drishti

Current Affairs
(CONSOLIDATION)

JULY 2020
(PART – I)

Contents

Polity and Governance

Highlights

- *Padmanabhaswamy Temple Case*
- *Andhra Pradesh Poll Panel Chief Case*
- *Extra-judicial Killings*
- *Committee on Criminal Law Reform*
- *Friends of Police in Tamil Nadu*
- *Indian Railways to Use More Renewable Energy*
- *Attorney General of India: Article 76*
- *Duties of Prime Minister: Article 78*
- *Online Education*
- *Digital Accountability and Transparency Act: DATA*
- *Powers of Election Commission to Delay Polls*
- *Fugitive Economic Offenders Act, 2018*
- *Digital India Atmanirbhar Bharat Innovate Challenge*
- *Performance Assessment of Highways by NHAI*

- *Affordable Rental Housing*
- *Complexes for Urban Migrants*
- *Draft Aids to Navigation Bill 2020*
- *FASTag Details for New Vehicle Registration*
- *ASEEM Portal*
- *New Defence Weapons Approved*
- *Privatisation of Railways*
- *India's Second Voluntary Review of SDGs*
- *PRAGYATA: Guidelines on Digital Education*
- *Faulty Education Guidelines in Rajasthan*
- *Strength of CoM in Madhya Pradesh*
- *India Cycles4Change Challenge*
- *Rabari, Bharvad and Charan of Gujarat*
- *Accelerate Vigyan Scheme: SERB*

Padmanabhaswamy Temple Case

Why in News

Recently, the **Supreme Court (SC) upheld the right of the Travancore royal family** to manage the property of deity at **Sree Padmanabhaswamy Temple** in Thiruvananthapuram (Kerala).

➢ The Temple has been in the news since 2011 after the discovery of treasure worth over Rs. 1 lakh crore in its underground vaults.

Key Points

➢ **Judgement:**
- ○ SC **reversed the 2011 Kerala High Court decision,** which had directed the Kerala government to set up a trust to control the management and assets of the temple.
- ○ The State High Court (HC) had ruled that the **successor to the erstwhile royals could not claim to be in control of the Sree Padmanabhaswamy**

Temple after the **amendment of definition of 'Ruler' in Article 366 (22)** of the Constitution of India.
- ● The definition of Ruler was amended by the **26ᵗʰ Constitutional Amendment Act, 1971** which abolished the privy purses.
- ● Article 366 (22) reads, 'Ruler' means the Prince, Chief or other person who, at any time before the commencement of the 26ᵗʰ Constitutional Amendment Act, 1971, was recognised as the Ruler of an Indian State or was recognised as the successor of such Ruler.
- ○ However, the SC rejected this and said that, **as per customary law,** the members of the royal family have the **shebait rights** even after the death of the last ruler.
  - ● **Shebait rights** means **right to manage the financial affairs of the deity**.
- ○ The SC held that, **for the purpose of shebait rights the definition of Ruler would apply** and would transfer to the successor.
➢ **Administrative Committees:**
- ○ The SC accepted the submission of the royal family

that the temple is a **public temple** and directed setting up of an **administrative committee with the Thiruvananthapuram District Judge as its chairperson**, for its transparent administration in the future.

- The other members of the committee would be a nominee of the trustee (royal family), the chief thanthri of the temple, a nominee of the State and a member nominated by the Union Ministry of Culture.

○ The SC **also ordered a second committee** to be constituted to advise the administrative committee on policy matters.

- This would be **chaired by a retired High Court judge** nominated by the Chief Justice of the Kerala High Court.

○ The primary duties of the two committees would be to preserve the treasures and properties.

➢ **Background:**

○ As per the **Instrument of Accession** signed between the princely states and the Government of India, the administration of the Padmanabhaswamy Temple was **vested in trust of the Ruler of Travancore**, since 1949.

○ **In 1971, privy purses to the former royals were abolished** stripping their entitlements and privileges.

○ In 1991, when the last ruler of Travancore Chithira Thirunal Balarama Varma passed away, his brother Uthradam Thirunal Marthanda Varma took over the temple management.

○ This created a furore that he had no legal right to claim the control or management of the temple.

○ However, the royal family continued to manage the affairs of Sree Padmanabhaswamy Temple till the Kerala High Court in 2011 ruled that the family cannot continue to exert its shebait rights.

Sree Padmanabhaswamy Temple

➢ According to Historians, the temple dates back to the **8th century** but the present structure was built in the 18th century by the then Travancore **Maharaja Marthanda Varma.**

○ The temple was initially made of wood but later it was constructed with granite.

➢ The temple is built in the unique **Chera style of architecture** and its **main deity is Lord Vishnu** who is found in the *Anantha Shayana* posture (reclined

posture of eternal yoga) on *Adishesha* or king of all serpents.

➢ It is known to be **one of the 108 holy temples associated with Vaishnavism in India.**
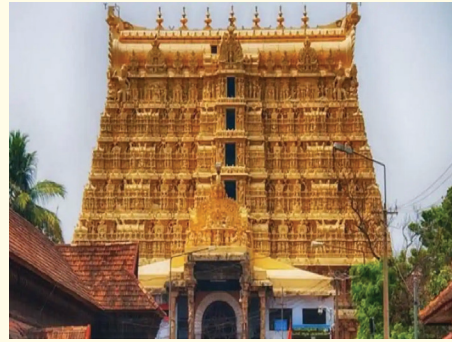
Andhra Pradesh Poll Panel Chief Case

Why in News

Recently, the **Supreme Court (SC) of India** refused to pass any interim orders on the Andhra Pradesh government's plea to stay the Andhra Pradesh High Court order, which set aside the recent ordinance passed by the Andhra Pradesh government.

Key Points

➢ **The Andhra Pradesh Panchayat Raj (Second Amendment) Ordinance, 2020**, was brought to amend **Section 200** of the Andhra Pradesh Panchayat Raj Act, 1994.

➢ **Amendments:**

○ **Restricted** the **State Election Commissioner (SEC)** post **to only** retired High Court judges.

- Prior to the amendment, **retired bureaucrats were also eligible** for the post.

○ **Curtailed the tenure** of the SEC from five years to three years.

- This compelled the then incumbent SEC to step down and a new Commissioner was appointed.

○ The amendments under the ordinance were challenged in the High Court.

➢ **High Court Ruling:**

○ The High Court (HC) had **set aside the amendments on restriction of SEC post**, by saying the ordinance

does not qualify the **test of reasonableness** specified in **Article 14** of the Constitution of India.

- The HC also observed that the **appointment of the newly incumbent** has been made by the Governor in exercise of the power **under Section 200 of the Andhra Pradesh Panchayat Raj Act and not under Article 243K(1) of the Constitution**.

○ The court also **set aside the amendment on the tenure of SEC.**

- It ruled that the SEC is a **Constitutionally defined functionary** under Article 243K of the Constitution, and it has a right to function till completion of tenure.
- According to **Article 243K (2)** of the Constitution, the SEC shall not be removed from his office except in like manner and on the like ground as a Judge of a High Court and the conditions of service of the State Election Commissioner shall not be varied to his disadvantage after his appointment.

Doctrine of Reasonability Test:

➤ It has been propounded by the Indian Judiciary. According to it any exception to equality is permissible only if the State has justifiable reasons for treating people differently.

➤ It means if the law makes a reasonable classification of a group for special treatment, it will not violate Article 14.

○ **E.g** Affirmative actions as provided under Article 15 and Article 16 of the Constitution.

Extra-judicial Killings

Why in News

Recently, Vikas Dubey, a gangster was killed by the Uttar Pradesh Police in an encounter (extra-judicial killing). Many experts raised questions on the encounter and demanded a judicial enquiry into the matter.

Key Points

➤ **Rights of Police:**

○ The police force has the right to injure or kill the criminal, **for the sole and only purpose of self-defense** or **where it is imminently necessary for the maintenance of peace and order**.

- Under **Section-96** of the **Indian Penal Code (IPC)**, every **human being** has the **right to private defense** which is a natural and an inherent right.
- **Section-46** of the **Criminal Procedure Code (CrPC)** authorises the police to use force, extending up to the cause of death, as may be necessary to arrest the person accused of an offence punishable with death or imprisonment for life.

➤ **Reasons behind Increasing Extra-judicial Killing:**

○ **Public Support:** It emerges out of a lack of faith in the judiciary because many believe that the courts will not provide timely justice.

- The fact of getting away with cold-blooded murders is the key reason behind police getting bolder by the day and killing at will.

○ **Political Support:** Many leaders project encounter numbers as their achievement in maintaining law and order.

○ **Rewards:** The police forces are very often rewarded and awarded for encounters.

- The government provides promotion and cash incentives to the teams involved in the encounters.

○ **Ineffective Institutions:** The **National Human Rights Commission** (NHRC) and the state human rights commissions have been redundant for many years.

- Though the judiciary is fully empowered to take up such cases suo-moto, however, this has now become a very rare practice.

○ **Hero-worshipping:** The police become heroes in the society as many people see them doing the job of cleaning up the Indian society by killing the criminals.

- Many times they are also projected as heroes on the silver screen with big budget films made on them and their 'heroic' acts.
- Amidst all the hero-worshipping, the people, the media and even the judiciary seem to cast aside the fact that all the killings are suspect unless they have been properly investigated and the real story established.

➤ **Constitutional Provision:**

○ The Constitution of India intended for India to be a country governed by the **rule of law.**

- As per the rule of law, the Constitution is the supreme power in the land and the legislative

Note:

and the executive derive their authority from the constitution.

○ There is a procedure prescribed by the law for **criminal investigation** which is embedded in the Constitution under **Article 21 as the Right to Life and Personal Liberty**. It is fundamental, non-derogable and is available to every person. Even the State cannot violate that right.

● Hence, it is the responsibility of the police to follow the Constitutional principles and uphold the Right to Life of every individual whether an innocent one or a criminal.

➢ **Supreme Court Guidelines:**

○ In the *PUCL vs State of Maharashtra case (2014),* the SC was dealing with **writ petitions** questioning the genuineness of **99 encounter killings by the Mumbai Police** in which **135 alleged criminals** were shot dead **between 1995 and 1997.**

○ The Supreme Court then laid down the following **16 point guidelines** as the **standard procedure** to be followed for **thorough, effective and independent** investigation in the cases of death during police encounters. Some of which include:

● **Record tip-off (intelligence) regarding criminal activities** pertaining to the commission of a grave criminal offence.

● **Registering FIR:** If in pursuance to a tip-off, the police uses firearms and this results in the death of a person, then an **FIR initiating proper criminal investigation must be registered and be forwarded to the Court** without any delay.

● **Independent Probe: Investigation** into such death must be done **by an independent CID team or a police team of another police station** under the supervision of a senior officer. It has to fulfil eight minimum investigation requirements like, identify the victim, recover and preserve evidentiary material, identify scene witnesses, etc.

● **Inform NHRC:** The NHRC or State Human Rights Commission (as the case may be) must be **immediately informed** of the encounter death.

● **Prompt Action:** Amounting to an offence under the IPC, **disciplinary action must be initiated against the police officer** found guilty of wrongful encounter and for the time being that officer must be suspended.

○ The Court directed that these requirements/norms must be **strictly observed** in all cases of death and grievous injury in police encounters by treating them as a **law declared under Article 141** of the Indian Constitution.

➢ **NHRC Guidelines:**

○ In **March 1997, Justice M. N. Venkatachaliah** (the then chairperson of the NHRC), asked all States and Union Territories to ensure that police follows the following set of guidelines in cases of encounter killings:

● **Register FIR:** When the in-charge of a Police Station receives information about the deaths in an encounter, he shall **record that information in the appropriate register.**

● **Investigation:** Received information shall be regarded as **sufficient to suspect and immediate steps** must be undertaken to investigate the relevant facts and circumstances leading to the death so as to ascertain, if any, offence was committed and by whom.

● **Compensation:** It can be granted to the dependents of the deceased when the police officers are prosecuted on the basis of the results of the investigation.

● **Independent Agency:** Whenever the police officers belonging to the same police station are the members of the encounter party, it is appropriate that the cases for investigation are referred to some other **independent investigation agency,** such as State CID.

○ In 2010, NHRC extended these guidelines by including:

● **Magisterial Probe:** A **magisterial enquiry** must be held in all cases of death which occurs in the course of police action, as expeditiously as possible (preferably **within three months).**

● **Reporting to Commission:** All cases of deaths in police action in the states shall be preliminary **reported to the Commission** by the Senior Superintendent of Police/Superintendent of Police of the District **within 48 hours** of such death.

■ A **second report** must be sent in all cases to the Commission **within three months** providing hnnnnnnn gn like a post mortem report, findings of the magisterial enquiry/ enquiry by senior officers, etc.

Note:

Committee on Criminal Law Reform

Why in News

Recently, the **Ministry of Home Affairs (MHA)** has constituted a **national level committee for reform in criminal law.**

Key Points

➢ **Committee For Reform In Criminal Law:**
  ○ The committee has been constituted under **Ranbir Singh** and several other members**.**

➢ **Background of Criminal Justice System:**
  ○ The codification of **criminal laws** in India was done during the **British rule**, which more or less remains the same even in the 21st century.
  ○ **Lord Thomas Babington Macaulay** is said to be the chief architect of **codification of criminal laws** in India.
  ○ Criminal law in India is governed by **Indian Penal Code, 1860**, **Code of Criminal Procedure, 1973**, and **Indian Evidence Act, 1872**, etc.

➢ **Need for Reforms:**
  ○ **Colonial Era Laws:** The criminal justice system is a replica of the British colonial jurisprudence, which was designed with the purpose of **ruling the nation and not serving the citizens.**
  ○ **Ineffectiveness:** The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but nowadays the system has become a tool of harassment of common people.
  ○ **Pendency of Cases:** According to **Economic Survey 2018-19**, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualisation of the maxim **"Justice delayed is justice denied."**
  ○ **Huge Undertrials:** India has one of the world's largest number of undertrial prisoners.
    • According to **NCRB – Prison Statistics India** (2015), 67.2% of our total prison population comprises **undertrial prisoners.**
  ○ **Investigation:** Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.

  ○ **Madhav Menon Committee:** It submitted its report in 2007, suggesting various recommendations on reforms in the **Criminal Justice System of India (CJSI)**.
  ○ **Malimath Committee Report:** It submitted its report in 2003 on the CJSI**.**
    • The Committee had opined that the **existing system "weighed in favour of the accused and did not adequately focus on justice to the victims of crime."**
    • It has provided various **recommendations** to be made in the CJSI, which were not implemented.

Suggestions for Reforms

➢ Criminal law is considered to be the most apparent expression of the **relationship between a state and its citizens.** Therefore, any revision to the CJSI needs to be done while keeping several principles in mind, which are:
  ○ The **reason for victimization** ought to be given a major thrust in reforming laws to identify the **rights of crime victims.**
    • **For Example:** Launch of victim and **witness protection schemes**, use of victim impact statements, increased victim participation in criminal trials, enhanced access of victims to compensation and restitution.
  ○ The **construction of new offences** and reworking of the existing classification of offences must be guided by the principles of criminal jurisprudence which have substantially altered in the past four decades.
    • **For Example:** Criminal liability could be graded better to assign the degree of punishments. New types of punishments like **community service orders, restitution orders, and other aspects of restorative and reformative justice** could also be brought in its fold.
  ○ The **classification of offences** must be done in a manner conducive to management of crimes in the future.
    • Many chapters of the IPC are overloaded at several places. The chapters on offences against public servants, contempt of authority, public tranquility, and trespass can be redefined and narrowed.

Note:

- **Guiding principles** need to be developed after sufficient debate before criminalising an act as a crime.
  - Unprincipled criminalisation not only leads to the creation of new offences on unscientific grounds, but also arbitrariness in the criminal justice system.
- The **discretion of judges** in deciding the quantum and nature of sentence differently for crimes of the same nature should be based on principles of judicial precedent.

Friends of Police in Tamil Nadu

Why in News

Recently, the services of **Friends of Police (FOP)** has been suspended in Tamil Nadu.

Key Points

➢ The move came after a controversy over FOP volunteers being engaged in beating of P. Jayaraj and his son J. Benicks, which led to their **death in custody**.

➢ The FOP **is a Community Policing initiative** that aims to bring police and public closer. It was **started in 1993** in Ramanathapuram district of Tamil Nadu.

➢ **Issues Involved:**
  ○ The 3rd Tamil Nadu Police Commission Report, 2008 has said that the FOP scheme is not evaluated by an independent body and its usefulness is doubted by a section of people.
  ○ It has also mentioned that some undesirable persons enroll themselves under the FOP scheme and misuse the position.

➢ **Suggestion:** The 2008 police report had recommended that the FOP scheme should be modified as **Citizen Volunteers Scheme**.
  ○ It mentioned that the effort of Police must be to develop such a bond with the public that **all citizens are friends of Police, and not only a designated few.**

Community Policing
➢ The Basic Principle Underlying Community Policing is that **'A Policeman is a Citizen with Uniform and a Citizen is a Policeman without Uniform'.**

➢ It is defined as a law enforcement philosophy that allows police to continuously operate in the same area in order to create a stronger bond with the citizens living and working in that area.

➢ It helps in **reducing the trust deficit between police and public** as it requires the police to work with the community for prevention and detection of crime, maintenance of public order, and resolving local conflicts, with the objective of providing a better quality of life and sense of security.

➢ Examples of Community Policing in India are:
  ○ **Janamaithri Suraksha Project:** Kerala
  ○ **Joint Patrolling Committees:** Rajasthan
  ○ **Meira Paibi:** Manipur
  ○ **Community Policing Project:** West Bengal
  ○ **Maithri:** Andhra Pradesh
  ○ **Mohalla Committees:** Maharashtra

Indian Railways to Use More Renewable Energy

Why in News

The Indian Railways has decided to be **self-reliant for its energy needs** by utilizing its vacant lands for **Renewable Energy** (RE) projects.

➢ It will **utilize solar energy** for meeting its **traction (action of drawing or pulling something over a surface) power** requirements.

Key Points

➢ In January 2020, it was announced that the **entire network** of the Indian Railways will run on **electricity by 2024** and become a **net-zero emission network by 2030.**

➢ Indian Railways is adopting an **innovative concept of installation of solar projects along operational railway lines**. This will help in:
  ○ Preventing encroachment.
  ○ Enhancing the speed and safety of trains.
  ○ Reduction of infrastructure costs due to direct injection of solar power into the traction network.

➢ **Railway Energy Management Company Limited** (REMCL) is working continuously to further proliferate the use of solar energy on mega-scale.

Note:

➤ With these mega initiatives, Indian Railways is leading **India's fight against climate challenge** and is taking significant steps towards meeting its ambitious goal of being a net-zero **carbon emissions** organisation and meeting India's **Intended Nationally Determined Contributions (INDC) targets**.

➤ This would also help in making Indian Railways a **complete 'Green mode' of transportation** and '**Atmanirbhar (energy self-sufficient transport organisation)'**.

➤ **Achievements:**
  ❍ Energy procurement from various solar projects like **3 MWp solar plant** set up at Modern Coach Factory (MCF) Raebareli (Uttar Pradesh).
  ❍ About 100 MWp **rooftop solar systems** on various stations and buildings of Railways.
  ❍ A **project of 1.7 MWp** near Bina Traction Sub Station, Bina (Madhya Pradesh) connected directly to **Overhead Traction System** (OTS) will be commissioned shortly.
    ● This is the **first of its kind project in the world** authorised by Indian Railways in collaboration with **Bharat Heavy Electricals Limited** (BHEL).
      ▪ BHEL is one of the seven **Maharatna** companies.
      ▪ The project was undertaken by BHEL under its **Corporate Social Responsibility** (CSR) scheme.
    ● It involves the adoption of innovative technology for **converting Direct Current (DC) to single-phase Alternating Current (AC)** for feeding directly to Railway's overhead traction system.
    ● It can produce approximately 25 lakh units of energy annually and will save around Rs. 1.37 crore for Railways every year.

Overhead Traction System
➤ **Traction system** causes the propulsion of a vehicle in which tractive or driving force is obtained from various devices such as diesel engine drives, steam engine drives, electric motors, etc.
➤ When this **power supply is drawn from an overhead line system**, it is called an Overhead Traction System.

Railway Energy Management Company Limited
➤ It was incorporated on **16th August 2013** under the **Companies Act 1956** as a **joint venture company** of Ministry of Railways.

➤ **Objective:** To tap the business potential in the energy sector including green energy, power trading etc. by setting up renewable energy wind power projects, etc.

Attorney General of India: Article 76

➤ Recently, the central government has **extended the term of K.K. Venugopal** as Attorney General (AG) for one year who was appointed the 15th AG of India in 2017.

➤ The AG of India is a **part of the Union Executive** and is th**e highest law officer** in the country.

➤ **Article 76** of the Constitution provides for the office of AG of India.

➤ **Appointment and Eligibility:**
  ❍ AG is **appointed by the President on the advice of the government.**
  ❍ S/he must be a person who is **qualified to be appointed as a judge of the Supreme Court**, i.e. s/he must be a citizen of India and must have been a judge of some high court for five years or an advocate of some high court for ten years or an eminent jurist, in the opinion of the President.

➤ **Term of the Office:** Not fixed by the Constitution.

➤ **Removal:** Procedures and grounds for the removal of AG are not stated in the Constitution. S/he **holds office during the pleasure of the President** (may be removed by the President at any time).

➤ **Duties and Functions:**
  ❍ To give **advice to the Government of India (GoI) upon legal matters** which are referred to her/him by the President.
  ❍ To perform such **other duties of a legal character** that are assigned to her/him by the President.
    ● To appear on behalf of the GoI in all cases in the Supreme Court or in any case in any High Court in which the GoI is concerned.
    ● To represent the GoI in any reference made by the President to the Supreme Court under **Article 143** (Power of the President to consult the Supreme Court) of the Constitution.
  ❍ To discharge the functions conferred on her/him by the Constitution or any other law.

Note:

- **Rights and Limitations:**
  - S/he has the right to speak and to **take part in the proceedings of both the Houses of Parliament** or their joint sitting and any committee of the Parliament of which s/he may be named a member, but **without a right to vote.**
  - S/he **enjoys all the privileges and immunities** that are available to a member of Parliament.
  - S/he **does not fall in the category of government servants.** S/he is not debarred from private legal practice.
    - However, s/he should not advise or hold a brief against the GoI.
- **Solicitor General of India and Additional Solicitor General of India** assist the AG in fulfillment of the official responsibilities.
- **Corresponding Office in the States:** Advocate General **(Article 165)**.

Duties of Prime Minister: Article 78

Why in News

Recently, the **Prime Minister of India briefed the President** on 'issues of national and international importance'.

- The meeting took place against the backdrop of **border tensions with China**, economic crisis and the **Covid-19** situation.
- **Article 78** of the Constitution deals with the **duties of the Prime Minister** with respect to the **furnishing of information to the President**.

Key Points

- As per Article 78, following are the duties of the Prime Minister:
  a. To communicate to the President all decisions of the **Council of Ministers (CoM - Article 74)** relating to the administration of the affairs of the union and proposals for legislation;
  b. To furnish such information relating to the administration of the affairs of the Union and proposals for legislation as the President may call for; and

  c. If the President so requires, to submit for the consideration of the CoM, any matter on which a decision has been taken by a Minister but which has not been considered by the CoM.
- **Article 167** of the Constitution is a **corresponding article in the state executive.**

Online Education

Why in News

Recently, the Central government has proposed long-term measures to address social inequities in **online education**, as highlighted by the **Covid-19 pandemic**.

- The measures include plans to **distribute laptops or tablets** to 40% of all college and university students over the next five years and to **equip all government schools with Information and Communication Technology** (ICT).
- Earlier in April 2020, the Centre had announced to **start the 2020-21 academic year virtually**.

Key Points

- **Facilitation of Online Education:**
  - **Providing Laptops and Tablets:**
    - Providing these **devices to 4.06 crore students** (40% of the projected student population) **by 2026**, at a total cost of Rs. 60,900 crore.
    - The **Centre and State**s will share the cost in a **60:40 ratio**.
- **Installing ICT Facilities:**
  - The **Ministry of Human Resource Development** proposes to spend Rs. 2,306 crore on **developing and translating digital course content and resources** over the next five years.
  - Different **e-learning** techniques will be used like YouTube, Google Classroom, **SWAYAM Prabha portal**, **direct-to-home** (DTH), etc.
- **Sanitisation and Quarantine Measures before School Reopenings:**
  - The measures would include ensuring basic **water, sanitation and hygiene (WASH) facilities**, safe drinking water, availability of sanitiser, disinfectant, cleaning material and equipment for temperature checking.

Note:

Factors Affecting Online Education In India

Factors Affecting Online Education In India — COST OF ONLINE EDUCATION, AVAILABILITY OF QUALITY EDUCATION, YOUNG POPULATION, EMPLOYABILITY QUOTIENT, DISPOSABLE INCOME, GOVERNMENT'S DIGITAL INITIATIVES, INTERNET PENETRATION, SMARTPHONE USER BASE
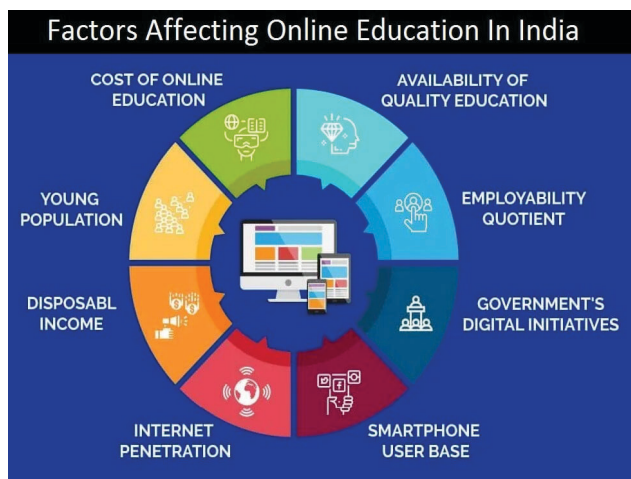
➢ **Financial Support:**
- ○ Under the **composite grant for schools**, ranging between **Rs. 25,000 for small schools with less than 100 students** and **Rs. 1 lakh for schools with over a thousand students** for awareness and community mobilisation to sensitise parents, students and local leaders about pandemics, social distancing and other preventive measures.
- ○ **Rs. 1,000 per teacher to encourage** them to function as first-level counsellors, disseminate basic information about Covid-19 and provide digital/online/mobile education.
- ○ **Rs. 1 lakh per school for sanitisation and quarantine measures** in preparation for the safe reopening of schools.
- ○ A proposed **budget of Rs. 55,840 crore to equip government schools** above the upper primary level, with ICT facilities.

Challenges

➢ **Social Inequity:**
- ○ e-Learning is a privilege for the students from middle and upper class but it has proved to be a nuisance for students from the lower middle class and people living **below the poverty line** (BPL).

➢ **Marketing of Education:**
- ○ Corporate houses, technology firms and educational institutions will be working closely to achieve the goals of e-learning which may aggravate the commercialisation of education and exclude the self-dependent tutors and students from economically weak backgrounds.

➢ **Technological Constraints:**

- ○ Poor students, who do not have access to e-resources (computers, laptops, internet connectivity), will not be able to attend classes from home.
- ○ Teachers too might have technical constraints and if teachers are equipped but the same might not be the case for the institutions.

➢ **Lack of Practical Learning:**
- ○ Most of the subjects like beauty culture, fashion design and tailoring, office management, travel and tourism, web design etc need practical learning so it is difficult to teach them from a distance.

➢ **Traditional classroom organisations** like schools and colleges, as social space (whereby a student not just learns the academic knowledge but many social skills also), **are indispensable**.

Digital Accountability and Transparency Act: DATA

Why in News

Recently, the **Comptroller and Auditor General (CAG)** has suggested **three-phase transition** to **mandatory digital payments, accounting, and transactions** for the Central government under a proposed project and law called **Digital Accountability and Transparency Act (DATA).**

Key Points

➢ The suggestions recognise the need of **digital public utilities.** It not only includes e-services but makes all government revenue and expenditure data electronic, machine-readable, purpose linked, non-repudiable, reliable, accessible and searchable.

➢ **Requirement for Digitisation, i.e.** 100 % end-to-end **electronic data capture**. This includes all receipts and expenditure transactions including demands, assessment, and invoices should be received, processed, and paid electronically.

➢ **Data governance** for standards across all government entities. Data standards are rules for describing and recording data elements with precise meanings and semantics that enable integration, sharing, and interoperability.

➢ **Technology architecture:** Under this all IT government systems should conform to a **prescribed open architecture framework** while ensuring robust security and maintaining privacy.

Note:

drishti

➢ **Benefits of Digitisation:**
  ○ It has many advantages, it recognises off-budget transactions, business continuity (e.g. electronic records cannot be lost or misplaced like files or paper records), and an incontrovertible audit trail.
  ○ It will also **enable Parliament and legislatures** to draw assurance that each rupee due to the government has been collected, and each rupee has been spent for the purpose it was allocated.
  ○ Prescribing data elements for all transactions will **ensure standardisation, clarify ambiguity, minimise redundant data, and create protocols** for integration across different databases.
  ○ It will enable the **use of cognitive intelligence tools** like analytics, artificial intelligence, machine learning, which in turn will support the establishment of budget baselines, detecting anomalies, data-driven project costing, performance comparisons across departments and agencies, and benchmarking.

Powers of Election Commission to Delay Polls

Why in News

Recently, various political parties have voiced their concerns over holding elections in Bihar amid **Covid-19 pandemic** and asked to postpone the same.

Key Points

➢ **Election Commission Mandate:**
  ○ The **Election Commission (EC) of India** is mandated under law to hold elections at any time within **six months before the five-year term** of the Lok Sabha or Legislative Assembly expires.
    ● The polls are timed in a way that the new Assembly or Lok Sabha is in place on the day of the dissolution of the outgoing House.
    ● For instance, in the case of Bihar, the EC should normally conduct Legislative Assembly elections before the end of its time on 29th November 2020.
  ○ **In the case of early dissolution**, EC has to ensure a new Lok Sabha or Assembly is in place **within six months of the dissolution.**

  ● The **six months** is the constitutionally defined limit between two sessions of the House/Assembly (Article 85(1) and Article 174(1) of the Constitution, respectively).

➢ **Postponement of Election:**
  ○ An election once called usually proceeds as per schedule. However, in some extraordinary circumstances, the process can be **postponed or even scrapped** after its announcement.
  ○ Under **Section 153 of the Representation of the People Act, 1951, read with Article 324 of the Constitution of India**, the EC can extend the time for completing an election, but such extension:
    ● Should **not go beyond the six months.**
    ● Should not go beyond the date of the normal dissolution of the Lok Sabha or the Assembly.
  ○ In 1991, the EC postponed the ongoing parliamentary elections for three weeks after Rajiv Gandhi's assassination during his campaign in Tamil Nadu.
    ● Recently, in March 2020 elections to 18 Rajya Sabha seats were postponed by the EC due to the Covid-19 pandemic.

➢ **Grounds for Election Postponement:**
  ○ **Article 172(1)** states that, i**n case of a state of Emergency**, an election can be postponed **for one year at a time in addition to a period of six months** after the Emergency is lifted.
  ○ There is **no specific legal provision** that specifies the circumstances under which elections can be deferred **in non-Emergency situations.**
  ○ However, law and order, natural calamities like earthquakes and floods, or any other compelling circumstances which are beyond EC's control **can be the grounds for extension.**

➢ **Legal Issues Involved:**
  ○ Powers under Section 153 can be exercised only after an election schedule has been notified.
  ○ If the EC wants to postpone Bihar elections, it will have to be done through its **extraordinary powers under Article 324.**
    ● Under Article 324 the EC will have to inform the government of its inability to hold polls on time.
    ● The government can decide the future course — to impose **President's Rule** or allow the incumbent Chief Minister to continue for six more months.

Note:

drishti

Fugitive Economic Offenders Act, 2018

Why in News

Recently, assets worth Rs. 329.66 crore of the Punjab National Bank (PNB) fraud mastermind Nirav Modi have been confiscated under Section 12(2) and (8) of the **Fugitive Economic Offenders Act, 2018**.

➢ In this **money laundering** case, the **Enforcement Directorate** (ED) has so far attached properties valued at Rs. 2,348 crore.

➢ The properties were earlier attached under the **Prevention of Money Laundering Act, (PMLA) 2002**.

➢ To proactively detect such frauds, the **Reserve Bank of India** (RBI) is in the process of putting together an exclusive wing for **banking fraud oversight.**

  ○ This wing will have teams for meta-data processing and analysis, **artificial intelligence** analysis units, as well as proactive risk assessment cells.

Key Points

➢ **Fugitive Economic Offenders Act, 2018:** It seeks to confiscate properties of economic offenders who have left the country to avoid facing criminal prosecution or refuse to return to the country to face prosecution.

  ○ **Fugitive economic offender:**

    ● A person against whom an arrest warrant has been issued for committing an offence listed in the Act and the value of the offence is at least Rs. 100 crore.

  ○ **Some of the offences** listed in the act are:

    ● Counterfeiting government stamps or currency.

    ● Cheque dishonour.

    ● Money laundering.

    ● Transactions defrauding creditors.

➢ **Declaration of a Fugitive Economic Offender:**

  ○ After hearing the application, a **special court** (designated **under the PMLA, 2002**) may declare an individual as a fugitive economic offender.

  ○ It **may confiscate properties** which are proceeds of crime, Benami properties and any other property, in India or abroad.

  ○ Upon confiscation, **all rights and titles of the property will vest in the central government**, free from encumbrances (such as any charges on the property).

  ○ The central government may appoint an administrator to manage and dispose of these properties.

➢ **Bar on Filing or Defending Civil Claims:**

  ○ The Act allows any **civil court or tribunal to prohibit** a declared fugitive economic offender, from **filing or defending any civil claim**.

  ○ Further, any **company or limited liability partnership** where such a person is a majority shareholder, promoter, or a key managerial person, may also be **barred from filing or defending civil claims**.

  ○ The authorities may **provisionally attach properties of an accused**, while the application is pending before the Special Court.

➢ **Powers:**

  ○ The authorities under the PMLA, 2002 will exercise powers given to them under the Fugitive Economic Offenders Act.

  ○ These **powers** will be **similar to those of a civil court**, including the search of persons in possession of records or proceeds of crime, the search of premises on the belief that a person is an FEO and seizure of documents.

Enforcement Directorate

➢ It is a **specialized financial investigation agency** under the **Department of Revenue, Ministry of Finance**.

➢ On **1st May 1956,** an 'Enforcement Unit' was formed in the Department of Economic Affairs for handling Exchange Control Laws violations under **Foreign Exchange Regulation Act, 1947**. In 1957, it was renamed as 'Enforcement Directorate'.

➢ ED enforces the following laws:

  ○ Foreign Exchange Management Act, 1999.

  ○ Prevention of Money Laundering Act, 2002.

Digital India Atmanirbhar Bharat Innovate Challenge

Why in News

Recently, the **Ministry of Electronics and Information Technology** and the **Atal Innovation Mission** (initiative by **NITI Aayog**) have launched the **Digital India Atmanirbhar Bharat Innovate Challenge**.

➢ This move comes after the Central government's decision to **ban 59 Chinese apps**.

➢ Further, the **Covid-19 pandemic** has brought about a big disruption in the day-to-day lives, which is being tackled through the use of technology.

Key Points

➢ The challenge would **encourage Indian application developers and innovators** and facilitate their ideas and products.

➢ It will be **jointly hosted** by the **governmen**t and **members of the tech community** to make it more holistic.

➢ **Objectives:**
  ○ To help create an **Atmanirbhar (self-reliant) app ecosystem**.
  ○ To give **better visibility and clarity to existing apps** to achieve their goals.
  ○ To **create tech products helpful in finding solutions to tech problems**, with the help of mentorship, tech support and guidance during the entire life-cycle.

➢ The challenge will run in **two tracks**:
  ○ **Track-01: Promotion of existing apps.**
    ● For the promotion of existing apps and platforms across the categories of e-learning, work-from-home, gaming, business, entertainment, office utilities and social networking, the government will provide mentoring, hand-holding and support.
  ○ **Track-02: Development of new apps.**
    ● For incubating new apps and platforms, the initiative will provide support in ideation, incubation, prototyping, roll out and market access.

Performance Assessment of Highways by NHAI

Why in News

Recently, the **National Highways Authority of India (NHAI)** has decided to undertake **performance assessment and ranking of the highways** in the country.

➢ The assessment activity majorly intended to **improve the quality of roads** in the country.

National Highway Authority of India (NHDP)

➢ It was set up under **NHAI Act, 1988**.

➢ It is under the administrative control of the **Ministry of Road Transport and Highways**.

➢ It has been entrusted with the **NHDP**, along with other minor projects for development, maintenance and management.
  ○ NHDP is a project to **upgrade, rehabilitate and widen major highways in India** to a higher standard.
  ○ It was started in **1998**.

➢ NHAI **maintains the National Highways network** to global standards and cost effective manner and promotes economic well being and quality of life of the people.

Key Points

➢ **Parameters for Assessment:**
  ○ The criteria for the assessment have been broadly categorised in three main heads namely, **Highway Efficiency (45%), Highway Safety (35%) and User Services (20%)**.
  ○ Additionally, important parameters like operating speed, time taken at toll plaza, road signages, road markings, accident rate, illumination, availability of **Advanced Traffic Management System** (ATMS), functionality of structures, cleanliness, plantation, wayside amenities and customer satisfaction will also be considered while conducting the assessment.
  ○ Apart from overall ranking of all the corridors, **separate ranking for Build-Operate-Transfer (BOT), Hybrid Annuity Model (HAM) and Engineering, Procurement, and Construction (EPC) projects** will also be done.
    ● **BOT** is a conventional **Public-private partnerships (PPP) model** in which a private partner is responsible to design, build, operate (during the contracted period) and transfer back the facility to the public sector.
    ● In the case of **HAM**, the central government bears 40% of the project cost and the remaining amount is arranged by the developer.
    ● Under the **EPC model**, the cost is completely borne by the government.
  ○ The ranking of the corridors will be **dynamic** and the operators will get the **opportunity to improve**

Note:

drishti

upon their ranking by improving the services on that corridor.

➤ **Significance:**
   ○ The score obtained by each corridor in each of the parameters will provide **feedback and corrective recourse** for **higher standards of operation, better safety and user experience** to improve existing highways.
   ○ It will also help in **identifying and filling gaps of design, standards, practices, guidelines and contract agreements** for other NHAI projects.
   ○ The ranking for BOT, HAM and EPC projects is expected to bring out **operational efficiency and ensure high quality maintenance** of roads.
   ○ On the basis of outcome of the assessment, the authority will undertake a **comprehensive analysis** and decide on the **level of intervention required** to enhance the overall service quality.

Affordable Rental Housing Complexes for Urban Migrants

Why in News

Recently, the Union Cabinet has approved a scheme for providing **affordable rental housing** to about **3 lakh urban migrants.**

➤ It will be a **sub-scheme of the Pradhan Mantri Awas Yojana-Urban** that is implemented by the **Ministry of Housing and Urban Affairs**.

➤ The creation of **Affordable Rental Housing Complexes (ARHCs)** is as a part of the government's **economic package** to address the **Covid-19 crisis**.

➤ The scheme is in line with the vision of **Atmanirbhar Bharat**.

Key Points

➤ **Target Beneficiaries:** Workers who come from rural areas or towns to work in manufacturing, hospitality, health, construction, etc.

➤ **Features:**
   ○ **Affordable Rental Housing:** About 1.03 lakh completed government-funded houses across cities that are yet to be allotted to beneficiaries (urban poor) under existing schemes would be converted into the rental housing complexes.

○ **Concession Agreements:** The conversion will be done through **concession agreements** for 25 years.
   • The States and Union Territories would invite bids to select concessionaires.
   • Concessionaires will make the complexes livable by repair/retrofit and maintenance of rooms and filling up infrastructure gaps like water, sewer/septage, sanitation, road, etc.
   • Complexes will revert to **Urban Local Bodies (ULB) after 25 years** to run on their own.
○ **Special Incentives to Entities:** Special incentives like **concessional loan at priority sector lending rate,** etc. will be offered to private/public entities to develop ARHCs on their own available vacant land for 25 years.
○ **Technology Innovation Grant**: Under it, an **expenditure of Rs. 600 crore would be provided** for projects using identified innovative technologies for construction.

➤ **Significance:**
   ○ **Creation of New Ecosystem:** It will create a **new ecosystem in urban areas** making housing available at affordable rent close to the place of work. Hence, cutting down unnecessary travel, congestion and pollution.
   ○ **Investment Opportunities:** It would create a **conducive environment for entities** to develop AHRCs on their own vacant land which would enable new investment opportunities and promote entrepreneurship in the rental housing sector.
   ○ **Employment:** Covid-19 **pandemic** has resulted in massive reverse migration of workers/ urban poor. Investment under ARHCs is expected to create new job opportunities.

Pradhan Mantri Awas Yojana-Urban
➤ It was launched in **2015** by the **Ministry of Housing and Urban Affairs**, in which affordable housing would be provided to the **urban poor** with a target of building **20 million affordable houses by 31st March 2022**.
➤ It provides central assistance to ULBs and other implementing agencies through States/UTs.
➤ **Eligibility:** All statutory towns as per **Census 2011** and towns notified subsequently would be eligible for coverage under the Mission.
➤ **Provisions:**

○ In-situ rehabilitation of existing slum dwellers using land as a resource through private participation.

○ Credit linked subsidy.

○ Affordable housing in partnership.

○ Subsidy for beneficiary-led individual house construction/enhancement.

➢ The mission promotes **women empowerment** by providing the ownership of houses in the name of female members or in joint name.

Draft Aids to Navigation Bill 2020

Why in News

Recently, the **Ministry of Shipping** has issued the **draft** of the **Aids to Navigation Bill, 2020** for suggestions from the stakeholders and general public.

➢ It aims to regulate **state-of-the-art technologies of marine navigation** which was earlier used to tangle in statutory provisions of the **Lighthouse Act, 1927**.

➢ **A navigational aid** is any kind of marker which aids the traveler in navigation, usually nautical or aviation travel. Common types of such aids include **lighthouses, buoys, fog signals, and day beacons.**

Key Points

➢ **Replacement of Lighthouse Act:** It is proposed to replace the **nine decades old colonial Lighthouse Act, 1927,** to incorporate the **global best practices**, **technological developments** and India's **International obligations** in the field of aids to **marine navigation**.

○ It also provides for **identification and development of heritage lighthouses.**

○ **The Lighthouse Act** is an act **relating to the provision, maintenance and control of lighthouses.** It was enacted by the Brtishers in 1927.

➢ **Empowerment of DGLL:** It provides for empowering **Directorate General of Lighthouses and Lightships (DGLL) with additional power and functions** such as vessel traffic service, wreck flagging, training and certification, implementation of other obligations under International Conventions, where India is a signatory.

➢ **Offences:** It comprises a **new schedule of offences**, along with commensurate penalties for obstructing and damaging the aids to navigation, and non-compliance with directives issued by the Central Government and other bodies.

➢ **Aids to Navigation Cess:** Every ship arriving at or departing from any port in India will have to **pay cess at rates** notified by the Central government.

○ Currently, the Central government, as per the provisions of the Lighthouse Act, levies **light dues** on all the foreign going ships arriving at or departing from any port in India.

○ **Light dues** are the charges levied on **ships** for the maintenance of lighthouses and other aids to navigation.

Significance

➢ **Proactive Approach:** The draft bill is part of the **proactive approach** adopted by the Ministry of Shipping by repealing archaic colonial laws and replacing it with modern and contemporary needs of the maritime industry.

○ The new law **encompasses a major shift from lighthouses to modern aids** of navigation.

➢ **Misinterpretation of the Lighthouse Act:** It is often seen that the Act is **misinterpreted by the custom department under the Customs Act of 1962** and has led to incorrect collection of a huge sum of light dues thereby putting financial & economic burden upon citizens.

➢ **Strengthening of the Provisions:** The suggestions from the public and stakeholders will strengthen the provisions of the legislation. This is in line with the vision for augmenting **people's participation and transparency** in the **governance**.

Directorate General of Lighthouses and Lightships

➢ It is a subordinate office under the **Ministry of Shipping** to provide general aids to marine navigation along the Indian coast.

➢ **Mission:** To help the mariners and local fisherman to navigate safely in the Indian waters.

➢ **Headquarters:** Noida, Uttar Pradesh.

FASTag Details for New Vehicle Registration

Why in News

Recently, the **Ministry of Road Transport and Highways (MoRTH)** has decided to ensure capturing of

Note:

drishti

FASTag details while registering or issuing fitness certificates to vehicles all over the country.

➢ Besides facilitating smooth commutation/transit, use of **electronic medium of FASTag payment**, would also help in **checking Covid-19 spread** as cash payment is avoided.

FASTag

➢ Introduced in **2017,** it is an **electronic toll collection system** with reloadable tag feature which **allows automatic deduction of toll** without having to stop for carrying out the cash transaction.
  ❍ The reloadable tag allows addition of monetary values multiple times.
➢ It is operated by the **National Highway Authority of India (NHAI)** under the supervision of MoRTH.
➢ The tag uses **Radio Frequency IDentification (RFID) technology** and is fixed on the windscreen of the vehicle once active.
  ❍ **RFID** is the **use of radio waves to read and capture information stored** on a tag attached to an object. A tag can be read from up to several feet away and does not need to be within the direct line-of-sight of the reader to be tracked.
➢ It is linked to a prepaid account from which the applicable toll amount is deducted.
  ❍ Consumers avoided using it following complaints of technical glitches, and money getting deducted twice from their bank accounts or e-wallets.

Key Points

➢ The MoRTH has directed the **National Information Centre (NIC)** to ensure details of the electronic toll collection device are captured on **VAHAN portal.**
  ❍ The full integration of **National Electronic Toll Collection (NETC) with VAHAN portal** has been achieved and the portal is now getting all information on FASTags through **Vehicle Identification Number/ Vehicle Registration Number (VIN/VRN).**
➢ **VAHAN Portal:** It acts as an **integrated solution for vehicle registration** for the State Transport Department. It helps in various processes like fitness, taxes, permits & enforcement to get computerized.
  ❍ The State Transport Department is governed by both Central Motor Vehicle Regulation (CMVR) and state specific Motor Vehicle Regulation (State MVR).

❍ Consequently, VAHAN was conceptualized as a product that would capture the functionalities **mandated by CMVR as well as state MVRs**.
➢ **National Electronic Toll Collection:** It was developed by **National Payments Corporation of India (NPCI) in 2016** for electronic toll collection at toll plazas using FASTag.

ASEEM Portal

Why in News

The **Ministry of Skill Development and Entrepreneurship (MSDE)** has launched **Aatmanirbhar Skilled Employee Employer Mapping (ASEEM) portal** to help skilled people find sustainable livelihood opportunities.

➢ The portal is expected to improve the information flow and bridge the demand-supply gap in the skilled workforce market.

Key Points

➢ **Development and Management: National Skill Development Corporation** (NSDC) in collaboration with 'Betterplace', a Bengaluru-based company.
➢ **Artificial Intelligence (AI) Based Platform:**
  ❍ It will provide **real-time data analytics** about the demand and supply patterns including industry requirements, skill gap analysis, demand per district/state/cluster, key workforce suppliers, key consumers, migration patterns and multiple potential career prospects for candidates.
  ❍ It will enable **policymakers** to take a more objective view of various sectors in the economy.
  ❍ Driven by Prime Minister's assertion of 'India as a talent powerhouse' at the **India Global Week 2020 Summit**, it will further **re-engineer the vocational training landscape** in the country ensuring skilling, up-skilling and reskilling in a more organised set up.
➢ **Functioning:** Also available as an application (app), it consists of three IT based interfaces:
  ❍ **Employer Portal:** Employer onboarding, demand aggregation and candidate selection.
  ❍ **Dashboard:** Reports, trends, analytics and highlight gaps.
  ❍ **Candidate Application:** Create and track candidate profile and share job suggestions.

Note:

➢ **Benefits:**
  ❍ **To Skilled Workforce:**
    ● It will have provision for registration and data upload for workers across job roles, sectors and geographies.
    ● It will help in strengthening industry-relevant skills and explore emerging job opportunities especially in the **post-Covid-19** era.
    ● Candidate data coming to **Skill India Portal** from various state and central skilling schemes will be integrated including that from **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**, Fee-based Programs, **National Urban Livelihoods Mission**, **Deen Dayal Upadhyaya Grameen Kaushalya Yojana**, etc.
  ❍ **To Migrants:**
    ● **Database of labour migrants** in Indian states and overseas citizens, who returned to India under the **Vande Bharat Mission** and filled **SWADES Skill Card**, has been integrated with the ASEEM portal.
  ❍ **To Employers:** They will be able to assess the availability of a skilled workforce and formulate their hiring plans.

National Skill Development Corporation

➢ NSDC is a **not-for-profit public limited company incorporated in 2008** under **section 25 of the Companies Act, 1956** (corresponding to section 8 of the Companies Act, 2013).

➢ It was **set up by the Ministry of Finance** as a **Public Private Partnership (PPP)** model.
  ❍ The Government of India through the **Ministry of Skill Development and Entrepreneurship (MSDE) holds 49%** of the share capital of NSDC, while the private sector has the balance 51% of the share capital.

➢ **Aim:**
  ❍ To promote skill development by catalyzing creation of large, quality and for-profit vocational institutions.
  ❍ To enable a support system which focuses on quality assurance, information systems and train the trainer academies either directly or through partnerships.

➢ **Skill India Portal** is an initiative by the NSDC.

New Defence Weapons Approved

Why in News

Recently, the **Defence Acquisition Council (DAC)** approved several proposals that will boost the combat capabilities of all three services—Army, Navy and the Air Force.

Key Points

➢ **Proposals:** It includes **buying of missile systems and additional fighter jets.**
  ❍ The government will buy 33 aircrafts, which include 21 MiG-29s from Russia, 12 new Sukhoi-30 fighters from **Hindustan Aeronautics Limited (HAL).**
    ● It also includes upgradation of 59 MiG-29 jets.
  ❍ Under the missile system, the government will buy **Pinaka ammunition**, **Astra Beyond Visual Range (BVR) air-to-air missiles**, land-attack **cruise missile (LACM) systems with a range of 1,000 km** among others.

➢ **Cost of Proposal:** It will cost around Rs. 39000 crore. The acquisitions from Indian Industry will cost around Rs. 31,130 crore and rest acquisitions will be done from Russia.

➢ **Pinaka Ammunition:**
  ❍ It is an **all-weather, indirect fire, free flight artillery rocket** system developed by **Defence Research and Development Organisation (DRDO).**
  ❍ The Pinaka weapon system consists of Rocket, Multi Barrel Rocket launcher, Battery Command Post, Loader cum Replenishment Vehicle, Replenishment Vehicle and Digicora MET Radar.

➢ **Astra Missiles:**
  ❍ **Astra missile** is developed by Defence Research and Development Organisation (DRDO).
  ❍ It is a **Beyond Visual Range (BVR)** class of **Air-to-Air Missile (AAM) system** designed to be mounted on fighter aircraft. It has capability to destroy the enemy targets which are beyond their visual range.
  ❍ The missile has all weather day and night capability and will serve as a force multiplier and immensely add to the strike capability of the Navy and Air Force.

Note:

➢ **Long-Range Land Attack Cruise Missile Systems:**
  ○ It is developed by Defence Research and Development Organisation (DRDO).
  ○ It is aimed at enhancing the firing range of the **Brahmos missile** from 400-500 km to 1000 km.
  ○ Its features include aerodynamic configuration, vertical launch using solid booster, thrust vector control system, booster separation, in-flight wing deployment, in-flight engine start and long range way-point navigation system".
  ○ The proposed development of fully indigenous long-range land attack cruise missiles can greatly enhance the operational capability of services.

➢ **MIG 29 Fighter jets:**
  ○ It is a **twin-engine, multirole fighter jet, developed by the Soviet Russia** in the 1970s. It has been upgraded since.

➢ **Su-30 MKI Fighter jets:**
  ○ The Sukhoi Su-30 is a **twin-engine, two-seat supermaneuverable fighter aircraft** developed by Russia's Sukhoi Aviation Corporation.
  ○ It is a multirole fighter for all-weather, air-to-air and air-to-surface deep prohibition missions.

Defence Acquisition Council

➢ It is the **highest decision-making body in the Defence Ministry** for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.

➢ The **Minister of Defence is the Chairman** of the Council.

➢ It was formed, after the Group of Ministers recommendations on '**Reforming the National Security System',** in 2001, post Kargil War (1999).

Privatisation of Railways

Why in News

Recently, the Ministry of Railways has taken the **first step towards privatisation of railways** by inviting **Request for Qualifications (RFQ)** to private players for operation of passenger train services.

Key Points

➢ **Privatisation Project:**

  ○ Under this at least 151 modern trains will be introduced and 109 pairs of routes will be planned out for private train operations.
  ○ Train **sets have to be brought by private operators and maintained by them.**
  ○ Fares in private trains will be competitive and prices on other modes of transport like airlines, buses have to be kept in mind while fixing the fares
  ○ Private participation in passenger train operations will only be **5% of the total operations of Railways. 95% of trains** will still be run by Indian Railways.
  ○ The project will bring private sector investment of about Rs. 30,000 crore.

➢ **Reason Behind Privatisation:**
  ○ To develop India's railway infrastructure to provide travel services to all its passengers.
    ● According to the 2019-20 data, the Railways ferried 8.4 billion (840 crore) passengers in 2019-20, about five crore passengers could not be accommodated, meaning their wait-listed tickets were dropped.
    ● During the busy seasons/summer season nearly 13.3% passengers were not able to get confirmed reservations.
  ○ Induction of **modern technology and reduction in transit time** and the demand-supply deficit in train tickets.

➢ **Benefits:**
  ○ Confirmed tickets and faster trains for passengers.
  ○ Trains would run faster and would be safer and provide more facilities.
  ○ Reduction in maintenance cost of train coaches.
    ● The train coaches now required maintenance after they ran 4,000 km, but modern coaches would need maintenance after every 40,000 km or once or twice in 30 days.
  ○ Reduction in railways loss. Currently, the railways makes losses in passenger services.
  ○ Provide revenue to railways for future operations.
    ● The private entity will pay the Railways fixed haulage charges, energy charges as per actual consumption and a share in gross revenue determined through the bidding process.
  ○ RFQ had been issued under the **Make in India** policy. So the coaches would have to be manufactured in India.

- This will create jobs and utilisation of local components in manufacturing.

➤ **Issues Involved:**

○ There is fear that it will lead to increase in fair prices of rail travel and job losses.

○ It will harm the interest of marginalised communities (Scheduled Castes, Scheduled Tribes and Other Backward Classes), who get reservation under the government jobs.

- Currently there is no reservation in private sector employment.

India's Second Voluntary Review of SDGs

Why in News

Recently, India has represented the **second voluntary national review** of **Sustainable Development Goals (SDGs)** report titled as '**Decade of Action: Taking SDGs from Global to Local**' to the **United Nations High-level Political Forum**.

➤ The report, presented by the **NITI Aayog**, discusses SDGs related policy, means of implementation and situation of **Covid-19** in India.

➤ It presented the **first** voluntary national review of SDGs in **2017.**

Key Points

➤ **Localising SDGs:** The goal wise account of the progress on SDGs has been represented with examples of a range of diverse practices and success stories of interventions from the states, specifically **Aspirational Districts**.

➤ **Financial Assistance:** Highlighted the challenges thrown up by the Covid-19 outbreak, India has called on developed countries to provide **financial assistance** to the developing countries, especially for **global public good such as climate change mitigation and control of pandemics.**

○ According to a study conducted by the government in partnership with the **International Monetary Fund (IMF)**, education, health, electricity, roads, water and sanitation will require additional funding for significant progress.

➤ **Curbing Illicit Financial Flows:** Deliberating on the 'SDG-17' that is about 'partnerships for the goals', the report highlighted the need for international cooperation for curbing illicit financial flows.

➤ **Efforts to curb the Covid-19:** The report mentioned the vulnerabilities faced by the migrants and the urban poor in the wake of the pandemic.

○ India is leading a multi-faceted effort to revamp the public health infrastructure, protect jobs and livelihoods to reduce the impact of the Covid-19.

○ Government has announced **economic relief packages** for them.

United Nations High-Level Political Forum

➤ Formed in 2013, it is a subsidiary body of both the **United Nations** General Assembly and the **United Nations Economic and Social Council** responsible for the entire organization's policy on sustainable development.

➤ **Headquarter:** New York, USA.

➤ It adopts negotiated declarations, reviews commitment and the progress of the **2030 Agenda for Sustainable Development.**

➤ Member countries are required to apprise about the progress in the form of **Voluntary National Review reports (VNRs).**

○ The VNRs that are presented by the member states are a critical component of the **review of the implementation and progress** of 2030 Agenda and SDGs.

○ The process of the preparation of a country's VNR provides a platform for the partnerships, which includes the participation of various stakeholders.

○ India's VNR in 2020 undertook a paradigm shift in terms of embodying a **'whole of society' approach** in letter and spirit.

- It has been prepared with the help of sub-national and local governments, civil society organizations, local communities, people in vulnerable situations and the private sector.

- NITI Aayog has the mandate of overseeing the adoption and monitoring of SDGs at the national and sub-national level.

Note:

drishti

PRAGYATA: Guidelines on Digital Education

Why in News

Recently, the **Ministry of Human Resource Development (MHRD)** has released **guidelines on digital education** titled **'PRAGYATA'**.

➢ The guidelines have been prepared by the **National Council of Educational Research and Training (NCERT)**.

➢ These are **only advisory in nature** and state governments **can formulate their own** rules, based on local needs.

➢ The guidelines include **eight steps of online/digital learning** namely: **P**lan-**R**eview-**A**rrange-**G**uide-**Y**ak(talk)-**A**ssign-**T**rack-**A**ppreciate.

Key Points

➢ **Digital Access:**

❍ Over **25 crore students** across the country have been out of school since mid-March 2020 due to **Covid-19 pandemic**. The guidelines acknowledge that these students live in households which fall into **different categories**:

● Those who have computers or smartphones with **4G** internet access.

● Those with smartphones but limited or no internet access.

● Those with television with cable or **Direct-to-Home** (DTH).

● Those with a radio set or a basic mobile phone with FM radio.

● Those with no communication devices at all.

❍ It emphasised the aim of **digital classrooms** is not to try and **recreate Face-to-Face (F2F) classrooms** over the internet.

➢ **Need for Survey:** It advises **schools to first survey the digital infrastructure available** with teachers as well as students, the levels of parental involvement before making decisions about the mode of teaching.

❍ Therefore, schools must also make arrangements to reach students who do not have **access to any digital infrastructure** at home.

➢ **Duration:** For **kindergarten, nursery and pre-school**, **only 30 minutes** of screen time per day for interacting with parents is recommended.

❍ Schools can hold live online classes for a maximum of **1.5 hours per day** for **classes 1ˢᵗ to 8ᵗʰ** and **3 hours per day** for **classes 9ᵗʰ to 12ᵗʰ**.

➢ **Synchronous or Real-time Communication:** This is **real-time teaching** and learning that can happen **collaboratively** at the same time with a group of online learners or individuals and teachers **allowing instant feedback.** For example, online teaching through video conference, audio conference, using satellite or telecommunication facilities.

❍ However, schools should not assume that teaching-learning through it is the only requirement in order to **support effective digital learning**.

➢ **Asynchronous Learning:** Apart from live classes, it offered a number of recommendations for **asynchronous learning** with tools to allow students to download **lessons or listen to radio and TV programmes**, communicate through Whatsapp and SMS, study on their own and **undertake creative projects**.

➢ **Health Issues:** Children exposed to digital technologies or gadgets for a longer time are prone to severe health issues.

❍ Hence, sitting with digital gadgets for longer hours or their excess use can be avoided by **designing age appropriate schedules.**

➢ **Cyber Safety:** It also recommends ethical practices including precautions and measures for maintaining cyber safety.

➢ **Convergence:** It envisages convergence **with the government initiatives on digital education** like **SWAYAM Prabha**, **SWAYAM**, **DIKSHA** and **Radio Vahini**, **Shiksha Vaani**, etc.

National Council of Educational Research and Training

➢ It is **an autonomous organisation** of the Government of India which was established in 1961 as a literary, scientific and charitable Society under the **Societies Registration Act, 1860**.

➢ **Aim:** To reform the school education system through research, training, policy formulation and curriculum development.

➢ **Headquarters:** New Delhi.

Note:

Faulty Education Guidelines in Rajasthan

Why in News

Recently, the **National Commission for Protection of Child Rights** (NCPCR) has criticised the Rajasthan government for its **new guidelines on elementary education**.

➢ The new guidelines **violate the Right to Education (RTE) Act, 2009**.

➢ They **deny** children from **economically weaker sections** the right to free education in **nursery classes**.

Key Points

➢ **Background:**

○ Rajasthan's Department of School Education issued guidelines stating that **admissions to private schools** under the RTE Act, 2009 for the 2020-21 academic year would take place **only from class 1 or above, excluding pre-schoolers** (children in the nursery).

○ The guidelines recommend the age of admission to be "**5 years or above but less than 7 years as of 31st March 2020**".

➢ **Violations:**

○ These guidelines are **violative of the RTE Act 2009** which states that **at least 25%** strength of a class in private schools should **consist of children belonging to weaker sections and disadvantaged groups**.

○ The guidelines **only allow children less than 7 years** but the RTE Act allows "**male or female child of the age of six to fourteen years**" for admission.

➢ **NCPCR's Reaction:**

○ It recommended the **state to re-examine the guidelines** in light of the Act and make necessary changes so that there is no loss of education to children.

Right to Education

➢ **Constitutional Background:**

○ **Part IV of Indian Constitution**, **Article 45 and Article 39 (f) of Directive Principles of State Policy** (DPSP), has a provision for state-funded as well as equitable and accessible education.

National Commission for Protection of Child Rights

➢ It is a **statutory body** set up in **March 2007** under the **Commissions for Protection of Child Rights (CPCR) Act, 2005**.

➢ It is under the **administrative control of the Ministry of Women and Child Development**.

➢ **Mandate:**

○ To ensure that all laws, policies, programmes and administrative mechanisms are in consonance with the child rights perspective as enshrined in the Constitution of India and also the **United Nations Convention on the Rights of the Child, 1989**.

➢ **Powers:**

○ It **monitors the implementation of Protection of Children from Sexual Offences (POCSO) Act, 2012**.

○ It can **inquire into complaints about violation of the law and can summon an individual, demand evidence, seek a magisterial enquiry**.

○ The first official document on the Right to Education was the **Ramamurti Committee Report in 1990**.

○ In *Unnikrishnan JP vs State of Andhra Pradesh & Others, 1993* the Supreme Court held that education is a **fundamental right flowing from Article 21.**

○ **Tapas Majumdar Committee (1999)** was set up, which encompassed the insertion of **Article 21-A**.

○ The **86th amendment** to the constitution of India in **2002**, provided Right to Education as a **fundamental right in Part III of the Constitution**.

● It inserted **Article 21-A which made Right to Education a fundamental right** for **children between 6-14 years**.

● It provided for follow-up legislation for the **Right to Education Bill 2008** which became an Act in 2009.

➢ **Feature of RTE Act, 2009:**

○ It aims to provide **primary education** to all children aged **6 to 14 years** and enforces education as a **Fundamental Right (Article 21)**.

○ The act **mandates 25% reservation for disadvantaged sections** of the society where disadvantaged groups **include:**

● Scheduled Castes (SCs) and Scheduled Tribes (STs).

Note:

- Socially Backward Class.
- Differently-abled.
○ **Children Related Provisions:**
  - It makes provisions for a **non-admitted child to be admitted to an age-appropriate class**.
  - It had a clause for '**No Detention Policy**' which has been removed under the **Right of Children to Free and Compulsory Education (Amendment) Act, 2019**.
  - It focuses on **making the child free of fear, trauma and anxiety** through a system of child-friendly and child-centred learning.
○ **Teachers Related Provisions:**
  - It provides for **prohibition of deployment of teachers for non-educational work**, other than **decennial census, elections** to a local authority, state legislatures and parliament and **disaster relief.**
  - It provides for the **appointment of teachers with the requisite entry and academic qualifications**.
○ It also talks about the **sharing of financial and other responsibilities** between the Central and State Governments.
○ It lays down the **norms and standards related to:**
  - Pupil-Teacher Ratios (PTRs).
  - Buildings and infrastructure.
  - School-working days.
  - Teacher-working hours.
○ It **prohibits:**
  - Physical punishment and mental harassment.
  - Screening procedures for admission of children.
  - Capitation fee.
  - Private tuition by teachers.
  - Running of schools without recognition.

Strength of CoM in Madhya Pradesh

Why in News

Recently, it has been alleged that the strength of the **Council of Ministers (CoM)** in Madhya Pradesh exceeds the prescribed Constitutional limit.

Key Points

➢ The recent expansion of the Ministry in Madhya Pradesh has increased the Council of Ministers strength to 34, which is **more than 15%** of the **effective strength** of the **legislators at 206.**
  ○ The effective strength of the House is calculated by **deducting the vacant seats** out of the total strength of the House.
➢ **Article 164 (1A)** of the Constitution prescribed that the **total number of Ministers, including the Chief Minister,** in the Council of Ministers in a State **shall not exceed 15% of the total number of members of the Legislative Assembly of that State.**
  ○ Provided that the number of Ministers, including the Chief Minister in a State **shall not be less than twelve.**
  ○ This provision was introduced through the **91st Constitution (Amendment) Act, 2003**.
➢ The Assembly strength of 228 dropped to 206 in March 2020, when 22 rebel Congress MLAs resigned, toppling the then government. Two seats fell vacant earlier owing to deaths.

Council of Ministers in State

➢ The Council of Ministers in the states is **constituted and function in the same way** as the Council of Ministers at the Centre.
➢ **Article 163 (1)** provides that **there shall be a Council of Ministers** with the **Chief Minister as the head** to aid and advise the Governor in the exercise of his functions.
  ○ However, the Constitution **does not specify** the size of the State Council of Ministers or the ranking of ministers. They are determined by the chief minister according to the exigencies of the time and requirements of the situation
➢ **Article 164 (1)** provides that the Chief Minister shall be **appointed by the Governor** and the other Ministers shall be appointed by the Governor on the advice of the Chief Minister.
  ○ However, in the states of **Chhattisgarh, Jharkhand, Madhya Pradesh and Odisha**, there shall be a **Minister in charge of tribal welfare** who may in addition be in charge of the welfare of the scheduled castes and backward classes or any other work.

Note:

➤ **Article 164 (2)** provides that the Council of Ministers shall be **collectively responsible to the State Legislative Assembly.**

➤ **Article 164 (4)** provides that a person can remain as Minister without being a member of the state legislature for a **period of six consecutive months.**

➤ **Article 164 (1B)** provides that a member of either House of state legislature **who is disqualified on the ground of defection shall also be disqualified** to be appointed as a Minister.

India Cycles4Change Challenge

Why in News

The **Smart Cities Mission** (under the **Ministry of Housing and Urban Affairs**) has opened the registration for **India Cycles4Change Challenge.**

➤ India Cycles4Change Challenge was **launched in June 2020.**

Key Points

➤ **Aim:** To inspire Indian cities to implement **quick cycling-friendly interventions** in the wake of **Covid-19** with the support of their citizens and assistance from experts.

  ❍ Cities would be encouraged to create extensive cycling-networks using low-cost methods like pop-up cycle lanes, non-motorised zones and set up community-led cycle rental schemes.

  ❍ In the longer term, the Smart Cities Mission encourages cities to convert temporary interventions into permanent.

➤ **Coverage:**

  ❍ The Challenge is open to all cities under the Smart Cities Mission, capital cities of States/UTs, and all cities with a population of more than 5 lakh population.

  ❍ All eligible cities can register and submit their applications on the portal (https://smartnet.niua.org/indiacyclechallenge/).

  ❍ The portal also has a registration form for citizens, experts, and Civil Society Organizations (CSOs) to express their interest in collaborating with the city for the project.

➤ **Functioning:** The Challenge will run in two stages.

  ❍ **Stage One** will run until October 2020 where cities will focus on piloting quick interventions to **promote cycling and developing a scale-up strategy.**

  ❍ In October 2020, 11 cities will be shortlisted and will receive Rs. 1 Crore award and guidance from national and international experts to further scale-up the initiatives in **Stage Two**, which will be held until May 2021.

➤ **Knowledge Partner:** The India Programme of the **Institute for Transportation and Development Policy (ITDP)** will be the knowledge partner of the Smart Cities Mission to assist the Mission in conducting this challenge and guiding cities in developing and implementing their proposals.

➤ **Need of Such an Initiative:**

  ❍ The need for **personalized forms of transport** is expected to increase as a response to Covid-19. Some Indian cities have already started working towards promoting cycling as a response to the pandemic.

    ● **Kolkata** has proposed a **dedicated cycle corridor** by reclaiming parking spaces.

    ● **In Guwahati**, the Green lane Foundation, with the support of the Bicycle Mayor of Guwahati and Pedal for a Change, is conducting a survey for citizens to vote for the best routes for bicycle lanes in the city.

Institute for Transportation and Development Policy

➤ It was founded in **1985** and is headquartered in **New York, USA.**

➤ It has grown from a small band of cycling activists to a leading organization in the fight to curb climate change, and transform streets for a better quality of life in cities.

➤ It works in all types of cities on five continents, with offices in China, Brazil, India, Indonesia, Kenya, Mexico and the United States.

➤ In **India**, the **Urban Works Institute**—a public charitable trust registered in the country—is ITDP's network partner that manages the ITDP India Program.

  ❍ The India Program works with cities to design and implement sustainable transport projects, and provide policy solutions to enhance social inclusion, reduce dependency on limited resources, improve road safety, and reduce carbon emissions.

○ A recent survey by the ITDP India Programme shows that **cycling would increase by 50-65%** as cities come out of lockdown.

- Cities around the world are leveraging the opportunity to expand their cycling networks and public bicycle-sharing systems.

○ Further, increasing cycling can help cities in a **green economic recovery.**

- Investments in cycling infrastructure have economic benefits of up to 5.5 times the initial investment.

- Cycling for short distances can result in an annual benefit of Rs. 1.8 trillion to the Indian economy.

Rabari, Bharvad and Charan of Gujarat

Why in News

Recently, the **Gujarat government** has decided to form a **five-member commission** to identify members of **Rabari, Bharvad and Charan** communities, who are eligible for benefits of **Schedule Tribe (ST) status**.

Key Points

➢ **Issue:**

○ In **October 1956**, the **central government conferred ST status** on people of **Rabari, Bharvad and Charan** communities, living in *nesses* (tiny, oval-shaped hutments made of mud) of **Gir, Barda and Alech areas** of Gujarat.

○ However, it has been alleged that a number of **people not living in** *nesses* have managed to **get ST certificates** and are **enjoying undue reservation benefits**, mainly in government jobs.

○ Leaders of these three communities and other communities as well, have been **protesting** for quite some time against this.

➢ **Objective of the Commission:**

○ To **resolve this issue and identify the legitimate beneficiaries** of ST status among the members of the three communities.

○ To **ensure** that the eligible members of the tribes are **not devoid of their right** and the **others do not get an undue benefit** in their names.

➢ **Composition:**

○ The five-member commission will comprise a retired judge of the high court as the head, two district judges, one retired forest officer and one retired revenue officer.

Rabari

➢ They **migrated from Rajasthan** via Kutch and now most of them live in the Okhamandal region of Jamnagar district.

➢ They speak '*Bhopa*' which is a **mixture of Gujarati, Kachchi, Marwari words and Pharasi** (Persian) and use **Gujarati script**.

➢ **Women stand in almost equal status** to that of men.

➢ The main economic activity is **sheep breeding and selling of milk**. Only a few of them own cultivable **agricultural land**. Recently, they have started engaging as **wage labourers in industrial establishments** both as skilled and unskilled labourers.

➢ They profess **Hinduism** and are followers of **Shiva and Shakti**.

➢ Their folk songs are called '*Siya*'.

Bharvad

➢ The term Bharwad is a modified form of the word '*Badawad*'.

○ 'Bada' means sheep and 'Wada' refers to compound or enclosure. The person who possesses compounds or pens is known as Badawad.

➢ They **communicate in Gujarati** and use **Gujarati script**.

➢ Bharwad **women have a lower status**.

➢ The Bharwads are **pastorals** who are permitted to graze their sheep and cattle in certain demarcated areas of the reserved forest. Some of them **possess dry agricultural land** and earn their livelihood as **agricultural labourers**.

➢ They profess **Hinduism** and **Krishna** is considered the supreme God.

Charan

➢ The Charan, also called **Gadhvi**, is a small tribe in Gujarat and the name Charan is derived from the word '*Char*' which means **grazing**.

➢ They **speak Gujarati** and use **Gujarati script**.

➢ They **marry within their community** and **practice monogamy**.

➢ The Charans are traditionally **cattle breeders**. They have also **adopted agriculture as their secondary occupation**.

➢ They profess **Hinduism** and the main deity is **Pithorai Mata**.

Scheduled Tribes

➢ As per **Census 1931**, Schedule tribes are termed as '**backward tribes**' living in the '**Excluded**' and '**Partially Excluded**' areas.

  ❍ The Constitution **does not define the criteria for recognition** of Scheduled Tribes and hence the definition contained in 1931 Census was used in initial years after independence.

➢ The **Government of India Act, 1935** called for the first time for representatives of 'backward tribes' in provincial assemblies.

➢ **Article 366 (25)** of the Constitution **only provides a process to define** Scheduled Tribes:

  ❍ Scheduled Tribes means such tribes, tribal communities, parts of or groups within such tribes or tribal communities as are deemed under **Article 342** to be Scheduled Tribes for the purposes of the Constitution.

  ❍ **Article 342 (1):** The President may with respect to any State or Union Territory, and where it is a State, after consultation with the Governor, by a public notification, specify the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory.

➢ The category of '**tribe**' entails a **social and cultural dimension** but the '**schedule tribe**' category has **political-administrative implications**.

➢ A majority of the ST population is **concentrated in the eastern, central and western belt** covering the nine states of **Odisha, Madhya Pradesh, Chhattisgarh, Jharkhand, Maharashtra, Gujarat, Rajasthan, Andhra Pradesh and West Bengal**.

  ❍ About **12%** inhabit the **North-eastern region**, about **5%** in the **Southern region** and about **3%** in the **Northern states**.

➢ The **Constitution (Scheduled Tribes) Order (Second Amendment) Bill, 2019** will amend **Part VI of the Constitution** (**Scheduled Tribes**) Order, 1950 that specifies the tribal and tribal communities which are deemed to be Scheduled Tribes.

➢ **Other Constitutional Provisions:**

  ❍ **Article 15 (4):** Special provisions for advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes (SCs) or the STs.

  ❍ **Article 16 (4):** Enables the state to make any provision for reservation of appointments or posts in favour of any backward class of citizens which, in the opinion of the state, is not adequately represented in the services under the state.

  ❍ **Article 46:** Promotion of educational and economic interests of Scheduled Castes (SCs), STs and other weaker sections.

  ❍ **Article 330 and 332:** Provides for specific representation through reservation of seats for SCs and STs in the Parliament and in the State Legislative Assemblies respectively.

  ❍ **Article 338 A:** Gives powers to the **National Commission for Scheduled Tribes** (NCST) to oversee the implementation of various safeguards provided to STs.

Accelerate Vigyan Scheme: SERB

Why in News

Recently, **the Science and Engineering Research Board (SERB)**, has launched a scheme called **Accelerate Vigyan (AV)** to strengthen **scientific research** mechanisms in the country.

Key Points

➢ **Objective:** To give more thrust on encouraging **high-end scientific research** and **preparing scientific manpower**, which can lead to careers in research and knowledge-based economy.

➢ **Vision:** To expand the research base, with **three broad goals** i.e. **consolidation/aggregation of all scientific programs**, **initiating high-end orientation workshops**, and **creating opportunities for research internships**.

➢ **Components:**

  ❍ **ABHYAAS Programme:** Under it, AV is inviting applications for the winter season (December 2020-January 2021).

Note:

drishti

- It is an attempt to **boost research and development** in the country by **enabling and grooming potential PG/PhD students** by means of developing their research skills in selected areas across different disciplines or fields.
- It has two components: High-End Workshops i.e. **KARYASHALA** and Research Internships i.e. **VRITIKA.**
- This is especially important for those researchers who have limited opportunities, access to facilities and infrastructure.

○ **SAMMOHAN:** It has been sub-divided into SAYONJIKA and SANGOSHTI.

- **SAYONJIKA** is an **open-ended program** to catalogue the capacity building activities in **science and technology** supported by all government funding agencies in the country.
- **SANGOSHTI** is a pre-existing program of SERB for the organisation of workshops.

➤ **Execution:** An **Inter-Ministerial Overseeing Committee (IMOC)** involving all the scientific ministries/departments has been constituted for the purpose of supporting SERB in implementing the AV scheme.

➤ **Significance:**
○ **Capacity Building:** The database of skilled manpower developed across different disciplines through all the sub-components of the AV would help in capacity building.
○ **Social Responsibility:** The scheme also seeks to garner the social responsibility of the scientific community in the country.

Science and Engineering Research Board

➤ It is a **statutory body** under the **Department of Science and Technology**, Ministry of Science and Technology established by an Act of the Parliament of India in 2009.

➤ It is chaired by the **Secretary to the Government of India in the Department of Science and Technology** and has other senior government officials and eminent scientists as members.

➤ It was set up for **promoting basic research in science and engineering** and to provide **financial assistance** to scientists, academic institutions, Research and Development laboratories, industrial concerns and other agencies for such research.

■■■

Note:

Economic Scenario

Highlights

- *Core Sector Shrinks by 23.4%*
- *Special Liquidity Scheme for NBFCs/HFCs*
- *Fall in Service Purchasing Managers' Index*
- *New National Logistics Law*
- *Equalisation Levy for Non-Resident E-Commerce Firms*

- *Rise in Food Grain Offtake by States*
- *Capital Infusion for the Insurance Companies*
- *Draft Rules for Code on Wages Act 2019*
- *Warning of Higher NPAs*
- *Retail Inflation Growth at 6.09%*

Core Sector Shrinks by 23.4%

Why in News

According to the data released by the Ministry of Commerce and Industry, **the eight core sector industries** contracted by 23.4% in May, 2020.

- In **April 2020** the eight core sectors had **contracted by 37%.**
- In **May 2019** the eight core sectors had **grown by 3.8%.**

Key Points

- **Core Sector Data: Except fertiliser**, all seven sectors — coal, crude oil, natural gas, refinery products, steel, cement, and electricity — had recorded negative growth in May.
  - The **fertiliser production** showed growth at 7.5% after two consecutive months of contraction.
  - The **steel and cement** showed a shrinkage of 48.4% and 22.2% respectively.
- **Reason:** The main reason for contraction was **factories remained affected** by a **lack of labour and cash shortages** owing to the nationwide lockdown.
- **Impact:** Experts are of the opinion that aftershocks of the **lockdown** will continue to affect domestic industry in coming months.
  - They will see a lower but certain contraction.

Core Sector Industries

- The **eight core sector industries** include coal, crude oil, natural gas, refinery products, fertiliser, steel, cement and electricity.

- These **comprise 40.27% of the weight of items** included in the **Index of Industrial Production (IIP).**
- The eight Core Industries in **decreasing order** of their weightage: **Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers.**

Industry	Weight (%)
Petroleum & Refinery production	28.04
Electricity generation	19.85
Steel production	17.92
Coal production	10.33
Crude Oil production	8.98
Natural Gas production	6.88
Cement production	5.37
Fertilizers production	2.63

Index of Industrial Production

- The Index of Industrial Production (IIP) is an indicator that **measures the changes in the volume of production of industrial products** during a given period.
- It is compiled and published monthly by the **National Statistical Office (NSO), Ministry of Statistics and Programme Implementation.**
- IIP is a **composite indicator** that measures the growth rate of industry groups classified under:

- ❍ **Broad sectors,** namely, Mining, Manufacturing, and Electricity.
  - ❍ **Use-based sectors,** namely Basic Goods, Capital Goods, and Intermediate Goods.
- ➤ **Base Year** for IIP is **2011-2012.**
- ➤ **Significance of IIP:**
  - ❍ It is **used by government agencies** including the Ministry of Finance, the Reserve Bank of India, etc, for policy-making purposes.
  - ❍ IIP remains extremely relevant for the calculation of the quarterly and **advance GDP estimates.**

Special Liquidity Scheme for NBFCs/HFCs

Why in News

Recently, the Central government has approved the proposal to launch a **Special Liquidity Scheme** for **Non-Banking Financial Companies (NBFCs)** and **Housing Finance Companies** (HFCs) to improve their liquidity position.

- ➤ In the Budget Speech of 2020-21, it was announced that a mechanism would be devised to **provide additional liquidity facility to NBFCs/HFCs** over that provided through the **Partial Credit Guarantee Scheme (PCGS)**.
- ➤ HFCs are specialized NBFCs that have a separate regulator **National Housing Bank (NHB).**

Key Points

- ➤ **Details of the Scheme:**
  - ❍ Under the scheme a **Special Purpose Vehicle (SPV)** would be set up to manage a Stressed Asset Fund (SAF) of the NBFCs/ HFCs.
  - ❍ The SPV will issue securities, which would be **guaranteed by the Government of India** and **purchased by the Reserve Bank of India (RBI) only.**
  - ❍ The proceeds of sale of such securities would be used by the SPV to acquire short-term debt of NBFCs/HFCs.
  - ❍ The Scheme will be **administered by the Department of Financial Services** (Ministry of Finance).
- ➤ **Eligibility for NBFCs/ HFCs:**
  - ❍ They should not have net **Non Performing Assets (NPAs)** of more than 6% as on 31st March 2019.

Non-Banking Financial Company

- ➤ NBFC is a company registered under the **Companies Act, 1956.**
- ➤ It is engaged in the **business of loans and advances, acquisition of shares/stocks/bonds/debentures/ securities** issued by Government or local authority or **other marketable securities** of a like nature, leasing, hire-purchase, insurance business, chit business.
- ➤ But, it **does not include** any institution whose principal business is that of **agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property.**
- ➤ A non-banking institution which is a company and has principal business of receiving deposits under any scheme or arrangement in **one lump sum or in installments by way of contributions or in any other manner,** is also a non-banking financial company (Residuary non-banking company).
- ➤ **Features of NBFCs**
  - ❍ NBFC cannot accept demand deposits.
  - ❍ NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself.
  - ❍ Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs.

  - ❍ They should have made net profit in at least one of the last two preceding financial years of 2017-18 and 2018-19.
  - ❍ They should not have been reported under SMA-1 or SMA-2 category by any bank for their borrowings during the last one year prior to 1st August 2018.
    - ● Banks classify borrowers into **Special Mention Accounts (SMA)** based on their delay in repayment.
      - ■ SMA-0 loans are overdue between 1 and 30 days.
      - ■ SMA-1 loans are overdue between 31 and 60 days.
      - ■ SMA-2 loans are overdue between 61 to 90 days.
    - ● The asset turns NPA after 90 days of being overdue.

Note:

- ➢ **Benefits:**
  - ○ Unlike the **Partial Credit Guarantee Scheme**, NBFCs/HFCs **do not have to liquidate their current asset portfolio** under this scheme.
    - ● Current assets are all the assets of a company that are expected to be used as a result of standard business operations over the next year.
  - ○ The scheme would also **act as an enabler for the NBFC to get investment grade for bonds issued.**
  - ○ The Scheme would benefit the real economy by **augmenting the lending resources** of NBFCs/HFCs/MFIs.
  - ○ This facility would **supplement the liquidity measures** taken so far by the Government and RBI.
- ➢ **Financial implication:**
  - ○ The direct financial implication for the Central government is Rs. 5 crore, which may be the equity contribution to the SPV.
  - ○ Beyond that, there is no financial implication for the government until the guarantee involved is invoked.
  - ○ However, on invocation, the extent of government liability would be equal to the amount of default subject to the guarantee ceiling, which has been set at Rs. 30,000 crore.

Fall in Service Purchasing Managers' Index

Why in News

The IHS Markit India Services Business Activity Index i.e Service **Purchasing Managers' Index (PMI)** has observed the **contraction of services sector activity** for the **fourth consecutive month** in June 2020.

- ➢ India's services sector activity remained in deep downturn in June as the Covid-19 pandemic **curtailed intakes of new work orders and disrupted business operations.**
- ➢ The Index is compiled by IHS Markit for **more than 40 economies worldwide**.
  - ○ IHS Markit is a **global leader in information**, analytics and solutions for the major industries and markets that drive economies worldwide.

Purchasing Managers' Index

- ➢ PMI is an index of the **prevailing direction of economic trends** in the **manufacturing and service sectors.**
- ➢ It consists of a diffusion index that summarizes whether market conditions, as viewed by purchasing managers, are expanding, staying the same, or contracting.
- ➢ The purpose of the PMI is to provide information about **current and future business conditions** to company decision makers, analysts, and investors.
- ➢ It is **different from the Index of Industrial Production (IIP)**, which also gauges the level of activity in the economy.
  - ○ IIP covers the **broader industrial sector** compared to PMI.
  - ○ PMI is **more dynamic** compared to a standard industrial production index.

Key Points

- ➢ **Current Scenario of Service Sector:**
  - ○ The IHS Markit Services PMI in June **rose to 33.7 from 12.6 in May (2020)**, indicating a **pick-up from the previous month**, although **any reading below 50** on this survey-based index **shows contraction**.
    - ● The index stood at a **record low of 5.4** in April 2020.
  - ○ India's services sector activity reported the **slower rate of decline** which is reflective of some **stabilisation** in activity levels.

Servicing Challenge

Service PMI — Composite PMI

2020: JAN 56.3 55.5, FEB, MAR, APR 5.4, MAY, JUN 33.7 37.8

Business activity falls sharply as crisis continues

Downturn may spill over into H2 unless infection rate controlled

Business confidence at a survey low since Dec 2005

Job losses on lower business needs, poor staff availability in some cases

Demand, exports remain stressed

Note:

- However, the **closures and temporary suspensions** are responsible for the **stabilization in service** activities.
  - ○ Additionally, **59 %** of firms reported **no change in output** since May. Meanwhile, **only 4 %** registered **growth**, while **37 %** recorded a **reduction**.
- ➢ **Reasons:**
  - ○ Sharp fall in total new orders due to reduced consumption habits.
  - ○ Closure of businesses due to the unfavourable environment.
  - ○ Steep drop in export sales.
  - ○ Job losses due to lower business requirements.
  - ○ Poor staff availability.
- ➢ **Significance of Service Sector:**
  - ○ The performance of the service sector is **critical to measure the economic situation** of the country as it accounts for the **two-thirds of total foreign direct investment** inflows into India and about **38% of India's exports**.
  - ○ The Service Sector has a **share of 57% in Gross Domestic Products (GDP)**, which is **maximum** among all three sectors-services, industry and agriculture.
- ➢ **Composite PMI Output Index:**
  - ○ It measures **combined services and manufacturing output** and **rose to 37.8 in June**, up from 14.8 in May.
    - However, 37.8 is still below the crucial 50 level signifying contraction.
  - ○ The PMI for manufacturing has also been released which is at **42.7** signifying **moderate fall** in **manufacturing** production.

New National Logistics Law

Why in News

The Ministry of Commerce and Industry is considering replacing the **Multimodal Transportation of Goods Act, 1993 (MMTG)** with a **National Logistics Efficiency and Advancement Predictability and Safety Act (NLEAPS)**.

- ➢ MMTG provides for the **regulation** of multimodal transportation of goods from any place in India to any place outside India.
  - ○ Multimodal transportation refers to a combination of more than one mode of movement, such as rail, road or sea, for end-to-end delivery of goods.
- ➢ It was introduced **to facilitate the exporters** and give them a sense of security in transporting their goods.

Key Points

- ➢ **Aim:**
  - ○ NLEAPS aims to **streamline the logistics ecosystem** in the country, with a view to promote growth of the sector.
  - ○ **Modernise and formalise** the logistics services and **promote digitisation** in the sector, which is key for the smooth movement of goods.
  - ○ To **reduce the logistics cost** from the present 14% of the **Gross Domestic Product (GDP)** to less than 10% of GDP.
- ➢ **Reason Behind New Law:**
  - ○ The new law tends to **define various participants** of the logistics sector and **create a light regulatory ecosystem**.
    - There is no clear definition of the logistics sector in the MMTG.
  - ○ The logistics sector with a market size of USD 160 billion is complex, with more than 20 government agencies, 40 partnering agencies, 37 export promotion councils, 500 certifications and 10,000 commodities.
- ➢ **Benefit:**.
  - ○ Effective implementation of the Act would help provide an impetus to trade, enhance export competitiveness, and improve India's ranking in the **Logistics Performance Index and Ease of Doing Business.**

Logistics Performance Index

- ➢ The Logistics Performance Index (LPI), **developed by the World Bank Group,** is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.
- ➢ The logistics performance (LPI) is the weighted average of the country's scores on the **six key dimensions:**

Note:

drishti

- ❍ Efficiency of the **clearance** process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs.
- ❍ **Quality of trade** and transport related infrastructure (e.g., ports, railroads, roads, information technology).
- ❍ Ease of **arranging competitively priced shipments.**
- ❍ Competence and quality of **logistics services** (e.g., transport operators, customs brokers).
- ❍ Ability to **track and trace consignments.**
- ❍ Timeliness of shipments in reaching destinations within the scheduled or expected **delivery time.**
- ➢ **India ranked 44ᵗʰ** on the **LPI in 2018.**

Equalisation Levy for Non-Resident E-Commerce Firms

Why in News

Recently, the Central government has stated that it will **not extend the deadline for payment of equalisation levy by non-resident e-commerce players**, even though a majority of them are yet to deposit the first installment of the tax.

- ➢ The **equalization levy** is aimed at taxing foreign companies which have a significant **local client base in India** but are billing them through their **offshore units,** effectively **escaping the country's tax system**.
- ➢ The step has come in the backdrop of the **United States Trade Representative (USTR) investigations into taxes adopted or under consideration by 10 nations, including India**, on revenues of American digital service companies like Netflix, Airbnb etc.

Key Points

- ➢ **Background for Equalization Levy:**
  - ❍ Equalisation levy at **6 %** has been in force **since 2016 on payment exceeding Rs 1 lakh a year** to a non-resident service provider for online advertisements.
    - ● It is now **applicable for e-commerce companies** that are sourcing revenue from Indian customers **without having tangible presence** here in the country.
  - ❍ The amendments to the **Finance Act, 2020** had expanded the ambit of the **equalisation levy for**

non-resident e-commerce operators involved in supply of services, including online sale of goods and provision of services, with the levy at the **rate of 2 %** effective April 1, 2020.

- ● The tax applies on e-commerce transactions on **websites such as Amazon.com. Google in particular** as the tax applies on advertising revenue earned overseas if those ads target customers in India.
- ➢ **Changes in Challan ITNS 285:**
  - ❍ The income tax department has modified **challan ITNS 285 (relating to payment of equalisation levy)** to enable payment of the first installment by non-resident e-commerce operators.
  - ❍ The challan also seeks **mandatory PAN** and provides for **'Outside India'** option while **seeking address**.
- ➢ **Penalties Involved:**
  - ❍ The **non-payment** could result in a **penalty equal to the amount of equalisation levy**, along with interest.
  - ❍ The **late-payment** would **attract interest** at the **rate of 1% per month** or part of the month.

Rise in Food Grain Offtake by States

Why in News

The **food grain procurement by states has risen** sharply due to **relief measures** being implemented in the wake of the **Covid-19 pandemic**.

- ➢ The **total amount of rice** utilised by the States and Union Territories (UTs) from the **Food Corporation of India (FCI)** under the Centre's various schemes is **192.34 lakh tonnes in 2020** as compared to **90.71 lakh tonnes in 2019.**

Key Points

- ➢ **Reasons:**
  - ❍ **Increased Entitlements:**
    - ● After the breakout of the Covid-19 pandemic, it was announced that **Priority Household (PHH)** and **Antyodaya Anna Yojana (AAY) cardholders** in the country would receive **free entitlement of 5 kg per person per month**, initially for three months (April to June) and **now extended up to November** 2020.

Note:

- This was in addition to their entitlement under the **National Food Security Act (NFSA) 2013.**
  - The Centre has also announced a scheme for providing wheat and rice to ration cardholders **not covered under the NFSA or Non-Priority Household (NPHH) cardholders** at the rate of Rs.21 per kg and Rs.22 per kg respectively.
    - This has been used by Tamil Nadu to provide additional entitlement of rice to about 85.99 lakh such cardholders.
  - ❍ **Needs of Migrants Labourers:** Aimed at addressing the requirements of **migrant labourers** who were not covered under the NFSA or any scheme of the States, the central government announced one more scheme i.e.**distribution of free food grains at 5 kg per person per month for May and June.**
- ➢ **Related Data:**
  - ❍ The data by FCI has revealed that the **seven States** i.e. Uttar Pradesh, Bihar, West Bengal, Maharashtra Andhra Pradesh, Tamil Nadu and Karnataka **availed over 60%** of the total quantity of rice during the pandemic.
  - ❍ As for **wheat**, the rate of increase in offtake was not so high (around 30%). Compared to 59.45 lakh tonnes lifted in the three months of 2019, it was 78.16 lakh tonnes in 2020.
    - **Rajasthan** had drawn the **highest quantity of 14.84 lakh tonnes** of wheat followed by Uttar Pradesh which has drawn 14.01 lakh tonnes.

National Food Security Act

- ➢ The enactment of the **National Food Security Act (NFSA) on 5th July 2013** marks a paradigm shift in the approach to **food security** from welfare to a rights based approach.
- ➢ The Act legally entitled **upto 75% of the rural population and 50% of the urban population** to receive subsidized food grains under the Targeted Public Distribution System.
- ➢ Under it, the **Antyodaya Anna Yojana (AAY -** launched in 2000**) households**, which constitute the poorest of the poor, **continue to receive 35 Kgs** of foodgrains per household per month.
- ➢ Households having **Priority Households (PHH) ration cards** are issued **8 kgs i.e. 5 and 3 Kgs of rice** monthly per beneficiaries at the rate of Rs. 3 and Rs. 15 respectively.

- ❍ 5 kgs is Central Scheme under National Security Act-2013 and 3 kgs is the state scheme.
- ❍ It targets the poor and vulnerable sections of the society such as **landless laborers, marginal farmers and wage earners of the informal sections** of the economy.

Capital Infusion for the Insurance Companies

Why in News

Recently, the Union Cabinet has approved the **capital infusion of Rs.12,450 crore in the three Public Sector General Insurance Companies (PSGICs)** namely **Oriental Insurance Company Limited (OICL)**, **National Insurance Company Limited (NICL)** and **United India Insurance Company Limited (UIICL).**

- ➢ The primary regulator for insurance in India is the **Insurance Regulatory and Development Authority of India (IRDAI).**

Key Points

- ➢ **Capital Infusion:**
  - ❍ The capital infusion of **Rs. 3,475 Crore** will be allocated to three PSGICs as the **first tranche** in the current financial year and the balance amount will be released in one or more tranches.
  - ❍ To give effect to the infusion, the authorised capital of NICL has been increased to Rs. 7,500 Crore and that of UIICL and OICL to Rs. 5,000 Crore respectively.
- ➢ **Impact:**
  - ❍ The capital infusion will enable the three PSGICs to improve their financial and solvency position.
  - ❍ It will also help to meet the insurance needs of the economy and enhance the capacity to raise resources and improve risk management.
- ➢ **Background:**
  - ❍ The government has **dropped the process of merger**, which was proposed, in the 2018-19 Budget, of these three PSGICs in view of the economic crisis created due to **Covid-19 pandemic**.
    - Instead, it has decided to focus on the profitable growth of these three PSGICs.
    - The **aim of the merger was to augment capital by listing the merged entity on stock exchanges,**

drishti

which would have brought down government equity (share).

- ○ The firms were also not in good shape.
  - As of the third quarter of 2019-20, NICL had a **solvency ratio** of 1.01, against the regulatory requirement of 1.5.
    - ■ The solvency ratio examines a company's ability to meet its long-term obligations.
  - Its **combined ratio** stood at 173%. If the ratio is below 100%, it indicates that the firm is making underwriting profits.
    - ■ The combined ratio is a measure of profitability used by an insurance company to gauge how well it is performing in its daily operations.
    - ■ **Underwriting profit** consists of the earned premium remaining after losses have been paid and administrative expenses have been deducted.
  - OICL had a solvency ratio of 1.54 and reported a combined ratio of 132%.
  - UIICL had a solvency ratio of 0.94, much below the regulatory requirement, with combined ratio at 127.62%.

Note:
- ➢ Public Sector Insurance Companies are under the **Department of Financial Service, Ministry of Finance. Life Insurance Corporation of India (LIC)** is the largest insurance company in India.

Draft Rules for Code on Wages Act 2019

Why in News

Recently, the **Ministry of Labour and Employment** has published the draft rules framed for the implementation of the **Code on Wages Act, 2019**.

- ➢ The latest draft rules are **similar to the preliminary draft published in November 2019** with **one major change**.
  - ○ The Ministry has **changed the work requirement for eligibility for minimum wages and other benefits from nine hours to eight**.
  - ○ The nine hours mentioned **earlier included one hour of rest**, which has **now been mentioned separately** from the eight working hours.

Code on Wages Act 2019

- ➢ Aims to **transform the old and obsolete labour laws** into **more accountable and transparent** ones and seeks to pave the way for the **introduction of minimum wages and labour reforms** in the country.
- ➢ **Removes the multiplicity of wage definitions**, which can significantly reduce litigation as well as compliance cost for employers.
- ➢ **Regulates the wages and bonus payments** in all employments where any industry, trade, business, or manufacturing is being carried out.
- ➢ **Links minimum wage** across the country to the **skills of the employee** and the **place of employment**.
  - ○ It simplifies the methodology to fix minimum wage by **doing away with the 'type of employment'**.
- ➢ It seeks to **universalise the provisions of minimum wages and timely payment** of wages to all employees irrespective of the sector and wage ceiling.
  - ○ It seeks to ensure '**Right to Sustenance**' for every worker and intends to **increase the legislative protection of minimum wage**.
  - ○ Employees getting **monthly salary** shall get the salary by **7th of next month**, those working on a **weekly basis** shall get the salary on the **last day of the week** and **daily wagers** should get it on the **same day**.
- ➢ The **Central Government is empowered to fix the floor wages** by taking into account the living standards of workers. It may set different floor wages for different geographical areas.
  - ○ The **minimum wages** decided by the central or state governments **must be higher than the floor wage**.
  - ○ Under the Constitution of India, **labour** is a subject in the **Concurrent List of the Seventh Schedule** where both the Central and State Governments are competent to enact legislation.
- ➢ **Calculation of Minimum Wage:**
  - ○ According to the draft rules, the **basis for calculating the minimum wage** would be a standard working-class family of one earning worker, a spouse and two children, a net intake of 2,700 calories per day each, 66 metres of cloth per year, rent expenditure equal to 10% of the food and clothing expenditure, fuel, electricity and other miscellaneous expenses of 20% of minimum wage and expenditure on children's education, medical care, recreation and contingencies amounting to 25% of the minimum wage.

➢ It subsumes the **following four labour laws**:
  ❍ The Payment of Wages Act, 1936.
  ❍ The Minimum Wages Act, 1948.
  ❍ The Payment of Bonus Act, 1965.
  ❍ The Equal Remuneration Act, 1976.
➢ The Centre shall constitute a **technical committee** which would **advise on the skill categories**, while an **advisory board may recommend the minimum wage**.

Types of Wages

➢ **Minimum Wage: International Labour Organisation** defines it as "the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract".
  ❍ The minimum wage includes the bare needs of life like food, shelter and clothing.
➢ **Living Wage:** It is the wage needed to provide the minimum income necessary to pay for basic needs based on the cost of living in a specific community.
  ❍ In addition to bare needs, a 'living wage' includes education, health, insurance, etc.
➢ **Fair Wage:** A 'fair wage' is a mean between 'living wage' and 'minimum wage'.
➢ **Starvation Wage:** It refers to the wages which are insufficient to provide the ordinary necessities of life.

Warning of Higher NPAs

Why in News

Recently, the **Reserve Bank of India (RBI)** Governor has warned that the economic impact of the **Covid-19 pandemic** would lead to higher **Non-performing Assets** and capital erosion of banks.

Key Points

➢ **Reasons:**
  ❍ Just in a span of decade, Indian economy has been hit by the **global financial crisis of 2008-09** and the **Covid-19 pandemic in 2020.**
  ❍ The current crisis may leave a longer impact on Indian economy, which is predicted to contract in the Financial Year (FY) 2020-21 for the first time in the past four decades.

❍ Uncertainty about:
  ● Full restoration of supply chains.
  ● Normalisation of demand conditions.
  ● Long term impact of the pandemic on India's potential growth.
➢ **Issues Involved:**
  ❍ Banks have poor asset quality, lack of profitability, loss of capital, excessive risk exposure, poor conduct, and liquidity concerns.
  ❍ There is also a **lack of a mechanism** to address bank failures.
  ❍ Stress on **Non-banking Finance Companies (NBFCs)** and **mutual funds** are emerging as crucial stress points in the financial system.
➢ **Suggestion:**
  ❍ The RBI Governor has advised all financial intermediaries to assess the impact of Covid-19 on their balance sheet, asset quality, liquidity, profitability and capital adequacy for the FY 2020-21 and to work out possible mitigating measures.
    ● The idea is to ensure continued credit supply to different sectors of the economy and maintain financial stability.
  ❍ Financial intermediaries should **make risk management** in tune with the emerging contingencies.
    ● The risk management includes, building buffers and raising capital, which will strengthen the internal defences of banks against the risks posed by Covid-19 also ensure credit flow.
  ❍ **Recapitalisation plan** for Public Sector Banks (PSBs) and private banks since the **minimum capital requirements** of banks may no longer be sufficient enough to absorb the losses.
    ● The minimum capital requirements of banks are calibrated based on historical loss events.

Retail Inflation Growth at 6.09%

Why in News

Recently, the **National Statistical Office (NSO)** released the retail inflation data, which rose to **6.09%** in the month of June, 2020.

➢ Retail inflation is measured by the **Consumer Price Index (CPI).**

Key Points

➢ The retail inflation growth was mainly due to a rise in **pulses and products** prices that saw a **16.68%** on-year rise in June.

  ○ Apart from pulses and products segment, the **meat and fish** segment saw a rise of **16.22%**, while that of **oils and fats** rose **12.27%** and **spices** prices gained **11.74%**.

➢ The retail inflation has grown beyond the **Reserve Bank of India's (RBI)** upper margin of 6%.

  ○ The Central government has mandated the RBI to keep inflation within the range of 4±2%.

  ○ This **inflation range (4% within a band of +/- 2%) was recommended by the committee headed by Urjit Patel** in 2014.

➢ The NSO also released the **Consumer Food Price Index (CFPI)** data which measures the inflation in the food basket.

  ○ The CFPI stood at 7.87% in the month of June. The CFPI for May was revised to 9.20%.

  ○ The reduction in CFPI is because of ease in supply related issues post lockdown.

➢ The government **has not released the retail inflation data for April and May.**

  ○ The price collection of Consumer Price Index (CPI) through personal visits of price collectors was suspended due to the announcement of nation-wide lockdown to contain spread of **Covid-19 pandemic.**

Inflation

➢ Inflation refers to the **rise in the prices of most goods and services** of daily or common use, such as food, clothing, housing, recreation, transport, consumer staples, etc.

➢ Inflation measures the average price change in a basket of commodities and services over time.

➢ Inflation is indicative of the **decrease in the purchasing power** of a unit of a country's currency. This could ultimately lead to a deceleration in economic growth.

➢ However, a **moderate level of inflation is required in the economy** to ensure that production is promoted.

➢ In India, the **NSO** under the **Ministry of Statistics and Programme Implementation** measures inflation.

➢ In India, inflation is primarily measured by two main indices — **WPI (Wholesale Price Index)** and **CPI (Consumer Price Index)** which measure wholesale and retail-level price changes, respectively.

Consumer Price Index

➢ It measures price changes from the **perspective of a retail buyer.**

➢ The CPI calculates the difference in the price of commodities and services such as food, medical care, education, electronics etc, which Indian consumers buy for use.

➢ The CPI has several sub-groups including food and beverages, fuel and light, housing and clothing, bedding and footwear.

➢ Four types of CPI are as follows:

  ○ CPI for Industrial Workers (IW).

  ○ CPI for Agricultural Labourer (AL).

  ○ **CPI for Rural Labourer (RL).**

  ○ **CPI (Rural/Urban/Combined).**

  ○ Of these, the first three are compiled by the Labour Bureau in the **Ministry of Labour and Employment**. Fourth is compiled by the National Statistical Office (NSO) in the Ministry of Statistics and Programme Implementation.

➢ **Base Year** for CPI is **2012**.

➢ The **Monetary Policy Committee (MPC)** uses CPI data to control inflation.

■ ■ ■

Note:

International Relations

Highlights

- *Constitutional Amendments in Russia*
- *Natanz: Underground Nuclear Facility of Iran*
- *New Butanese Territory Claimed by China*
- *Economic Measures by India Against China*
- *USA, China Visa Curbs Over Tibet Issue*
- *Australia Suspends Extradition Treaty with Hong Kong*
- *Expat Quota Bill Approved in Kuwait*
- *USA's Position on CAATSA*
- *Hurdles for F-1 and M-1 Visa Holders in USA*

- *World Bank's Support to India for MSMEs*
- *Italian Marines Case*
- *Fishermen Issue with Sri Lanka*
- *UN Special Rapporteurs' Communication to India*
- *USA: India's Top Trading Partner*
- *India Global Week 2020: India Inc.*
- *Open Sky Agreement*
- *India-China*
- *244th Independence Day of USA*

Constitutional Amendments in Russia

Why in News

The Russian citizens have **supported** a set of constitutional amendments including **continuation of presidency by Vladimir Putin** in a recently held **referendum** in the country.

- ➢ The referendum was originally **planned for April 2020 but was delayed** due to the coronavirus outbreak.
  - ❍ A referendum is a **direct and universal vote** in which an entire electorate is invited to vote on a particular proposal and can have nationwide or local forms. It **supports direct democracy**.

Key Points

- ➢ **Other Aspects included in Refrendum:** Clauses related to the reorganisation of the government, introducing a higher minimum pension and wages, a ban on gay marriage, restricting top officials from holding dual citizenship, enshrining "faith in God" as a core value and emphasising the primacy of the Constitution over international treaties and rulings.
- ➢ **Clause for Continuation of Presidency Term:**
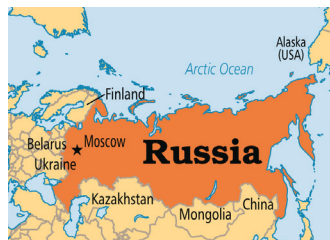
- ❍ The Russian Constitution **bars more than two consecutive presidential terms**.
- ❍ The new Constitution **doesn't change the two term limit in theory**, but in practice, it **resets Mr. Putin's terms** so that it will be the first election under the new Constitution for him, to be held in 2024.
- ❍ According to the referendum the current President of Russia Vladimir Putin can stay in power for **two more six year terms (until 2036)** after his term expires in 2024.
- ➢ **Significance:**
- ❍ The amendments have **enhanced the powers of the State Council, an advisory body**. Overall, the changes will help to **tighten his grip over Russia**.
- ❍ The proposed changes had **already been approved by Parliament and the Supreme Court** but it was put to vote to **gain legitimacy and popular approval**.
  - The preliminary results released by the Election Commission showed that almost **78% of voters endorsed the amendments**, while **21% voted against them**. Some **65% voters had turned up** to cast their ballots.
- ➢ **Background:**
- ❍ Mr. Putin became President for the **first time in 2000**. After completing his two terms, he swapped the presidency with Mr. Dmitry Medvedv. During the Medvendv presidency, Mr. Putin **remained the centre of power** as **Prime Minister**.

Note:

- Mr. Medvedv **served one term** and stepped aside for Mr. Putin to assume the presidency again. Thus, Mr. Putin is now into the second term of his second stint as President, which will expire in 2024.

  ○ If Mr. Putin stays in power for two more terms, he will be the **longest serving Russian leader since Peter the Great**.

  - The **Tsar**, who built the Russian Empire, was in power **for 43 years** until his death in 1725.

➤ **Challenges Ahead:**

  ○ According to the International Monetary Fund (IMF), the **economy hasn't expanded in dollar terms** for a decade. The Fund estimates the **Gross Domestic Product (GDP) to shrink by 6.6% in 2020**.

  ○ The pandemic affecting local businesses and the falling oil prices reducing exports revenue.

  ○ In foreign policy, Russia's relationship with the West remains troublesome. The **sanctions imposed on Russia after the annexation of Crimea in 2014** are still in place.

  ○ Though Russia managed to prevent the collapse of the Syrian regime after its intervention in the civil war, the Syrian crisis is far from resolved.

  ○ Russia also faces allegations of interference in the elections of other countries.

Natanz: Underground Nuclear Facility of Iran

Why in News

Recently, a fire broke out at **Natanz**, an **underground nuclear facility of Iran** used for enriching uranium.

➤ Enriched uranium is a type of uranium in which the percent composition of uranium-235 is increased.

Key Points

➤ **Natanz:**

  ○ Located in **Iran's central Isfahan province in Tehran**, Natanz hosts the country's **main uranium enrichment facility**.

  ○ It is known as the first **Pilot Fuel Enrichment Plant** of Iran.

  - **Fordow Fuel Enrichment Plant (FFEP)** is Iran's second pilot enrichment plant.

○ It is among the sites monitored by the **International Atomic Energy Agency (IAEA)** after **Iran's 2015 nuclear deal with world powers** (the USA, the UK, France, China, Russia and Germany).

International Atomic Energy Agency

➤ Widely known as the world's **'Atoms for Peace and Development'** organization within the **United Nations** family, the IAEA is the international centre for cooperation in the nuclear field.

➤ It was **created in 1957** in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.

➤ **Headquarter: Vienna, Austria**.

➤ It works with its member states and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.

  ○ In **2005,** it was awarded the **Nobel Peace Prize** for its efforts towards a safe and peaceful world.

➤ **Functions:** It is an independent international organization that reports annually to the UN General Assembly. When necessary, the IAEA also reports to the UN Security Council in regards to instances of members' non-compliance with safeguards and security obligations.

➤ **Controversy:**

  ○ **IAEA Inspection:** Natanz became a point of controversy as **Iran refused to allow an IAEA inspector** into the facility in October 2019, after allegedly testing positive for suspected traces of **explosive nitrates**.

  - Nitrates are common fertilisers but when mixed with proper amounts of fuel, it can become an explosive as powerful as **Trinitrotoluene (TNT).**

  - TNT is also known as **2,4,6-Trinitrotoluene** and does not occur naturally in the environment.

  - It is an explosive used in military shells, bombs and grenades and in underwater blasting.

➤ **Stuxnet Computer Virus:** The Stuxnet computer virus, believed to be an **American and Israeli creation**, disrupted and destroyed centrifuges at Natanz amid the height of **Western concerns over Iran's nuclear program in 2010.**

➤ **USA's Response:** The USA has unilaterally withdrawn from the nuclear deal in May 2018 as Iran has continuously been breaking all the production limits set by the deal.

○ According to the IAEA, Iran enriched uranium to about 4.5% purity, above the terms of the nuclear deal.

New Butanese Territory Claimed by China

Why in News

Recently, China has made new territorial claims in the **eastern sector of Bhutan's Trashigang district.**

Key Points

➤ **Territorial Claim of China:**

○ China made this claim at an online meeting of the **58th Global Environment Facility (GEF) Council,** while objecting to the funding request to develop the Sakteng Wildlife Sanctuary project in eastern Bhutan.

● However, GEF cleared the funding to the project after Bhutan protested against the Chinese claims.

● Set up in 1992, GEF is a US-based global body to finance projects in the environment sector.

○ According to China, the **Sakteng Wildlife Sanctuary** is located in the China-Bhutan disputed areas which is on the agenda of China-Bhutan boundary talk.

○ China claims that the **boundary between China and Bhutan has never been delimited.** It has had disputes over the **eastern, central and western sectors** of Bhutan.

➤ **Bhutan's Position:**

○ **Bhutan totally rejected the claim made by China.** It said that Sakteng Wildlife Sanctuary is an integral and sovereign territory of Bhutan.

● Also, Sakteng Sanctuary in the past too has received such grants, including in 2018-2019, for a project on preventing soil erosion, without any objection from China.

○ Bhutan has conveyed its position to China through its embassy in New Delhi— since both countries don't have embassies in each other's countries.

● Bhutan and China **do not have any formal diplomatic relations,** both the countries conduct their diplomatic communication through their missions in Delhi.

○ China and Bhutan have a dispute in **only two sectors of the border,** one in the **north (central) – Pasamlung and Jakarlung,** and second in the **west – Doklam.**

○ There has been **no mention of eastern Bhutan, or Trashigang district,** where Sakteng is based, **in 24 previous rounds of boundary negotiations** held between the two countries between 1984 and 2016.

➤ **Concerns for India:**

○ China's new territorial claim is a part of the larger Chinese tactics of putting pressure on India's smaller neighbours, to punish them for any closeness to India.

● In 2017 China had intruded into **Doklam plateau,** which is claimed by Bhutan, leading to a standoff between Indian and Chinese Armies.

○ China might be doing this to put a pressure on India, or to divert India's attention from its **aggression at Ladakh.**

○ Sakteng is situated along the border with Arunachal Pradesh, some part of which is also claimed by China.

○ Even after the **India-Bhutan Friendship Treaty** of 2007, Indian military is virtually responsible for protecting Bhutan from the kind of external threat that the Chinese military poses.

● According to the **India-Bhutan Friendship Treaty of 1949,** Bhutan allowed India to "guide" its foreign policy and defence affairs.

Dividing line

A brief overview of the boundary dispute between China and Bhutan

■ Bhutan and China have no formal diplomatic relations but have held 24 rounds of boundary talks between 1984 and 2016

■ Talks concentrated on north and west Bhutan regions

■ Eastern Bhutan not part of the talks

so far, say officials

■ Sakteng sanctuary is situated close to the border with Arunachal Pradesh

■ In June 2020, China attempted to stop UNDP-GEF funding for Sakteng by claiming it was disputed, but was overruled

Bhutan and India formally demarcated their 699 km boundary in 2006

Map not to scale

Note:

drishti

- However, the 1949 treaty was amended in 2007 to respect the sensitivities of Bhutan regarding its sovereignty.
- Under the India-Bhutan Friendship Treaty of 2007, the two sides have agreed to cooperate closely with each other on issues relating to their national interests.
  - Neither Government shall allow the use of its territory for activities harmful to the national security and interest of the other.
- China has said that a third party should not point fingers in the China-Bhutan border issue, which is an apparent reference to India.

Economic Measures by India Against China

Why in News

India is considering a **range of economic measures** aimed at **Chinese firms amid the border tensions between two countries.**

- The **ban on 59 Chinese apps** is one of the economic measures taken by India, with other measures likely to follow if tensions along the **Line of Actual Control (LAC)** continue without disengagement.
- India wants to indicate that **China cannot continue trade and investment relations** as normal if it does not agree to return to the status quo of April before its incursions along the LAC began.

Key Points

- **Economic Measures Planned by India:**
  - The government is considering **trade and procurement curbs** targeting China.
  - It is also **increasing scrutiny of Chinese investments** in many sectors, and weighing a decision to **keep out Chinese companies** including **5G trials**.
  - Recently, the Union Minister for Road Transport and Highways has announced that **Chinese companies** would **not be allowed** to take part in **road projects**.
- **Implications:**
  - **Overall India-China Trade:**
    - In the India-China economic relationship, trade is lopsided in **China's favour** as **China's exports to India account for less than 3% of its overall**

exports. Thus, China **could inflict immediate economic pain** if it chooses to.
  - In 2019-20, India's imports from China accounted for **USD 65 billion** out of two-way trade of USD 82 billion.
- **Dependence on Chinese Goods:**
  - India remains deeply dependent on Chinese goods, **whether they are procured from China or through other countries**.
  - India also relies on China for **crucial imports for many of its industries** including auto components and **Active Pharmaceutical Ingredients (APIs).**
  - Between 70- 90% of APIs needed for the pharma industry of India come from China.
- **Investments:**
  - On the investment front, Chinese investment in Indian tech start-ups has **crossed USD 4 billion** spanning major investments in companies including Paytm, Swiggy, Ola and Flipkart.
- **Possible Harm to Chinese Economy:**
  - The economic measures taken by India could **potentially cost Chinese companies billions of dollars** in contracts and future earnings.
  - For TikTok, one of the 59 apps banned, **India is the biggest overseas market with more than 100 million users.** Thus, the app is anticipating a **loss of more than USD 6 billion**, most likely more than the combined losses for all the other Chinese companies behind the other 58 apps banned in India.
  - A move to restrict Chinese companies from India's 5G rollout would also have the similar effect of **costing hundreds of millions of dollars** in potential revenue.
  - Moreover, losing Indian market would come at a time when the Chinese economy is facing its own challenges in the **wake of the Covid-19 pandemic** and facing increased barriers in many Western countries.
- **China's Stand:**
  - China has asked India to **review its recent economic measures** taken against it.
  - It has also stated that these economic measures are selectively and discriminatorily aimed at certain Chinese apps, going **against the general trend of international trade and E-commerce**.

Note:

- It has also stated that such measures are **not conducive to consumer interests and the market competition** in India.
- Chinese state media have also **widely criticised** calls in India to boycott Chinese goods.

China's History in Trade and Procurement Curbs

➢ **Background:**
  ○ **Economic sanctions** have been one of the **key tools** of Chinese coercion.
  ○ China usually uses economic sanctions with the countries with whom it faces territorial claims.
  ○ Sanctions include **restrictions on trade, encouragement for boycotts and cutting off tourism**.
    - China used these measures to inflict **immediate economic pain.**
  ○ China's coercive actions are always **selective and focused** on targets where the **economic cost of coercing is low but the impact is high**.

➢ **Affected Countries:**
  ○ **South Korea:**
    - China had boycotted **South Korean goods in 2016 and 2017**, when South Korea had deployed the USA **Terminal High-Altitude Area Defense (THAAD)** missile system. In October 2017, South Korea had issued a list of assurances meant to clarify to China that it would not expand the scope of THAAD.
    - China had also placed curbs on tourism to South Korea, costing the country millions of dollars in tourism revenue.
  ○ **Japan:**
    - In 2010, China had restricted the exports of rare earth elements to Japan, a key ingredient for many electronics industries, following a **collision near disputed East China Sea islands**.
    - Two years later, mass protests organised by China led to boycotts of Japanese brands and, in some instances, violence targeting Japanese branded-cars and stores.
  ○ **Philippines:**
    - A dispute over the **Scarborough Shoal** in the **South China Sea** in 2012 led to China curbing imports on bananas and restricting tourism, costing the country millions of dollars in revenue.

USA, China Visa Curbs Over Tibet Issue

Why in News

Recently, China has announced visa restrictions on people from the USA for **behaving badly on Tibet-related issues**.

➢ It is considered a **retaliatory step by China** over USA's visa restrictions for a certain group of Chinese officials.

➢ The moves come as relations between China and the USA deteriorate over trade, technology, the **Covid-19 pandemic** and the **national security law of Hong Kong**.

Tibet

➢ Tibet is a region on the Tibetan Plateau **in Asia**, spanning about 2.4 million square kilometre, nearly a **quarter of China's territory.**

➢ It is the traditional homeland of the Tibetan people as well as some other ethnic groups.

➢ Tibet is the **highest region on Earth**, with an average elevation of 4,900 metres. The highest elevation in Tibet is Mount Everest, Earth's highest mountain, rising 8,848 metres above sea level.

Key Points

➢ **Background:**
  ○ China insists that Tibet has been part of its territory for centuries. Also, it has barred foreign journalists from visiting **Tibet since 2008**, when the region experienced a wave of **protests**.
    - From 1912, until the founding of the People's Republic of China in 1949, **no Chinese government exercised control** over what is today China's Tibet Autonomous Region (TAR).
    - Many Tibetans insist they were **essentially independent** for most of that time and have protested what they regard as China's rule imposed after the People's Liberation Army occupied TAR in 1950.
    - Since the 1959 uprising, the central government of China has been steadily tightening its grip on Tibet.
    - The **14th Dalai Lama**, continues to head the **Tibetan government-in-exile** from McLeod Ganj, a suburb of **Dharamsala, India** which coordinates political activities for Tibetans in India.

drishti

- ○ China has also **not responded** to USA's requests to set up a consulate in the **regional capital Lhasa**.
- ○ The access to tibetan region is vital to **keep track of humans as well as environmental abuses** by China. Also, stability of the region is important as it is the source for major rivers of Asia supporting civilisation for the time immemorial.

➢ **USA's Stand:**
- ○ China has continued systematically to **obstruct travel to the Tibetan Autonomous Region (TAR) and other Tibetan areas** by USA diplomats and other officials, journalists and tourists, while Chinese officials and other citizens enjoy far greater access to the USA.
- ○ USA announced **visa restrictions on Chinese government and Chinese Communist Party officials** determined to be substantially involved in the formulation or execution of policies related to access for foreigners to Tibetan areas, pursuant to the **Reciprocal Access to Tibet Act of 2018**.
  - • The Act promotes access for diplomats, officials, journalists and others from the USA to China's Tibetan areas.
- ○ Furthermore, the USA has also committed to work to **advance the sustainable economic development**, environmental conservation and humanitarian conditions of **Tibetan communities** within China and abroad.
- ○ The USA's funding for the **Tibetan issues** for the fiscal year 2021 has been proposed to be **USD 17 million** and **USD 1 million for the Special Coordinator for Tibetan issues**.

➢ **China's Stand:**
- ○ China has expressed firm opposition to the USA's visa restriction move and urged the USA to immediately stop **interfering in China's internal affairs** through Tibet-related issues.
- ○ China has also suggested the USA **to avoid further harming China-USA relation, communication and cooperation** between the two countries.

Australia Suspends Extradition Treaty with Hong Kong

Why in News

Recently, Australia has **suspended its extradition treaty with Hong Kong** in response to a **new national security law** imposed by China.

➢ The extradition treaty has been in place **since 1993**.

Extradition

➢ Extradition is the **formal process of one state surrendering an individual to another state** for **prosecution or punishment** for crimes committed in the requesting country's jurisdiction.

➢ It is generally enabled through a **bilateral or multilateral treaty**.

➢ The legal basis for extradition with countries with whom India does not have an Extradition treaty is provided by **Section 3 (4) of the Indian Extradition Act, 1962**.

Background

➢ Hong Kong was formerly a British colony and was handed over to mainland China in **1997**, becoming one of its **Special Administrative Regions (SAR)**.

➢ It is governed by a **mini-constitution called the Basic Law**, which affirms the principle of **'one country, two systems'**.

➢ The constitutional document is a product of the **1984 Sino-British Joint Declaration**, under which China promised to honour Hong Kong's liberal policies, system of governance, independent judiciary and individual freedoms for a period of 50 years from 1997.

Key Points

➤ **Issues With National Security Law:**

○ China **bypassed Hong Kong's Legislative Council** to impose the national security law which **prohibits activities which are viewed by China** as secessionist, subversive or terrorist activities or foreign intervention in Hong Kong affairs.

○ Under the law, police have sweeping powers to conduct searches without warrants and order internet service providers and platforms to remove messages deemed to be in violation of the legislation.

● Thus, the law is considered as an attack on **human rights especially freedom of speech and freedom of assembly** of the people of Hong Kong.

○ It also violates the **basic law of Hong Kong** which suggests that no central government agencies can interfere in the functioning of the Special Administrative Region (Hong Kong).

● **Article 12** of the Basic Law suggests that there will be a **high degree of autonomy** for administration of Hong Kong.

➤ **Global Response:**

○ **Australia:** It has announced a range of **visa extensions** from two to five years and pathways to **permanent residency visas**.

● Earlier, Australia had offered **'safe haven' visas to Chinese** people after the crackdown on pro-democracy protesters around **Beijing's Tiananmen Square in 1989**.

● More than 27,000 Chinese students in Australia at the time were allowed to stay permanently.

○ **Britain:** It has declared that it is extending residency rights for up to 3 million Hong Kongers eligible for British National Overseas passports, allowing them to live and work in the UK for five years.

○ **Canada:** It has suspended its extradition treaty with Hong Kong and is looking at other options including migration.

○ **India:** India is expecting relevant parties would address the concerns **properly, seriously and objectively**.

● The large Indian community makes the Hong Kong Special Administrative Region of China its home and thus, India has been keeping a close watch on recent developments.

➤ **China's Response:**

○ China has warned Australia against **interfering in China's internal affairs with Hong Kong**.

○ It has also indicated that such steps will cause a **huge negative impact on the Australian economy** making the issue more serious.

Expat Quota Bill Approved in Kuwait

Why in News

Recently, the legal and legislative committee of **Kuwait's National Assembly** has **approved** the **draft expat (expatriate) quota bill**.

➤ According to the bill, **Indians should not exceed 15% of the population** and if it is enacted into law, over 8 lakh Indians could be forced out of Kuwait.

➤ Kuwait is a country located in the **Persian Gulf region**.

Key Points

➤ Lawmakers and government officials including the Prime Minister of Kuwait have been calling to **reduce the number of expats from 70% to 30%** of the population.

➤ The draft law will **impose a cap on the number of expats and gradually reduce** them by almost 5% on a yearly basis.

○ For example, if expats constitute 70% of the population this year, next year it will 65% and 60% in the following year.

➤ **Reasons Behind the Move:**

○ Anti-expat aspirations have been rising in Kuwait since the beginning of the **Covid-19 pandemic.**

● **Foreigners have accounted for the majority of Kuwait's virus cases** as the disease spread among migrant workers living in overcrowded housing.

○ Kuwait has been working to **reduce its dependence on foreign workers**. It no longer wants to remain an expat-majority nation with its own citizens turning into a minority.

● This move is similar to the **USA's decision** to **extend the 60-day ban on immigrant and non-immigrant worker visas** till the **end of 2020**.

○ Kuwait faces problems in its **population structure** due to huge numbers of expats.

Note:

- Almost **one-third of the expats are either illiterate or can merely read and write**. They do not contribute to the country's growth and hence, are not needed.
  - ❍ The **oil-price crash** has also affected the country's economic conditions.
- ➢ **Data Analysis:**
  - ❍ In Kuwait, expats account for 3 million out of the total population of 4.3 million.
  - ❍ **Indians constitute the largest expat community** in Kuwait, totalling 1.45 million.
  - ❍ About 28,000 Indians work in **various government jobs** like nurses, engineers in national oil companies and as scientists.
  - ❍ Majority of Indians (around 5 lakh) work in the **private sector**.
  - ❍ There are about 1.16 lakh dependents out of which about 60,000 are students studying in various Indian schools in the country.

India's Perspective

- ➢ The Indian community in Kuwait has always played an **important factor in bilateral ties**.
- ➢ Indians are present in **all segments of society** in Kuwait and are largely **considered disciplined, hardworking and law-abiding**.
- ➢ **Kuwait is a top source of remittances for India**. In 2018, India received nearly USD 4.8 billion from Kuwait as remittances.
- ➢ The Indian embassy has been closely following developments related to the proposed legislation. However, **India has so far not made any statement** on the issue.

Persian Gulf Region

- ➢ The lands around the Persian Gulf are shared by **eight countries** namely, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE).
- ➢ These all eight countries are members of the **United Nations**.
  - ❍ UAE, Bahrain, Saudi Arabia, Oman, Qatar, Kuwait are members of the **Gulf Cooperation Council** (GCC).
  - ❍ Out of the Persian Gulf countries, Iran, Iraq, Kuwait, UAE and Saudi Arabia are members of

the **Organization of the Petroleum Exporting Countries** (OPEC).

- ➢ Being **major producers of crude oil and natural gas**, there is a commonality of interest among these countries.
  - ❍ This commonality of interest has given rise to their own prosperity and subsequently, economic-political entanglements among them.

USA's Position on CAATSA

Why in News

Recently, the USA has reiterated its position and asked all its allies and partners, including India, to stop transactions with Russia.

- ➢ It can risk triggering sanctions under the **Countering America's Adversaries Through Sanctions Act (CAATSA)**.

Countering America's Adversaries Through Sanctions Act

- ➢ CAATSA is a United States federal law that imposed sanctions on **Iran, North Korea, and Russia.**
- ➢ It includes sanctions against countries that engage in **significant transactions** with Russia's defense and intelligence sectors.

Key Points

- ➢ **USA's Stand:** The USA has reiterated its position on CAATSA in the context of **India's planned jet fighter deal with Russia** at an estimated Rs. 18,148 crore.
  - ❍ Recently, the **Defence Acquisition Council** has **approved the procurement** of 21 MiG-29 fighter jets for the Indian Air Force (IAF), an upgrade for 59 of these Russian aircraft and the acquisition of 12 Su-30 MKI aircraft.

○ India could also face USA sanctions for purchasing the **S-400 Triumf missile defense system** from Russia under the CAATSA.

- The **USA suspended Turkey from its F-35 aircraft programme** and barred it from purchasing the jet, following Turkey's purchase of the S-400 from Russia.

- However, this was done without invoking CAATSA.

➢ **Major Defence Partner:** The USA recognised India as a **Major Defence Partner** in 2016.

○ The designation allows India to buy more advanced and sensitive technologies from America at par with that of the USA's closest allies and partners.

➢ **Issues with Purchase from Adversary:** The USA fears that acquisitions by countries like India on significant systems would either **expose or put at risk platforms and its technologies to an adversary.**

○ It has declared that the S-400 purchase by Turkey from Russia has put a risk to its F-35 aircraft system.

➢ **Waiver Criteria under CAATSA:** The USA President was given the authority in 2018 to waive CAATSA sanctions on a **case-by-case basis.**

○ However, the USA has repeatedly stated that India should not assume it will get a waiver.

NOTE:

➢ The S-400 is known as Russia's most advanced **long-range surface-to-air missile defence system**. China was the first foreign buyer to seal a government-to-government deal with Russia in 2014 for the system.

Hurdles for F-1 and M-1 Visa Holders in USA

Why in News

Recently, the USA has announced that **F-1 and M-1 visa holders** who are **planning to take online only models will not be allowed to stay** in the USA.

➢ Many universities in the USA are planning **to shift all their classes online** for the fall semester (starts in late August) due to **Covid-19 pandemic.**

➢ **F-1 visas** are issued to study in the USA for **full-time students** whereas **M-1 visas** are issued to students engaging in **vocational or non-academic studies**.

➢ The announcement comes weeks after the USA President **suspended H1-B** highly skilled worker visas through the end of the year. Most of these visas go to Indian citizens each year.

Key Points

➢ **Announcements Made:**

○ The students outside the USA **planning to take all courses online** in the fall semester would not be **permitted entry** into the country.

- The **USA would not issue visas** to students who are going to take all their classes online due to the pandemic.

○ It also stated that the active students under F-1 and M-1 visas in such programs **must depart the country or take other measures**, such as **transferring to a school with in-person instruction** to remain in lawful status.

- The USA regulations **do not allow students in F-1 status to be in online classes** but normally F-1 students are allowed to take one class or three credit hours online.

➢ **Affected Population:**

○ There were **more than one million international students** in the United States for the 2018-19 academic year. That accounted for **5.5%** of the total USA's higher education population.

- Also, international students contributed **USD 44.7 billion** to the USA's economy in 2018.

○ **India** is the **second largest source of the foreign students in the USA** after China.

- The largest number of international students come from China, followed by India, South Korea, Saudi Arabia and Canada.

➢ **Consequences:**

○ If alternative measures are **not opted** then these students may face **immigration consequences** like the initiation of removal proceedings for example.

○ It is a difficult situation for students as international travel already faces disruption due to Covid-19.

➢ **Available Alternatives:**

○ Affected students may **switch to visitor status** but it is **not a long term** solution as visitor status is short term and there is **no guarantee that it will be approved**.

World Bank's Support to India for MSMEs

Why in News

Recently, the **World Bank (WB)** and the Government of India has signed the USD 750 million agreement for an **Emergency Response Programme** for Micro, Small, and Medium Enterprises (MSMEs).

➢ Emergency Response Programmes are dedicated towards **enhancing the resilience of communities and livelihoods** in order to address fragility, poverty and vulnerability to conflict and disaster.

Key Points

➢ **Financial Support:**
  ❍ The USD 750 million loan which is being granted from the **International Bank for Reconstruction and Development (IBRD - a part of the WB group)**, has a maturity of 19 years including a 5-year grace period.
  ❍ The WB groups and its private sector arm – **the International Finance Corporation (IFC),** will support the government's initiatives to protect the **MSME sector** which is severely impacted by the **Covid-19** crisis.
    ● Covid-19 **pandemic** has severely impacted the MSME sector leading to loss of livelihoods and **employment.**
  ❍ Earlier, the World Bank has committed to support India's emergency Covid-19 response, including the new MSME project with **USD 2.75 billion**.
    ● The first **USD 1 billion emergency support was announced in April** 2020 for immediate support to **India's health sector**.
    ● Another **USD 1 billion project was approved in May** to increase cash transfers and food benefits to the poor and vulnerable, including a more consolidated delivery platform – accessible to both rural and urban populations.

➢ **Significance:**
  ❍ **Unlocking Liquidity:** Considering the current uncertainties, lenders remain concerned about borrowers' ability to repay – resulting in limited flow of credit.
    ● Therefore, the program will support the government's efforts to channel liquidity to the MSME sector by de-risking lending from banks and **Non-Banking Financial Companies (NBFCs)** to MSMEs through a range of instruments, including credit guarantees.
  ❍ **Strengthening NBFCs and SFBs:** The programme will address the urgent and varied needs of the MSMEs by **improving the funding capacity** of key market-oriented channels of credit, such as the **NBFCs and Small Finance Bank (SFBs)**.
    ● This will support the government's **refinance facility for NBFCs**.
    ● In parallel, the IFC would provide direct support to SFBs through loans and equity.
  ❍ **Enabling Financial Innovations:** Currently only about 8% of MSMEs are served by formal credit channels. The program will **incentivize and mainstream** the use of **fintech** and **digital financial services** in MSME lending and payments.

World Bank Group

➢ With 189 member countries, the World Bank Group is a unique global partnership which consists of five development institutions.

➢ **International Bank for Reconstruction and Development (IBRD)** provides loans, credits, and grants.

➢ **International Development Association (IDA)** provides low- or no-interest loans to low-income countries.

➢ **The International Finance Corporation (IFC)** provides investment, advice, and asset management to companies and governments.

➢ **The Multilateral Guarantee Agency (MIGA)** insures lenders and investors against political risk such as war.

➢ **The International Centre for the Settlement of Investment Disputes (ICSID)** settles investment-disputes between investors and countries.
  ❍ India is not a member of ICSID.

Italian Marines Case

Why in News

Recently, the **Permanent Court of Arbitration (PCA)** has published an extract of the final award of the **ad-hoc tribunal** constituted to settle disputes related to the **United Nations Convention for the Law of the Sea (UNCLOS)** regarding **Italian marine Case** between **India and Italy**.

➤ It has **rejected India's contention** that the soldiers, who were accused of killing Indian fishermen, could be **tried in Indian courts** and **ordered India to cease all criminal proceedings**.

Background

➤ In 2012, Indian police had detained two Italian marines posted on oil tanker Enrica Lexie who had shot at two Indian fishermen on an Indian vessel, **apparently mistaking them for pirates** operating near the Kerala Coast.

➤ After three years, Italy moved the **International Tribunal for Law of the Sea (ITLOS)** seeking **for two italian marines to stay in their own country during the trial process** and also **to stop India from going ahead with its criminal prosecution**.

➤ At that time, India had set up a **specially designated court, as ordered by Indian Supreme Court**, to determine the applicability of jurisdiction.

  ❍ India's **National Investigation Agency** had already slapped charges against the two Italians under sections of the Indian Penal Code, related to murder, attempt to murder, mischief and common intent.

➤ The **ITLOS judgement of 2015** called on **Italy and India to suspend all domestic prosecutions arising from the Enrica Lexie Case**. It had also ordered **not to initiate** any steps that might jeopardize or prejudice the carrying out of any decision which the arbitral tribunal may provide.

➤ The matter led to a **long freeze in diplomatic relations between India and Italy**, which were **reset only in 2016**.

Key Points

➤ **Judgements in Favour of India:**

  ❍ The tribunal held that the actions of the Italian military officers **breached India's freedom of navigation** under **UNCLOS Article 87(1)(a) and 90.**

  ❍ The tribunal also held that **India is entitled for payment of compensation** in connection with loss of life, physical harm, material damage to property and moral harm suffered by captain and crew of 'St Antony', the Indian vessel.

➤ **Judgements in Favour of Italy:**

  ❍ India had called on the Permanent Court of Arbitration (PCA) UNCLOS tribunal to adjudge and declare that PCA has no jurisdiction with respect to the case submitted to it by Italy. However, a

majority of the court's five- member bench ruled 4-1 that **it had jurisdiction in the matter**.

  ❍ Italian position that the marines, being members of the Italian armed forces in the **official exercise cannot be tried by Indian courts**, was held and **immunity was granted** to Italian marine officials.

➤ **Basis of the Judgement:**

  ❍ The tribunal observed that **India and Italy had concurrent jurisdiction** over the incident and a valid legal basis to institute criminal proceedings against the marines.

  ❍ However, it also observed that the immunities enjoyed by the marines as State officials operate as an **exception to the jurisdiction of the Indian courts** and, hence, preclude them to judge the marines.

Permanent Court of Arbitration

➤ The Permanent Court of Arbitration (PCA) was established in **1899** and headquartered at the **Hague in Netherlands**.

➤ It is an **intergovernmental organization** dedicated to serve the international community in the field of **dispute resolution** and to facilitate arbitration and other forms of dispute resolution between States.

➤ It has a **Financial Assistance Fund** which aims at helping developing countries meet part of the costs involved in international arbitration or other means of dispute settlement offered by the PCA.

Fishermen Issue with Sri Lanka

Why in News

Recently, Sri Lanka's northern fishermen have reported a **sudden increase in the number of Indian trawlers spotted in its territorial waters.**

➤ The territorial waters extend seaward **up to 12 nautical miles (nm)** from baselines of a country.

➤ Fishermen along the northern coast of Jaffna Peninsula have **lost their nets worth lakhs of rupees in the sea**, after being caught under the large Indian trawlers.

  ❍ These Indian trawlers are known to **originate** from the Indian State of **Tamil Nadu**.

Background

➢ **Introduction of the International Maritime Boundary Line:**
  ○ Indian boats have been fishing in the troubled waters for centuries and had a free run of the Bay of Bengal, Palk Bay and the Gulf of Mannar **until 1974 and 1976** when treaties were signed between the two countries to demarcate International Maritime Boundary Line (IMBL).
  ○ However, the treaties failed to factor in the hardship of thousands of traditional fishermen who were forced to restrict themselves to a meagre area in their fishing forays.

➢ **Katchatheevu Island Issue:**
  ○ The **small islet of Katchatheevu**, hitherto used by them for sorting their catch and drying their nets, fell on the other side of the IMBL.
  ○ Fishermen often risk their lives and cross the IMBL rather than return empty-handed, but the Sri Lankan Navy is on alert, and have either arrested or destroyed fishing nets and vessels of those who have crossed the line.

➢ **Implementation of Practical Agreements:**
  ○ Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line.
  ○ Through these arrangements, it has been possible to deal with the issue of detention of fishermen in a humane manner.
  ○ India and Sri Lanka have agreed to set up a **Joint Working Group (JWG)** on Fisheries between the **Ministry of Agriculture and Farmers' Welfare of India** and Ministry of Fisheries and Aquatic Resources Development of Sri Lanka as the mechanism to help find a **permanent solution** to the fishermen issue.

Key Points

➢ **Threat to Livelihoods:**
  ○ The Sri lankan fishermen fear that their **livelihoods will be hit due to trawlers** which are already under strain due to the coronavirus pandemic induced reduction in the export.

➢ **Step Taken by Sri Lanka:**
  ○ In the last couple of years, Sri Lanka has introduced **tougher laws banning bottom-trawling**, and

has also introduced **heavy fines for trespassing foreign vessels**.
  ○ The Sri Lankan Navy arrested over **450** Indian fishermen in **2017** and **156** in **2018** on charges of poaching. A total of **210** arrests were made in **2019**, while **34** have been made so far in **2020**.

➢ **Scare of Covid-19:**
  ○ The Sri Lankan fishermen have been alleging that currently the Sri Lankan Navy is reluctant to arrest the trespassing fishermen from Tamil Nadu now, due to the Covid-19 prevalence in India.
  ○ However, the Sri Lankan Navy claims to be very vigilant along their borders not just to monitor illegal fishing, but also to take action on any illicit activity such as narcotics trade.

UN Special Rapporteurs' Communication to India

Why in News

Recently, the **United Nations (UN) Special Rapporteurs (SRs)** have made public their third communication forwarded to India since the 5th August, 2019 decision to **revoke Jammu and Kashmir's special status (under Article 370)**.

➢ Four UN SRs on torture and other cruel, inhuman or degrading treatment or punishment; on extra-judicial, summary or arbitrary executions; on minority issues; and on freedom of religion or belief forwarded a joint communication to India.

Key Points

➢ **Third Communication:**
  ○ It highlighted continued deterioration of human rights conditions in J&K following severe restrictions imposed after 5th August 2019.
  ○ The UN has urged the Indian government "to conduct a prompt and impartial investigation, if it has not done so already, into the allegations of arbitrary killings, torture and ill-treatment and to prosecute suspected perpetrators under Article 6 of the **International Covenant on Civil and Political Rights (ICCPR),** and Articles 7 and 12 of the **Committee Against Torture (CAT).**
    ● **ICCPR (1976)** compels countries that have ratified it to protect and preserve basic human

Note:

drishti

rights such as the right to life and human dignity, equality before the law etc. **India is a party to the Treaty and has issued a declaration.**

- **CAT** is the body of 10 independent experts that monitors implementation of the **Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment** (1987) by its State parties. **India is not a state party but signatory to the Convention.**

➢ **Second Communication:** It was forwarded on 27th February, 2020 on alleged mass crackdown, targeting those expressing dissent against the decision taken by the Central government.

➢ **First Communication**: It was forwarded to India by the UN on 16th August, 2019 on restrictions on freedom of expression and freedom of peaceful assembly.

➢ **India's Response:** According to the UN SRs, **no response has been received from India** to any of the communication forwarded.

➢ **Supreme Court's Recent Judgement:** It needs to be noted that the Supreme Court on 11th May 2020 had ordered the **constitution of a Special Committee** to determine the necessity of the continuation of limiting mobile internet to 2G speed in the Union Territory of J&K.

- However, it declined pleas for restoration of 4G internet services and held that peculiar circumstances in the Union Territory require **delicate balancing of national security concerns and human rights.**
- The mobile internet has been restricted to low-speed 2G services since the government eases a communication blackout imposed in August 2019.

UN Special Rapporteur

➢ The Special Procedures of the **Human Rights Council** are independent human rights experts with mandates to report and advise on human rights (civil, cultural, economic, political and social) from a thematic or country-specific perspective.

- The Human Rights Council is an **inter-governmental body** within the United Nations system made up of 47 States responsible for the promotion and protection of all human rights around the globe.
- **Universal Periodic Review** happens under the aegis of the Human Rights Council.
- **Current membership** of the Council includes **India**.

- It meets at the UN Office at **Geneva (Switzerland)**.

➢ Special procedures are either an individual (called "Special Rapporteur" or "Independent Expert") or a working group composed of five members, one from each of the five UN regional groupings: African Group, Asia-Pacific group, Latin American and Caribbean Group, Eastern European Group and Western European and Others Group.

➢ They are **not UN staff members** and **do not receive financial remuneration.**

- The independent status of the Special Procedures mandate-holders is crucial for them to be able to fulfil their functions in all impartiality. **A mandate-holder's tenure** in a given function, whether it is a thematic or country mandate, is limited to a maximum of **six years.**

➢ Most Special Procedures receive information on specific allegations of human rights violations and **send communications (urgent appeals and other letters) to States**, and occasionally to non-State actors, asking for clarification and action.

USA: India's Top Trading Partner

Why in News

As per the data from the Ministry of Commerce and Industry, the **USA remained India's top trading partner for the second consecutive fiscal year in 2019-20.**

➢ This indicates **increasing economic ties** between the two countries.

Key Points

➢ **Trade with the USA:**

- In 2019-20, the bilateral trade between the USA and India stood at USD 88.75 billion as against USD 87.96 billion in 2018-19.
- The USA is one of the few countries with which **India has a trade surplus.**
  - India's trade surplus with the USA increased to USD 17.42 billion in 2019-20 from USD 16.86 billion in 2018-19.
- In 2018-19, the **USA surpassed China** to become India's top trading partner.

➢ **Trade with China:**

○ The bilateral trade between India and China has **dipped** to USD 81.87 billion in 2019-20 from USD 87.08 billion in 2018-19.

○ **Trade deficit** between the two neighbours has declined to USD 48.66 billion in 2019-20 from USD 53.57 billion in the previous fiscal.

○ **China was India's top trading partner from 2013-14 till 2017-18.**

● Before China, **the United Arab Emirates (UAE)** was the country's largest trading nation.

○ Further, India is considering certain steps like framing technical regulations and quality control orders for host of items with a view to cut import dependence on China and boost domestic manufacturing.

● Recently, **India banned 59 Chinese apps** and made **government approval mandatory for Foreign Direct Investment (FDI) from neighbouring countries.**

● The app ban decision came amid **tensions on the border.**

➤ **Way Forward for the USA and India:**

○ There is a huge potential to boost bilateral trade between the countries on account of **increasing anti-China sentiment in both the nations.**

● Because of the anti-China sentiment, several USA companies are exploring new suppliers in countries like India to cut dependence on China and if this happens, then it will greatly help India to boost exports to the USA.

○ **Presence of Indian diaspora** in the USA is one of the main reasons for increasing bilateral trade. A **balanced trade deal** can further boost the economic ties.

● India and the USA are negotiating a limited trade pact with a view to iron out differences at trade front and boost commercial ties.

● However, India should be a bit cautious while negotiating the pact with the USA in areas such as **agriculture, dairy and issues related to intellectual property rights.**

● Recently, the USA administration has **extended the ban on immigrant and non-immigrant visas** till the end of 2020.

■ **India's IT services exports to the USA,** which depend significantly on the **H-1B visa,** has been an **important** constituent element of **bilateral economic trade.**

India Global Week 2020: India Inc.

Why in News

Recently, the Prime Minister of India has addressed the inaugural session of a three-day virtual conference of **India Global Week 2020** organised in London, United Kingdom by **India Inc.**

➤ It also marks the **100th birth anniversary of Pandit Ravi Shankar**, a great Indian musician (**Sitar player**, composer and singer).

India Global Week

➤ It is an **annual flagship event** organised by **India Inc.,** a **London based media house** to re-energise and ignite optimism at global level.

➤ It brings about an **action-oriented focus by giving a forum to global deliberations** from geopolitics to business, arts & culture to emerging technologies, banking and finance, pharma, defence and security, social impact and the diaspora dividend.

➤ India Inc. also produces incisive contents and events on **investment, trade and policy matters related to India's** increasingly globalised economic and strategic agenda.

➤ Its **flagship publication: India Global Business.**

➤ Diaspora news network: **iGlobal.**

Key Points

➤ **Theme:** Be The Revival: India and a Better New World.

➤ **Objective:** Explore business, strategic and cultural opportunities, understand the challenges and make informed decisions as the world looks ahead to a better, brighter future beyond **Covid-19.**

➤ **Significance for India:**

○ **Global Revival:** As India is playing a leading **role in the global revival**, it has brought India's ancient culture (**AYUSH**), universal, peaceful ethos and the beauty of classical music to the world.

○ **Global Audience:** The event as a forum has helped to **bring the opportunities in India to a global audience** and made the links between India and UK stronger.

○ **Trade and Investment:** It would focus on India's **trade and foreign investment processes** as it has

done many reforms e.g. **private investment in the space sector.**

- Reforms in agriculture would provide an opportunity to invest in storage and logistics.

○ **Invest India Programme:** It will help in improving the **Invest India programme**. India has recently been reviewing 50 investment proposals from China under its new screening policy which is being done under the new rules.

- **New rules:** India announced new investment rules in April 2020. Under the new rules, all the investments by the entities based in neighbouring countries have to be approved by Indian Government. This was introduced to curb opportunistic takeovers during Covid-19-period.

○ **Battle against the Covid-19:** As India is fighting a strong battle against the global pandemic it would recognise **India's efforts towards revival** with care, compassion and sustainability - both for the environment and the economy.

➢ **Initiatives to fight Covid-19:**

○ **AtmaNirbhar Bharat Initiative:** It is about being self-sustaining and self-generating. **AtmaNirbhar Bharat** merges domestic production and consumption with global supply chains.

○ **Economic Relief Packages:** The **package** has been targeted to help the poorest with aid of technology and providing free cooking gas, cash in the bank accounts, free food grains to millions.

Open Sky Agreement

Why in News

Recently, the United Arab Emirates (UAE) has expressed interest to have an Open Sky Agreement with India.

Key Points

➢ **Significance of the Open Sky Agreement:**

○ Open Sky Agreements are **bilateral agreements** that the two countries negotiate to provide **rights for airlines to offer international passenger and cargo services**. It **expands** international passenger and cargo flights.

○ India has Air Service Agreements (ASA) with 109 countries including UAE covering aspects relating to the number of flights, seats, landing points and code-share. But does not allow unlimited number of flights between two countries.

United Arab Emirates

○ Open skies between India and UAE will allow unlimited number of flights to the selected cities of each other's countries.

➢ **India's Open Sky Policy:**

○ The **National Civil Aviation Policy (2016)** allows the government to enter into an 'open sky' air services agreement on a reciprocal basis with South Asian Association for Regional Cooperation (SAARC) nations as well as countries **beyond a 5,000 kilometre radius from New Delhi**.

○ It implies that **nations within 5,000 kilometer of distance** need to enter into a bilateral agreement and mutually determine the number of flights that their airlines can operate between the two countries.

○ India has open sky agreements with Greece, Jamaica, Guyana, Finland, USA, Japan, etc.

➢ **Fifth and Sixth Freedom of Air:**

○ UAE also mentioned that it **does not intend to implement fifth and six freedoms of air**, and where the interest of Indian airlines will be threatened by other air carriers.

○ The Freedom of air was formulated as a result of **disagreements over the extent of aviation liberalisation** in the Convention on International Civil Aviation of 1944, known as the **Chicago Convention.**

- The freedoms of the air are a **set of commercial aviation rights** granting a country's airlines the privilege to enter and land in another country's airspace.

- The **fifth freedom of air** includes the right to fly between two foreign countries on a flight originating or ending in one's own country.

- The **sixth freedom of air** includes the right to fly from a foreign country to another while stopping in one's own country for non-technical reasons.

Note:

India-China

Why in News

Recently, the **third round of Corps Commander-level talks** was held between India and China.

➢ Both the sides emphasised on expeditious, phased and step-wise de-escalation in areas close to the **Line of Actual Control (LAC)** in Ladakh as priority.

Key Points

➢ **Background:**
  ○ In the previous two rounds, India sought **restoration of the status quo** as it existed before the **standoff began in May 2020.**
    ● Indian and Chinese troops scuffled at Pangong Tso in Ladakh on 5/6th May.
  ○ After the first round of talks on 6th June, 2020, **clashes occurred in Galwan Valley (Ladakh)** that claimed 20 Indian soldiers' lives and an unknown number of casualties on the Chinese side.
  ○ While faceoffs and standoffs keep occurring on the LAC due to differences in perception on the alignment, there has been no instance of firing on the LAC since 1975.
    ● India and China fought a war in 1962.

➢ **India's Response:**
  ○ **Military:**
    ● India has moved in additional divisions, tanks and artillery across the LAC to match Chinese deployments.
    ● Further, India has approved the purchase of 33 Russian fighter jets and upgrades to 59 war planes at a cost of Rs. 18,148 crore.

➢ **Economic:**
  ○ Citing the "emergent nature of threats" from mobile applications, including popular ones of **Chinese origin** such as TikTok, ShareIt, UC Browser, and Weibo, the government has **banned 59 apps.**
  ○ Further, **India's trade deficit with China fell to $48.66 billion in 2019-20** on account of the **decline in imports.** The trade deficit stood at $53.56 billion in 2018-19 and $63 billion in 2017-18.
    ● However, the tensions on the border, as well as the **Covid-19 pandemic**, have thrown light on India's economic dependencies on China.

● **India remains reliant on Chinese products** in several critical and strategically sensitive sectors, from semiconductors and active pharmaceutical ingredients to the telecom sector, where Chinese vendors are involved not only in India's 4G network but in on-going **5G** trials as well.

  ○ **Foreign Direct Investment (FDI) from China in India has dipped to $163.78 million** in 2019-20 from $229 million in 2018-19.
    ● In April 2020, the **Indian government tightened FDI norms** coming from the countries which **share land borders with India.** Government approval has been made mandatory.

➢ **China's Reaction:**
  ○ It has described the app ban action as "a deliberate interference in practical cooperation" between the two countries. China's State media has warned of economic repercussions, such as affecting outbound Chinese investment into India.

Possible Reasons Behind Increased China's Deployment at the LAC:

➢ India's decision to strengthen its border infrastructure (**Darbuk-Shyok-Daulat Beg Oldie road**).

➢ India's United States tilt (e.g. **Quad**) amid **US-China tensions.**

➢ China views India's assertions regarding Gilgit-Baltistan, as an implicit attack on the **China-Pakistan Economic Corridor (CPEC)**, China's flagship programme.

➢ China's growing assertiveness over the **South China Sea.**

➢ Political and economic tensions within China due to Covid-19 pandemic.

➢ **India being a growing power in Asian region.**

Note:

Line of Actual Control

➢ **Demarcation Line:** The Line of Actual Control (LAC) is the demarcation that separates Indian-controlled territory from Chinese-controlled territory.

➢ **LAC is different from the Line of Control (LoC) with Pakistan:**

❍ The LoC emerged from the 1948 ceasefire line negotiated by the **United Nations (UN)** after the Kashmir War.

❍ It was **designated as the LoC in 1972, following the Shimla Agreement** between the two countries. It is delineated on a map signed by the Director General of Military Operations (DGMO) of both armies and has the international sanctity of a legal agreement.

❍ The LAC, in contrast, is only a concept – **it is not agreed upon by the two countries,** neither delineated on a map or demarcated on the ground.

➢ **Length of the LAC:** India considers the LAC to be 3,488 km long, while the Chinese consider it to be only around 2,000 km.

➢ **Sectors Across the LAC**:

❍ It is divided into **three sectors:** the **eastern sector which spans Arunachal Pradesh and Sikkim (1346 km)**, the **middle sector in Uttarakhand and Himachal Pradesh (545 km)**, and the **western sector in Ladakh (1597 km).**

● The alignment of the LAC in the eastern sector is along the 1914 **McMahon Line.**

● The McMohan line marked out previously unclaimed/undefined borders between Britain and Tibet.

❍ The middle sector is the least disputed sector, while the western sector witnesses the highest transgressions between the two sides.

➢ **Disagreements:**

❍ India's **claim line is different from that of the LAC**. It is the line seen in the official boundary marked on the maps as released by the **Survey of India,** including **Aksai Chin (occupied by China)**.

❍ In **China's case**, LAC corresponds mostly to its claim line, but in the eastern sector, it **claims the entire Arunachal Pradesh as South Tibet.**

❍ The **claim lines come into question when a discussion on the final international boundaries**

takes place, and not when the conversation is about a working border i.e. LAC.

➢ **Border Negotiations:**

❍ Indian Prime Minister's visit to China in 2003 led to the agreement on appointing Special Representatives (SRs) and, in April 2005, there was agreement on the political parameters and principles that would underpin negotiations.

● The aim was a comprehensive solution encompassing all three sectors. The agreed boundary would follow well-defined geographical features and respect the interests of the settled populations.

❍ During Indian Prime Minister's visit to China in May 2015, the proposal to clarify the LAC was rejected by the Chinese.

❍ However, in the **Wuhan (2018) and Mahabalipuram (2019)** summits, both China and India had reaffirmed that they will make efforts to "ensure peace and tranquility in the border areas".

Relevance of Pangong Tso Lake

➢ **Location:** It is a long narrow, deep, **endorheic (landlocked) lake** situated at a height of more than 13,000 ft in the Ladakh Himalayas.

➢ **Significance:** It lies in the path of the **Chushul approach, one of the main approaches that China** can use for an offensive into Indian-held territory.

➢ **Governance:** It is overlooked by the **Finger Area - a set of eight cliffs** extending out of the Sirijap range (on the northern bank of Lake).

❍ India claims that the **LAC is coterminous with Finger 8 but it physically controls area only upto Finger 4.**

❍ Chinese border posts are at Finger 8, while it believes that the **LAC passes through Finger 2.**

Note:

THE LINE OF ACTUAL CONTROL AT PANGONG TSO

1 Located at an altitude of 13,900 feet, two-thirds of the 134km-long lake is controlled by China as it extends from Tibet to India

2 India physically controls till Finger-4 (has a post between F3 and F4) but for decades has been patrolling west to east till Finger-8, where it says the LAC runs north to south

Google Maps

3 China has posts and bases at Finger-8, claims territory up to Finger-2

4 Since early May, PLA has blocked all Indian patrols beyond Finger-4 by occupying the 8km stretch between Finger-4 and Finger-8 by building fortifications and bunkers

Way Forward

➢ Detailed protocols are in place for troops to handle face-off incidents. The countries need to stick to the **2005 protocol** and the **2013 Border Defence Cooperation Agreement.**

➢ On 1st April, 2020, **India and China completed their 70 years of diplomatic relations**. Both sides should acknowledge that the situation is precarious, and that the recent days in particular have undone decades of painstakingly negotiated confidence-building mechanisms.

➢ **For India**, the first priority has to be to **restore the status quo ante** at the border as it existed in April. This will require both a **display of military strength** at the border by standing up to Chinese aggression, and **diplomatic work** by making it clear to China that its intervention will lead to heavy costs across all spheres of the relationship.

➢ India cannot afford to sever all its economic links with the world's second-largest economy, even in the digital space. Chinese finance will help in sustaining India's start-up economy. However, through **Atmanirbhar**

Bharat Abhiyan, India can try to replace chinese products with domestic products in the sectors where it is possible. Further, it needs to **boost up its economic relations** with other countries.

244th Independence Day of USA

Why in News

The **USA** celebrated the **244th anniversary of American Independence Day** on **4th July** 2020.

➢ Indian Prime Minister also congratulated the USA on the same occasion.

Key Points

➢ **Background:**

○ Throughout the **1760s and early 1770s**, the American colonies found themselves **increasingly at odds with British imperial policies** regarding taxation and frontier policy.

○ When repeated protests failed to influence British policies the Continental Congress worked with local groups, originally intended to enforce the boycott, to coordinate resistance against the British.

○ British officials throughout the colonies increasingly found their authority challenged by informal local governments, although loyalist sentiment remained strong in some areas.

○ Finally, the United States was founded on an **ideal of democracy** on the **4th July 1776** by adopting the **Declaration of Independence** from the **13 colonies**.

➢ **Declaration of Independence :**

○ The Declaration of Independence was a **one-page document**, but it laid the **foundation** for other documents that followed, including the **Constitution and the Bill of Rights**.

○ It contains **three main ideas:**

● All men are created equal.

● All men have certain inalienable rights, which include life, liberty and the pursuit of happiness.

● People have a civic duty to defend these rights for themselves and for others.

Science and Technology

Highlights

- G4 Flu Virus
- G4 and Disease Surveillance
- Demand for Compulsory Licencing of Remdesivir
- Use of Winter Diesel in Ladakh
- Drug Discovery Hackathon 2020
- Lithium Production in Stars
- Global Response to China's Security Law on Hong Kong
- More Metallic Moon: NASA
- UN Report on Zoonotic Diseases
- Comet C/2020 F3 Neowise

- Itolizumab: Emergency Covid-19 Drug
- Flood Resistant Paddy: Assam
- Hope: UAE Mars Mission
- Low-cost Supercapacitor
- Covid-19 Specific Memory T Cells
- Data on Covid-19 After-effects
- App to Monitor Rice Fields: Paddy Watch
- Kuaizhou-11 Rocket
- Measles and Rubella in WHO SEAR

G4 Flu Virus

Why in News

Recently, scientists have identified a "newly emerged" strain of influenza virus that is infecting Chinese pigs and that has the potential of triggering a **pandemic**.

➢ Named G4, scientists believe that it has descended from the **H1N1 strain** that was responsible for the 2009 swine flu pandemic.

➢ A pandemic happens if a new strain emerges that can easily spread from person to person.

Key Points

➢ **G4 Strain:**
  - ❍ It was identified through surveillance of **influenza viruses in pigs** through a study carried out from 2011 to 2018 in ten provinces of China.
  - ❍ It can **grow and multiply in the cells** that line the human airways.
  - ❍ It has the capability of binding to human-type receptors (like, the **SARS-CoV-2 virus**).
  - ❍ Scientists found evidence of recent infection in people who worked in abattoirs and the swine industry in China.
    - ● However, it is not clear whether the new strain can transmit from one human to another.

  - ❍ Current flu vaccines do not appear to protect against it, although they could be adapted to do so if needed.

➢ **Flu Pandemic:**
  - ❍ Pigs are **intermediate hosts** for the generation of pandemic influenza virus.
    - ● Intermediate host is an organism that **harbours a parasitic** which is being provided with nourishment and shelter by the organism.
  - ❍ The systemic surveillance of influenza viruses in pigs is a key measure for pre-warning the emergence of the next pandemic influenza.
    - ● There is an urgent need to control the prevailing **G4 virus** in pigs.

➢ **2009 Swine Flu Pandemic:**
  - ❍ The 2009 pandemic was caused by a strain of the **swine flu called the H1N1 virus**, which was transmitted from human to human.
    - ● **Swine flu** is a respiratory disease of pigs caused by type A influenza viruses i.e. H1N1. It is called swine flu because it was known in the past to occur in people who had been in the vicinity of pigs.
    - ● While humans typically do not get infected by such a virus that circulates among pigs, when they do, it is called **"variant influenza virus"**.
  - ❍ The **World Health Organisation (WHO)** declared

Note:

drishti

the outbreak of type A H1N1 influenza virus a pandemic in 2009 when there were around 30,000 cases globally.

○ **Transmission:** The virus is transmitted by short-distance airborne transmission, particularly in crowded enclosed spaces. Hand contamination and direct contact are other possible sources of transmission.

○ **Symptoms** of swine flu include fever, cough, sore throat, body aches, headaches, chills and fatigue.

○ The **treatment** includes antiviral therapy with medicines like Oseltamivir (Tamiflu), peramivir (Rapivab).

G4 and Disease Surveillance

Why in News

Recently, scientists have identified **a new strain of Swine Flu (H1N1) virus** namely, **G4 EA H1N1**. It has started infecting Chinese pigs and also has the potential of **triggering a pandemic**.

Key Points

➢ **Risk Involved:**

○ **G4 EA H1N(also known as G4)** replicates efficiently in **human airway paths** and so far, has infected a f**ew people without actually making them ill**.

○ Thus, greater vigilance in monitoring people is needed because humans have **no inbuilt immunity against this new strain of the virus**, much like SARS-CoV-2.

➢ **Regional Disease Surveillance:**

○ Most countries have their **own disease surveillance mechanisms** in place to **monitor and track emerging diseases**. It helps to **evaluate the risk of a particular pathogen on the community**, based on the cases occurring, and warn of potential risks from that pathogen.

● India has the **Integrated Disease Surveillance Project (IDSP)** to strengthen/maintain decentralized laboratory based and IT enabled disease surveillance systems for epidemic prone diseases to monitor disease trends.

● It was launched by the **Ministry of Health and Family Welfare**, in assistance with the **World Bank, in 2004**.

○ Closely studying a pathogen yields valuable information on transmission, and behaviour of the organism.

➢ **Global Level Surveillance:**

○ Countrywise alerts need to be **shared on the global network** so that other nations at equal risk might be warned before the outbreak hits their shores.

○ The **World Health Organisation (WHO)**'s **Global Outbreak Alert and Response Network (GOARN)** is one of the initiatives which makes scientific predictions based on global data about diseases.

● GOARN is a **global technical partnership** aimed to engage the resources of technical agencies beyond the United Nations for rapid **identification, confirmation and response to public health emergencies** of international importance.

● It currently comprises over **250** technical institutions and networks (and their members) across the globe including medical and surveillance initiatives, regional technical networks, networks of laboratories, United Nations organizations (e.g. UNICEF, UNHCR) etc.

● GOARN's **regional office for South East Asia Region** is located at **New Delhi, India**.

● The main objective of the network is to provide technical support to **WHO Member States experiencing a human health emergency** due to various threats including disease outbreaks, food safety, chemical toxins, zoonosis, natural and manmade disasters etc.

Demand for Compulsory Licencing of Remdesivir

Why in News

Recently, the CPI (Marxist) party has suggested that the government shall issue **compulsory licences** (CL) for **the manufacturing of a generic version of Remdesivir** which is being used to treat **Covid-19** patients.

➢ Generic medicines and vaccinations are copies of originally researched drugs, but at much lower prices.

Note:

Compulsory Licensing

➢ It allows governments **to license third parties** (that is, parties other than the patent holders) to produce and market a patented product or process without the consent of patent owners.

➢ Any time **after three years from date of sealing of a patent**, application for compulsory license can be made, provided:

  ❍ Reasonable requirements of the public have not been satisfied.

  ❍ Patented inventions are not available to the public at a reasonably affordable price.

  ❍ Patented inventions are not carried out in India.

➢ It is regulated under the **Indian Patent Act, 1970.**

➢ The **Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement does not specifically list the reasons** that might be used to justify compulsory licensing.

➢ However, the **Doha Declaration on TRIPS and Public Health** confirms that countries are free to determine the grounds for granting compulsory licences, and to determine what constitutes a national emergency.

Key Points

➢ **Background:**

  ❍ Remdesivir is developed to **treat Ebola and related viruses**.

  ❍ According to the **World Health Organization (WHO)**, the drug helps **to prevent Covid-19 viral replication**. It has the best potential and can be used in high doses without causing toxicities.

  ❍ It has been observed that the USA has bought the **entire stock of Remdesivir for the next three months**. It will therefore **not be available for the rest of the world**.

    ● **Vaccine nationalism** occurs when a country manages **to secure doses of vaccine for its own citizens or residents** before they are made available in other countries.

    ● It is done through **pre-purchase agreements** between a government and a vaccine manufacturer.

  ❍ Also, the manufacturing firm of the drug Remdesivir has a **patent monopoly** and thus **charging a price which is way more than its original cost**.

➢ **Proposals:**

  ❍ With the USA buying up all the stocks of the drug and high cost may cause **unavailability of the drug** for other countries including India.

  ❍ Thus, the party has suggested the government invoking **Clause 92 of the Patent Act (1970)** that allows it to issue **compulsory licences**.

    ● Clause 92 of the Patent Act states that the Central Government in **circumstances of national emergency or in circumstances of extreme urgency can issue the compulsory license**s for any patent in force.

    ● It can be issued at any time after the sealing thereof to work the invention by a notification in the Official Gazette.

  ❍ The issuance of compulsory licences **will allow** Indian manufacturers to produce a **more affordable generic version**.

Use of Winter Diesel in Ladakh

Why in News

Recently, the **Indian Oil Corporation** (IOC) has sought approval from the **Directorate General of Quality Assurance (DGQA)** for the **use of winter diesel** by armed forces for operations in high altitude areas such as Ladakh.

➢ The winter diesel was introduced as a **technological solution by the IOC in 2019** in **high-altitude sectors like Ladakh, Kargil, Kaza and Keylong**, which face the problem of freezing of diesel in their vehicles in extreme weather conditions.

Key Points

➢ **Winter Diesel:**

  ❍ It is a specialised **fuel** specifically for high altitude regions and low-temperature regions such as Ladakh, where ordinary diesel can become unusable.

  ❍ It also meets the **Bureau of Indian Standards (BIS)** specification of **BS-VI** grade.

➢ **Characteristics:**

  ❍ **Low Viscosity:** It contains additives to maintain lower viscosity by enabling the **fuel to remain fluid** in such conditions.

Note:

- Regular diesel fuel contains **paraffin wax** which is added **for improving viscosity and lubrication**. At low temperatures, the paraffin wax **thickens or 'gels' and hinders the flow** of the fuel in the car engine.
- The viscosity of a fluid is a **measure of its resistance** (due to internal friction) to deformation thereby maintaining the state of being thick and semi-fluid in consistency.
- Paraffin wax is a soft colorless solid derived from petroleum, coal or **shale oil** that consists of a mixture of hydrocarbon molecules.

○ **Low Pour Point:** It has **a low pour point (as low as -30°C)**. It is the **temperature below which** the liquid loses its **flow characteristics**.

- The flow characteristics of **regular diesel change** at low temperatures and using it may be detrimental to vehicles.
- Earlier, the IOCL provided the **Diesel High sulphur Pour Point (DHPP-W)** to armed forces, which also has a pour point of -30°C.

○ **Higher Cetane Rating:** It has a **higher cetane rating** which is an indicator of the combustion speed of diesel and compression needed for ignition.

○ **Lower Sulphur Content:** It would lead to **lower chemical deposits in engines** and better performance.

➢ **Significance:**

○ **Border Tensions with China in Ladakh:** It is expected that demand for the winter fuel may rise due to the border tensions in the **Galwan valley in Ladakh** for the patrolling purposes.

○ **Boost to Local Economy:** Supply of the special fuel to Ladakh would reduce the hardships faced by the local people for **transportation and mobility** during winter months, therefore facilitate the local economy and tourism.

○ **Curb in Air Pollution:** Before the launch of winter diesel, consumers in such areas were using kerosene to dilute diesel to make it usable, which leads to more air pollution.

- Now use of **winter diesel would replace use of Kerosene** therefore helping in the **reduction of air pollution**.

Drug Discovery Hackathon 2020

Why in News

Recently, the government has launched **Drug Discovery Hackathon 2020 (DDH2020)**, a first of its kind national initiative for **supporting the drug discovery process**.

➢ The objective is to **identify drug candidates against SARS-CoV-2 (Covid-19)** by **in-silico drug discovery**.

In-Silico Drug Discovery

➢ In-Silico is an expression used to mean "**performed on computer or via computer simulation**."

➢ In-Silico drug discovery process is thus the identification of the drug target molecule **by employing bioinformatics tools.**

○ Drug target molecules generally include **DNA, RNA and proteins** such as receptors, enzymes etc.

○ Identification of drug target molecules help in knowing their pharmacological relevance to the disease under investigation.

➢ **Bioinformatics** is the application of computational technology (such as **Artificial Intelligence/Machine Learning**) to handle the rapidly growing repository of information related to molecular biology.

Key Points

➢ **Joint Initiative:** DDH2020 is a joint initiative of the Ministry of Human Resource Development (MHRD), **All India Council for Technical Education (AICTE)** and the **Council of Scientific and Industrial Research (CSIR)** and supported by partners like **Centre for Development of Advanced Computing (CDAC)**, **MyGov** and private players.

➢ **Participants:** Researchers/Faculty across the world, students studying in India and abroad.

➢ **Functioning:**

○ It will primarily focus on computational aspects of drug discovery and will have three Tracks.

○ **Track-1** will deal with computational modelling for drug design or identifying 'lead' compounds from existing databases that may have the potential to inhibit SARS-CoV-2.

Note:

○ **Track-2** will encourage participants to develop new tools and algorithms using data analytics and AI/ML approach for predicting drug-like compounds with minimal toxicity and maximal specificity and selectivity.

○ **Track 3** will only deal with novel and out-of-the-box ideas in this field.

○ Participants will submit their ideas online after which the CSIR and other labs will work towards executing them.

Lithium Production in Stars

Why in News

Recently, scientists from the **Indian Institute of Astrophysics** (IIA) have provided evidence for the first time that **Lithium (Li) production is common** among **low mass Sun-like stars during their Helium (He) core burning phase**.

➢ IIA is an **autonomous institute** of the **Department of Science and Technology** (DST), Government of India.

Key Points

➢ **Findings of the Study:**

○ Scientists performed a large-scale systematic investigation of the '**He-flash**' (**on-set of He-ignition at the star's core via violent eruption**), at the **end of the star's core hydrogen-burning phase**.

● Hydrogen burning is the fusion of hydrogen nuclei into a helium nucleus.

○ This **He-flash** has been identified as the **source of Li production** suggesting that **all low-mass stars undergo Li production**.

● Our **Sun** will reach this phase in about **6-7 billion years** and will manufacture Li.

○ The study **challenges the long-held idea that stars only destroy lithium** and indicates that there is some physical process missing in **stellar theory**.

● Earlier, it was believed that a vast majority of stars with a mass similar to that of the Sun destroy Li gradually over the course of their lives, via **low-temperature nuclear burning**.

○ The study also **suggests new limits** (A(Li) > -0.9~dex) for **classifying stars as Li-rich**, which is 250 times below the threshold (A(Li) > 1.5~dex) used till now.

➢ **Origin of Lithium:**

○ The origin of much of the Li can be traced to the **Big-Bang** that happened about 13.7 billion years ago.

○ Over the course of time, **Li content** in the physical universe has **increased** by about a factor of four, which is **meagre compared to the rest of the elements** which grew about a million times.

○ **Stars are primary contributors** to the significant enhancement of heavier elements through **mass ejections and stellar explosions**. Li, however, was thought to be an exception till now.

➢ **Usage of Lithium:**

○ Lithium is a **light inflammable metal** which is mainly used in **lithium-ion (Li-ion) batteries** and has brought a transformation in modern communication devices and transportation.

○ It is used in the **manufacturing of aircrafts**.

○ It is also used in **mental health**. **Lithium carbonate** is a common treatment of bipolar disorder, helping to stabilize wild mood swings caused by the illness.

Global Response to China's Security Law on Hong Kong

Why in News

Recently, several countries have proposed measures to protect Hong Kong residents fleeing potential political persecution from China's new **National Security Law**.

➢ China's new security law criminalizes what it deems secession, subversion, terrorism, and collusion with a foreign country.

Key Points

➢ **United Kingdom's Response:**

○ It has described the security law as a clear and serious violation of the **1984 Sino-British Joint Declaration** under which it handed back its colony to China in 1997.

- Under the Joint Declaration, China had promised to maintain Hong Kong's capitalist and more open political system for 50 years under **"one country, two systems"**.
- Since the handover, Hong Kong residents have accused China of **overstepping its authority**.
  - The **Umbrella Movement** was a series of protests in 2014 that called for more transparent elections for the city's chief executive.
  - In 2019 protests erupted in Hong Kong over a proposed bill to allow **extradition** to mainland China.

○ It has **decided to offer British citizenship** to around three million **residents of Hong Kong**.

○ It is also **rethinking its provisional decision to allow Huawei (China's Company)** to be involved in the development of Britain's 5G infrastructure.

➢ **Taiwan's Response:**

○ It has opened the **Taiwan-Hong Kong Services and Exchange Office** in order to help facilitate asylum for people fleeing Hong Kong.

○ Taiwan **was the first state which pledged to support Hong Kong** residents seeking asylum, in May 2020.

- China also **claims Taiwan to be part of China** and threatens to use force to take over the island.
- China has proposed to Taiwan that it follow the **"one country, two systems"** model to unite with China. But the Taiwanese reject any idea of uniting with mainland China.

➢ **Other Country's Response:**
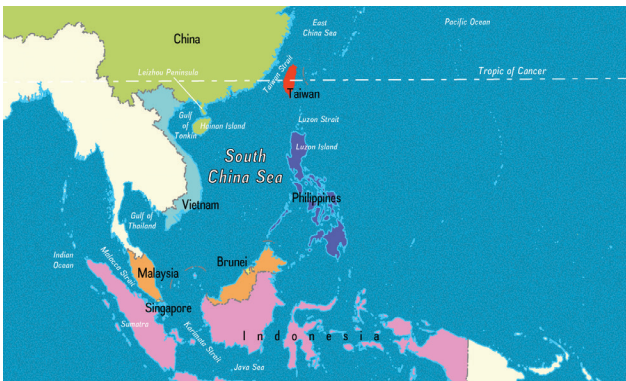
○ **The USA** has passed a **Bipartisan Bill** to sanction Chinese officials who violate Hong Kong's freedoms.

- It is also planning to bring the **Hong Kong Safe Harbor Act**, which would open up a route for asylum for Hong Kong's frontline activists in immediate danger.

○ **Australia** is considering offering Hong Kong residents **temporary protection visas** that will allow refugees to live in the country for up to three years.

○ **Japan** said that it is **seriously concerned** about China's decision toward Hong Kong.

○ **India** has been keeping a close watch on recent developments in Hong Kong.

➢ **Chinese Reaction to Global Response:**

○ It has said that the **security law issue is purely China's internal affairs**, and no foreign country has the right to interfere.

○ It has condemned the UK's citizenship offer to Hong Kongers and **warned the UK for serious consequences.**

- It considers all residents living in Hong Kong, including those with British National Overseas passports, as Chinese nationals.
- It has said that the UK's U-turn on its **Huawei decision would damage the UK's image as an open, business-friendly environment.**

More Metallic Moon: NASA

Why in News

Recently, the **National Aeronautics and Space Administration** (NASA) has found evidence of **greater quantities of metals** such as iron and titanium on the **Moon's subsurface**.

➢ The metallic distribution was observed by the **Miniature Radio Frequency (Mini-RF) instrument** aboard the **Lunar Reconnaissance Orbiter** (LRO) spacecraft.

> **Lunar Reconnaissance Orbiter**
> ➢ It is a NASA moon mission that has been in **operation since 2009**.
> ➢ The mission particularly focuses on the moon's poles to **search for water or ice** that could **exist in permanently shadowed craters**.

Note:

Miniature Radio Frequency Instrument
➢ It is one of the two radar instruments launched to the moon to **map the lunar poles**, **search for water and ice** and **to demonstrate future NASA communication technologies**, under the **Mini-RF project**.
  ❍ The first instrument, launched on the **Indian Space Research Organisation** (ISRO) **Chandrayaan-1** spacecraft, mapped both polar regions of the Moon.
  ❍ The second instrument, currently flying on NASA's LRO, has been mapping the **different geologic units of the lunar surface**.

Key Points

➢ The LRO's Mini-RF instrument was measuring **dielectric constant** within lunar soil in crater floors in the Moon's northern hemisphere.
  ❍ **Dielectric constant**, an **electrical property**, is the **ratio of the electric permeability of a material to the electric permeability of a vacuum**.
  ❍ Dielectric properties are **directly linked to the concentration of metal minerals**.
➢ The level of this property increased while surveying larger craters and kept rising in crater sizes up to 5 km in diameter. Beyond that size, the value of the dielectric constant leveled off.
➢ It raised the possibility that the dielectric constant increased in larger craters because the meteors that created them dug up dust containing iron and titanium oxides from beneath the Moon's surface.
➢ The Mini-RF findings were backed by **metal oxide maps** from the **LRO Wide-Angle Camera**, **Japan's Kaguya mission** and **NASA's Lunar Prospector spacecraft**, which showed that larger craters with their increased dielectric material were also richer in metals.
  ❍ The metal oxide maps suggested that more quantities of iron and titanium oxides were dug up from 0.5 to 2 km below the Moon's surface as compared from the first 0.2 to 0.5 km.
➢ **Significance:**
  ❍ If the findings are proven to be true, it would imply that there are **large quantities of iron and titanium oxides** beyond a few meters of the Moon's upper surface.
  ❍ The finding could **aid in drawing a clearer connection between Earth and the Moon**.

➢ NASA has now undertaken further research to find whether the **same relation between metal deposits and crater size holds true on the southern hemisphere** of the Moon.

Connection with Moon Formation

➢ A **Mars-sized protoplanet collided** with the **newly formed Earth** around **4.5 billion years ago**, breaking off its piece that went on to become a satellite.
➢ The hypothesis is backed by substantial evidence, such as the **close resemblance between the Moon's bulk chemical composition with that of Earth**.
➢ However, scientists have been trying to explain **how Earth's crust has fewer amounts of iron oxide than the Moon**. Now, the new discovery of even greater quantities of metal on the Moon makes the process more difficult.
➢ A possible reason could be that the Moon was **created from a material much deeper beneath Earth's surface** than was believed before, or that the **newly found metal presence could be the result of molten lunar surface cooling down** gradually.

UN Report on Zoonotic Diseases

Why in News

According to a report published by the **United Nations Environment Programme (UNEP)** and the **International Livestock Research Institute (ILRI)**, about 60% of known infectious diseases in humans and 75% of all emerging infectious diseases are **zoonotic**.

➢ The report was released on **6th July 2020**, observed as the **World Zoonoses Day**.
➢ It focuses on the **context and nature** of potential future zoonotic disease outbreaks, during the **Covid-19 pandemic** by identifying the **anthropogenic** (changes in environment due to human activity) factors.

Key Points

➢ **Zoonoses or Zoonotic Disease:**
  ❍ It is a disease that passes into **the human population from an animal source** directly or through an intermediary species.

Note:

○ Zoonotic infections can be **bacterial, viral or parasitic in nature**, with animals playing a vital role in maintaining such infections.

○ Examples of zoonoses include **HIV-AIDS**, **Ebola**, **Malaria** and the current **Covid-19 disease**.

➢ **Anthropogenic Factors:**

○ **Increased Use of Wildlife:** Exploitation of **wildlife** for hunting, harvesting of wild animals for meat and research or medical purposes can bring humans in closer contact with wild animals, thus increasing the risk of zoonotic disease emergence.

○ **Changes in Food Supply Chains:** The popularity of food products with **animal source** and the need for immediate delivery to consumers is driving major changes in the food supply chain.

○ **Increased Demand for Animal Protein:** This has encouraged the **intensification and industrialisation of animal production**, wherein a large number of genetically similar animals are bred in for higher productivity.

○ **Intense and Unsustainable Farming:** Intensive farm settings cause **animals to be raised in close proximity** to each other characterised by poor waste management. This makes them more vulnerable to infections, which can further lead to emergence of zoonotic diseases.

○ **Use of Antimicrobials:** High **use of antimicrobials** in farm settings is contributing to the burden of **Antimicrobial Resistance (AMR).**

● **Antimicrobial resistance** is the **resistance acquired** by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials and anthelmintics) that are used to treat infections.

● As a result, standard treatments become ineffective, infections persist and may spread to others**.**

➢ **Recommendations:**

○ **One Health Approach: One Health** is a **multisectoral and transdisciplinary approach** with the goal of achieving **optimal health outcomes** by recognizing the interconnection between **people, animals, plants and their shared environment**.

● It aids a coordinated response to future pandemics and is a key to zoonoses risk reduction and control.

○ **Expanding Scientific Enquiry:** This is a crucial element of AMR containment efforts since waste from **intensive farms using antimicrobials** paves way for AMR determinants (**example - antibiotic residues, resistant bacteria**) in the environment.

○ **Strengthening Monitoring:** It would help in regulating practices associated with zoonotic diseases.

○ **Sustainable Land Management Practices:** It would help in developing alternatives for food security and livelihoods that do not rely on the destruction of habitats and **biodiversity**.

● It would also enhance sustainable co-existence of agriculture and wildlife.

○ **Identifying Key Drivers:** It would encourage management and control measures for emerging zoonotic diseases in animal husbandry.

United Nations Environment Programme

➢ It is a leading global environmental authority established on **5th june 1972**.

➢ **Functions:** It sets the **global environmental agenda**, promotes the sustainable development within the **United Nations** system and serves as an authoritative advocate for global environment protection.

➢ **Major Reports:** Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.

➢ **Major Campaigns:** Beat Pollution, UN75, World Environment Day, Wild for Life.

➢ **Headquarters:** Nairobi, Kenya.

International Livestock Research Institute

➢ The ILRI is an **international agricultural research institute** formed in 1994 through the merger of the International Livestock Centre for Africa and the International Laboratory for Research on Animal Diseases situated in Nairobi, Kenya.

➢ **Functions:**

○ It focuses on **building sustainable livestock** pathways out of poverty in low-income countries.

○ It works with partners worldwide to help poor people keep their farm animals alive and productive and find profitable markets for their animal products.

➢ **Headquarters:** Nairobi, Kenya.

Note:

Comet C/2020 F3 Neowise

Why in News

The recently discovered **comet C/2020 F3** will make its closest approach to the Earth at a distance of 64 million miles or 103 million kilometres while crossing **Earth's outside orbit on 22ⁿᵈ July 2020**.

➢ It is also known as **NEOWISE** after the **National Aeronautics and Space Administration** (NASA) **telescope** that discovered it.

➢ On 3ʳᵈ July, it was closest to the sun at 43 million km due to which its outer layer was released, creating an atmosphere (referred to as *coma*) of gas and dust from its icy surface.

➢ **It will be visible** through binoculars or a small telescope.

Key Points

➢ The word comet comes from the Latin word '*Cometa*' which means '**long-haired**'.

➢ The earliest known record of a comet sighting was made by an astrologer in **1059 BC**.

➢ Comets or '**dirty snowballs**' are **mostly made of dust, rocks and ice** and can range in their width from a **few miles to tens of miles wide**.

➢ When they orbit **closer to the sun**, like C/2020 F3, they **heat up and release debris of dust and gases**.

  ❍ The **solid portions** of comets consisting mostly of water, ice and embedded dust particles are **inactive when far away from the sun**.

  ❍ When near the sun, the **icy cometary surfaces vaporize** and throw off large quantities of gas and dust thus **forming the enormous atmosphere and tails**.

  ❍ The **released gases form a glowing head** that can often be larger than a planet and the **debris forms a tail** that can stretch out to millions of miles.

  ❍ Each time a comet passes the sun, it **loses some of its material** and it will **eventually disappear completely** as a result.

  ❍ Comets may be occasionally pushed into orbits closer to the Sun and the Earth's neighbourhood **due to forces of gravity**.

➢ According to NASA, while there are millions of comets orbiting the sun, there are **more than 3,650 known comets** as of now.

➢ **The predictable comets** are the **short-period comets** which take **less than 200 years to orbit around the sun**.

  ❍ These can be **found in the Kuiper belt**, where many comets orbit the sun in the realm of Pluto.

  ❍ One of the most famous short-period comets is called **Halley's Comet** that **reappears every 76 years**. Halley's will be **sighted next in 2062**.

➢ The **less-predictable comets** can be found in the **Oort cloud** that is about **100,000 AU (Astronomical Unit** which is the distance between the Earth and the Sun and is roughly 150 million km**) from the sun** or 100,000 times the distance between the Earth and the sun.

  ❍ Comets in this cloud **can take as long as 30 million years to complete one rotation** around the sun.

➢ **Visibility:**

  ❍ Comets **do not have the light of their own** and the visibility **depends on its gas and dust outbursts**.

  ❍ Humans see the **reflection of the sun's light off the comet** as well as the **energy released** by the gas molecules after it is absorbed from the sun.

  ❍ To be visible, a comet must make a **particularly close approach to the sun** to produce enormous quantities of gas and dust or it should make a **relatively close approach to the Earth** so that it is easily viewed.

Significance of the Study

➢ Astronomers believe that comets hold important **clues about the formation of the solar system** and it is **possible that comets brought water and other organic compounds** to Earth.

➢ NASA tracks all **Near Earth Objects (NEOs)** that includes comets and asteroids using telescopes placed all around the Earth, as part of its **NEO Observation Program**.

  ❍ **Objective of the Program:** To find, track and characterise NEOs that are 140 meters or larger in size since they can pose a risk to the Earth because of the devastation a potential impact can cause.

Note:

Itolizumab: Emergency Covid-19 Drug

Why in News

Recently, the **Drugs Controller General of India** (DCGI) has cleared **Itolizumab** for **restricted emergency use in Covid-19 cases**.

➢ Itolizumab is a drug used to treat **severe chronic plaque psoriasis**.

   ○ Plaque psoriasis is a **chronic autoimmune condition** in which skin cells build up and form scales and itchy, dry patches.

Key Points

➢ Itolizumab is for emergency use only in the treatment of **Cytokine Storm Syndrome** (CSS) in moderate to Severe **Acute Respiratory Distress Syndrome** (ARDS) patients due to Covid-19.

   ○ **CSS** is an uncontrolled attempt by the immune system to neutralise the virus that often ends up damaging the lungs and other organs and even death.

   ○ **ARDS** is a disease in which the lung loses its capacity to expand further.

➢ It will be **manufactured and formulated as an intravenous (IV) injection** at the bio-manufacturing facility in Bengaluru.

➢ Itolizumab is the **first novel biologic therapy** to be approved anywhere in the world for treating patients with moderate to severe Covid-19 complications.

   ○ Itolizumab is a **biologic/biologic drug** given by injection (shot) or IV infusion.

   ○ A biologic is a **protein-based drug derived from living cells cultured in a laboratory**.

   ○ Biologics are **different from traditional systemic drugs** that impact the entire immune system.

   ○ Biologics **only target specific parts of the immune system** and biologics used to treat psoriatic disease block the action of a specific type of immune cell called a **T-cell**.

Reasons for its Approval

➢ DCGI's approval for the repurposed drug comes after the **successful conclusion of a randomised, controlled clinical trial** at multiple hospitals.

   ○ The trial was designed employing a method called **Simon's Two-Stage Design**, an approach in executing **phase-2 clinical trials where the efficacy of a drug is tested**.

➢ Other criteria such as **improvement in oxygen levels** and **reduced inflammation** were also convincing to several doctors who used the drug on their patients.

➢ The evaluation also **rests on Itolizumab being added to the 'best standard of care'** which slightly varied across hospitals.

   ○ In general, this consisted of **hydroxychloroquine** (HCQ), **ritonavir** (antivirals), oxygen therapy, antibiotics, heparin (to avoid clotting) and some got methylprednisolone (a corticosteroid).

➢ Its usage was justified because of its **large trials and safety assessments are already done for psoriasis**. Plus, it is **hard to recruit a larger number of patients in critical care conditions** so numbers had to be kept low.

   ○ There are **no hard rules on a minimum number** of recruits.

   ○ For an **orphan drug** (used to treat **orphan or rare diseases**), small numbers of recruits are approved.

➢ The available evidence for **remdesivir** suggests that it may decrease the time for clinical improvement when used in moderate to severe cases and has no benefits in terms of reduced mortality.

   ○ Remdesivir has to be used with **extreme caution** due to its potential for **serious adverse effects including liver and kidney injury.**

➢ Another drug **Tocilizumab** has not shown any benefits in mortality reduction.

➢ **Criticism:**

   ○ Itolizumab appears to have been **tested on too few patients to reliably conclude on its benefits** and with such a small sample size it would be unwise to claim it as the final and fully successful drug.

   ○ 30 patients were recruited across four hospitals and 20 of them were given Itolizumab along with the 'standard of care treatment' and 10 were given only standard of care.

Drug Controller General of India

➢ It is responsible for **approval of licences of specified categories of drugs** such as blood and blood products, **IV fluids**, **vaccines and sera** in India.

➢ It comes under the **Ministry of Health and Family Welfare**.

Note:

drishti

○ Nobody died from the set of 20 patients and 3 patients died from the set of 10 patients.

Flood Resistant Paddy: Assam

Why in News

Recently, farmers from **Golaghat district in Assam** have cultivated new **flood resistant paddy varieties** to shift from the traditional ones.

➢ The varieties called **Ranjit Sub1, Swarna Sub1 and Bahadur Sub1** have been used by about 60% farmers of the **West Brahmaputra area.**

Key Points

➢ Farmers in flood-prone areas of Assam have been harvesting the water-resistant Swarna Sub1, developed by the **Indian Council of Agricultural Research** (ICMR) and **the Manila-based International Rice Research Institute,** since 2009.

➢ However, the switchover from traditional varieties of paddy has been slow.

  ○ The flood-resistant varieties including Ranjit Sub-1 were reintroduced in 2018.

➢ **Significance:**

  ○ **Resist Submergence:** The new **rice** varieties can resist submergence for **up to two weeks** and significantly do not get damaged by the heavy flood.

    ● However, comparison with the traditional varieties is difficult as they get damaged in the flood.

  ○ **Greater Yield:** Enriched with the '**submergence**' (sub in short) **gene**, the varieties can yield up to **five tonnes per hectare** on an average.

  ○ **Reduction in Crop Loss:** Some 1,500 farmers cultivate on about 950 hectares in crop-yielding areas which have been impacted by the regular flood. Therefore, rice varieties can reduce **flood-caused crop loss substantially**.

  ○ **Regeneration:** These varieties **can get regenerated again** in case damaged by the flood, hence ensure maximum productivity.

> **Rice**
> ➢ It is a **kharif crop** which requires **high temperature, (above 25°C)** and **high humidity** with annual r**ainfall above 100 cm**.

➢ About one-fourth of the total cropped area in India is under rice cultivation.

➢ **Leading Producer States:** West Bengal, Uttar Pradesh and Punjab.

➢ **High Yielding States:** Punjab, Tamil Nadu, Haryana, Andhra Pradesh, Telangana, West Bengal and Kerala.

➢ In West Bengal, farmers grow three crops of rice called **'aus', 'aman' and 'boro'.**

➢ India contributes **21.6% of rice production in the world** and ranks second after China.

Major Rice Producing States
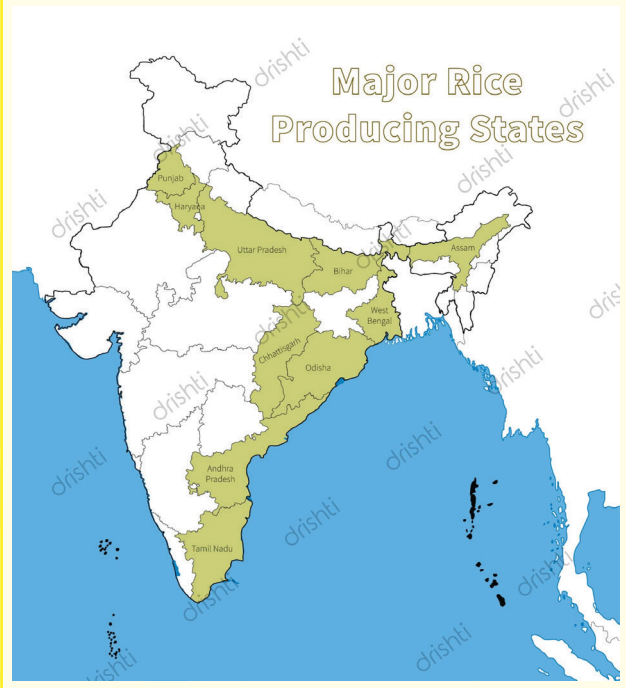
Hope: UAE Mars Mission

Why in News

The **United Arab Emirates (UAE) Mars Mission or 'Hope'** is scheduled for launch on 16th July 2020.

➢ It is **one of three Mars missions** scheduled to be launched this month. The **USA and China,** both have surface rovers in the late stages of preparation.

Key Points

➢ **Hope Mission:**

  ○ It is the **first interplanetary mission for the Arab World.**

  ○ The **'Hope Orbiter'** will be lifted on an **H-IIA rocket** from Mitsubishi Heavy Industries, a machinery maker

in **Japan**. It will be launched from **Tanegashima Island** in Japan.

- The UAE does not have its own rocket industry.

○ Once launched, it is expected to **arrive in orbit around Mars in February 2021** (the year of **50th anniversary of UAE's founding**).

○ It costs about **USD 200 million** and will carry three instruments: an infrared spectrometer, an ultraviolet spectrometer and a camera.

○ **Expected Benefits:**

- It will give planetary scientists their **first global view of Martian weather at all times of the day**.

- Over its two-year mission, it will investigate how dust storms and other weather phenomena near the Martian surface speed or slow the **loss of the planet's atmosphere** into space.

○ **Significance:** The country's primary aim is to inspire school children and **spur its science and technology industries** which in turn will enable the UAE to tackle critical issues like food, water, energy and a post-petroleum economy.

○ **Previous UAE Space Missions:**

- The UAE has built and launched three **earth-observing satellites** in collaboration with a South Korean manufacturer.

- In 2019, the UAE bought a seat on a **Russian Soyuz rocket** and sent its first astronaut for an eight-day stay at the **International Space Station**.

➢ **Other Two Missions:**

○ **NASA's** Mars rover, **Perseverance**, with instruments to search for chemical signs of past life, is scheduled to launch on 30th July 2020.

○ **China** is also launching an ambitious mission to Mars, **Tianwen-1.**

➢ **Reasons Behind these Timings:**

○ The timing is dictated by the opening of a **one-month window** in which **Mars and Earth are in an ideal alignment** on the same side of the sun, which **minimizes travel time and fuel use**. Such a window **opens only once every 26 months.**

➢ **Existing Missions on Mars:**

○ Only the **USA has successfully put a spacecraft on Mars**. Two **NASA landers** are operating on Mars which are **InSight** and **Curiosity**.

○ Six spacecraft that are **exploring Mars from orbit** include three from the USA, two European and one from **India (Mars Orbiter Mission)**.

➢ **Objective Behind Mars Exploration:**

○ Despite being starkly different in many ways, the Red Planet has several **Earth-like features** such as clouds, polar ice caps, volcanoes and seasonal weather patterns.

○ For ages, scientists have wondered **whether Mars can support life.** In the past few years, Mars missions have been able to discover the **possible presence of liquid water** on the planet, either in the subsurface today or at some point in its past.

Low-cost Supercapacitor

Why in News

Recently, scientists at the **International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI)** have **developed a simple, low-cost, environment-friendly, and sustainable supercapacitor device.**

➢ ARCI is an autonomous organization of the **Department of Science and Technology**, Government of India.

Supercapacitor

➢ Supercapacitor is a next-generation **energy storage device**. They are also known as **ultracapacitors**.

➢ It has significant advantages such as **high power density, long durability, and ultrafast charging characteristics** as compared to conventional capacitors and **Lithium-Ion batteries (LIB)**.

➢ Main components of supercapacitors include **electrode, electrolyte, separator, and the current collector.**

➢ The electrode and electrolyte are the pivotal components, which directly determine the electrochemical behaviour of the supercapacitors.

○ The manufacturing cost of electrode materials, as well as electrolytes account for a major portion of the supercapacitor manufacturing cost.

○ An **electrode** is a solid electric conductor that is used to take an electric current to or from a source of power.

○ An **electrolyte** is a substance that produces an electrically conducting solution when dissolved in a polar solvent, such as water.

Note:

Key Points

➢ **Supercapacitor Device:**

○ The supercapacitor is developed from **industrial waste cotton based electrode** & **natural seawater electrolyte.**

○ Industrial waste cotton was **converted into highly porous carbon fibers** by activation process and then utilised to make high-performance supercapacitor **electrodes.**

○ **Natural seawater** was explored as an environment-friendly, cost-effective and alternative aqueous **electrolyte.**

➢ **Benefit:**

○ This supercapacitor showed great potential for practical implementation.

○ It exhibited **maximum capacitance**, **good durability** and **high efficiency**.

● Capacitance is the ability of a system to store an electric charge.

● Efficiency denotes the charge transfer in a system facilitating an electrochemical reaction.

○ **When integrated with a solar cell**, the supercapacitor will become a low cost, eco-friendly, efficient and self-powering device.

● It has a long life cycle and can be used as maintenance-free power supply.

● It can also overcome the drawbacks of the intermittent nature of the solar irradiation.

➢ **Conclusion:**

○ The development is an excellent example of creative science for the sustainable, green processes embedding principles of **waste-to-wealth.**

Covid-19 Specific Memory T Cells

Why in News

Recent studies have shown that people unexposed to and not infected with **Covid-19** (caused by **SARS-CoV-2** or **Novel Coronavirus**) may still exhibit **T cell responses** specific to other **coronaviruses**.

Key Points

➢ A huge number of adults are exposed to **four different coronaviruses** that cause **common cold** and studies have shown that **20-50%** of healthy people **display SARS-CoV-2-specific memory T cells**.

○ The healthy people studied were those **tested prior to the pandemic** or have not been infected with novel coronavirus.

○ Memory T cells protect against **previously encountered pathogens.**

➢ It is thought that **SARS-CoV-2-specific T cell responses** seen in healthy people might arise from **memory T cells** derived from **exposure to 'common cold' coronaviruses**.

➢ However, it is **not known** that the presence of pre-existing immunity from memory T cells **offers clinical relevance**, when exposed to SARS-CoV-2.

➢ **Measuring pre-existing immunity and correlating** it with infection and severity of disease is the only way to find out its role in protection against SARS-CoV-2.

➢ However, the **relationship between the infections by and immunity** from common cold coronavirus and **age is not well established**. That is why it is unclear why children do not show severe symptoms, while older people do.

➢ These considerations underline how **multiple variables may be involved** in potential pre-existing partial immunity to Covid-19.

➢ **Pros:**

○ It is believed that people with a high level of pre-existing memory T cells **could mount a faster and stronger immune response** upon exposure to the virus and thereby limit disease severity.

● T cells could potentially **facilitate an increased and more rapid neutralizing antibody response** against the virus.

Note:

- **Cons:**
  - ❍ The pre-existing immunity can **reduce the immune responses** that the vaccine causes through a mechanism called the **'original antigenic sin'.**
    - ● **Original antigenic sin**, also known as the **Hoskins effect**, refers to the propensity of the body's immune system to preferentially utilize immunological memory based on a previous infection when a second slightly different version of that foreign entity is encountered.
  - ❍ It can also lead to **antibody-mediated disease enhancement**, where antibodies present at sub-neutralising concentrations can actually **augment virus infection and cause more severe disease**.

T Cells

- ➤ T cells are so called because they are **predominantly produced in the thymus.**
- ➤ They recognise foreign particles (antigen) by a surface expressed, highly variable, T cell receptor (TCR).
- ➤ There are two major types of T cells: **the helper T cell** and the **cytotoxic T cell**.
- ➤ As the names suggest, helper T cells 'help' other cells of the immune system, whilst cytotoxic T cells kill virally infected cells and tumours.
- ➤ The severity of disease can depend on the strength of these T cell responses.

Data on Covid-19 After-effects

Why in News

Recently, the **Directorate General of Health Services** (DGHS) has started collecting data on **post-Covid-19 medical complications** from leading central government and other hospitals across India.

- ➤ DGHS is a repository of technical knowledge concerning public health, medical education and health care. It is an **attached organisation of the Ministry of Health and Family Welfare**.

Key Points

- ➤ Leading physicians from across the country have indicated that they are seeing some **worrying medical complications among the recovered patients**.
- ➤ Stress on the body associated with **Coronavirus** could lead to long and short term complications.
- ➤ Data is being collected on the medical complications including **Covid-19-induced diabetes, impaired lung, heart, liver and brain functions** along with **acute fatigue and dyspnea** (shortness of breath).
- ➤ It would help the Health Ministry to come out with **guidelines on further care and treatment** of those who had recovered.
- ➤ **Data Highlight:**
  - ❍ **86%** of the Covid-19 cases in the country were reported from **10 states**, with **Maharashtra and Tamil Nadu** accounting for **50%**.
  - ❍ The overall **recovery rate** had climbed from **47.6% (31st May)** to **63.02% currently**.
- ➤ **Trends in Recovered Patients:**
  - ❍ Patients took a long time to fully recover with complaints of feeling **lethargic**, completely **drained out**, **mentally depressed** with the **inability to concentrate**.
  - ❍ Those who developed **pneumonia**, lung function improves within some months of recovery but some may not normalise due to the **fibrosis** (development of fibrous connective tissue as a reparative response to injury or damage).
  - ❍ Possibilities of **long-term lung function deterioration** and **vascular diseases**.
  - ❍ Indications of **Covid-induced diabetes**.
- ➤ **After-effects of Covid-19:**
  - ❍ The damage is caused by **thrombosis in the small vessels** that ultimately **damages lung tissues and other organs**, including the heart and can lead to fatal **pulmonary embolism**.
    - ● **Thrombosis** is the formation of a blood clot, known as a thrombus, within a blood vessel. It prevents blood from flowing normally through the circulatory system.
    - ● **Pulmonary Embolism** (PE) is a condition in which one or more arteries in the lungs become blocked by a blood clot.

App to Monitor Rice Fields: Paddy Watch

Why in News

Researchers from University of Sydney in collaboration with other partners have been developing an app i.e. **Paddy watch,** which will act as the **first real-time monitoring platform for rice fields.**

➢ The project has been undertaken in collaboration with **Google Earth** and the **Group on Earth Observations (GEO)**.

Key Points

➢ **Development of the App:** The Paddy watch is being developed in partnership with **Indian Agricultural Research Institute,** India along with the research institutes from different countries i.e. China, Malaysia, Indonesia, and Vietnam.

  ○ These five countries hold the position of the largest rice-producing countries across the globe.

  ○ Among these, **India, China and Indonesia** are the world's three largest producers of rice and together account for about **60% of the total** world production.

➢ **Functioning:** The **real-time land-use data** will be generated using **Google Earth** and **cloud computing technology**, and will be verified by field operators in partner countries to ensure accuracy of rice production worldwide.

➢ **Significance:**

  ○ **Digital Agriculture:** The app would work on **deep-learning techniques (**works on the idea of **Artificial Intelligence**) to forecast crop yields and water consumption.

    ● This type of technology would enhance the world's confidence to feed the population in a sustainable way.

  ○ **Accurate Information:** Accurate and up-to-date information on rice planted and harvested can be achieved through the app.

    ● It would allow **farmers, agricultural scientists, non-government organisations and government planners** to manage land use to **ensure food security** in the world's rice bowls.

    ■ Therefore, helps in meeting the **United Nations**-mandated **sustainable development goal** No.2 — of **'Zero Hunger**.'

  ● It would help in water management and **water security** by predicting the use of water for the rice fields.

  ○ **GreenHouse Gas Emission:** As paddy fields release methane, a significant component to the **greenhouse gases**, the app would help in the estimation of the emission and impact of **global warming.**

  ○ **Policy Formulation:** The information collected through the app would also help the associated partners to develop policies for education, economic growth, gender equity, and reduction of social inequality.

Group on Earth Observations

➢ GEO is a unique **global network** connecting government institutions, academic and research institutions, data providers and scientists to benefit the world by comprehensive and sustained Earth observations.

➢ It coordinates international efforts to build a **Global Earth Observation System of Systems (GEOSS)**.

  ○ It aims to produce a **global public infrastructure** that generates, near-real-time environmental data, information and analyses for a wide range of users and mitigation of global issues like climate change.

Kuaizhou-11 Rocket

Why in News

The **Chinese rocket named Kuaizhou-11** failed due to malfunction during the flight, losing both the satellites it was carrying.

Key Points

➢ **Description:** Kuaizhou, meaning **"fast ship"** in **Chinese** is a low-cost **solid-fueled carrier rocket**.

  ○ It was **operated by the commercial launch firm Expace**, and was originally scheduled for 2018 after being developed three years earlier.

  ○ Also known as **KZ-11**, it had a lift-off mass of 70.8 tonnes, and was designed to launch **low-Earth and Sun-synchronous orbit satellites.**

Note:

➢ **Significance:** Although the launch failed, it signifies a **rapidly growing commercial space industry** in China.

○ Commercial launches are an emerging industry in China. Companies such as Expace, iSpace, and Landspace, created after the **Chinese government opened its space sector to private investment in 2014,** have cut down traditional launch operations and are developing rapid response capabilities, the report stated.

○ This has provided greater advantages for both government and commercial customers.

➢ **Other Important Missions of China:**

○ **Tianwen-1:** **China's Mars Mission** to be launched by July, 2020. China's previous **'Yinghuo-1' Mars mission,** which was supported by Russia **failed in 2012**. Tianwen-1 will lift off on a Long March 5 rocket.

○ **Long March 5 Rocket:** Considered as China's successful step to **operate a permanent space station** and send astronauts to the Moon.

○ **Tiangong:** China's own **space station to be built by 2022**. Tiangong means a **'Heavenly Palace'.**

Space Commercialization and India

➢ The development of **low-cost carrier rockets** must be seen in the backdrop of the fact that China gears up to compete with India to attract the lucrative global space launch market.

➢ According to an article published in 2017 in the Global Times, **'China's space industry is lagging behind that of India in the commercial space industry.'**

➢ The Chinese rockets will have to create a niche for themselves in the satellite market where the Indian Space Research Organisation (ISRO) has already gained a foothold. ISRO's tried and trusted **Polar Satellite Launch Vehicle (PSLV)** has till now launched 297 foreign satellites and has various variants, which are meant for carrying different-size payloads and to different orbits.

➢ **Small satellite revolution** is underway, globally, 17,000 small satellites are expected to be launched between 2020 and 2030. A strong private sector in space will help India to tap into this lucrative commercial space launch market.

➢ However, apart from economic and efficient launch vehicles, India must also explore other domains, say, **space tourism** through private sector involvement.

➢ **Space tourism** is one among several opportunities that Indian businesses may be keen to explore. A policy framework to **enable private participation** in this sector, of course, would have to be formulated by the government.

➢ **Increasing Space Competitiveness:**

○ **USA:** Recently, SpaceX became the **first private company to launch people (human spaceflight)** into orbit, a feat achieved by the US, Russia & China. The spacecraft **Crew Dragon** was used to successfully **carry astronauts of National Aeronautics and Space Administration (NASA)** at the International Space Station (ISS).

○ **Singapore** is offering itself as a hub for space entrepreneurship based on its legal environment, availability of skilled manpower and equatorial location.

○ **New Zealand** is positioning itself as a location for private rocket launches.

➢ **Steps Taken by India:**

○ Approval to the **Indian National Space Promotion and Authorization Centre (IN-SPACe)** to provide a level playing field for **private companies to use Indian space infrastructure.**

○ **New Space India Limited (NSIL)**, the newly created **second commercial arm** of the **Indian Space Research Organisation**.

○ ISRO has been a genuine global pioneer of aerospatial cost compression on several fronts. **Cost-effectiveness** has given the agency a distinct edge in the commercial arena of satellite launch services.

● With such a valuable base of expertise within the country, it is only natural to expect the **emergence of a private space industry** that could prove globally competitive.

Measles and Rubella in WHO SEAR

Why in News

Recently, the Maldives and Sri Lanka have become the first two countries in the **World Health Organisation's South-East Asian Region** (WHO SEAR) to have eliminated both measles and rubella ahead of the 2023 deadline.

Note:

- In September 2019, member countries of WHO SEAR **set 2023 as the target** for the elimination of measles and rubella.
- The WHO SEAR has **11 member states including India.**

Key Points

- The announcement came after the 5th meeting of the **SEAR Verification Commission for Measles and Rubella Elimination**.
  - The Commission comprises **11 independent international experts** in the fields of epidemiology, virology and public health.
  - **Bhutan, DPR Korea and Timor-Leste** are countries in the region which have **eliminated measles**.
  - **Bangladesh, Bhutan, Maldives, Nepal, Sri Lanka and Timor-Leste** have **controlled Rubella**.
- **Criteria:**
  - A country is verified as having eliminated measles and rubella when there is no evidence of endemic transmission of the respective viruses for over three years in the presence of a well-performing surveillance system.
    - The Maldives reported its last endemic case of measles in 2009 and of rubella in October 2015.
    - Sri Lanka reported the last endemic case of measles in May 2016 and of rubella in March 2017.
- **Steps Taken:**
  - All countries in the region **introduced two doses of measles-containing vaccine** and **at least one dose of rubella-containing vaccine** in their routine immunisation programme.
  - Since 2017, nearly **500 million additional children have been vaccinated** with measles and rubella-containing vaccines.
  - **Surveillance** for measles and rubella has been **strengthened further**.
- The announcement comes amidst the **Covid-19 pandemic** and the success demonstrates the importance of joint efforts.
  - Globally, more than half of all countries **reported moderate-to-severe disruptions** or a **total suspension of vaccination** services in March and April.
  - Regionally, **both immunisation coverage and surveillance were impacted**.

- However, SEAR countries made **coordinated efforts to resume immunisation and surveillance** activities.

Measles

- It is a **highly contagious viral disease** and is a cause of death among young children globally.
- It is particularly **dangerous for children** from the economically weaker background, as it **attacks malnourished children and those with reduced immunity.**
- It can cause **serious complications**, including **blindness, encephalitis, severe diarrhoea, ear infection and pneumonia**.

Rubella

- It is also called **German Measles**.
- Rubella is a **contagious, generally mild viral infection** that occurs most often in **children and young adults**.
- Rubella infection in **pregnant women may cause death** or **congenital defects** known as **Congenital Rubella Syndrome** (CRS) which causes irreversible birth defects.

Measures and Vaccinations

- The **Measles and Rubella Initiative** is a global program which aims at eliminating both these diseases.
- The **vaccine** for the diseases are provided in the form of **measles-rubella** (MR), **measles-mumps-rubella** (MMR) or **measles-mumps-rubella-varicella** (MMRV) combination.

India's Status

- **Incidence:**
  - Despite the availability of a safe and effective vaccine since the 1960s, both measles and rubella are **major public health concerns** in India.
  - More than 1.3 million children acquire **measles infection** and around 4,9000 infected children die each year, contributing nearly 36% to the global figures.
  - **Rubella infection** in pregnant women leads to the development of birth defects in almost 40,000 children annually in the country.
- **Government Initiatives:**

Note:

○ **Measles-Rubella Vaccination**
- The **Ministry of Health and Family Welfare** launched the MR Vaccination program in 2017.
- The MR campaign **targets around 41 crore children** across the country, the largest ever in any campaign.
- All **children aged between 9 months and less than 15 years** are given a single shot of MR vaccination irrespective of their previous measles/rubella vaccination status or measles/rubella disease status.
- MR vaccines are **provided free-of-cost** across the states.

○ Other Initiatives include **Universal Immunization Programme (UIP), Mission Indradhanush and Intensified Mission Indradhanush**.

■■■

Note:

Environment and Ecology

Highlights

- *Rajaji National Park*
- *Reconstitution of Central Zoo Authority*
- *Globba andersonii: Rediscovered Plant Species*
- *Assam Keelback Rediscovered*
- *Golden Birdwing: India's Largest Butterfly*
- *National Gene Bank*
- *Marmots*
- *Decrease in Dolphin Number: Chambal River*
- *Prerak Dauur Samman: Swachh Survekshan 2021*
- *Increasing E-waste*
- *Virtual Climate Action Ministerial*

- *Rewa Solar Project*
- *Snakebite Deaths in India*
- *Tiger Census 2018: Guinness Book of World Records*
- *Dehing Patkai Wildlife Sanctuary*
- *Ophiocordyceps Nutans Fungi*
- *Rare Orchids in India*
- *Bon Bibi: Sundarban*
- *Two New Species of Butterfly*
- *Kaziranga National Park*
- *Nagarahole National Park: Karnataka*

Rajaji National Park

➢ **Location: Haridwar (Uttarakhand)** along the foothills of the Shivalik range and spans 820 square kilometres.

➢ **Background:** Three sanctuaries (Rajaji, Motichur and Chila) in Uttarakhand were amalgamated into a large protected area and named Rajaji National Park in 1983 **after the famous freedom fighter C. Rajgopalachari, popularly known as 'Rajaji'.**

➢ **Features:**
  ○ This area is the **North Western Limit of habitat of Asian elephants**.
  ○ Forest types include sal forests, riverine forests, broad-leaved mixed forests, scrubland and grassy.
  ○ It possesses as many as 23 species of mammals and 315 bird species.
  ○ It was declared a **Tiger Reserve** in 2015.
  ○ It is **home to the Van Gujjars in the winters.**

➢ **Van Gujjars:**
  ○ It is one of the few **forest-dwelling nomadic** communities in the country.
  ○ Usually, they migrate to the *bugyals* (grasslands) located in the upper Himalayas with their buffaloes and return only at the end of monsoons to their *deras* (makeshift huts) in the foothills. They inhabit

the foothills of Himalayan states like Himachal Pradesh and Uttarakhand.
  ○ They traditionally practice **buffalo husbandry**. A family owns up to 25 buffaloes and rely on them for milk, which gets them a good price in Uttarakhand and Uttar Pradesh markets.

➢ **Other Protected Areas in Uttarakhand:**
  ○ Jim Corbett National Park (first National Park of India).
  ○ Valley of Flowers National Park and Nanda Devi National Park which together are a **UNESCO World Heritage Site**.
  ○ Govind Pashu Vihar National Park and Sanctuary.
  ○ **Gangotri National Park**.
  ○ Nandhaur Wildlife Sanctuary.

Reconstitution of Central Zoo Authority

Why in News

Recently, the **Ministry of Environment, Forest and Climate Change** has reconstituted the **Central Zoo Authority (CZA)** to include an expert from the School of Planning and Architecture, Delhi, and a molecular biologist.

Note:

Key Points

➢ The CZA is a **statutory body** under the Ministry of Environment, Forest and Climate Change. It was constituted in 1992 under the **Wildlife (Protection) Act, 1972.**

➢ **Members:** It is **chaired by the Environment Minister** and has 10 members and a member-secretary.

➢ **Objective:** The main objective of the authority is **to complement and strengthen the national effort in conservation of rich biodiversity.**

➢ **Functioning:** The authority provides **recognition to zoos** and is also tasked with **regulating the zoos** across the country.

- It **lays down guidelines** and prescribes rules under which animals may be transferred among zoos nationally and internationally.

- It **coordinates and implements programmes** on capacity building of zoo personnel, planned breeding programmes and ex-situ research.

Globba andersonii: Rediscovered Plant Species

Why in News

A team of researchers have **"rediscovered"** a **rare plant species** called *Globba andersonii* from the Sikkim Himalayas.

➢ The species has been found near the Teesta river valley region after a **gap of nearly 136 years**.

Key Points

➢ **Features:**

- The plant, known commonly as **'dancing ladies' or 'swan flowers'** was **thought to have been extinct** until its "re-collection", for the **first time since 1875**.

- *Globba andersonii* are characterised by **white flowers and non-attached anthers** (the part of a stamen that contains the pollen).

- The species has been listed as **"Endangered"** on the IUCN Red List of Threatened Species.
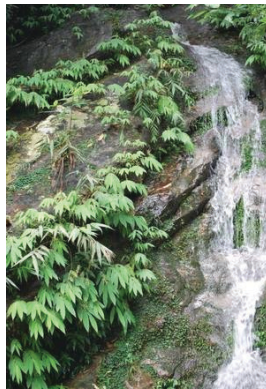
➢ **Habitat:**

- It is also termed as **"narrowly endemic"** as the species is restricted mainly to the **Teesta River Valley region** which includes the **Sikkim Himalayas and Darjeeling hill ranges**.

- The plant usually grows in a **dense colony as a lithophyte (plant growing on a bare rock or stone) on rocky slopes** in the outskirts of evergreen forests.

- It is especially prevalent **near small waterfalls** along the roadside leading to these hill forests, which are **400-800 m. above sea level.**

Assam Keelback Rediscovered

Why in News

The **Assam keelback (*Herpetoreas pealii*),** a snake **endemic** to Assam, has been found 129 years after it was last spotted by British tea planter **Samuel Edward Peal in 1891.**

Key Points

➢ The snake was considered a **lost species** since no sighting had been reported since its discovery in 1891.

➢ In 2018, it was found in the **Poba Reserve Forest (RF)** by a team of scientists from the **Wildlife Institute of India (WWI),** who were retracing the steps of the Abor Expedition.

- Abor Expedition was a military expedition by the British against the Abors in 1911.

➢ **Assam Keelback:**

- The **non-venomous** snake was **named after Samuel Peal and the place where it was found.**

- It is small — about 60 cm long, brownish, with a patterned belly.

- It has a **unique genus (*Herpetoreas*)** belonging to a smaller group of four species, found in Eastern and Western Himalayas, South China and Northeast India.

- It is categorised as **'data deficient'** in the **International Union for Conservation of Nature (IUCN)** list.

Note:

- This is the **worst category** because there is practically no information available about it and it is difficult to determine its status.

➤ **Poba Reserve Forest:**
- ❍ Poba RF is located along the Assam-Arunachal border, in Assam.
- ❍ The **National Highway -15** passes through the reserved forest.

Golden Birdwing: India's Largest Butterfly

Why in News

Recently, a Himalayan **butterfly** known as **Golden Birdwing** *(Troides aeacus)* has been discovered as India's largest butterfly after 88 years.

➤ It has replaced an **unknown specimen** which a british army officer Brigadier Evans had **recorded in 1932.**

Key Points

➤ **Discovery:**
- ❍ The female was recorded from **Didihat in Uttarakhand,** the male was from the **Wankhar Butterfly Museum in Shillong,** Meghalaya.

➤ **Characteristics:**
- ❍ With a **wingspan of 194 mm,** the female of the species is marginally larger than the Southern Birdwing (190 mm).
  - Earlier, the largest Indian butterfly that was recorded in 1932 was an individual of the **Southern Birdwing *(Troides minos),*** which was then treated as a subspecies of the **Common Birdwing *(Troides helena).***
  - However, the specimen that Evans measured **was unknown** and no other **butterfly measured** as much as the 190 mm that he recorded.
- ❍ The male Golden Birdwing is much smaller at 106 mm.

➤ **Measurement:** The only measurement used in the study of **Lepidoptera is wingspan** in which butterflies are measured from the wing base to the tip.

Butterfly
➤ Butterflies are insects from the **order Lepidoptera of phylum Arthropoda** which also includes moths.

➤ Adult butterflies have large, often brightly coloured wings, and conspicuous, fluttering flight.

➤ **Significance:**
- ❍ **Rich Biodiversity:** Abundance of butterflies in any area represents the rich biodiversity.
- ❍ **Indicator Species:** The butterfly acts as an indicator species.
  - An indicator species provides information on the **overall condition of the ecosystem** and of other species in that ecosystem. They reflect the quality and changes in environmental conditions as well as aspects of community composition.
- ❍ **Pollinator:** It acts as a **pollinator** by helping in pollination and conserving several species of plants.

Southern Birdwing
➤ **Scientific Name:** Troides minos

➤ **Description:** It is a large and striking butterfly endemic to south India.

➤ With a wingspan of 140-190 mm, it is considered as one of the largest butterflies of India.

➤ **Protection Status:** Least Concern in the International Union for Conservation of Nature (IUCN).

National Gene Bank

Why in News

Recently, the National Medicinal Plants Board (NMPB) under the Ministry of AYUSH and the National Bureau of Plant Genetic Resources (NBPGR) under the Ministry of Agriculture & Farmers' Welfare have signed a Memorandum of Understanding (MoU).

➤ The purpose of this MoU is to conserve the Medicinal and Aromatic Plants Genetic Resources (MAPGRs) in the **National Gene Bank (NGB).**

Key Points

➤ **Establishment:** The National Gene Bank was notified in 1996-97.

➢ **Hosted By:** National Bureau of Plant Genetic Resources (NBPGR), New Delhi.

➢ **Purpose:** To conserve the Plant Genetic Resources (PGR) for future generations in the form of seeds, genomic resources, pollen etc.

➢ **Functioning:**
  ❍ The NGB has four kinds of facilities, namely, Seed Genebank (-18°C), Cryogenebank (-170°C to -196°C), In vitro Genebank (25°C), and Field Genebank, to cater to long-term as well as medium-term conservation.
  ❍ It stores different crop groups such as cereals, millets, medicinal and aromatic plants and narcotics, etc.

➢ **Other Facilities:**
  ❍ The **Svalbard Global Seed Vault in Norway** houses the world's largest collection of seeds.
  ❍ **India's seed vault** is at **Chang La (Ladakh)** in the Himalayas.
  ❍ **National Animal Gene Bank**, established at the **National Bureau of Animal Genetic Resources (NBAGR - Karnal, Haryana)**, has the objective of conserving the indigenous livestock biodiversity.
    ● NBAGR is one of the **Indian Council of Agricultural Research (ICAR)** institutes.

National Medicinal Plants Board

➢ In order to promote the medicinal plants sector, the Government of India set up the National Medicinal Plants Board (NMPB) on 24th November 2000.

➢ Currently the board is working under the Ministry of **AYUSH** (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy).

➢ The primary mandate of NMPB is to develop an appropriate mechanism for coordination between various ministries/ departments/ organizations and implementation of support policies/programs for overall (conservation, cultivation, trade and export) growth of medicinal plants sector both at the Central /State and International level.

National Bureau of Plant Genetic Resources

➢ The 'National Bureau of Plant Introduction' was renamed as 'National Bureau of Plant Genetic Resources' (NBPGR) in January 1977.

➢ It is one of the **Indian Council of Agricultural Research (ICAR)** Institutes.

❍ ICAR is an autonomous organisation under the **Ministry of Agriculture & Farmers' Welfare.**

➢ It is a **nodal organisation** in India for **management of Plant Genetic Resources (PGR).**

➢ It has played a pivotal role in the improvement of various crop plants and diversification and development of agriculture in India through germplasm introduction from various institutes/organizations located in foreign countries and germplasm collection from within the country and abroad and conservation thereof.
  ❍ **Germplasm** is a live information source for all the genes present in the respective plant, which can be conserved for long periods and regenerated whenever it is required in the future.

➢ The NBPGR has linkage with **National Active Germplasm Sites (NAGS)** for the management of active germplasm of field and horticultural crops.
  ❍ NAGS are located at NBPGR regional stations, other crop-based ICAR institutes or State Agricultural Universities.

➢ It is headquartered in **New Delhi** and has **10 regional stations.**

Marmots

Why in News

Recently, reports of an outbreak of **bubonic plague** in Mongolia, China and far east Russia have emerged, caused mainly by **Tarbagan Marmot** (a **species of Marmot**).

➢ It has been compared to the **Covid-19 pandemic** which was apparently spread by the consumption of **bat** meat.

Key Points

➢ **General Description:**
  ❍ Marmot (**genus Marmota**) belongs to the **squirrel family** (*Sciuridae*) within the **order Rodentia**.
  ❍ These have **almost 15 species** and the closest living relatives of marmots are **ground squirrels and prairie dogs**.
    ● Prairie dogs are **herbivorous burrowing rodents native** to the grasslands of **North America**.

Note:

- ❍ Marmots are well suited for life in **cold environments** and have **small fur-covered ears, short, stocky legs, and strong claws** for digging.
- ❍ Marmots are **diurnal** (active during the day) and are almost **entirely vegetarian**.
- ➢ **Habitat:**
  - ❍ They are found primarily in the continents of **Europe, Asia and North America**.
  - ❍ **South Asia or the Indian Subcontinent** is home to the **Himalayan Marmot and the Long-tailed Marmot** (both are **Least Concerned** in the **IUCN Red List**).
  - ❍ **Tarbagan or Mongolian Marmot** (**Endangered**) is found in Mongolia, China and parts of Russia.
- ➢ **Importance:**
  - ❍ **While digging burrows, marmots increase aeration in the soil which** increases **nutrient circulation** and helps **different plants to propagate**.
  - ❍ Marmots also play a very important role in **Himalayan ecology**. They are **prey species for predators** including the **snow leopard**, red fox, hawks, eagles, etc.
- ➢ **Threats:**
  - ❍ Marmots are **hunted for their meat in China and Mongolia**.
    - ● High altitude regions lack proteins. Pastoral nomads usually eat these when they do not have any other means of sustenance.
  - ❍ Marmots are **also hunted for their fur**.

Plague
- ➢ Plague is caused by the **bacteria *Yersinia pestis*** usually found in **small mammals and their fleas**.
  - ❍ It is transmitted between animals and humans by the **bite of infected fleas**, **direct contact** with infected tissues and **inhalation of infected respiratory droplets**.
- ➢ It is one of the examples of **bacterial zoonoses.**
- ➢ There are **two main clinical forms** of plague infection:
  - ❍ **Bubonic plague** is the most common form and is characterized by painful **swollen lymph nodes** or '**buboes**'.
    - ● Highly infectious bubonic plague killed about 50 million people across **Africa, Asia and Europe in the 14th century**.

- ● Over 3,200 people were infected worldwide between 2000-15, resulting in 584 deaths.
- ● The bacterial disease was named the **Black Death** after the dark swellings or buboes that victims suffered.
- ❍ **Pneumonic plague** is a form of severe lung infection.
- ➢ **Antibiotic treatment is effective** against plague bacteria, so **early diagnosis and early treatment can save** lives. However, **if left untreated, the fever can kill** a victim in a very short time.

Decrease in Dolphin Number: Chambal River

Why in News

According to the latest census report prepared by the **Madhya Pradesh (MP) forest department**, the number of **dolphins** in **Chambal river** (a **tributary of Yamuna**) has been **reduced by 13% in 4 years**.

- ➢ There are just 68 dolphins left in the 435-kilometre-long Chambal river sanctuary which passes through three states viz. **MP, Uttar Pradesh (UP) and Rajasthan**.
- ➢ Gangetic Dolphins are the sanctuary's main attraction.
- ➢ The decreasing trend is continuing from 2016 when there were 78 dolphins.

Key Points

- ➢ The maximum **carrying capacity** of dolphins in Chambal is 125.
  - ❍ The **carrying capacity of an environment is** the maximum population size of a biological species that can be sustained in that specific environment, given the food, habitat, water and other resources available.
- ➢ In Chambal river, dolphins were **spotted for the first time in 1985 near Etawah**, UP. That time, the number was more than 110.
- ➢ **Reasons for Declining Numbers:**
  - ❍ **Unfavourable Habitat:** Dolphins face the threat of hunting and entanglement in fishing gear due to fragmented habitats.
  - ❍ **Poaching:** Fragmented habitats lead to the problem of poaching for not only dolphins but also for **gharials**.

Note:

- **Illegal Sand Mining:** It is rampant in Bhind and Morena in Madhya Pradesh and Dholpur in Rajasthan and is putting the **whole ecosystem of the river in danger**.
  - Further, the forest team never gets support from locals.
  - In 2006, the **Supreme Court's Central Empowered Committee** (CEC) ordered a ban on mining in the sanctuary area to save the flora and fauna of the river.
- **Consumption of Water:** Chambal is the lifeline of MP, UP and Rajasthan and the locals are withdrawing water daily.
  - It has led to a **gradual decrease in the water levels** and needs to be addressed properly to save the dolphins as well as gharial.
- **Lack of Studies:** Dolphins are sensitive animals. There is a need to study their **favourable environment** and **communication system.**
  - The Forest Department of MP has collaborated with the scientists of **Wildlife Institute of India (WII)** to do research for safeguarding and increasing the population of dolphins in Chambal.

Gangetic Dolphin

- **Scientific Name:** *Platanista gangetica*.
- It is a highly intelligent **freshwater mammal** placed into the infraorder *Cetacea*.
- It is India's **national aquatic animal** and is popularly known as '**Susu**'.
- **Habitat:** Parts of the **Ganges-Meghna-Brahmaputra and Karnaphuli-Sangu river systems** in India, Nepal and Bangladesh.
  - It requires at least 3-metre depth and 266.42-289.67 m^3 per second flow of water for sustainable habitat.
- Gangetic Dolphin is among the **four freshwater dolphins in the world,** which live only in rivers and lakes. The other three are:
  - The **'Baiji'** now likely extinct from the Yangtze River in China.
  - The **'Bhulan'** of the Indus in Pakistan.
  - The '**Boto'** of the Amazon River in Latin America.

- **Characteristics:** It has rudimentary eyes and uses **echolocation** (through ultrasonic sound) to navigate and hunt.
- **Threats:** Habitat destruction, Poaching and Pollution.
- **Protection Status:**
  - **International Union for Conservation of Nature (IUCN)**: Endangered .
  - **Wildlife (Protection) Act, 1972:** Schedule I.
  - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix-I.
- **Vikramshila Gangetic Dolphin Sanctuary (VGDS) in Bihar's Bhagalpur** district is India's only sanctuary for dolphins.

Prerak Dauur Samman: Swachh Survekshan 2021

Why in News

Recently, a new category of awards titled '**Prerak Dauur Samman**' has been announced as part of **Swachh Survekshan 2021**.

Key Points

- **Prerak Dauur Samman:**
  - The Prerak Dauur Samman has a total of **five additional subcategories** namely, *Divya* (Platinum), *Anupam* (Gold), *Ujjwal* (Silver), *Udit* (Bronze) and *Aarohi* (Aspiring).
  - In **Swachh Survekshan 2020**, cities are evaluated on the criteria of '**population category**' but for 2021, they will be categorised on the **basis of six select indicator wise performance criteria**.
    - Segregation of waste into Wet, Dry and Hazard categories.
    - Processing capacity against wet waste generated.
    - Processing and recycling of wet and dry waste.
    - Construction and Demolition waste processing.
    - Percentage of waste going to landfills.
    - Sanitation status of cities.
- **Integrated SBM-Urban MIS Portal:**
  - The **integrated Management Information System (MIS) portal** was also launched.

Note:

drishti

❍ It aims to **bring the numerous digital initiatives on a single platform** and **ensure a unified and hassle-free experience** for states and cities.

Swachh Survekshan

➢ Launched as a part of the Swachh Bharat Mission, it is an **annual survey of cleanliness, hygiene and sanitation** in cities and towns across India.

➢ The ranking exercise is taken up by the Government of India to **assess rural and urban areas** for their levels of cleanliness and active implementation of Swachhata mission initiatives in a timely and innovative manner.

  ❍ **Swachh Survekshan-Urban** is conducted by the **Ministry of Housing and Urban Affairs**.

  ❍ **Swachh Survekshan-Rural** is conducted by the **Ministry of Jal Shakti.**

    ● Earlier, it was conducted by the Ministry of Drinking Water and Sanitation which was merged with the Ministry of Water Resources, River Development and Ganga Rejuvenation to make a new Ministry of Jal Shakti in 2019.

➢ **Earlier Editions:**

  ❍ **2016:** Ranked **73** cities.

  ❍ **2017:** Ranked **434** cities.

  ❍ **2018:** Ranked **4203** cities and became the **world's largest cleanliness survey** of that time.

  ❍ **2019:** Ranked **4237** cities and was **first of its kind completely digital survey** completed in a record time of 28 days.

  ❍ **2020:** It continues the momentum and has seen a huge participation of **1.87 crore citizens**. To ensure sustainability of on-ground performance of cities, the **Swachh Survekshan League** was also introduced in **2019**.

    ● Swachh Survekshan League is a **quarterly cleanliness assessment** of cities and towns, to be done in three quarters and these quarterly assessments will hold **25% weightage** in the annual survey.

    ● **Swachh Survekshan 2020** was evaluated for each quarter on the basis of monthly updation of Swachh Bharat Mission-Urban (SBM-U) online **Management Information System** (MIS) by cities along with citizen's validation on the 12 service level progress indicators.

● The results for Swachh Survekshan 2020 will be **announced shortly** by the Ministry.

➢ **Notable Rankings:**

  ❍ **Mysuru** won the award for the **Cleanest City of India** in the Swachh Survekshan **2016**.

  ❍ **Indore has retained the top position** in Swachh Survekshan for **three consecutive years** (**2017, 2018 and 2019**).

Increasing E-waste

Why in News

According to a recent **United Nations University** (UNU) report, **global e-waste** will **increase** by **38%** in the **decade between 2020 and 2030**.

➢ UNU is a **global think tank and postgraduate teaching organisation** headquartered in **Japan**.

  ❍ **UNU's mission** is to resolve the pressing global problems of human survival, development and welfare that are the concern of the United Nations, its peoples and the member states.

E-Waste

➢ E-Waste is short for **Electronic-Waste** and the term used to describe old, end-of-life or discarded electronic appliances.

➢ It is categorised into **21 types under two broad categories**:

  ❍ Information technology and communication equipment.

  ❍ Consumer electrical and electronics.

➢ E-waste includes their components, consumables, parts and spares.

Key Points

➢ **Data Analysis of 2019:**

  ❍ There was **53.6 million tonnes (MT) e-waste in 2019**, which is a nearly **21% increase** in just five years.

  ❍ **Asia generated the greatest volume** (around 24.9 MT) followed by the Americas (13.1 MT) and Europe (12 MT). Africa and Oceania generated 2.9 MT and 0.7 MT respectively.

  ❍ Most E-waste **consisted of small and large equipment** like screens and monitors, lamps, telecommunication equipment etc and temperature exchange equipment.

○ **Less than 18%** of the e-waste generated in 2019 was **collected and recycled**.

● E-waste consisting of gold, silver, copper, platinum and other high-value, recoverable materials worth at least USD 57 billion was mostly dumped or burned rather than being collected for treatment and reuse.

○ The **number of countries that have adopted a national e-waste policy**, legislation or regulation has **increased from 61 to 78** and **includes India**.

● It is far from the target set by the **International Telecommunication Union** to raise the percentage of countries with e-waste legislation to 50%.

➢ **Concerns:**

○ **Toxicity:** E-waste consists of **toxic elements** such as Lead, Mercury, Cadmium, Chromium, Polybrominated biphenyls and Polybrominated diphenyl.

○ **Effects on Humans:** Some of the major health effects include serious illnesses such as lung cancer, respiratory problems, bronchitis, brain damages, etc due to inhalation of toxic fumes, exposure to heavy metals and alike.

○ **Effects on Environment:** E-waste is an **environmental hazard** causing groundwater pollution, acidification of soil and contamination of groundwater and air pollution due to the burning of plastic and other remnants.

E-waste in India

➢ Structured management of e-waste in India is mandated under the **E-Waste (Management) Rules, 2016**.

➢ Some of the salient features of the rules include **e-waste classification**, **extended producer responsibility** (EPR), **collection targets** and **restrictions on import of e-waste** containing hazardous materials.

➢ There are 312 authorised recyclers of e-waste in India, with the capacity for treating approximately 800 kilo tons annually. However, **formal recycling capacity remains underutilised** because **over 90%** of the e-waste is still **handled by the informal sector**.

➢ Almost over a million people in India are involved in **manual recycling operations**. Workers are not registered so it is hard to **track the issues of employment such as workers' rights, remunerations, safety measures**, etc.

➢ Labourers are from the **vulnerable sections** of the society and **lack any form of bargaining power** and are **not aware of their rights**. This has a serious impact on the environment since none of the procedures is followed by workers or local dealers.

Virtual Climate Action Ministerial

Why in News

Recently, the 4th edition of the virtual Ministerial on Climate Action was organised to advance discussions on implementation of the **Paris Agreement** under the **United Nations Framework Convention on Climate Change (UNFCCC)**.

Key Points

➢ **The Ministerial:**

○ It was **co-chaired by** European Union, China and Canada.

○ The participating countries **exchanged their views on how they are aligning economic recovery plans amid Covid-19, with the Paris Agreement**.

○ India highlighted that **developed country parties have not fulfilled their promise for extending financial and technological support to developing countries** as envisaged under UNFCCC and its Paris Agreement.

● India hopes that in the remaining 5 months of 2020, the promised amount will be mobilized and delivered, for further strengthening climate actions in developing countries.

● The developed countries had promised to provide USD 1 trillion by 2020.

➢ **India's Efforts in Combating Climate Change:**

○ India has **provided 80 million LPG connections** under the **Pradhan Mantri Ujjwala Yojana (PMUY)** in rural areas, providing the people with clean cooking fuel and a healthy environment.

○ It has **distributed more than 360 million LED bulbs** under the **UJALA scheme**, which has led to energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO_2 per year.

○ India has also **shifted from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norms** from 1st April 2020 which was earlier to be adopted by 2024.

Note:

drishti

○ It **had levied a coal cess** as part of one of the most explicit green initiatives.

○ Under Smart Cities Mission, **Climate Smart Cities Assessment Framework 2019 has been launched** which intends to provide a clear roadmap for cities and urban India towards combating climate change through adoption of both mitigation and adaptation measures.

➢ **Achievements of India in Combating Climate Change:**

○ India has **achieved a reduction of 21% in emission intensity of its Gross Domestic Product (GDP) between 2005 and 2014,** thereby on its way to achieving its voluntary target under its **Intended Nationally Determined Contributions (INDC)**.

   • India had pledged to cut emission intensity of its GDP by 33-35% by 2030 below 2005 levels.

○ Its **renewable energy installed capacity has increased** by 226% in the last 5 years and stands more than 87 gigawatts (GW).

   • India has a target of installing 175 GW of renewable power capacity by 2022 under its INDC.

○ The **share of non-fossil sources** in installed capacity of electricity generation **increased** from 30.5% in March 2015 to 37.7% in May 2020.

   • It has further announced the aspirational target of increasing its renewable energy capacity to 450 GW.

   • India has pledged to increase the share of non-fossil fuels-based electricity to 40% by 2030 under INDC.

○ India's total forest and tree cover is 8,07,276 sq. km. which is 24.56% of the total geographical area of the country.

   • India has agreed to enhance its forest cover which will absorb 2.5 to 3 billion tonnes of CO_2 by 2030.

Paris Agreement- COP 21

➢ Conference of Parties (COP) 21, also known as the **Paris Climate Conference** is a landmark environmental accord that was adopted in 2015 to address climate change and its negative impacts.

➢ It aims to **reduce global greenhouse gas emissions** in an effort **to limit the global temperature increase in this century to well below 2°C** above pre industrial levels, while pursuing means to limit the increase to 1.5°C.

➢ Countries have **promised to try to bring global emissions down from peak levels as soon as possible.**

○ However, the USA has withdrawn from the agreement.

➢ The deal includes **loss and damage,** a mechanism for addressing the financial losses vulnerable countries face from climate impacts such as extreme weather.

➢ **Raising money to help developing countries adapt to climate change and transition to clean energy** was an important point in the agreement.

○ This part of the deal has been made **non-legally binding on developed countries**.

➢ Before the conference started, more than 180 countries had submitted pledges to cut their carbon emissions **(Intended Nationally Determined Contributions, or INDCs)**. The **INDCs were recognized under the agreement**, but are not legally binding.

Rewa Solar Project

Why in News

Recently, the Prime Minister has inaugurated the **750 MW (Mega Watt) solar project** set up in **Rewa, Madhya Pradesh.**

➢ It is in line with India's commitment to attain the target of **175 GW of installed renewable energy** capacity by 2022 including 100 GW of solar installed capacity.

Key Points

➢ **Features:**

○ It is **Asia's largest solar power project**.

○ It comprises **three solar generating units of 250 MW** each located on a 500 hectare of land situated inside a **solar park** (total area 1500 hectare).

○ **Solar Park:**

   • It was developed by the **Rewa Ultra Mega Solar Limited (RUMSL)**, a Joint Venture Company of Madhya Pradesh UrjaVikas Nigam Limited (MPUVN), and **Solar Energy Corporation of India (SECI)**, a Central Public Sector Undertaking.

   • Central Financial Assistance of Rs. 138 crore was provided to the RUMSL for development of the Park.

➢ **Significance:**

○ **Grid Parity Barrier:** It is the **first solar project** in the country to break the grid parity barrier.

● **Grid parity** occurs when an alternative energy source can generate power at a cost of electricity that is less than or equal to the price of power from the electricity grid.

● Further, compared to prevailing solar project tariffs of approx. Rs. 4.50/unit in early 2017, it achieved a first year tariff of Rs. 2.97/unit with a tariff escalation of Rs. 0.05/unit over 15 years.

○ **Risk Reduction:** Its **payment security mechanism for reducing risks** to power developers has been recommended as a model to other states by the Ministry of New and Renewable Energy.

○ **Renewable Energy Project:** It is the **first renewable energy project** to supply an institutional customer outside the state, i.e. Delhi Metro, which will get 24% of energy from the project with the remaining 76% being supplied to the state **DISCOMs** of Madhya Pradesh.

● It is also **India's first solar project to get funding** from Clean Technology Fund (CTF), which is available at a rate of 0.25% for a 40-year period from the **World Bank**.

● The **CTF** promotes scaled-up financing for demonstration, deployment and transfer of **low carbon technologies** with a significant potential for long-term greenhouse gas emissions savings.

○ **Carbon Emission Reduction:** It will help in **reducing the carbon emission** equivalent to 15 lakh ton of CO_2 per year.

○ **Global Appreciation:** It has also received the **World Bank Group President's Award** for innovation and excellence and was included in the book 'A Book of Innovation: New Beginnings'.

Snakebite Deaths in India

Why in News

Recently, a study conducted by the **Centre for Global Health Research (CGHR)** at the University of Toronto (Canada), with Indian and United Kingdom as partners, has revealed that India recorded 1.2 **million snakebite deaths** from 2000 to 2019 (i.e. an average of annual 58,000 deaths)**.**

➤ Earlier, in the largest ever such survey published in 2011 titled '**Snakebite Mortality in India: A Nationally Representative Mortality Survey',** estimated 46,000 annual snakebite deaths in India.

Key Points

➤ **Data Analysis:**

○ **Half** of all the snakebite deaths occurred **during the monsoon period** from June to September.

○ **Around 70% of deaths** occurred in limited, low altitude, rural areas of the following **States** — Bihar, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh, Andhra Pradesh, Telangana, Rajasthan and Gujarat.

● The numbers for **annual snakebite deaths** were highest in the states of **Uttar Pradesh**, **Andhra Pradesh**, and **Bihar**.

○ The snakebite deaths occurred mostly in rural areas (97%), were more common in males (59%) than females (41%), and peaked at ages 15-29 years (25%).

○ The overall lifetime risk of being killed by snakebite is about **1 in 250,** but in some areas, the lifetime risk reaches 1 in 100.

○ It also indicated that most of the **envenomation** (the process by which venom is injected by the bite or sting of a venomous animal) was by **Russell's vipers** followed by **Kraits and Cobras**.

➤ **Solutions:**

○ **Immediate Action:** As India has tremendous snakebite burden and the **World Health Organization (WHO)** recognises snakebite as a top-priority **Neglected Tropical Disease (NTD)**, there is a need for immediate action.

○ **Snake Safe Harvest Practices:** The primary victims of snakebites are rural farmers and their families. Targeting certain areas and educating people with simple methods such as 'snake-safe' harvest practices — **using rubber boots and gloves, mosquito nets and rechargeable torches (or mobile phone flashlights)** — could reduce the risk of snakebites.

○ **Snake Species Database:** Habitat details, clear photographs and geographical distribution in the form of snake database would help in **the identification of the venomous and nonvenomous snake species.**

❍ **Anti-Venom:** India has sufficient capacity to manufacture large volumes of anti-venom. However, **Indian anti-venoms neutralise venom from only spectacled cobra**, **common krait, Russell's viper and saw-scaled viper**, whereas there are **12 other snake species causing fatal bites** that are not covered by current anti-venoms.

● **Antivenoms are the medicines** produced from **antibodies** made by animals to injected venoms.

● It is given to stop snake venom from binding to tissues and causing serious blood, tissue, or nervous system problems.

Tiger Census 2018: Guinness Book of World Records

Why in News

India's 2018 Tiger Census has made it to the **Guinness Book of World Records** for being the **world's largest camera trapping wildlife survey**.

➢ India has also fulfilled its resolution to double the Tiger numbers made at St. Petersburg Tiger Summit in 2010, before the target year of 2022.

➢ The tiger numbers in India have increased from around 1500 in 2010 to 2976 in 2020.

Key Points

➢ **Comprehensive:** The **fourth cycle** of the **Tiger Census 2018**, conducted in 2018-19 is the most comprehensive in terms of both resource and data recorded.

❍ It counted **2976 tigers** which is **75%** of the global tiger population.

❍ The census is done quadrennially (every four years) by the **National Tiger Conservation Authority (NTCA)** with technical help from the **Wildlife Institute of India**.

● It is done with cooperation from the state Forest Departments and partners.

➢ **Methods:**

❍ **Camera traps** were placed at multiple locations across different sites and surveyed an effective area of 121,337 square kilometres.

● **Camera Traps** are **outdoor photographic devices** fitted with motion sensors that start recording when an animal passes by.

❍ It also conducted extensive **foot surveys** that sampled habitat plots for vegetation and prey dung.

➢ **Identification:** From these photographs, 83% of the total tiger population were identified using **stripe-pattern-recognition software**.

❍ The software helps to match a new image of a tiger already in the database, based on the pattern of stripes.

Project Tiger

➢ It was launched in **1973** with 9 tiger reserves for conserving our national animal, the tiger.

➢ It is an ongoing **Centrally Sponsored Scheme** of the **Ministry of Environment, Forests and Climate Change.**

➢ Currently, the Project Tiger coverage has increased to 50 Tiger reserves, spread out in 18 tiger range states which amounts to around 2.21% of the geographical area of our country.

➢ The tiger reserves are **constituted on a core/buffer strategy**. The core areas have the legal status of a national park or a sanctuary, whereas the buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area.

➢ The **NTCA** was **launched in 2005**, following the recommendations of the Tiger Task Force. It is a **statutory body of the Ministry,** with an overarching supervisory/coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972.

➢ **M-STrIPES** (Monitoring System for Tigers - Intensive Protection and Ecological Status) is an **app based monitoring system**, launched across Indian tiger reserves by the NTCA in 2010.

❍ The system enables field managers to assist intensity and spatial coverage of patrols in a Geographic Information System (GIS) domain.

Tiger

➢ **Scientific Name:** *Panthera tigris*

➢ **Indian Sub Species:** *Panthera tigris tigris.*

➢ **Habitat:** It stretches from Siberian temperate forests to **subtropical and tropical forests on the Indian subcontinent** and Sumatra.

➢ It is the largest cat species and a member of the genus Panthera.

Note:

➤ Traditionally **eight subspecies of tigers** have been recognized, out of which **three are extinct**.

  ○ **Bengal Tigers:** Indian Subcontinent.

  ○ **Caspian tiger:** Turkey through central and west Asia **(extinct)**.

  ○ **Amur tiger:** Amur Rivers region of Russia and China, and North Korea.

  ○ **Javan tiger:** Java, Indonesia **(extinct)**.

  ○ **South China tiger:** South central China.

  ○ **Bali tiger:** Bali, Indonesia **(extinct)**.

  ○ **Sumatran tiger:** Sumatra, Indonesia.

  ○ **Indo-Chinese tiger:** Continental south-east Asia**.**

➤ Designated as the National Animal of India, Bengal Tiger is most recognisable for its dark vertical stripes on orange-brown fur with a lighter underside.

➤ **Importance:** Tigers are terminal consumers in the ecological food pyramid, and their conservation results in the conservation of all trophic levels in an ecosystem.

➤ **Threats:** Habitat destruction, habitat fragmentation and poaching.

➤ **Protection Status:**

  ○ **Indian Wildlife (Protection) Act, 1972: Schedule I**

  ○ **International Union for Conservation of Nature (IUCN)** Red List: **Endangered.**

  ○ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix I.**

➤ **Tiger Reserves in India**

  ○ **Total Number: 50**

  ○ **Largest:** Nagarjunsagar Srisailam Tiger Reserve, Andhra Pradesh

  ○ **Smallest:** Orang National park, Assam

Dehing Patkai Wildlife Sanctuary

Why in News

The **Assam** government has decided to **upgrade** Dehing Patkai Wildlife Sanctuary **into a National Park.**

➤ The announcement comes just months after the **National Board of Wildlife (NBWL)** gave conditional clearance to a coal mining project by Coal India Limited (CIL) in the Dehing Patkai Elephant Reserve.

Key Points

➤ As a national park, its importance will increase and new rules will bring increased vigilance to the area. While the first proposal to accord national park status to the region dates back to 1995, **Dehing Patkai was declared a wildlife sanctuary in 2004.**

➤ **Description:** Dehing Patkai Wildlife Sanctuary is located within the **larger Dehing Patkai Elephant Reserve,** which spreads across the coal- and oil-rich districts of **Upper Assam (Dibrugarh and Tinsukia districts).**

  ○ The Dehing Patkai Wildlife Sanctuary is also known as the **Jeypore Rainforest.**

  ○ Dehing is the **name of the river** that flows through this forest and **Patkai is the hill** at the foot of which the sanctuary lies.

  ○ The **oldest refinery of Asia in Digboi** and 'open cast' coal mining at Lido are located near the sanctuary.

  ○ It is famous for **Assam Valley Tropical Wet Evergreen Forests** bordering Arunachal Pradesh.

➤ **Fauna:** Rare fauna found in the region include **Chinese pangolin**, flying fox, wild pig, sambar, barking deer, gaur, serow and Malayan giant squirrels.

  ○ It is the only sanctuary in India which is home to **seven different species of wild cats** - tiger, leopard, clouded leopard, leopard cat, golden cat, jungle cat and marbled cat.

  ○ **Assamese macaque,** a primate found in the forest, is in the red list of **Near Threatened species.**

  ○ It has the highest concentration of the **rare endangered White Winged Wood Duck.**

➤ **Flora:** Dehing Patkai is a deciduous rainforest interspersed with semi-evergreen and lush green flora.

Note:

> **Sixth National Park:** Post upgradation, Dehing Patkai will be the **sixth national park in Assam** — the other five being Kaziranga, Nameri, Manas, Dibru-Saikhowa and Rajiv Gandhi Orang National Park.

National Parks

> National Park implies an area that is exclusively designated by the government for the conservation of wildlife and biodiversity due to its natural, cultural and historical significance.

> National parks are highly restricted areas, which are not open to all the people.

> **For example:** To visit national parks, official permission is to be taken from the requisite authorities.

> Human activities are strictly prohibited in the National parks.

> The national parks have clearly marked boundaries (fixed by legislation).

> The International Union of Conservation of Nature (IUCN) has declared National Parks in **Category II of the protected areas.**

> Most of the national parks were initially wildlife sanctuaries, which were then upgraded to national parks.

> Tourism is allowed in both of them.

Wildlife Sanctuaries

> Wildlife sanctuaries refer to an area which provides protection and favourable living conditions to the wild animals.

> Wildlife sanctuaries have lesser restrictions than national parks.

> In contrast, no official permission is to be taken to visit a wildlife sanctuary.

> Human activities are allowed to a limited extent in the wildlife sanctuaries.

> Boundaries of wildlife sanctuaries are not sacrosanct.

> Wildlife sanctuaries are grouped in Category IV of protected areas.

> A national park cannot be downgraded to a Wildlife Sanctuary.

Ophiocordyceps Nutans Fungi

Why in News

Recently, researchers have found *Ophiocordyceps nutans* (fungi) for the first time in **central India**, while setting out on a plant survey at the **Kanger Valley National Park** in **Bastar**, **Chhattisgarh**.

> Earlier, these have been reported in India only from the **Western Ghats**.

Key Points

> *Ophiocordyceps nutans* host on a specific insect, *Halyomorpha halys*.

○ *Halyomorpha halys* is commonly known as the **stink bug** and is a **pest to forest trees and agricultural crops**.

○ The stink bug is known to **damage the flower and fruits** of soybean, green beans, apple, pear, etc.

> **Mechanism:**

○ The fungi infect the insect when alive and develop **fungal mycelium** (the vegetative part of a fungus) inside its **thorax** (chest).

○ The **spores** (single-celled reproductive units) **sprout out** from between the insect's thorax and head, **killing the insect** but it continues to take nutrition from the dead body.

○ The fungi are very **host-specific**, so the spores travel and infect stink bugs only.

> **Importance:**

○ Studies have shown that these fungi can be **used as a biological pest control agent** against the stink bugs.

● Exploring these fungi as a pesticide will help **reduce the harmful effect of chemicals** in fields.

○ Several species of the Ophiocordyceps fungi have **medicinal properties**.

● Reports show that **China has been traditionally using** it.

● In the **Western Ghats**, the local people use these fungi as an **immune stimulator**.

○ These are rich in **biologically active metabolites, vitamin C, phenolic compounds** (disinfectant in household cleaners), and also have **anti-inflammatory** and **antioxidant properties**.

○ Scientists claim that it contains a component called '**cordycepin**' which has **anti-cancer properties**.

Note:

Rare Orchids in India

Why in News

Recently, two **rare orchid species** i.e. **Tiger orchids** (*Grammatophyllum speciosum*) and **Ground orchids** (*Eulophia obtusa*) have been found to be blooming in different parts of the country after a gap of many years.

Key Points

➢ **Tiger Orchid:**

○ **Scientific Name:** *Grammato-phyllum speciosum*

○ **Characteristics:** It has **large and resplendent flowers** which resemble the tiger skin.

● It flowers in **alternate years** and remains in bloom for about a month.

○ **Geographical Distribution:** These epiphytic plants are **not native to India**, and are **endemic** to **southeast Asia** i.e.Indonesia and Philippines.

● An **epiphyte** grows on the surface of a plant and derives its moisture and nutrients from the air, rain, water or from debris accumulating around it.

● It is found to be in full bloom at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) Kerala, where it was introduced in the 1990s.

➢ **Ground Orchid:**

○ **Scientific Name:** *Eulophia obtusa*

○ **Rediscovery:** It has been rediscovered in **Dudhwa Tiger Reserve**, Uttar Pradesh after 118 years.

● It was last recorded in Pilibhit, Uttar Pradesh in 1902.

○ **Geographical Distribution:** The species is originally from **Uttarakhand.**

● It was collected by botanists from Gangetic plains but there have been no sightings in the past 100 years. In 2008, the plant species was sighted in Bangladesh for the first time.

○ **Characteristics:** It has white flowers and bright pink hues.

○ **Protection Status:** Listed as **"critically endangered"** in the **International Union for Conservation of Nature (IUCN)** Red List of endangered species.

Bon Bibi: Sundarban

Why in News

A centuries-old folk theatre form and the worship of a **forest goddess** i.e. Bon Bibi has helped the natives of the **Sundarban** survive by understanding the power of nature and the limits of human needs.

Key Points

➢ **Bon Bibi:** Bon Bibi is a **deity of the forest** and the central character of **Bon Bibir Palagaan, a musical drama unique** to the Sundarbans.

➢ **Bon Bibir Palagaan:** People express their belief in Bon Bibi through Bon Bibir Palagaan, **a dramatic storytelling form** that is enacted throughout the island.

Sundarbans

➢ The **Sundarbans** is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna Rivers in the Bay of Bengal.

➢ It spans from the **Hooghly River in India's state of West Bengal** to the **Baleswar River in Bangladesh.**

➢ The active delta region is among the **largest in the world,** measuring about 40,000 sq km.

➢ India's Sundarban was declared as the **UNESCO'S World Heritage site** in 1987.

- ○ Sunderban Wetland has been accorded the status of 'Wetland of International Importance' under **Ramsar Convention** in 2019.
  - ○ Sunderbans Biosphere Reserve (National Park) is an Important Bird Area under Birdlife International.
- ➤ The area is known for many rare and globally threatened wildlife species such as the estuarine **crocodile** *(Crocodylus porosus),* **royal Bengal tiger *(Panthera tigris)*,** Water monitor lizard *(Varanus salvator),* **gangetic dolphin** *(Platanista gangetica)*, and **olive ridley turtle** (Lepidochelys olivacea).
- ➤ **Sajnekhali Bird Sanctuary** is a part of Sundarban and is famous for the sight of rare birds.

Two New Species of Butterfly

Why in News

Recently, the lepidopterists have discovered the two new species of **butterfly** i.e. **Striped Hairstreak** and **Elusive Prince** in **Changlang district** of **Arunachal Pradesh.**

- ➤ At present, India has 1,327 species of **butterfly** as compared to 1,318 species in 2015.
- ➤ A **lepidopterist** is a person who specialises in **studying butterflies and moths.**

Key Points

- ➤ **Striped Hairstreak:**
  - ○ **Scientific Name:** *Yamamotozephyrus kwangtugenesis*
  - ○ **Discovery:** It is found in **Vijaynagar village of Changlang district of Arunachal Pradesh**, bordering Myanmar.
    - It was a subject of interest for the lepidopterists as **its genus is diversified into several genera** (i.e. sub-divisions) and thus, difficult to trace.
  - ○ **Habitat:**
    - It was **first recorded** by Japanese entomologists in **Hainan province of China**.
    - It is also found in North America, from the Rocky Mountains
- ➤ **Elusive Prince:**
  - ○ **Scientific Name:** *Rohana tonkiniana*

- ○ **Discovery:** It is found in Miao subdivision situated on the periphery of the **Namdapha National Park.**
  - In India only a **male specimen of the Elusive Prince** was found.
  - Initially it was considered as a variant of the Black Prince, but the study revealed that **it is different** and **not recorded in India** before.
- ○ **Habitat:** It was first recorded in Tonkin in north Vietnam.
- ○ The *Rohana* **Genus:** It has been represented in India by two species — **the Black Prince (*Rohana parisatis*)** and the Brown Prince *(Rohana parvata)*.

Kaziranga National Park

Why in News

According to **Kaziranga National Park** authorities around **80%** of its area has been inundated due to floods.

Key Points

- ➤ **Location:** It is located in the **State of Assam** and **covers 42,996 Hectare (ha)**. It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain.
- ➤ **Legal Status:**
  - ○ It was declared as a **National Park in 1974.**
  - ○ It has been declared a **tiger reserve** since 2007. It has a total tiger reserve area of 1,030 sq km with a core area of 430 sq. km.
- ➤ **International Status:**

Note:

○ It was declared a **UNESCO World Heritage Site** in **1985.**

○ It is recognized as an **Important Bird Area** by **BirdLife International.**

➢ **Important Species Found:**

○ It is the home of the world's most **one-horned rhinos**. **Pobitora Wildlife Sanctuary** has the **highest density of one-horned rhinos in the world** and second highest number of Rhinos in Assam after Kaziranga National Park.

○ Much of the focus of conservation efforts in Kaziranga are focused on the **'big four'** species—**Rhino, Elephant, Royal Bengal tiger and Asiatic water buffalo.**

○ The 2018 census had yielded 2,413 rhinos and approximately 1,100 elephants.

○ As per the figures of tiger census conducted in 2014, Kaziranga had an estimated 103 tigers, the third highest population in India after **Jim Corbett National Park (215) in Uttarakhand** and **Bandipur National Park (120) in Karnataka.**

○ Kaziranga is also home to 9 of the 14 species of **primates found** in the Indian subcontinent.

➢ **Rivers and Highways:**

○ The National Highway 37 passes through the park area.

○ The park also has more than 250 seasonal water bodies, besides the **Diphlu River** running through it.

➢ Other **national parks in Assam are:**

○ Dibru-Saikhowa National Park,

○ **Manas National Park**,

○ Nameri National Park,

○ Rajiv Gandhi Orang National Park.

Nagarahole National Park: Karnataka

Why in News

Recently, the Karnataka Forest Department has decided to put in place a **traffic monitoring mechanism** along the roads adjacent to **Nagarahole National Park.**

Key Points

➢ **Time-stamped Card System:**

○ The forest department will introduce a **time-stamped card system** for vehicles passing through the roads, adjacent to **Nagarahole National Park,** which have high traffic density 24x7.

○ The time stamped card will have complete details on the **speed limit** to be maintained and the **exit time** at the next check post.

○ Such a system is already in place on the road cutting through **Nagarahole Tiger Reserve.**

➢ **Issues Involved:**

○ **Pollution:** In the absence of any monitoring mechanism, **littering along the road** is high as many motorists stop midway on the road adjacent to the forests for lunch break and leave behind plastic water bottles and liquor bottles.

○ **Road Kills:** The heavy vehicle movement along the stretch also causes **road kills** some of which come to light if the animal dies on the road. But in most cases the injured animals tend to drag themselves into the forests and their subsequent deaths do not come to light.

○ **Man-made Forest Fires:** The forests adjacent to the highway also witness **forest fires and illegal tree felling.**

➢ **Benefit of Road Monitoring:**

○ It will help ensure that motorists don't stop midway and litter the area or cause disturbance to wildlife.

○ It will also ensure better compliance of forest laws by motorists and will also minimise road kills.

Nagarhole National Park

➢ It is also known as '**Rajiv Gandhi National Park.**

➢ It was established as a **wildlife sanctuary in 1955** and was upgraded into a national **park in 1988.** It was declared as the **37th Tiger reserve** under **Project Tiger** in 1999.

➢ The Park lies in the **Western Ghats** and is a part of the **Nilgiri Biosphere Reserve.**

➢ The **Nagarahole River** flows through the park, which joins the **Kabini River** which also is a boundary between **Nagarahole and Bandipur Ntional Park**.

➢ **Flora:** The vegetation consists mainly of **moist deciduous forests** with predominating trees of teak and rosewood.

➢ **Fauna:** Asian elephants, chital (spotted deer), Indian mouse deer, gaur, stripe-necked and ruddy mongooses, grey langur, bonnet macaque, Asian wild dog, leopard, tiger, sloth bear among others.

■■■

Note:

Art & Culture

Highlights

- *Dharma Chakra Day*
- *Hagia Sophia Museum: Turkey*
- *Mongolian Kanjur Being Reprinted*
- *Language of the Tangams*
- *Indira Gandhi National Centre for the Arts*

Dharma Chakra Day

Why in News

The **Ministry of Culture,** Government of India in partnership with **International Buddhist Confederation (IBC)** will celebrate the upcoming **Asadha Poornima on 4th July, 2020** as **Dharma Chakra Day.**

Key Points

➢ The festivities would start off with **chanting of prayers at Sarnath**, **Varanasi (U.P.)** which will be livestreamed, following which the opening event will be shifted to the Rashtrapati Bhavan.

➢ The auspicious day of Asadha Poornima falls on the **first full moon day** of the month of **Asadha** as per Indian sun calendar.

   ○ It is also known as **Esala Poya in Sri Lanka** and **Asanha Bucha in Thailand.**

   ○ It is the **second most sacred day for Buddhists** after the **Buddha Poornima or Vesak.**

➢ The day marks **Buddha's first teaching** after attaining Enlightenment to the **first five ascetic disciples (pañcavargika)** on the full-moon day of Asadha at **'Deer Park'**, Ṛiṣipatana in the current day **Sarnath**, near Varanasi, India.

   ○ This teaching of Dhamma Cakka- PavattanaSutta (Pali) or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the First Turning of Wheels of Dharma and comprised of the **Four Noble Truths and Noble Eightfold Path.**

➢ The **Rainy Season retreat (Varsha Vassa)** for the Monks and Nuns also starts with this day lasting for three lunar months from July to October, during which they remain in a single place, **generally in their temples (Viharas/ Chaityas)** dedicated to intensive meditation.

➢ The day is **also observed as Guru Poornima** by both Buddhists and Hindus as a day to mark **reverence to their Gurus.**

Guru Purnima

➢ According to the Hindu calendar, Guru Purnima generally falls on a **full-moon day** in the **Hindu month of Ashadh.**

➢ It is dedicated to **Maharshi Veda Vyasa,** the sage who is believed to have edited the sacred Hindu text, the Vedas and created the 18 Puranas, Mahabharata and the Srimad Bhagavatam.

➢ For Buddhists, the **festival marks the first sermon of Lord Buddha**, which is said to have been delivered at Sarnath, Uttar Pradesh, on this very day.

➢ It is also believed to **mark the onset of monsoons.**

Buddhism and Diplomacy

➢ **Buddhism** has become an important tool in contemporary geopolitics particularly in Asia, and it has become increasingly evident that whoever controls the Buddhist discourse and activities will sway influence in Asia.

➢ The celebration of **Dharma Chakra Day** is being pushed as an event **to show India's strong Buddhist heritage** amid **tensions with China.** It will see the virtual participation of leaders from major Buddhist countries, **except China.**

➢ The timing of the event is particularly important, because this is when both countries would like to **resurrect their linkages with others.** To show that like-minded countries are coming together sends across a message. What is however important is

drishti

that one has to put in sustained effort at this, and have a **relook at India-China policy with strategic cultural moves.**

➢ The **Central Tibetan Administration** has asked Tibetan Buddhists to participate in the online event in large numbers to "support and appreciate" the effort.

  ❍ The **Central Tibetan Administration (CTA)** is an organisation headquartered in **McLeod Ganj, Dharamshala, India**. It is also referred to as the **Tibetan Government in Exile** which has never been recognized by China.

  ❍ The position of the CTA is that Tibet is a distinct nation with a long history of independence and it considers **China's administration of Tibet as illegitimate military occupation.**

  ❍ In addition to political advocacy, it administers a network of schools and other cultural activities for Tibetans in India.

➢ Meanwhile, the **People's Republic of China (PRC)'s World Buddhist Forum (WBF)** has been hosting congregations of **buddhist monks since 2005.** China's extensive infrastructure investment in **Lumbini, Buddha's birthplace in Nepal**, is also seen as a strategic move to claim the Buddhist legacy.

Suggestions

➢ While Buddhism might have vanished from India as a religion practised by many people, it is **still a critical part of India's civilisational ethos.**

  ❍ There should be more **buddhist corridors** including Ladakh, Himachal Pradesh and Arunachal Pradesh, apart from Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat and Andhra Pradesh.

  ❍ There could be **nodal centres for people-to-people exchanges** for those who come from South Korea, Taiwan and other countries.

➢ Although no other country can take Buddhist leadership away from India, the status of Buddhism in India is quite different now.

  ❍ India **has not been promoting its own Buddhist** streams or strengthening the original Buddhism.

  ❍ Promoting anything else or any other brand than its own limits a genuine outreach. Promoting anything else becomes a subject of contestation, and the essence of using Buddhism as a diplomatic card gets lost.

Hagia Sophia Museum: Turkey

Why in News

Recently, the government of **Turkey** has decided to convert Istanbul's iconic **Hagia Sophia Museum** into a mosque.

Key Points

➢ **Turkey's Stand:**

  ❍ **Superiority of the Islamic World:** For the President **Recep Tayyip Erdoğan** of Justice and Development Party (AKP), and his supporters who tend to have **nationalist-Islamist sympathies**, it symbolises the conquest of **Christian Constantinople by the Ottomans**, and the **superiority of the Islamic world**.

  ❍ **Political Symbol:** Hagia Sophia is not only the symbol of Turkey's most popular tourist attraction but also acts as a **political symbol.**

    ● The plan of conversion is also an attempt to **gain political support** as AKP has lost many municipal elections.

  ❍ **USA Recognition of Jerusalem:** It also coincided with USA recognition of Jerusalem as the capital of Israel.

    ● Jerusalem which has a significant population of Arab-muslims who are becoming more and more hostile because of the **USA's recent stand on Israel-Palestine issue.** This step of conversion of mosque would gain support of Arab countries for Turkey.

  ❍ **Less Opposition:** It has also been believed that the government does not need the courts to decide on the fate of the Hagia Sophia as legal rulings will add legitimacy to his proposals.

- Also, there has been less opposition within Turkey because religious minorities do not wish to be involved in such polarising subjects
  - ○ **Domestic Matter:** Turkey considers the status of the Hagia Sophia as a domestic matter and interference of international players is not required as **Greece objected to the conversion** of the museum into a mosque.
- ➢ **Greece's Stand:**
  - ○ **Diplomatic Tension:** There have been diplomatic tensions between Turkey and Greece over many issues related to Hagia Sophia.
    - According to Greece, the museum which has been designated a world cultural heritage is currently being used to promote other purposes.
    - Earlier, Greece objected to the reading of passages from the Quran inside the Hagia Sophia on the 567th anniversary of the Ottoman invasion of the former Byzantine capital.
- ➢ **Role of UNESCO:** Greece had appealed to the **United Nations Educational, Scientific and Cultural Organization (UNESCO),** objecting to Turkey's moves on grounds that the conversion is a violation of UNESCO's 'Convention Concerning the Protection of the World Cultural and Natural Heritage.
  - ○ UNESCO too has objected to Turkey's plans.
- ➢ **USA's Stand:** It has expressed that by the conversion the Hagia Sophia would not be able to serve humanity as a bridge between those of differing faith and cultures.

Background

- ➢ **Hagia Sophia** is the former **Greek Orthodox Christian patriarchal cathedral**, later an Ottoman imperial mosque and now a museum located in Istanbul, Turkey.
- ➢ Built in AD 537 **(Byzantine architecture)**, during the reign of **Justinian 1, the Eastern Roman emperor**, it is famous for its large dome.
- ➢ In 1453, when Constantinople (capital city of the Roman Empire) fell to Sultan Mehmet II's Ottoman forces, the Hagia Sophia was turned into a mosque.
- ➢ For a long time, the Hagia Sophia was Istanbul's most important mosque.
- ➢ In 1934, **Mustafa Kemal Ataturk, the founder of the Republic of Turkey**, converted the **mosque into a museum** in an attempt to make the **country more secular**.

- ➢ The 1,500-year-old structure has been listed as a **UNESCO'S World Heritage site**.
  - ○ A World Heritage Site is a place that is listed by UNESCO as of special cultural or physical significance.

Mongolian Kanjur Being Reprinted

Why in News

The **Ministry of Culture** has taken up the project of reprinting **108 volumes of Mongolian Kanjur** by March 2022 under the **National Mission for Manuscripts (NMM)**.

- ➢ Some copies were presented to the government of Mongolia on the occasion of **Guru Purnima**, also known as **Dharma Chakra Day**, on 4th July, 2020.

Key Points

- ➢ **Mongolian Kanjur:**
  - ○ It is a **Buddhist** canonical text in 108 volumes and is considered to be the most important religious text in Mongolia. It is a source of providing a cultural identity to Mongolia.
  - ○ In the Mongolian language 'Kanjur' means **'Concise Orders'**- the words of Lord Buddha in particular.
  - ○ It has been **translated from Tibetan and is written in classical mongolian.**
- ➢ **Cultural Relations Between India and Mongolia:**
  - ○ Buddhism was carried to Mongolia by Indian cultural and religious ambassadors during the early Christian era. As a result, today, Buddhists form the single largest religious denomination in Mongolia.
  - ○ India established formal **diplomatic relations** with Mongolia in 1955. The publication of Mongolian Kanjur by the Government of India for the

Government of Mongolia will act as a **symbol of cultural harmony between India and Mongolia** and will contribute to furtherance of bilateral relations during the coming years.

National Mission for Manuscripts

➤ The National Mission for Manuscripts (NMM) was launched in **February 2003** by the Government of India with the mandate of documenting, conserving and disseminating the knowledge preserved in the manuscripts.

  ○ A **manuscript** is a handwritten composition on paper, bark, cloth, metal, palm leaf or any other material dating back at least seventy-five years that has significant scientific, historical or aesthetic value.

  ○ Lithographs and printed volumes are not manuscripts.

  ○ Manuscripts are distinct from historical records such as epigraphs on rocks, revenue records which provide direct information on events or processes in history.

➤ One of the objectives of the mission is to **publish rare and unpublished manuscripts** so that the knowledge enshrined in them is spread to researchers, scholars and the general public at large.

➤ It is under the **Ministry of Culture.**

Language of the Tangams

Why in News

Recently, the Chief Minister of Arunachal Pradesh has released a book titled "**Tangams: An Ethnolinguistic Study Of The Critically Endangered Group of Arunachal Pradesh**".

➤ The book has valuable data on **endangered oral narratives** like ritual songs, lamentation songs, lullabies and festival songs in **Tangam language** spoken by the Tangam community, which has **reportedly 253 speakers left now**.

Key Points

➤ **Tangam People:**

  ○ It is a little-known community within the larger **Adi tribe of Arunachal Pradesh**

which resides in the **hamlet of Kugging in Upper Siang district's Paindem circle**.

  ○ For long, the only account of the Tangams could be found in a book, "**Tangams**" **(1975)** where the community's population was pegged at 2,000 spread across 25 villages.

➤ **Tangam Language:**

  ○ Tangam is an **oral language that belongs to the Tani group**, under the greater **Tibeto-Burman language family**.

  ○ It has been marked '**critically endangered**' by the **UNESCO** World Atlas of Endangered Languages (2009).

➤ **Reasons for its Decline:**

  ○ **Low population:** Smaller languages are more vulnerable and extinction is directly proportional to population.

    ● Another c**ritically endangered language is Meyor** but it is better off than Tangam because the community has a population of around 1,000 people.

  ○ **Multilingualism:** Tangams have become **multilingual over time** to communicate with their neighbours.

    ● Kugging is surrounded by a number of villages inhabited by Adi subgroups such as Shimong, Minyongs, as well as the Buddhist tribal community of Khambas, among others.

  ○ **Less or No Use of Tangam:** They rarely speak their own language now because their population is restricted to a single village. Moreover, they are relatively unknown even within the state so there is no possibility of its expansion.

  ○ **Lack of Development and Infrastructure:** The village lacks proper infrastructure in all basic sectors of education, health, drinking water facilities, road and electricity. Not a single person from the community has gone to a university.

Degree of Endangerment	Intergenerational Language Transmission
Safe	Language is spoken by all generations; intergenerational transmission is uninterrupted.
Vulnerable	Most children speak the language, but it may be restricted to certain domains.
Definitely endangered	Children no longer learn the language as mother tongue in the home.
Severely endangered	Language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves.
Critically endangered	The youngest speakers are grandparents and older, and they speak the language partially and infrequently.
Extinct	There are no speakers left.

Note:

Languages of Arunachal Pradesh

➢ There has been **no systematic, scientific or official survey** on the number of languages in Arunachal Pradesh till recently.

○ An **official linguistic survey** by the state government began only in **2018**, which is currently underway.

○ Before that, **People's Linguistic Survey of India** was published in **2017**.

➢ According to experts, there are **around 32-34 languages** with a disclaimer that it is **not a conclusive figure**.

○ If various linguistic varieties or dialects embedded within these languages are enlisted then the numbers can go up to 90.

➢ The languages of Arunachal Pradesh have been **classified under the Sino-Tibetan language family** and **more specifically under the Tibeto-Burman and Tai group of languages**, such as Lolo-Burmish, Bodhic, Sal, Tani, Mishmi, Hruissh and Tai.

➢ The **education system introduced Devanagari, Assamese and Roman scripts** for most tribal languages but **new scripts such as Tani Lipi and Wancho Script** have been developed by native scholars as well.

➢ According to the UNESCO Atlas of the World's Languages in Danger, **more than 26 languages** of Arunachal Pradesh have been identified as endangered with the **degrees ranging from 'unsafe', 'definitely endangered' to 'critically endangered'**.

➢ **Risks:**

○ The **diversity of languages** has led various communities to **depend on English, Assamese and Arunachalee Hindi as the link languages**.

○ The **younger generation** of various tribes, especially in the urban areas, **has mostly discarded t**he use of their mother tongue.

Indira Gandhi National Centre for the Arts

Why in News

The **Indira Gandhi National Centre for the Arts (IGNCA)** is planning to highlight the work of artists who have been entertaining and boosting the public's morale during the **Covid-19 pandemic** (referred as **silent Covid warriors**).

Key Points

➢ The Indira Gandhi National Centre for the Arts (IGNCA) was **established in 1987** as an **autonomous institution under the Ministry of Culture,** as a centre for research, academic pursuit and dissemination in the field of the arts.

➢ The IGNCA has a trust (i.e. Board of Trustees), which meets regularly to give general direction about the Centre's work. The Executive Committee, drawn from among the Trustees, functions under a Chairman..

➢ It is a **research unit under Project Mausam**.

○ Project 'Mausam' is a Ministry of Culture project with **Archaeological Survey of India (ASI)**, New Delhi as the nodal agency.

○ The central themes that hold Project 'Mausam' together are those of **cultural routes and maritime landscapes that not only linked different parts of the Indian Ocean littoral, but also connected the coastal centres to their hinterlands.**

➢ A project on design and development of a **Vedic Heritage Portal** was initiated at IGNCA, under the aegis of the Ministry of Culture, Government of India. The portal aims to communicate messages enshrined in the Vedas.

■■■

Note:

Social Issues

Highlights

- *Completion of Annual MGNREGA Work Limit*
- *World Population Day*
- *World Youth Skills Day*
- *Infant Mortality Surged in Madhya Pradesh*

Completion of Annual MGNREGA Work Limit

Why in News

According to the central scheme database of the **Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA)**, **at least 1.4 lakh poor rural households** have completed **their quota of 100 days of work** for the first three months of the year.

➢ Therefore, they will not be eligible for further benefits under the rural employment guarantee scheme for the rest of the year.

Key Points

➢ **Related Data:**
  ❍ Overall, **23 lakh households** have already completed 60 days of work.
  ❍ Another **seven lakh households** have completed 80 days and are on the verge of running out of work.
  ❍ With almost 60,000 households which have completed 100 days of work, **Chhattisgarh** has the **highest rate** among states, followed by **Andhra Pradesh** with almost 24,500 households in this category.
    ● However, Andhra Pradesh maintains its own database showing that 8.6% of all beneficiary households in the state have already completed 100 days of work.

➢ **Related Issues:**
  ❍ **Impact of Covid-19 pandemic:** Due to **Covid-19**, the **nationwide lockdown** has resulted in thousands of unemployed migrant workers returning to their villages and now dependent on MGNREGA wages.
  ❍ **Increase in Demand for Work:** The demand for **MGNREGA** work almost **doubled** in June as there is no other work available for many people.

- Construction sector, which usually absorbs a large number of workers, has also collapsed.
  ❍ **Monsoon Season:** In many areas, **monsoon** is the hungry season and many people are desperate for work and dependent on MGNREGA wages.
    ● It is also expected that in December the situation would be worse especially for **women**, **elderly** and **disabled** and **tribals** when agriculture work is over and there will be no work from MGNREGA.

➢ **Solutions:**
  ❍ **Expansion of the Scheme:** The MGNREGA scheme contains a provision for an expansion of the scheme to allow for **150 days of work** per household for districts affected by drought or other natural disaster.
    ● Given that Covid-19 was declared a national disaster, this provision may be implemented immediately across the country.
  ❍ **Change in Limit:** The limit should be **imposed per adult individual** rather than per household.
  ❍ **Increase in Wage:** There is a demand for an increase to 200 days per individual at a daily wage rate of Rs. 600.
    ● The current wage rate of Rs. 200 per day does not even match up to minimum wage rates in most States.
  ❍ **Farming:** Getting employment from the Agriculture and farms is an option which can be provided to the migrants. For example, migrant workers being deployed in the Litchi farms of Bihar.
  ❍ **Government Initiatives:** It was announced in March that the workers under the MGNREGA would get a hike of **Rs. 2000** each on an average.
    ● **Garib Kalyan Rojgar Abhiyan** was started to provide employment to migrant labourers who returned home during the lockdown. The

scheme covers six states namely Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha.

- It has as a provision to grant 125 days of employment to migrants.

MGNREGA

➢ The **Mahatma Gandhi National Rural Employment Guarantee Act**, earlier known as the **National Rural Employment Guarantee Act** was passed in **2005** to augment employment generation and social security in India.

➢ It functions under the **Ministry of Rural Development.**

➢ **Objective:** To guarantee **100 days of employment in every financial year to adult members of any rural household** willing to do public work-related unskilled manual work.

➢ It covers all districts of India except the **ones with 100% urban population**.

➢ It is one of the **largest work guarantee programmes** in the world.

World Population Day

Why in News

11th July is celebrated as World Population Day.

Key Points

➢ **Theme for 2020:** How to safeguard the health and **rights of women and girls amid the** Covid-19 pandemic.

  ❍ Various reports have shown that **domestic violence** has increased globally amid the lockdown.

  - The **National Commission for Women in India** reported a huge rise in the number of complaints related to domestic violence.

  ❍ A study by the **United Nations Population Fund (UNFPA)** says, "47 million women in low- and middle-income countries **may not be able to access modern contraceptives**" if the lockdown-like disruptions continue for six months.

  - This could result in millions of unintended pregnancies and gender based violence.

  ❍ Women are also hit harder economically due to the **Covid-19 crisis**.

  - Around 60% of women across the world earn their livelihood by working in the informal sector.

➢ **Background:**

  ❍ In 1989, the **United Nations Development Programme (UNDP)** recommended that 11th July be observed by the international community as World Population Day, a day **to focus attention on the urgency and importance of population issues.**

  ❍ UNDP was inspired by the public interest and awareness that was created by **"Five Billion Day"** on 11th July, 1987 when the world's population reached 5 billion.

  ❍ The **United Nations Population Fund (UNFPA)** seeks to create awareness about the **issues** associated with the population.

➢ **India's Concerns:**

  ❍ India has just 2% of the world's landmass and 16% of the global population. It is the **second most populous country** in the world with an estimated population of around 1.37 billion in 2019.

  - It has been reported that India will soon surpass China's population.

  ❍ **Mismatch in** birth and death rate resulted in faster growth of population in the past few decades.

  ❍ **Poverty and illiteracy** contribute immensely in the population explosion.

  - Children in rural areas are considered as assets, who will take care of parents at old age, also more children mean more earnings.

  - The level of female education has a direct impact on fertility, as it is evidenced that the fertility rate of illiterate women tends to be higher than those who are literate.

  - Lack of education prevents women from having full knowledge about the use of contraceptives, of the consequences of frequent childbirth.

  ❍ Although the **Total Fertility Rate (TFR)** is declining in India, poorer states like Bihar (3.2), Uttar Pradesh (3.0), Rajasthan (2.6) and Jharkhand (2.5) still have **TFRs above the national average of 2.2.**

  - Total Fertility Rate (TFR) is the average number of children born to women during their reproductive years. For the population to remain stable, an **overall total fertility rate of 2.1 is needed.**

  ❍ **High youth unemployment** in India is turning **demographic dividend** into a demographic disaster for India.

- This youth potential is often referred to as the 'demographic dividend' which means that if the youth available in the country are equipped with quality education and skills training, then they will not only get suitable employment but can also contribute effectively towards the economic development of the country.

United Nations Population Fund

➤ It is a **subsidiary organ of the UN General Assembly** and works as a **sexual and reproductive health agency.**

➤ It was **established as a trust fund in 1967** and began operations in **1969.**

➤ In **1987,** it was **officially renamed** the United Nations Population Fund but the original abbreviation, **'UNFPA'** for the **United Nations Fund for Population Activities** was **retained.**

➤ UNFPA works directly to tackle **Sustainable Development Goals** on **health** (SDG3), **education** (SDG4) and **gender equality** (SDG5).

➤ Recently, the UNFPA released the **State of the World Population 2020 report.**

World Youth Skills Day

Why in News

15th July is marked as World Youth Skills Day. It was designated by the **United Nations General Assembly (UNGA)** in 2014.

Key Points

➤ **Aim:** To achieve better socio-economic conditions for today's youth in terms of challenges of unemployment and under-employment.

➤ **Theme for 2020:** "Skills for a Resilient Youth".
  ○ According to UNGA, **Covid-19** has led to the worldwide closure of training institutions, threatening the continuity of skills development.
  ○ Nearly 70% of the world's youth are affected by school closures.
  ○ According to the **Global Trends for Youth 2020 report**, since 2017, there has been an upward trend in the number of youth **not in employment, education or training (NEET)**.
    ● **Global Trends for Youth report** is released by **International Labour Organisation (ILO).**

○ Thus it has become important to impart relevant skills to the youth which can help them in the long run and successfully manage evolving challenges.

➤ **2030 Agenda:** Education and training are central to the achievement of the **2030 Agenda for Sustainable Development.**
  ○ The vision of the **Incheon Declaration: Education 2030** is fully captured by **Sustainable Development Goal-4**, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all".
  ○ Education 2030 devotes **attention to technical and vocational skills development**, acquisition of technical and vocational skills for employment, **decent work** and **entrepreneurship.**
    ● It also focuses on the **elimination of gender disparity.**

➤ **Skill India Mission:** The day also marks the 5th anniversary of the launch of **Skill India Mission**.
  ○ Skill India is an **initiative of the Government of India** which has been launched **to empower the youth of the country with skill sets** which make them more employable and more productive in their work environment.
  ○ Skill India offers courses across several sectors which are aligned to the standards recognised by both, the industry and the government under the **National Skill Qualification Framework.**

Infant Mortality Surged in Madhya Pradesh

Why in News

According to the Office of the Registrar General India, the **Infant Mortality Rate (IMR)** in Madhya Pradesh has surged by a single point over the previous year to 48 in 2018.

➤ IMR is the **number of deaths of children** under one year of age **per 1000 live births**.

➤ The Office of the Registrar General is under the **Ministry of Home Affairs**. It issues the **Sample Registration System bulletin,** which provides estimates of birth rate, death rate and infant mortality rate for states.

Key Points

➤ **Data Analysis:**

Note:

- The country's average **IMR stands at 32 per 1,000 live births** which includes an average 36 deaths for rural and 23 for urban areas.
- In Madhya Pradesh it is 52 children in rural areas and 36 in urban areas. Madhya Pradesh has the highest IMR (48) in the country.
    - The IMR for boys in the State stood at 51, while for girls it was 46 in 2018.
    - As many as 26 infants of 1,000 live births in Madhya Pradesh died within the first seven days constituting more than half the infant deaths.
- **Uttar Pradesh** has the **next highest rate of 43** and Kerala has 7, the lowest among the bigger States.

➢ **Causes:** Increasing premature deliveries, infections, birth asphyxiation (lack of oxygen in blood) and delay in securing treatment which lead to complicated deliveries.

➢ **Concerns:**
- **Birth Spacing:** In most cases two children were born within one-one and a half years as against the advocated gap of around three years.
    - This may result in premature deliveries of low birth weight babies.
- **High Malnutrition:** High malnutrition levels in pregnant as well as lactating mothers often result in the death of infants.
- **Maternal Health:** It also has a bearing on the IMR. In 2015-2017, Madhya Pradesh registered a maternal mortality ratio of 188 per 1 lakh live births, against the country's average of 122.
- **Antenatal Care:** According to the **National Family Health Survey** -4 (2015-16), only 11.4% mothers received full antenatal care. So, when pregnancy is not monitored properly it leads to complicated deliveries despite a high claimed **institutional deliveries**.

➢ **Solutions:**
- **Response of States: Health** being a state subject, puts the onus of patient's effective care on State government. Hence, there is a need for strong

commitment from the states in relation to availability of the human and financial resources.

- **Antenatal and Postnatal Care:** It is an important aspect in bringing down infant mortalities. There is a need for sufficient health checkups, institutional deliveries and medication in Antenatal and Postnatal Care.
- **Revamping of Primary Health Care:** The primary health system needs to be ramped up in terms of facilities, trained medical professionals and medical equipment.
- **Paediatric Intensive Care Units:** To bring down the IMR, ICUs should be set up to take care of inborn children.
- **Enhancement of Manpower:** Enhancement of manpower e.g. Doctors, skilled **ASHA workers** and nurses at the primary health especially in **rural areas** would aid to institutional deliveries.
- **Digitisation:** The **National Health Portal** has been used as a single point access for institutional deliveries through Janani Suraksha Yojana.

Government Initiatives

➢ **National Health Mission:** The National Health Mission (NHM) encompasses two Sub-Missions, the **National Rural Health Mission (NRHM)** launched in 2005 and the **National Urban Health Mission (NUHM)** launched in 2013.
- It envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

➢ **India Newborn Action Plan:** It was launched in 2014 to make concerted efforts towards attainment of the goal of "Single Digit Neonatal Mortality Rate" and "Single Digit Still-birth Rate".

➢ **Other Schemes:** Schemes like Janani Suraksha Yojana (JSY), **Janani Shishu Suraksha Karyakaram (JSSK)**, **Pradhan Mantri Matru Vandana Yojana (PMMVY)** etc. were started to promote institutional deliveries so as to reduce the prevalence of IMR.

■■■

Note:

Security

Highlights

- *Non-State Actors in Nagaland*
- *IAF Gets Apache Helicopters*
- *Spike-LR Anti-Tank Guided Missiles*

Non-State Actors in Nagaland

Why in News

Recently, the **Governor of Nagaland R.N. Ravi** wrote a letter to the state's **Chief Minister Neiphiu Rio**.

➢ The letter highlighted that the **legitimacy of the constitutionally-established State government is being challenged** on a daily basis by **armed gangs** that question the sovereignty and integrity of the nation.

➢ Mr. Ravi was appointed as the **Centre's interlocutor for the Naga peace process** in August 2014 for his hold on the affairs of the northeast.

Key Points

➢ **Various Taxes Imposed by Non-State Actors:**
  ❍ The letter pointed out the **issue of 'taxes' levied by armed gangs or parallel governments** as well as the **cost escalation of development and infrastructure** projects in the state due to the system of handing over a part of the project cost to these armed gangs for the projects to be executed.
  ❍ The extremist groups have been collecting '**taxes**' or '**donations**' from people in their areas of operation **before and after the ceasefire agreement** with the NSCN (IM) in mid-1997.

➢ **Reactions:**
  ❍ The Working Committee of the **Naga National Political Groups** (NNPGs), a **conglomerate of seven extremist groups**, denied indulging in extortion.
  ❍ **NSCN (IM) insisted that it does not extort people** but levies '**genuine taxes**' which have been the source of sustenance bringing the Naga political movement this far.
    ● It held that it is the inherent right of any sovereign people and nation to collect taxes from the people and commercial establishments and

the right was legitimately acknowledged by the earlier interlocutors and Indian authorities.
  ❍ The Chief Minister objected to the Governor's reminder of **Article 371A (1)(b)** of the Constitution. He said that **terming the organisations as 'armed gangs' may not be congenial to the achievement of lasting peace**, which is the desire of both the Central and the state governments.

Article 371A

➢ The **Acts of Parliament** relating to the following matters **would not apply to Nagaland unless decided by the State Legislative Assembly**:
  ❍ Religious or social practices of the Nagas.
  ❍ Naga customary law and procedure.
  ❍ Administration of civil and criminal justice involving decisions according to Naga customary law.
  ❍ Ownership and transfer of land and its resources.

➢ **Article 371A (1)(b):** The Governor of Nagaland shall have **special responsibility for law and order in the state** so long as internal disturbances caused by the hostile Nagas continue. In the discharge of this responsibility, the Governor, after consulting the Council of Ministers, exercises his individual judgement and his decision is final. This special responsibility of the Governor **shall cease when the President so directs**.

➢ The Governor has to **ensure that the money provided** by the Central Government for any specific purpose **is included in the demand for a grant relating to that purpose** and not in any other demand moved in the State Legislative Assembly.

Demand for Greater Nagalim

➢ The NSCN (IM), **dominated by the Tankhuls of Manipur**, has held more than 100 rounds of peace talks with the Centre within and outside the country.

Note:

- ➤ One of its most contentious demands was the **creation of a unified Naga homeland**, called '**Greater Nagalim**' by integrating the Naga-inhabited areas of Assam, Manipur and Arunachal with Nagaland.
- ➤ The **other north-eastern States are opposed to the idea** of the pan-Naga homeland and are wary of the Framework Agreement the NSCN (IM) leaders **signed at the Prime Minister's residence in August 2015**.
  - ○ The contents of the agreement have not been revealed.

IAF Gets Apache Helicopters

Why in News

Recently, **Boeing** has handed over the **last of the five AH-64E Apache attack helicopters** to the **Indian Air Force** (IAF).

- ➤ The handover was slightly delayed due to the **Covid-19** induced **lockdown**.
- ➤ Earlier, Boeing handed over the last five of the **15 CH-47F(I) Chinook heavy-lift helicopters** to the IAF as well.

Key Points

- ➤ India contracted **22 Apache helicopters** and 1**5 Chinook helicopters** from Boeing through the **Foreign Military Sales programme** of the **USA government** in September 2015 under a **USD 3 billion deal**.
- ➤ **Boeing's joint venture in Hyderabad**, Tata Boeing Aerospace Limited, has been producing aero-structures for the AH-64 Apache helicopter for both the USA Army and international customers.

Spike-LR Anti-Tank Guided Missiles

Why in News

The India Army is set to place a repeat order for **Spike-LR (Long Range) Anti-Tank Guided Missiles (ATGM)** from **Israel** as part of emergency procurement.

- ➤ The decision comes in the backdrop of **continuing tensions on the Line of Actual Control (LAC) with China**.

Key Points

- ➤ Last year, the Army procured 12 launchers and around 250 missiles from Israel under the **new emergency financial powers** sanctioned by the Ministry of Defence after the **Balakot airstrike**.
- ➤ **Emergency Financial Powers:**
  - ○ Under these, armed forces have been given a **free hand** to **procure equipment worth up to Rs. 300 crore** on a priority basis with deliveries stipulated to be **completed in three months** but **extendable up to six months**.
  - ○ Entirely new systems not in use were also allowed to be procured under the new powers.
- ➤ **Spike-LR:**
  - ○ These are the **4th generation Anti-Tank Missiles** developed and manufactured by the **Rafael Advanced Defence Systems, Israel**.
  - ○ It is a portable **anti-armour weapon system** with a **range of up to 4 km**, which can be operated in **fire-and-forget mode** and in the **fire, observe and update mode** using the fibre-optic data link.
  - ○ These are **used by** infantry soldiers, special rapid reaction forces, ground forces and helicopter aircrew.
  - ○ It can work in **Non-Line-Of-Sight** (NLOS) mode allowing the gunner to operate from a covered position.
- ➤ The army recently decided to place a repeat order for 72,400 **Sig 716 assault rifles** from the **USA** as well.
  - ○ They will replace the existing **Indian Small Arms System (Insas) rifles** manufactured locally by the **Ordnance Factories Board**.
  - ○ They will be used by the troops in the **counter-terrorism operations** and **frontline duties on the Line of Control** (LoC).
  - ○ India acquired the rifles under the **fast-track procurement (FTP) programme**.
  - ○ The remaining forces would be provided with the **AK-203 rifles**, which are to be produced **jointly by India and Russia at Amethi ordnance factory**.
- ➤ The Army has a much larger requirement for ATGMs which will be met through **indigenous Man-Portable ATGM** under development by the **Defence Research and Development Organisation** (DRDO).

■■■■

Note:

drishti

Miscellaneous

Highlights

- *Elephant Deaths in Botswana*
- *Tillari Conservation Reserve Notified*
- *National Doctor's Day*
- *National Fish Farmers Day 2020*
- *Mahajobs Portal: Maharashtra*
- *CogX 2020: Festival of AI & Emerging Technology*
- *Under-Reporting of Diseases due to Pandemic*

- *Samadhan se Vikas: Haryana*
- *Swabhiman Anchal*
- *No Merger of CBDT and CBIC*
- *CII-ITC Sustainability Awards 2019*
- *Rashtriya Chemicals and Fertilizers Limited*
- *MoU Between NATGRID and NCRB*
- *Introduction of Locally Produced Millets in ICDS, PDS*

Elephant Deaths in Botswana

Why in News

In the past two months, hundreds of elephants have died mysteriously in **Botswana's Okavango Delta.**

Key Points

➢ The **cause of the deaths is yet to be established.** However, poaching has been ruled out since the dead elephants were found with tusks.

○ Several live elephants appeared to have been weak, lethargic and skeletal, with some showing signs of disorientation, difficulty in walking or limping.

➢ **Okavango Delta:** It is one of the **very few major interior delta systems** that **do not flow into a sea or ocean.**

○ This delta comprises permanent **marshlands** and **seasonally flooded plains**.

○ The delta covers part of **Kalahari Desert** and owes its existence to the **Okavango (Kavango) River**.

○ It is home to some of the world's most endangered species of large mammal, such as the cheetah, white rhinoceros, black rhinoceros, African wild dog and lion.

➢ **Botswana:** It is a landlocked country in Southern Africa. Its 70% territory is covered by **Kalahari Desert**.

○ **Botswana has the world's largest elephant population,** estimated to be around 130,000.

○ It is Africa's oldest continuous democracy.
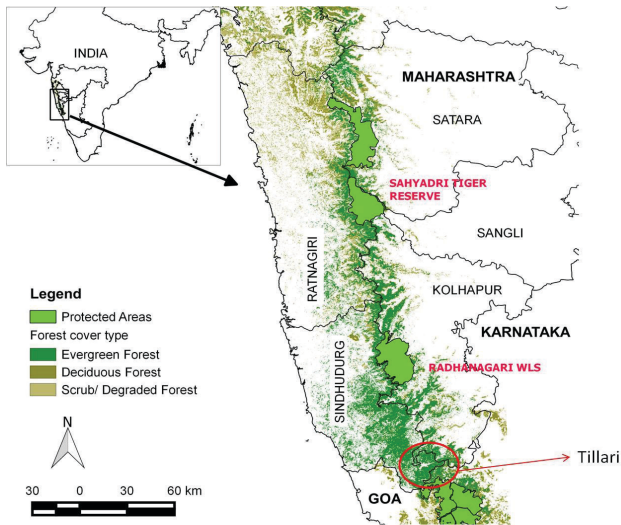

OKAVANGO DELTA

Tillari Conservation Reserve Notified

Why in News

The **Maharashtra Government** has declared **29.53 sq km area of Dodamarg forest range** in Sindhudurg district as '**Tillari Conservation Reserve'.**

Key Points

➢ **Tillari Conservation Reserve:**

Note:

drishti

- Tillari is the **seventh wildlife corridor** in the state to be declared as a **'conservation reserve'.**
- The area covering nine villages in the forest range is known to serve as a corridor and even as a habitat for the population of tigers and elephants moving between the three states of Goa, Karnataka and Maharashtra.
- It connects **Mhadei sanctuary in Goa** and **Bhimgad in Karnataka.**
- It has semi-evergreen forest, tropical moist deciduous forests, and a number of unique trees, butterflies, and flowers.
- **Conservation Reserves in Maharashtra:**
  - Maharashtra has 62 conservation reserves, of which 13 are in the western ghats.
  - Tillari is a reserve in western ghats.
- **Conservation Reserves in India:**
  - Conservation reserves and community reserves are terms denoting protected areas of the country which typically **act as buffer zones to or connectors and migration corridors** between established national parks, wildlife sanctuaries and reserved and protected forests.
  - Such areas are designated as **conservation areas** if they are uninhabited and completely owned by the Government of India but used for subsistence by communities and **community areas** if part of the lands are privately owned.
  - These protected area categories were first introduced in the **Wildlife (Protection) Amendment Act of 2002** – the amendment to the Wildlife Protection Act of 1972.

- These categories were added because of reduced protection in and around existing or proposed protected areas due to private ownership of land and land use.
- As of July 2019, there were 88 conservation reserves and 127 community reserves in India.

National Doctor's Day

Why in News

National Doctor's Day is celebrated on **1st July** every year to recognise the invaluable work done by doctors and physicians and thank them for their dedicated service.

➢ The day also marks the **birth and death anniversary of Dr. Bidhan Chandra Roy** who was one of the most renowned physicians in the country.

Key Points

➢ **Background**: The **Indian Medical Association (IMA)** observed the **first** National Doctor's day in July **1991.**
  - IMA is a representative, national voluntary organisation of Doctors of Modern Scientific System of Medicine, which looks after the interest of doctors as well as the well being of the community at large. It was formed in **1928,** headquartered in **New Delhi.**
  - IMA in 1946 helped in organisation of the **World Medical Association**, and thus became its founder member. WMA has its headquarters in **France.**
➢ **2020 Theme: 'Lessen the mortality of Covid-19'** which includes awareness about **asymptomatic hypoxia** and early aggressive therapy.

Dr. Bidhan Chandra Roy (1882-1962)
➢ Dr B.C. Roy served as a physician, a freedom fighter, an educationist and a politician.
➢ He was born in Patna Bengal Presidency, British India, in 1882
➢ He was a follower of **Brahmo Samaj**. He also led the **Civil disobedience movement** (began in 1930) in Bengal.
➢ He served as a physician to Mahatma Gandhi and was also elected as the **second Chief Minister of West Bengal.**
  - He laid the foundation of five eminent cities, namely, Durgapur, Kalyani, Bidhannagar, Ashokenagar and Habra.

Note:

➢ The British Medical Journal, in its obituary of Roy, called him the "first medical consultant in the subcontinent of India, who towered over his contemporaries in several fields".

➢ The Government honoured him with the country's highest civilian award, **Bharat Ratna**, in 1961.

➢ Further, the **B. C. Roy National Award was instituted in 1976** for work in the area of medicine, politics, science, philosophy, literature and arts.

National Fish Farmers Day 2020

Why in News

Recently, a webinar was hosted by the **Department of Fisheries under the Ministry of Fisheries, Animal Husbandry and Dairying** in association with the **National Fisheries Development Board** (NFDB) on the occasion of **National Fish Farmers Day**, which is celebrated on **10th July every year.**

Key Points

➢ National Fish Farmers Day is celebrated in the memory of scientists **Dr K. H. Alikunhi and Dr H. L. Chaudhury**.

○ Both of them successfully demonstrated **Hypophysation** (technology of induced breeding) in **Indian Major Carps** (common name for several species of fish) on **10th July 1957**.

➢ **Aim:**

○ To **recognise the accomplishments and contribution** of fish farmers, **aquapreneurs** (entrepreneurs in the water sector) and fisherfolks in the growth of the fisheries sector in the country.

○ To **draw attention to changing the way the country manages fisheries** resources to ensure sustainable stocks and healthy ecosystems.

➢ **Related Initiative:**

○ In order to make the **Blue Revolution** successful, the **Pradhan Mantri Matsya SampadaYojana** (PMMSY) has been launched.

➢ **Fish Cryobanks:**

○ NFDB and the **National Bureau of Fish Genetic Resources** (NBFGR) will establish fish cryobanks in different parts of the country.

○ The Cryomilt technology may be helpful in the establishment of fish cryobanks, which will **provide good quality of fish sperm in hatcheries at any time**.

○ This would be the **first time in the world when Fish Cryobanks** will be established, enhancing fish production and increasing prosperity among the fish farmers.

National Fisheries Development Board

➢ It was established in **2006** as an **autonomous organization** under the administrative control of the Ministry of Agriculture and Farmers Welfare.

○ Now, it works under the Ministry of Fisheries, Animal Husbandry and Dairying.

➢ **Mandate:**

○ To enhance fish production and productivity in the country and to coordinate fishery development in an integrated and holistic manner.

National Bureau of Fish Genetic Resources

➢ It was established in **December 1983**, under the aegis of **Indian Council of Agricultural Research** (ICMR).

➢ **Mandate:**

○ Exploration, characterization and cataloguing of fish genetic resources.

○ Maintenance and preservation of fish genetic resources for conservation and utilization of prioritized species.

○ Evaluation of indigenous and exotic germplasm including risk assessment and fish health.

Mahajobs Portal: Maharashtra

Why in News

The **Maharashtra Government** has launched a portal named **'Mahajobs'** for job seekers and employers, owing to the economic situation caused by **Covid-19 pandemic.**

Key Points

➢ **Aim:** To make local manpower available to companies and employment opportunities to workers.

➢ **Functioning:**

○ The job seekers and providers/industrial units can **register** themselves on the Portal.

○ The Portal has identified **17 sectors** including engineering, logistics, and chemicals, and provides for **selecting jobs across 950 trades** mainly for local youth who would need to produce **domicile certificates.**

Note:

○ There would be regular reviews of the jobs provided. There would be a study on the kind of problems faced by employers as well as youth seeking employment.

➢ **Developed by:** Maharashtra Industrial Development Corporation (MIDC).

➢ **Corresponding Initiative at the National Level: National Career Service Project,** implemented by the Ministry of Labour & Employment, works towards bridging the gap between job seekers and employers.

CogX 2020: Festival of AI & Emerging Technology

➢ Recently **MyGov Corona Helpdesk Chatbot** has bagged **two awards** under categories **of the Best Innovation for Covid-19: Society** and **People's Choice Covid-19 Overall Winner** at the CogX 2020.

○ MyGov Corona Helpdesk demonstrated the true **Public, Private Partnership (PPP)**, wherein, **citizen centric services were provided by MyGov,** while the state-of-the-art technological solution including infrastructure were designed, developed and deployed by a **private partner- JioHaptik Technologies Limited.**

○ MyGov (launched in 2014) is the **world's largest citizen engagement platform,** which facilitates two-way communication between the Government and the citizens and facilitates **participatory governance** in India.

➢ **CogX:** It is a prestigious **Global Leadership Summit and Festival** of **Artificial Intelligence** (AI) and **Emerging Technology,** held annually in London with over 15,000 participants in attendance from the highest levels of business, government, industry and research.

○ The CogX Awards are given out to the **best-of-the-best in AI and emerging technologies** across the world.

Under-Reporting of Diseases due to Pandemic

Why in News

According to information on weekly outbreaks available on the website of the **Integrated Disease Surveillance Programme (IDSP)**, there have been **unusually fewer instances of diseases other than Covid-19** due to the ongoing novel coronavirus pandemic.

➢ The IDSP issues **weekly reports on disease outbreaks** across the country based on its **surveillance network** that spans at least 600 districts.

Integrated Disease Surveillance Programme

➢ The Integrated Disease Surveillance Programme (IDSP) portal is a one stop portal which has facilities for data entry, view reports, outbreak reporting, data analysis, training modules and resources related to disease surveillance.

➢ It was launched by the **Ministry of Health and Family Welfare**, in assistance with the **World Bank**, in **2004**.

Key Points

➢ **Current Scenario:**

○ The latest weekly report available on the IDSP website from **Week 12 (March 16-22)** of 2020 records a **mere 6 disease alerts** across the country.

● An alert is when a **sizable number of cases from a region** are reported.

● The six alerts include a case of **Crimean-Congo Hemorrhagic Fever**, three cases of **chickenpox** and a case **each of dengue and food poisoning**.

○ In Week 11 of 2020, there were **28 alerts**, 12 of which were for Covid-19.

○ However, **after 3rd May 2020, there is again an increase in reports of other diseases** but the latest data suggests that it **hasn't completely normalised** as compared to previous years.

➢ **Past Scenario:**

○ In the same week in **2019**, there were **17 alerts**; in **2018**, there were **28;** and in **2017**, there were **45**.

○ However there are **no records** in 2020 after week 12, that is after March 22.

➢ **Reasons for Under-Reporting:**

○ **Lockdown and the behavioural change** due to Covid-19.

○ Presence of **only testing and treatment for Covid-19** available at government healthcare facilities.

○ IDSP faces a **manpower crunch** in the middle of a pandemic.

Note:

Samadhan se Vikas: Haryana

➢ Recently, the Haryana government has introduced a **one-time settlement scheme** called **'Samadhan se Vikas'** for the recovery of long-pending dues on account of **External Development Charges (EDC)** and **Infrastructural Development Charges (IDC).**

○ The scheme is modeled on the central scheme of '**Vivad se Vishwas-2020**'.

➢ **External Development Charges:**

○ It is the charges **paid by the real estate developer to civic authorities** for maintenance of civic amenities within the periphery of the developed project including construction of roads, water and electricity supply, landscaping, maintenance of drainage and sewage systems, waste management etc.

○ The EDC is decided by the civic authorities.

➢ **Infrastructure Development Charges:**

○ It is the charges **paid by the real estate developer to** the state government for development of major infrastructure projects across the state, which include construction of transportation networks including highways, bridges etc.

➢ **Legal Provision in Haryana:**

○ As per terms and conditions of the Haryana Development and Regulation of Urban Areas Rules, 1976, a licensee (developer) has to pay the EDC as per schedule of payment.

○ If the developer does not deposit the EDC/IDC nor avail the EDC Reschedulement Policy, then a show cause notice is issued by the Town and Country Planning Department warning such defaulters of revocating bank guarantee on account of non-payment of EDC/IDC.

○ The developers submit a bank guarantee of 15% within 90 days from the date of commencement of the project to safeguard the interest of buyers and to deal with any future misconduct.

Swabhiman Anchal

➢ Recently, a **passenger bus service** has been started for the **first time** after India's Independence in **Swabhiman Anchal region** (formerly known as the **cut-off area**) in **Odisha's Malkangiri** district**.**

➢ The bus service was able to start after the construction of the **Gurupriya Bridge** in 2018, which connects Swabhiman Anchal with the rest of the State.

THE 'CUT OFF' AREA

BALIMELA RESERVOIR

Andhra Pradesh

ORISSA

MALKANGIRI

○ Till now, motor launches and boats were the only mode of transportation to reach ferry points and from there people were taking country boats to reach villages.

○ People were even using horses to travel in the remote parts.

➢ Swabhiman Anchal is **situated along the Odisha-Andhra Pradesh border** and had long been a **stronghold of left-wing extremists.**

○ The region is covered by water from three sides and another side by inhospitable terrain.

○ **Balimela reservoir** is situated in the region.
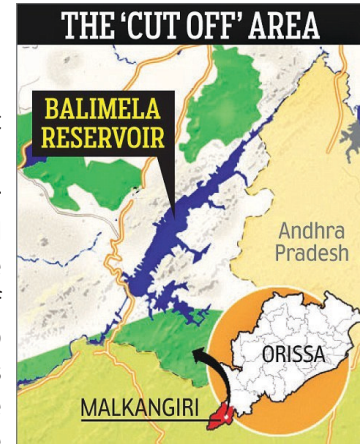
No Merger of CBDT and CBIC

Recently, the Central government has clarified that it has **no proposal** to merge the **Central Board of Direct Taxes (CBDT)** and **Central Board of Indirect Taxes and Customs (CBIC)**.

➢ The merger proposal was one of the recommendations of the **Tax Administrative Reforms Commission (TARC)** under the chair of **Parthasarathi Shome** that submitted its report in 2014.

➢ However, the proposal was **not accepted** by the government.

➢ **CBDT and CBIC** have been created under the **Central Boards of Revenue Act, 1963.** Both Boards are **part of the Department of Revenue** under the **Ministry of Finance**.

➢ **Central Board of Direct Taxes:**

○ It provides inputs for policy and planning of direct taxes in India and is also responsible for the administration of direct tax laws through the Income Tax Department.

○ Direct Taxes include income tax, corporation tax, etc.

➢ **Central Board of Indirect Taxes and Customs:**

○ The **Central Board of Excise and Customs** (CBEC) was renamed as CBIC in 2018 after the roll out of **Goods and Services Tax (GST)**.

○ It deals with the tasks of formulation of policy concerning levy and collection of customs, central excise duties, Central GST and Integrated GST.

CII-ITC Sustainability Awards 2019

Why in News

NTPC Limited has won the **CII-ITC Sustainability Award 2019**, under **Outstanding Accomplishment in Corporate Excellence Category**.

Key Points

➢ **CII-ITC Sustainability Award:**

○ **Instituted by** the **CII-ITC Centre of Excellence for Sustainable Development (CESD)** in **2006.**

● **Confederation of Indian Industry** (CII) is a non-government, not-for-profit, industry-led and industry-managed organization, having members from the private as well as public sectors. It also has links with 288 national and regional sectoral industry bodies.

● It works to create and sustain an environment conducive to the development of India, industry, government and civil society, through advisory and consultative processes.

● It is headquartered in **New Delhi**.

○ **Rationale Behind the Award:**

● Identifying and recognising exemplary performance in **economic, social and environmental dimensions of Indian business**.

● Promoting role models in Indian industry and recognising excellence achieved by businesses in **mainstreaming sustainability with business practices**.

● Imparting knowledge by which the CESD builds **capacity in Indian businesses** to adopt sustainability practices.

➢ **NTPC Limited:**

○ Established in **1975**, it is **India's largest power corporation** to accelerate power development in India. It is headquartered in **New Delhi**.

○ It became a **Maharatna company** in May 2010. It is under the **Ministry of Power.**

○ **Recent Initiatives:**

● **Corporate Social Responsibility** (CSR) program **Girl Empowerment Mission** (GEM) to uplift girls from the remote areas of the country.

● **Contractors' Labour Information Management System (CLIMS)** through which payment to contract labourers is paid on the last day of the month at project sites.

Rashtriya Chemicals and Fertilizers Limited

➢ Rashtriya Chemicals and Fertilizers Limited **(RCF Ltd.)** has introduced a **hand cleansing IsoPropyl Alcohol (IPA) Based Gel 'RCF SAFEROLA'** to assist the government in its effort to combat **Covid-19.**

➢ The hand cleansing gel is a skin friendly moisturizer based hand-sanitizer which contains IsoPropyl Alcohol (IPA) and Aloe Vera extract. It is enriched with Vitamin E and has a fresh lime fragrance.

➢ RCF is a **Miniratna company** and is a leading producer of fertilizers and chemicals in the country. It is under the **Ministry of Chemicals and Fertilizers.**

○ It manufactures urea, complex fertilizers, bio-fertilizers, micro-nutrients, water soluble fertilizers, soil conditioners and a wide range of industrial chemicals.

○ The company is a household name in rural India with brands **'Ujjwala' (Urea)** and **'Suphala' (Complex Fertilizers).**

○ It has two operating units, one at Trombay in Mumbai and the other at Thal, Raigad district, about 100 km from Mumbai.

MoU Between NATGRID and NCRB

Why in News

Recently, the **National Intelligence Grid (NATGRID)** has signed a **Memorandum of Understanding (MoU)** with the **National Crime Records Bureau (NCRB)** to **access the centralised online database** on FIRs and stolen vehicles.

Note:

- ➢ **NATGRID** which seeks to become the **one-stop destination for security and intelligence agencies** will be operational by **31st December 2020**.

Key Points

- ➢ **Access to CCTNS:** The MoU will give NATGRID access to the **Crime and Criminal Tracking Network and Systems (CCTNS)** database, a platform that links around 14,000 police stations.
  - ○ All State police are mandated to file First Information Reports (FIR) in the CCTNS.
  - ○ The MoU enables the NATGRID to get information about **details of a suspect as mentioned in the FIR** such as his/her father's name, telephone number and other details.
- ➢ **Concerns:**
  - ○ **Infringe on the Federal System of the Constitution:** The **NCRB** under the Union government is **only a repository** and **the data pertaining to FIRs** of a particular police station are a **State subject**.
    - ● However, it does not seem to violate any legal provisions as data pertaining to FIRs is shared with all the police stations.
    - ● The **State police will not be** a part of NATGRID and they could directly contact the airlines or railways for information.
  - ○ **Providing Information to Multiple Agencies:** Earlier the Civil Aviation Ministry and airline companies had raised concerns in providing information to yet another agency — NATGRID as they already provide information to the **Bureau of Immigration** and the **customs authorities.**
  - ○ **Privacy Issues:** Many agencies raised their concern regarding the accessibility of Data and privacy.
    - ● However, the information accessed by one agency through the grid **will not be accessible** to **any other agency** as it will be an **automated system** and the request will land directly with the concerned department.
  - ○ **Expenditure:** The major amount of funds would be required for the expenditure towards the **NATGRID software solution** and for **building infrastructural works** of offices, Data Centre etc. at Delhi and Bengaluru.
- ➢ **National Intelligence Grid:**

- ○ As a **counter-terrorism measure** it was proposed after the **terrorist attacks on Mumbai in 2008** and functions under the **Ministry of Home Affairs**.
- ○ It is the integrated **intelligence grid connecting databases of core security agencies** of the Government of India.
- ○ It is intending to set up an **Entity Extraction, Visualization, and Analytics** (EVA) system.
- ➢ **Significance:**
  - ○ **Secure Centralised Database:** It will become a **secure centralised database to stream sensitive information** from sets of data sources such as **banks, credit cards, visa, immigration and train and air travel details**, as well as from various intelligence agencies.
    - ● Presently, the security agencies directly contact an airline or a telephone company if they are on a suspect's trail through international servers such as Google etc.
  - ○ **Acts as a Link:** It will act as a link between intelligence and investigation agencies.
    - ● It will be a medium for at least 10 Central agencies such as the **Intelligence Bureau (IB) and the Research and Analysis Wing (R&AW)** to access data on a secured platform.
  - ○ **Technology Intensive Solutions:** The solutions provided by the NATGRID would be technology-intensive (e.g. use of Big Data and analytics) involving multiple stakeholders.

Introduction of Locally Produced Millets in ICDS, PDS

Why in News

Recently, **Odisha** has decided to introduce **locally produced millets** for the **first time** into **Integrated Child Development Services (ICDS)** Scheme and **Public Distribution System (PDS)**.

- ➢ The initiatives will be carried out as a **part of the Odisha's Millet Mission (2017)**.
  - ○ The State's millet mission aims to **popularise local production of millets** among farmers and **increase local household consumption** for better dietary diversity and nutritional gains.
- ➢ It is an attempt to develop decentralised infrastructure for processing and **re-popularising millets**.

Millets

➢ Millet is a collective term referring to a number of small-seeded annual grasses that are cultivated as grain crops, primarily on marginal lands in **dry areas in temperate, subtropical and tropical regions.**

➢ Some of the common millets available in India are Ragi (Finger millet), Jowar (Sorghum), Sama (Little millet), Bajra (Pearl millet), and Variga (Proso millet).

Key Points

➢ **Aim:**

❍ The initiative intends to **integrate locally grown millets** as part of public food systems such as I**CDS and PDS, mid-day meals**.

❍ It also aims to build **climate resilience among farmers** and **promote agroecological farming methods for cultivation** that draw on chemical-free agriculture practices and locally sustained food systems.

❍ Ideally, the aim is to make the districts **self-sufficient** with produce, procurement and distribution.

➢ **Need:**

❍ Odisha has an immense **malnutrition burden** to address, with about **45% children** who are **stunted.**

❍ The State also has almost **41 % women** who have a **below-normal body mass index**, according to the National Family Health Survey, 2015-16.

➢ **Features:**

❍ The districts will be using their **District Mineral Foundation (DMF) funds** to implement the initiative.

● DMF is a trust set up as a **non-profit body under the Ministry of Mines through the Mines and Minerals (Development & Regulation) Amendment Act, (MMDRA) 2015.**

● The objective is to work for the interest and benefit of persons and areas affected by mining related operations in those districts affected by the mining works.

❍ The money will be credited in the **farmers' account at the end of the sowing and harvest season** based on the report submitted by local implementation agencies and vetted by the district administration.

❍ Additionally, all the districts will provide **1.5 kilogrammes ragi per person** (out of the 5 kg per person entitlement) **through PDS**.

➢ **Complementary to Agricultural Practices:**

❍ The millet drive is largely focused on **local food diversity** and ensuring **availability of food to farmers** unlike the consumer and urban market-driven approach.

❍ Farmers who have adopted bio-inputs and follow the system of millets intensification will be given **incentives for three years**.

❍ The state government will also be **incentivising agronomic practices** including pest and weed management through organic methods. However, it **does not exclude farmers** who will be **using chemical-based fertilisers**.

■■■

Note:

Key Points

Details

Summary

Key Points

Details

Summary