40 per cent of each course through online mode and the remaining 60 per cent of the course through offline mode. The concept note has been prepared in accordance with the new National Education Policy (NEP), which gives acceptability to multiple modes of learning including face to face learning, online learning and distance or virtual mode.

#### **Infrastructure up gradation:**

The concept note underlines that availability of infrastructure is fundamental to teaching and learning. Thus, required infrastructure for online systems such as accessibility of internet, bandwidth, hardware, space and other related resources should be made easily available for the smooth execution of blended teaching-learning process.

The financial aid required to develop the infrastructure and resources must also be provided.

#### **Evaluation process:**

In order to implement blended learning, the area of assessment and evaluation needs to be explored again.

- Exams for teaching under both modes (online and offline) can be conducted online.
- The concept note suggests Continuous Comprehensive Evaluation (CCE) in universities and colleges.
- Summative evaluation strategies including open book examination, group examinations even for conventional theory papers, spoken examinations, on demand examinations have been recommended.
- Classroom/online quizzes can be used along with developing creative products for evaluation.

#### **Continuous Comprehensive Evaluation (CCE)**

CCE evaluates students through a series of curricular and extra-curricular evaluations along with academics. The idea is to decrease the workload on the student by taking a number of small tests throughout the year in place of single test at the end of the academic program.

#### **University Grants Commission (UGC)**

- The University Grants Commission (UGC) is a statutory body responsible for coordination and maintenance of standards of higher education in India.
- The UGC was first formed in 1945 to oversee the work of the three Central Universities of Aligarh, Banaras and Delhi. Its responsibility was extended in 1947 to cover all Indian universities.
- In 1956, the UGC became a statutory body, upon the passing of the University Grants Commission Act, 1956.

### Functions

- Promoting and coordinating university education.
- Determining and maintaining standards of teaching, examination and research in universities.
- Framing regulations on minimum standards of education.
- Monitoring developments in the field of collegiate and university education; giving funds to the universities and colleges.
- Serving as a vital link between the Union and state governments and institutions of higher learning.
- Advising the Central and State governments on the measures necessary for improvement of university education.

## MISCELLANEOUS

### ➤ Central Deputation of IAS Officer

**Why in News:** Recently, the Centre has asked the West Bengal Chief Secretary to report and join the Government of India for central deputation. This came after the West Bengal Chief Minister and the Chief Secretary skipped a meeting with the Prime Minister of India during his visit to the state.

### Central Deputation

**The Indian Administrative Service (Cadre) Rules, 1954 (Rule 6(1)):** With the concurrence of the State Governments concerned and the Central Government, officers of the All India Services (IAS, IPS and Indian Forest Service) willing to go on central deputation, be deputed for service under the Central Government or another State Government.

- In normal practice, the Centre asks every year for an “offer list” of such officers, after which it selects officers from that list.
- In case of any disagreement, the matter shall be decided by the Central Government and the State Government (or State Governments concerned) shall give effect to the decision of the Central Government.
- Legally speaking, the Centre holds the ultimate control, but there is also a custom that an officer will not be deputed against his/her own will.

### **Criticism of Central deputation rule**

After the All India Services Act, 1951 came into existence, the IAS cadre rules were framed in 1954. The said rule (Rule 6(1)) on deputation giving more discretionary powers to the Centre was added in 1969. However, it remains difficult for the Centre to enforce its will on a state that refuses to back down.

### **News Update**

The West Bengal Chief Secretary, an IAS officer of the 1987 batch, was due to begin an extension of three months after retiring recently. Citing the Centre’s approval, the West Bengal government issued this order (in the interest of public service).

Death-cum-Retirement Benefit (DCRB) Rules, 1958: With the prior approval of the Central Government, a member of the Service dealing with budget work or working as a full-time member of a Committee may be given extension of service for a period not exceeding three months in public interest. For an officer posted as Chief Secretary of a state, this extension can be for six months.

But, the Department of Personnel and Training (DoPT) has asked him to join the Government of India after the approval of the Appointment Committee of the Cabinet, and requested the state to relieve the officer with immediate effect.

### **➤ CBI Chief**

**Why in News:** Subodh Kumar Jaiswal, the current Director General of the CISF and an IPS officer from the 1985 batch, was named CBI Director.

### **Central Bureau of Investigation (CBI)**

The establishment of the CBI was recommended by the Santhanam Committee on Prevention of Corruption (1962–1964). It is not a statutory body as it was set up by a resolution (1963) of the Ministry of Home Affairs. It derives its powers from the Delhi Special Police Establishment Act, 1946.

#### **Appointment of CBI Director:**

The CBI is headed by a Director. He is assisted by a special/additional director. The Central Government appoints the Director on the recommendation of a high-powered three-member committee, comprising of:

- Prime Minister as Chairman
- Leader of Opposition in Lok Sabha
- Chief Justice of India

When there is no recognized Leader of Opposition in the Lok Sabha, then the leader of the single largest opposition party in the Lok Sabha would be a member of that committee. The Director of CBI has been provided security of two-year tenure in office by the Chief Vigilance Commission Act, 2003.

#### **➤ Mount Nyiragongo**

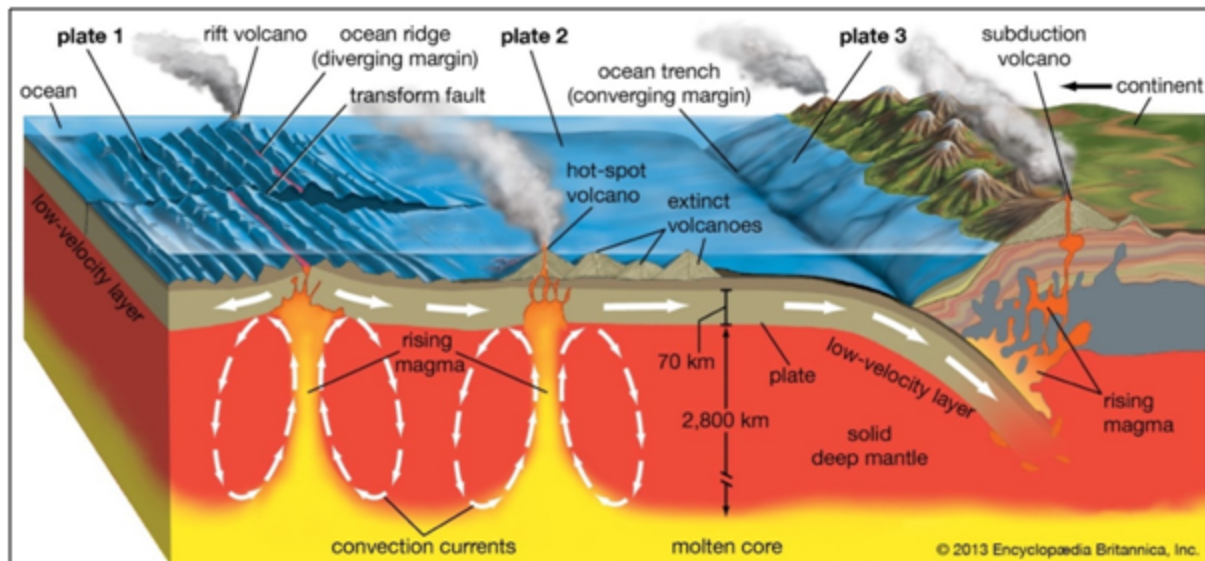
The eruption of Mount Nyiragongo in Democratic Republic of Congo poured lava into villages, leaving at least 15 dead.

#### **Volcanoes:**

A volcano is an opening on the surface of a planet that allows material warmer than its surroundings to escape from its interior.

On Earth, volcanoes are most often found where tectonic plates are diverging or converging, and most are found underwater.





### ➤ "Covid-19: Make it the Last Pandemic"

**Why in News:** The Independent Panel for Pandemic Preparedness and Response (IPPPR) recently released a report titled "Covid-19: Make it the Last Pandemic". The panel was established by the World Health Organization (WHO) Director-General in response to the 73rd World Health Assembly held in May, 2020.

The mission of the Independent Panel is to provide an evidence-based path for the future, to effectively address health threats.

### Key findings of the report

- The catastrophic scale of the Covid-19 pandemic could have been prevented, but a series of bad decisions allowed Covid-19 to kill at least 3.3 million people and destroy the global economy.
- With respect to the initial outbreak, there were delays in China -- but there were delays everywhere.
- If travel restrictions had been imposed more quickly and more widely, the disease would not have spread rapidly across the world.
- Poor strategic choices, unwillingness to tackle inequalities and an uncoordinated system allowed the pandemic to turn into a catastrophic human crisis.
- Institutions failed to protect people and science-denying leaders eroded public trust in health interventions.