INDEPENDENCE DAY 2020 SPEECH: KEY MESSAGES

National **Digital Health** Mission

Daughters have equal right to inherit family property: SC

One world, One sun, One grid plan

Mulgaonkar principles in contempt cases

NEXT IAS

Current Affairs

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MESSAGE TO THE READERS

The September 2020 Issue of the Next IAS Current Affairs Magazine (hereafter called 'The Magazine'), covers news events from 26th July 2020 to 25th August 2020 (hereafter called 'Coverage Period'). The Magazine has comprehensive coverage of all the topics from current affairs neatly categorized into major sections like Economy, International Issues, Polity & Governance, and so on.

This issue of the magazine has an in-depth analysis of 'Independence Day 2020 Speech: Key Messages', the Supreme Court's Verdict reconfirming that 'Daughters Have Equal Right to Inherit Family Property' and 'Mulgaonkar Principles in Contempt Cases'. The Magazine also covers the issues of 'Draft Defence Production and Export Promotion Policy 2020', 'India Report on Digital Education, 2020', 'National Council for Transgender Persons' and many other issues which have become relevant in the coverage period.

The Magazine is designed for the needs of the students who are preparing for UPSC Civil Services Examinations. However, it is also helpful for Engineering Services Examinations, Banking Examinations and other government or Public Sector Enterprises examinations.

Any suggestion for further improvement of the Magazine is welcome and may be e-mailed to currentaffairs@nextias.com

Team NEXTIAS

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INDEPENDENCE DAY 2020 SPEECH: KEY MESSAGES

Prime Minister Narendra Modi on 15ᵗʰ August addressed the nation from the ramparts of the Red Fort on the occasion of 74ᵗʰ Independence Day.

Key Highlights of the speech:

National Digital Health Mission (NDHM) announced

- PM launched the NDHM
- It will bring a new revolution in India's Health Sector. Technology will be used prudently to reduce the challenges in treatment.
- Every Indian will be given a Health ID. This Health ID will work like a Health Account of every Indian. This account will contain your details of every test, every disease, the doctors you visited, the medicines you took and the diagnosis.
- When and what was the report, all such information will be incorporated in the Health ID.
- The National Digital Health Mission will eliminate all these difficulties related to appointment with a doctor, depositing money, making a slip in the hospital, etc.
- We are devising a system which will help each and every citizen to make a better and informed decision.

Atmanirbhar Bharat- medical equipment

- India started production of PPE and ventilators which was not being produced in the country before.
- From merely one lab we have today more than 1400 labs. We were earlier conducting just 300 tests on a day; today we are conducting more than 7 lakh tests in a day. We have achieved this in a very less amount of time
- We are not only able to meet our own requirements, but now also become strong enough to export to the world.
- India became self-reliant, which is supporting the world.
- PM spoke about duty of India to work for the welfare of the world.

National Infrastructure Pipeline Project:

- Prime Minister announced a major push to infrastructure sector.
- Government is prioritizing on improving the overall infrastructure for faster development with the help of National Infrastructure Pipeline (NIP) project
- Over Rs.110 lakh crore would be invested in the NIP.
- More than 7,000 projects have been identified across various sectors.
- National Infrastructure Pipeline Project will play a crucial role in pulling the country out of impact of COVID 19.
- NIP is a project that will revolutionize India's infra creation efforts.
- Many new jobs will be created, our farmers, youngsters, entrepreneurs will benefit.
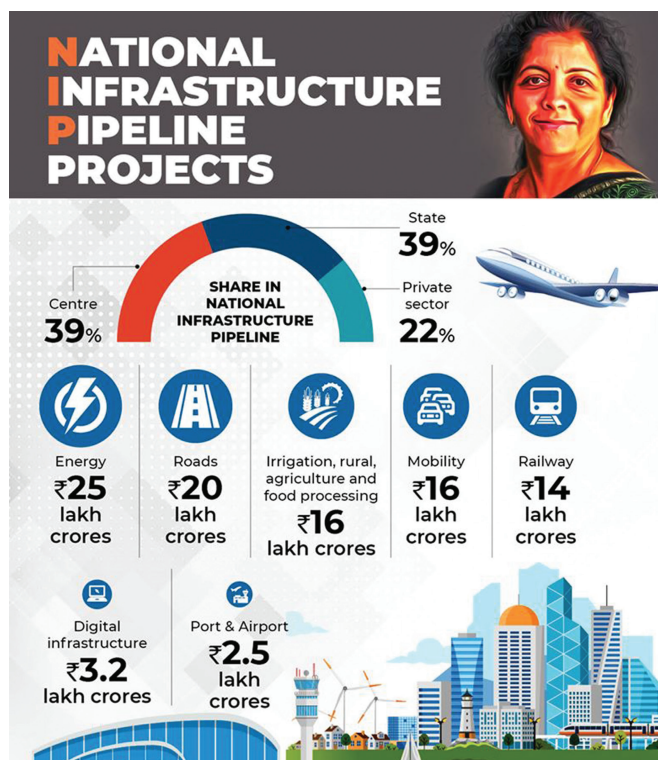
FDI:

- The Prime Minister emphasized that now along with **Make in India**, we have to move forward with mantra of **Make for World** also.

- Whole World has been noticing the reforms being pursued in India. As a result, the FDI inflow has broken all records.
- India witnessed 18% jump in FDI even during the Covid pandemic.

Jan Dhan Accounts:

- Lakhs of crores of rupees would be directly transferred in the Jan Dhan accounts of the poor in the country.
- 40 crore Jan Dhan accounts opened in the country, about 22 crore accounts are of women only.
- At the time of Corona, in April-May-June, about thirty thousand crore of rupees have been directly transferred to the accounts of women in these three months.

Direct Benefit Transfer

- 7 crore poor families were given **free gas cylinders**, more than 80 crore people were provided **free food** with or without ration cards, about 90 thousand crores were **directly transferred to bank accounts.**
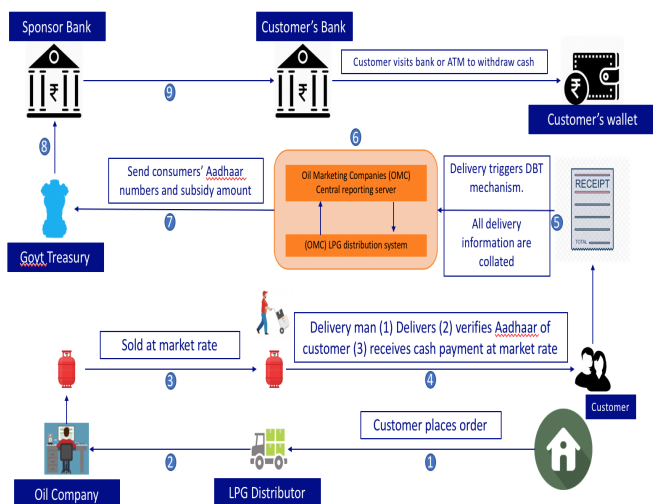
Towards Self Reliance in Agriculture

- PM spoke, our farmers have done a wonderful job. Today India's farmers not only supply food-grains for the citizens of India but also for other countries in need.
- The priority of a self -reliant India is a self -Reliant farming sector and self- reliant farmers. We have to free them of shackles and we have done that.
- Farmers could not sell their produce in any part of the country or the world according to their wishes on their terms but now these shackles will not be there.
- We have emphasized on several alternative measures to increase the income of farmers. We are constantly working to reduce input cost of farming.
- Avenues like beekeeping, fisheries, poultry will be available to farmer so that his income gets doubled.

- PM also talked about the benefits of PM KISAN scheme and the new Agriculture Infrastructure Fund.

PM-KISAN

- Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a Central Sector Scheme with 100% funding from the Government of India.
- It is being implemented by the Ministry of Agriculture and Farmer's Welfare.
- Under the scheme, the Centre transfers an amount of Rs 6,000 per year, in three equal instalments, directly into the bank accounts of the all landholding farmers irrespective of the size of their land holdings.
- It intends to supplement the financial needs of the Small and Marginal Farmers (SMFs) in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income at the end of each crop cycle.
- The entire responsibility of identification of beneficiary farmer families rests with the State / UT Governments.

Agriculture Infrastructure Fund

- The Agriculture Infrastructure Fund is a medium - long term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets through interest subvention and credit guarantee.
- The duration of the scheme shall be from FY2020 to FY2029 (10 years).
- Under the scheme, Rs. 1 Lakh Crore will be provided by banks and financial institutions as loans with interest subvention of 3% per annum and credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- The beneficiaries will include farmers, PACS, Marketing Cooperative Societies, FPOs, SHGs, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Startups, and Central/State agency or Local Body sponsored Public Private Partnership Projectso.

Connectivity for Everyone

- All villages will be connected with optical fiber cable in next 1000 days.
- PM Modi mentioned in his speech, "Before 2014, only 5 dozen panchayats in the country were connected with optical fiber. In the last five years, 1.5 lakh gram panchayats in the country have been connected with optical fiber. All 6 lakh villages in the country will be connected with optical fiber within coming 1000 days."

- In the next 1000 days, Lakshadweep will also be connected to submarine optical fiber cable.

- While announcing the Lakshadweep connectivity with submarine OFC, PM said, "There are more than 1300 islands in our country.

- In view of their geographical location, considering their importance in the development of the country, work is underway to start new development schemes in some of these selected islands.

New Cyber Security Policy

- Prime Minister also announced New Cyber Security Policy. He said, "In this era of technology, our dependence on cyberspace is going to increase multifold. However, cyberspace offers its own risks and threats.

- The world is very well aware of these. It can be a threat to the social fabric of our country, our economy and can even threaten the development of our nation; we are very well-aware of that. India is very cautious and is planning to take steps to combat these risks.

- Not only this, new systems are continuously being developed. In a short span of time, a draft of new cyber security policy would be presented to the nation.

- In the coming times, we will have to integrate everything and then work within the framework of this cyber security. We will formulate strategies to move forth."

New Education Policy facilitating everyone

- Education of the country is of great importance in building a self-reliant, modern, New India, an India which will be prosperous and happy.

- With this thought, we have become successful today in providing the country with a new National Education Policy after three decades.

- And this is the National Education Policy, which will connect our students with the roots. Alongside, it will help them become global citizens.

- The students will be well rooted and still touching new heights. You must have noticed that a special stress has been laid in National Education Policy on National Research Foundation because in order to progress, the nation needs to innovate.

- Higher the stress that will be laid on innovation and research, greater would be the strength to take India forward in this competitive world.

- Who would have thought that there would be online classes in rural areas and such a momentum would be created so fast? Sometimes, in the times of adversity, new revolutionary initiatives emerge with force. That's the reason we have witnessed how in this pandemic situation, a culture of online classes has emerged.

- Our policies, processes, products- everything must be par excellence, the best, and then only the idea of 'Ek Bharat Shreshtha Bharat' can be achieved.

Uplifting the lives of Tribals

- The solution to several health problems is directly linked to the pure drinking water. It also contributes to that nation's economy. That's why we have started the **Jal Jeevan Mission**.

- Today, I am happy to say that every day we are able to supply piped-water to over one lakh houses. And in the last one year, we have been **able to provide water to 2 crore families**, especially to the tribals living in the forests and far-flung areas.

Empowering women in all spheres

- The country is committed to providing equal opportunities for employment and self-employment to women.

- Government has taken the decision of **providing 6 months paid leave to pregnant women**.

- Liberating women from the sufferings of **triple talaq**.

- Economic empowerment of women. Out of **40 crore Jan Dhan accounts 22 crore accounts belong to women**. Out of 25 crore **Mudra loans** 70 percent have been given to women.

- Under **PM Awaas Yojana** maximum registration is done in the names of women

- More than 5 crore sanitary pads have been delivered to women from 6000 Jan Aushadhi Kendras.

Saving and Strengthening the Eco System

- A holistic Project Lion on the lines of Project Tiger announced.

- Project Dolphin to conserve both river and oceanic Dolphins announced.

- Ladakh to become first Carbon Neutral region, announced by PM

- Strong push towards mitigation of Air Pollution in more than 100 cities. (National Clean Air Programme launched in 2019 by MoEFCC will take this vision forward)

Culture

- In last year itself, the nation has achieved many big and important milestones. On the 150th year of Gandhi's birth anniversary, India freed its villages from open defecation.

- Be it the Citizenship Amendment Act for the refugees suffering due to their beliefs, reservation rights for Dalits/Backwards/SCs/STs/OBCs, historic peace agreement in Assam and Tripura, appointment of Chief of Defence staff for making the collective power of armies more effective, or the construction of Kartarpur Sahib Corridor in a record period, India has created history, it saw history being created, extraordinary feats were achieved.

- The construction of Lord Rama's magnificent temple in Ayodhya began. A peaceful culmination has been achieved to the age-old issue of Ram Janmbhoomi.

- The citizens of India have shown an exemplary restraint and wisdom, and acted responsibly. It is simply unprecedented and a motivating factor for the future. Peace, unity and harmony these are going to be the strengths of self-reliant India.

PM SVANidhi scheme for street vendors

- Since the center of economic activity is the city, a scheme is being implemented for workers like street vendors etc who come from off villages to the cities for their livelihood, for providing finances directly by the banks.

- Lakhs of people have taken advantage of this in such a short span of time even during the period of the Corona crisis. Now they do not need to borrow money at high interest. The workers can now get their money with dignity and authority.

New and Renewable energy

- PM announced creation of **7,500 MW Solar Park in Ladakh**. He said, "Ladakh is progressing towards new heights. Work is going on for a central university, setting up new research centres, new courses for hotel and management. Plan is also under way for the creation of 7,500 MW Solar Park."

- He also talked about India's vision of **one world, one sun and one grid**. He mentioned, "My dear countrymen, India has shown that the march towards development is possible by balancing the environment. Today India is inspiring the entire world with its vision of one world, one sun and one grid, particularly in the field of solar energy."

- "India has established itself as one of the five countries in the world in the generation of renewable energy. India is both aware as well as involved in finding solutions to pollution. We are leaving no stone unturned whether it is the Swachh India campaign, smoke-less cooking gas, LED campaign, CNG-based transportation, or electric mobility."

- We are emphasizing on increasing the use of ethanol to reduce pollution caused due to petrol. Five years ago, there used to be only 40 crores liters' production of ethanol. Today, we are producing 200 crore liters of ethanol which is proving to be very helpful towards our environment.

Basic Rights to certain sections of society post Article 370 revocation in Union Territory of Jammu & Kashmir

- The last one year has been a major milestone in the new development journey of Jammu-Kashmir.

- Last one-year basic rights have been provided to women and to Dalits.

- It has also been a year during which refugees have begun to live a life of dignity.

Movement towards revival of representative politics in J&K

- Delimitation exercise is going on in Jammu-Kashmir under a retired Chief Justice of the Supreme Court.

- Early completion of the delimitation exercise so that there are early elections, there should be Jammu & Kashmir MLAs, its own cabinet, its own Chief Minister so that it can march towards development with a new vigour.

Defence

- NCC would be expanded in about 173 Border and coastal districts. One lakh cadets, one-third of them girls, would be trained by Army, Navy and Air Force.

- Women are being included in the combat role in the Navy and the Air Force.

- Appointment of Chief of Defence staff has made collective power of armies more effective.

Aurobindo Ghose

- 15th August is also the birth anniversary of Aurobindo Ghose, who tread the path from being a revolutionary to spirituality.

Aurobindo Ghose
• Aurobindo Ghosh (a series of articles in April 1907, later reprinted as 'Doctrine of Passive Resistance.
• He passed the ICS examination securing the 11th rank out of 250 candidates.
• He was much influenced by the American Revolution, revolts in Italy and the medieval French revolts against England.He attended Congress sessions and at the same time, helped establish the Anushilan Samiti of Calcutta in 1902.
• He and his brother revolutionary Barin Ghose contributed articles to the magazine Jugantar.
• In 1905, Aurobindo started an English newspaper called Bande Mataram.In May 1908, Aurobindo was arrested in connection with the Alipore Conspiracy Case or Alipore Bomb Case.
• This was in the wake of the attempt to assassinate the Chief Presidency Magistrate Douglas Kingford by Khudiram Bose and Prafulla Chaki.

DAUGHTERS HAVE EQUAL RIGHT TO INHERIT FAMILY PROPERTY: SC

In a recent verdict the Supreme Court stated that daughters, like sons, have an equal birth-right to inherit joint Hindu family property.

About:

- A three-judge bench of the Supreme Court Supreme Court of India held that daughters, like sons, have an equal right, by birth, to inherit ancestral property.
- The legislation that conferred coparcenary status on women dates back to 2005, when the **Section 6 of the Hindu Succession Act, 1956** was amended.
- The verdict answers the question whether the coparcenary right of daughters comes into effect only if the father — through whom the right is claimed — was alive on the day the amendment came into force (9.9.2005).
  - The SC said that **it is not necessary that father coparcener should be living** as on 9.9.2005.
  - It means that amendment to the Hindu Succession Act, 1956 would have retrospective effect.
- This verdict has upheld the stand that coparcenary status of daughters is created by birth, and is not dependent on whether the father was alive or not on the date on which it came into force — a daughter has the same status as a son as soon as she is born.

What is Coparcenary Property?

- Coparcenary property is the one which is inherited by a Hindu man from his father, grandfather, or great grandfather.
  - It means that Hindu coparcenary consists of only the 'propositus' (the person from whom a line of descent is traced) and three of his descendants.
  - A coparcener is a person who has a birthright to parental property.
- **NOTE:** A joint Hindu family is a broader term and includes all people lineally descending from a common ancestor, including wives and unmarried daughters.
- Coparcenary property is held jointly and only a coparcener has a right to demand a partition of this property.

Background of Hindu's Women's Right to Ancestral Property:

- In 1975 itself, Kerala had abolished the Hindu Joint Family System. Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu also made some changes in the succession law.
- **Most significantly, in 2000, the 174th Law Commission** noted that "the framing of all property laws have been exclusively for the benefit of man" even though the right to property is "important for the freedom and development of a human being".
  - It noted that only male descendants of an ancestor, their mothers, wives and unmarried daughters were given that right.
- This was followed by the **2005 amendment to the Hindu Succession Act, 1956.**

2005 Amendment to Hindu Succession Act, 1956:

- Before 2005, the coparceners included only **sons, grandsons, and great grandsons**.
- But the 2005 amendment to Section 6 of the Hindu Succession Act gave equal rights to daughters in ancestral property.
  - It said that said that a woman could be a co-parcener by birth "in her own right in the same manner as the son".
  - This amendment gave the daughter the **same rights and liabilities** "in the coparcenary property as she would have had if she had been a son".
  - **NOTE:** This law for succession applies to ancestral property and to intestate succession in personal property where succession happens as per law and not through a will.

'GOAL OF GENDER JUSTICE ACHIEVED'

➤ SC irons out confusion arising from its own conflicting interpretations of the amended Section 6 (in force since Sept 9, 2005) of the Hindu Succession Act, 1956

➤ Spells out daughters' equal coparcenary rights in Hindu Undivided Family properties even if they were born before the 2005 amendment & regardless of whether their father

coparcener died before '05

➤ But the daughters won't get the right to question ancestral properties already disposed or alienated by then existing coparceners prior to December 20, 2004

➤ Rights of other relatives to remain unaffected as prevailed in the proviso to Sec 6 before amendment. It's only a case of enlargement of daughters' rights

Who is a coparcener? A Hindu who inherits property from his/her , grandfather or great grandfather. Only a coparcener has the o demand partition of property

❝ The classic Shastric Hindu law excluded the daughter from being coparcener... (this) injustice has now been done away with by amending the provisions in consonance with the spirit of the Constitution. The goal of gender justice, as constitutionally envisaged, is achieved, though belatedly

— Supreme Court

- Still there was the ambiguity of whether the amendment could apply retrospectively or depended upon the father's being alive in 2005.
  - The current judgement of the SC has put an end to this confusion.

Government's Stand:

- The Solicitor General of India has argued in favour of an expansive reading of the law to allow equal rights for women.
- He criticised the **Mitakshara coparcenary 1956 law** because it contributed to discrimination on the ground of gender and was also oppressive and negated the **fundamental right of equality (Articles 14 to 18)** guaranteed by the Constitution of India.

Mitakshara Law

- In the Mitakshara school, which prevails in most parts of India, a male's right to be a coparcener is by birth.
- It lays down that a coparcenary has succession up to four generations of lineal descent.
- It is believed that this is based on the Hindu tenet that only males up to three degrees can offer spiritual ministration to ancestors. And only males can be coparceners.

Conclusion

- Denying coparcenary rights to daughters leads to discrimination on the ground of gender, oppression and negation of her fundamental right of equality guaranteed by the Constitution.
- The significance of this verdict is that it has put an end to all doubts about when the amendment comes into force, and whether some women could be left out of it on the ground that it can only have prospective application.

TOP 7 LEGAL RIGHTS OF MARRIED DAUGHTERS
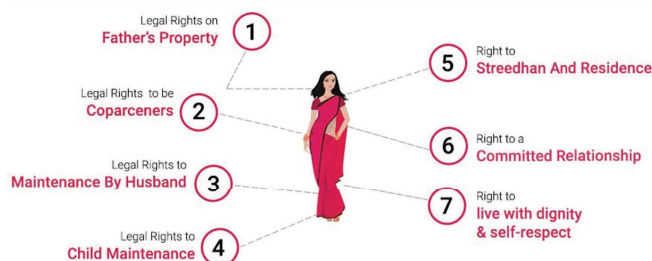
Some Constitutional Provisions related to Women

- Equality before law for women (Article 14)
- The State not to discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them (Article 15 (i))

- The State to make any special provision in favour of women and children (Article 15 (3))
- Equality of opportunity for all citizens in matters relating to employment or appointment to any office under the State (Article 16)
- The State to direct its policy towards securing for men and women equally the right to an adequate means of livelihood (Article 39(a)); and equal pay for equal work for both men and women (Article 39(d))
- To promote justice, on a basis of equal opportunity and to provide free legal aid by suitable legislation or scheme or in any other way to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities (Article 39 A)
- The State to make provision for securing just and humane conditions of work and for maternity relief (Article 42)
- The State to promote with special care the educational and economic interests of the weaker sections of the people and to protect them from social injustice and all forms of exploitation (Article 46)
- The State to raise the level of nutrition and the standard of living of its people (Article 47)
- To promote harmony and the spirit of common brotherhood amongst all the people of India and to renounce practices derogatory to the dignity of women (Article 51(A) (e))
- Not less than one-third (including the number of seats reserved for women belonging to the Scheduled Castes and the Scheduled Tribes) of the total number of seats to be filled by direct election in every Panchayat to be reserved for women and such seats to be allotted by rotation to different constituencies in a Panchayat (Article 243 D (3))
- Not less than one- third of the total number of offices of Chairpersons in the Panchayats at each level to be reserved for women (Article 243 D (4))
- Not less than one-third (including the number of seats reserved for women belonging to the Scheduled Castes and the Scheduled Tribes) of the total number of seats to be filled by direct election in every Municipality to be reserved for women and such seats to be allotted by rotation to different constituencies in a Municipality (Article 243 T (3))
- Reservation of offices of Chairpersons in Municipalities for the Scheduled Castes, the Scheduled Tribes and women in such manner as the legislature of a State may by law provide (Article 243 T (4))

MULGAONKAR
PRINCIPLES IN CONTEMPT CASES

Recently, the 'Mulhaonkar Principles' were invoked in the contempt case against Prashan Bhushan

About:

- In the criticism against the Supreme Court's ruling that held advocate Prashant Bhushan guilty of contempt of court, his counsel has invoked the 'Mulgaonkar principles', urging the court to show restraint.
- **NOTE:** The Supreme Court took suo motu cognisance and initiated the contempt of court case against public rights activist and lawyer Prashant Bhushan. This step was taken against his tweet criticising the current Chief Justice of India and the role of some Chief Justices of India in the last six years.
  - The court further opinionated that if there is any issue with respect to the judgment delivered or procedure followed by the judiciary, then queries must be brought before the courts rather than humiliating the judiciary on social media platforms.
  - The apex court opinionated that the tweets by Mr Bhushan undermined the prestige of the CJI office and portrayed the judiciary in a bad light.

What are Mulgaonkar Principles?

- S Mulgaonkar v Unknown (1978) is a case that led to a landmark ruling on the subject of contempt of court.
- In the verdict which had a 2:1 majority, the court held Mulgaonkar, then editor of The Indian Express, not guilty of contempt although the same Bench had initiated the proceedings.
- Justices P Kailasam and Krishna Iyer formed the majority going against then Chief Justice of India M H Beg. Justice Iyer's counsel of caution in exercising the contempt jurisdiction came to be called the Mulgaonkar principles.

Judgement Written by Justice Iyer (Mulgaonkar Principles):

- Justice Iyer said the first rule in the branch of power is a "wise economy of use by the Court of this branch of its jurisdiction".
- He argued in favour of harmonising "the constitutional values of free criticism, the fourth estate included, and the need for a fearless curial process and its presiding functionary, the judge". Some key principles of the judgement are:

- The Court will act with seriousness and severity where justice is jeopardized by a gross and/or unfounded attack on the judges, where the attack is calculated to obstruct or destroy the judicial process.
- The court is willing to ignore, by a majestic liberalism, trifling and venial offenses-the dogs may bark, the caravan will pass. The court will not be prompted to act as a result of an easy irritability.

The Case behind the Mulgaonkar Principles:

- An article by A G Noorani in the Indian Express newspaper about certain judicial decisions during the Emergency period, especially the Habeas Corpus case, had displeased the then CJI Beg.
- The Habeas Corpus case, often referred to as the "Supreme Court's darkest hour" upheld the detention law, citing that even the right to life can be suspended during an emergency.

Contempt of Court Provisions in India:

- As per the Contempt of Courts Act 1971, contempt refers to the offence of showing disrespect to the dignity or authority of a court. It divides contempt into civil and criminal contempt.
  - **Civil contempt:** It is willful disobedience to any judgment, decree, direction, order, writ or other processes of a court or wilful breach of an undertaking given to the court.

Course of justice
A look at what the SC said in the **Prashant Bhushan** case

- Judiciary is the central pillar of Indian democracy. An attempt to shake the very foundation of constitutional democracy has to be dealt with an iron hand
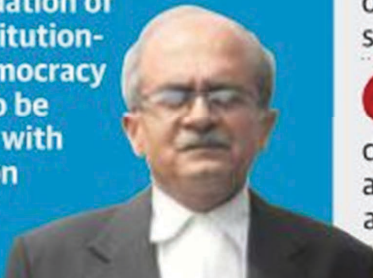
- Critics are instruments of reform but not those actuated by malice... hostile criticism of judges as judges or judiciary would amount to scandalising the court

- If such an attack is not dealt with requisite degree of firmness, it may affect the national honour and prestige in the comity of nations

- ◆ **Criminal contempt:** It is any act which may result in scandalising the court by lowering its authority, interference in the due course of a judicial proceeding, an obstruction in the administration of justice.

- The **act was amended in 2006 in order to include the defence of truth under Section 13 of the original legislation**. It states that the court must permit justification by truth as a valid defence if it is satisfied that it is in the public interest.

- The reason why the concept of contempt exists is to **insulate the institution from unfair attacks and prevent a sudden fall** in the **judiciary's reputation** in the public eye.

- **Fair and accurate reporting of judicial proceedings will not amount to contempt of court** nor is any fair criticism on the merits of a judicial order after a case is heard and disposed of.

Punishment for Contempt of Court:

- The Supreme Court and High Courts have the power to punish for contempt of court, either with simple imprisonment for a term up to six months or with fine up to Rs. 2,000 or with both.

- The High Courts have been given special powers to punish contempt of subordinate courts, as per Section 10 of The Contempt of Courts Act of 1971.

Evolution of the Contempt Provisions

- The concept of contempt of court is several centuries old. In England, it is a common law principle that seeks to protect the judicial power of the king, initially exercised by himself, and later by a panel of judges who acted in his name.
  - ◆ Violation of the judges' orders was considered an affront to the king himself.

- There were pre-Independence laws of contempt in India. Besides the early High Courts, the courts of some princely states also had such laws.

- With the enactment of the Constitution contempt of court was made one of the restrictions on freedom of speech and expression. The Contempt of Courts Act, 1971, gives statutory backing to the idea.

Concerns:

- **Article 19(1)(a)** of the Constitution gives the right to freedom of speech and expression to all citizens, while "contempt provisions" curb people's freedom to speak against the court's functioning.

Defending the judiciary

Contempt pleas seemed to be a sequel to a verdict by Justice Arun Mishra last month:

- In R. Muthukrishnan vs Madras HC, he had criticised lawyers attributing "political colour" to judges in important cases. He said this amounted to denigrating the judiciary
- Such acts amount to contempt of court but this power was a 'Brahmastra', only meant to be rarely used
- "It is the duty of the Bar to protect honest judges and not to ruin their reputation," the court had observed

- The law is very subjective which might be used by the judiciary arbitrarily to suppress their criticism by the public.

- The law for criminal contempt is **completely asynchronous with our democratic system** which recognises freedom of speech and expression as a fundamental right.

Some Constitutional Provisions:

- **Article 129:** It grants the Supreme Court the power to punish for contempt of itself.

- **Article 142(2):** It enables the Supreme Court to investigate and punish any person for its contempt.

- **Article 215:** It grants every High Court the power to punish for contempt of itself.

Contempt of Court (Per LORD HARDWICK)

- Scandalizing the court itself.
- Abusing parties who are concerned in the cause, in the presence of court.
- Prejudicing the public before the cause is heard.
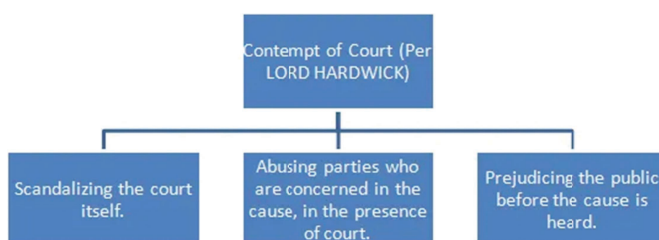
Way Forward:

- The contempt of court should not be allowed to be used as a means to prevent criticisms. In contemporary times, it is more important that courts are seen to be concerned about accountability, that allegations are scotched by impartial probes rather than threats of contempt action, and processes are transparent.

- The **contempt doctrine fell into disuse**, and England abolished the offence of "scandalising the court" in 2013 and there is a need to revisit the need for a law on criminal contempt in India also.

■■■■

INDIA REPORT
ON DIGITAL EDUCATION, 2020

Recently, the Ministry of Human Resource Development launched Indian Report on Digital Education, 2020.

About:

- The report highlights the innovative measures adopted by the states and **union territories to bridge learning gaps during the COVID-19 pandemic.**
- **It is prepared by** the **digital education division of MHRD** in consultation with education departments of the states and union territories.
- It **elaborates the innovative methods** adopted by the MHRD, for **ensuring accessible and inclusive education** to children at home and reducing learning gaps during the **Covid-19 pandemic**.

Why Digital Education is Important in India?

- **Education disruption:** The pandemic has led to the closure of almost all colleges and schools making 1.2 billion children out of the classroom.
- **Loss of nutrition due to school closure:** Not able to access food through Mid-Day meals causing socio-economic problems among children and their parents.
- **Unemployment:** Recent graduates in India are fearing withdrawal of job offers from corporates because of the current situation.
- **Social isolation:** This is causing Psychological impact on the personality of students.
  - Also, there is a need for new methods keeping in view the modern methods and future of education in scenarios like these, adaptation to modern methods of education like e-learning, online classes etc.

What are the issues faced by India with respect to Digital Education?

- Lack of separate Study Room for children at home: Census 2011 tells us that 71 per cent of households with three or more members have dwellings with two rooms or less. This prevents the children from concentrating on online classes
- A Large digital divide: Given the low per capita income of the

parents in India and the salary cuts and job losses because of COVID-19 pandemic, it is pertinent to assume that majority of the children in India will not have the digital tools necessary to indulge in online education. The lack of laptops, internet connections, smartphones, etc is creating a digital divide between the rich and the poor students.

- Lack of affordable and fast Internet: According to National Sample Survey data for 2017-18, only 42 per cent of urban and 15 per cent of rural households had internet access. Online education relies on watching videos and interacting with teachers via fast internet connections.
- A narrow understanding of Digital Education: Only providing videos of teachers will not be sufficient to engage the entire cognitive spectrum of the students especially young ones. We need to find more ways in which to entice young children to learn via online medium.
- Teacher Training: Teachers are not adequately trained to provide for emotional, psychological and behavioural needs of students through online mediums.
- Holistic education missing: Online education is only focussing on cognitive knowledge impartation. The present system is not able to cater to the other needs of the children such as socialization with friends, physical activity, emotional development and development of aptitude for music, arts etc. Parents need to be made aware to compensate school's efforts in providing a holistic and meaningful educational experience to the students.

Elements of Safe Digital Education

Digital Citizen Identity
Ability to build and manage a healthy congruent identity online and offline with integrity

Privacy Management
Ability to handle with discretion all personal information shared online to protect one's and others' privacy

Screen Time Management
Ability to manage one's screen time, multitasking, and one's engagement in online games and social media with self-control

Critical Thinking
Ability to distinguish between true and false info, good and harmful content, and trustworthy and questionable contacts online

Cyberbullying Management
Ability to detect cyberbullying situations and handle them wisely

Digital Footprint Management
Ability to understand the nature of digital footprints and their real-life consequences and to manage them responsibly

Cyber Security Management
Ability to protect one's data by creating strong passwords and to manage various cyber attacks such as SPAM, SCAM, and phishing

Digital Empathy
Ability to be empathetic towards one's own and others' needs and feelings online

DQ CITIZENSHIP

Initiatives taken by HRD Ministry:

- **DIKSHA (Digital Infrastructure for Knowledge Sharing) platform-DIKSHA is the national platform** for school education available for all states and the central government for grades 1 to 12 and was launched in September 2017.

- It provides access to a large number of curriculum-linked e-content through several use cases and solutions such as **QR coded Energized Textbooks (ETBs)**, courses for teachers, quizzes and others.

- As part of **PM eVidya** announced under the Atma Nirbhar Bharat programme, DIKSHA is the 'one nation; one digital platform' for school education in India.

- **Swayam Prabha TV Channel:** To support and reach those who do not have access to the internet.

- **Online MOOC courses- Online MOOC courses** relating to NIOS (grades 9 to 12 of open schooling) are uploaded on SWAYAM portal; around 92 courses have started and 1.5 crore students are enrolled.

- **On Air – Shiksha Vani, DAISY by NIOS for differently-abled, e-PathShala:** Radio broadcasting is being used for children in remote areas who are not online (especially for grades 1 to 5).

- **National Repository of Open Educational Resources (NROER)** to develop **e-content and energized books** etc.

- It also released **guidelines on digital education** called **'PRAGYATA'.**

- MHRD has also launched the **'Manodarpan' initiative**, which aims to provide psychosocial support to students, family members and teachers for their mental health and well-being during the times of Covid-19.

Initiatives taken by State Governments:

- Some of the major digital initiatives are **SMILE (Social Media Interface for Learning Engagement) in Rajasthan, Project Home Classes in Jammu, Padhai Tunhar duvaar (Education at your doorstep) in Chhattisgarh, Unnayan Initiatives in Bihar** through the portal and mobile application, **Mission Buniyaad in NCT of Delhi.**

- Some States have launched **innovative mobile apps and portals** as **means to facilitate remote learning** e.g. Madhya Pradesh has launched **Top Parent App, a free mobile app** that **empowers parents of young children (3-8 years)** with knowledge and strategies around child development.

Technology Driven Education with Equity Post-COVID

- **PM eVIDYA-** A programme for multi-mode access to digital/online education to be launched immediately; consisting of:
  - DIKSHA for school education in states/UTs: e-content and QR coded energized textbooks for all grades **(one nation, one digital platform)**
  - One earmarked TV channel per class from 1 to 12 **(one class, one channel)**
  - Extensive use of **radio, community radio and podcasts**
  - Special **e-content for visually and hearing impaired**
  - **Top 100 universities** will be permitted to automatically start online courses by 30th May, 2020

- To ensure **inclusive learning in remote areas** where internet connectivity and **electricity is poor and sporadic, States and UTs have also distributed textbooks at children's doorsteps** e.g. initiatives by Odisha, Madhya Pradesh (under Dakshata Unnayan Programme), Dadra and Nagar Haveli and Daman and Diu, etc.

What is the significance of Digital Education?

- It will help in **bringing on track the education set up** in the country amid the ongoing crisis.

- It **will help in preparing the education system** for any future crisis as it makes it more flexible and easier to access.

- It will **boost access and equity in education** and improve the gross enrolment ratio.

- This will help to **create opportunities for the implementation of homegrown technologies** in the education sector with digital content targeted at all sections of the society leading to a much wider reach and impact and will also help in revenue generation.

Way Forward:

- **Developing digital classrooms** as an instructional modality – Integration of use of technology with the education system.

- **Inclusion of virtual vocational training**, virtual labs & skill development courses.

- **Multi-mode access to education** using web portals, mobile apps, TV channels, radio, podcasts etc. with coherent user experience.

- Developing **quality e-content in local languages.**

- **Developing a framework for enhancing learning** within and outside the classroom, and for assessments in the era of digital education.

- **Framing of Online/Digital Education Guidelines** addressing the digital divide.

■■■■

INDIA DOES NEED A FISCAL COUNCIL

**In the wake of financial stress because of COVID-19, there has been talks
regarding the need for a fiscal council in India.**

About:

- Many economists have argued that the in current pandemic situation government should spend more to stimulate the economy by borrowing as may be necessary.
- Nonetheless, it is also necessary that the government must return to a credible fiscal consolidation path once the crisis gets over. This can be done by establishing some new institutional mechanism for enforcing fiscal discipline, such as the fiscal council.
- The idea of a fiscal council was first recommended by the **Thirteenth Finance Commission** and was subsequently endorsed by the Fourteenth Finance Commission and then by the FRBM (Fiscal Responsibility and Budget Management) Review Committee headed by N.K. Singh.
- In 2017, the N.K. Singh committee on the review of fiscal rules set up by the finance ministry suggested the creation of an **independent fiscal council** that would provide forecasts and advise the government on whether conditions exist for deviation from the mandated fiscal rules.
- Also in 2018, the D.K. Srivastava committee on fiscal statistics established by the National Statistical Commission (NSC) also suggested the establishment of a fiscal council.

Position of Fiscal Deficit in India

- The **fiscal deficit** of the Centre in 2019-20 as estimated by the **Controller General of Accounts (CGA) was 4.6%.**
- For the current year, the deficit is estimated at about 7% of GDP as against 3.5% estimated in the Budget due to a sharp decline in revenues.
- The consolidated deficit of the Union and States could be as high as 12% of GDP and the overall debt could go up to 85%.

What is Fiscal Deficit?

- Fiscal Deficit is the difference between the total income of the government (total taxes and non-debt capital receipts) and its total expenditure.
- A fiscal deficit situation occurs when the government's expenditure exceeds its income.

Current Global Scenario:

- According to the International Monetary Fund (IMF), about 50 countries around the world have established fiscal councils with varying degrees of success.

- Fiscal Council in these countries is a permanent agency with a mandate to independently assess the government's fiscal plans.
- It also gives projections against parameters of macroeconomic sustainability and put out its findings in the public domain.

About the Fiscal Council:

- It is an independent fiscal institution (IFI) with a mandate to promote stable and sustainable public finances.
- A fiscal council will give an independent and expert assessment of the government's fiscal stance, and thereby aid an informed debate in Parliament.
- **Council's Mandate**
  - Preparing fiscal sustainability analysis.
  - Providing an independent assessment of the Central government's fiscal performance and compliance with fiscal rules.
  - Recommending suitable changes to fiscal strategy to ensure consistency of the annual financial statement and taking steps to improve the quality of fiscal data.
  - Producing an annual fiscal strategy report which will be released publicly.

Arguments in Favor:

- In its role as a watchdog, it will prevent the government from gaming the fiscal rules through creative accounting.
- The committee should have the limited mandate of scrutinising the budget after it is presented to Parliament for its fiscal stance and the integrity of the numbers and give out a public report.
- The committee will be wound up after submitting its report leaving no scope for any mission creep.

Arguments against:

- A body with such a wide job chart and responsibilities is more likely to add more to the noise than signal.
- It must be left to the Finance Ministry to do its homework and defend its numbers rather than forcing it to privilege the estimates of one specific agency.
- Forcing the Finance Ministry to use someone else's estimates will dilute its accountability. If the estimates go awry, it will simply shift the blame to the fiscal council.
- It is believed by experts that it will prevent the government from gaming the fiscal rules through creative accounting.

DIRECT MONETISATION

Recently, a report by SBI recommended direct monetisation as a plausible way of funding the Centre's deficit.

About:

- The report also said that direct monetization can fund centre's deficit at lower rates without increasing inflation and affecting debt sustainability.
- This report comes as an outcome of a series of meetings by the Prime Minister's Office (PMO) to prepare further measures to boost growth and economic activity.

What is Direct Monetisation?

- It refers to the **purchase of government bonds by the Reserve Bank of India (RBI)** to finance the spending needs of the government.
- Under monetisation, the government can raise funds directly from the RBI through the issuance of **"Covid perpetual bonds" or such instruments.**
- **Significance of the move:** Direct monetization of the deficit could bring down interest rates and delay inflationary pressures arising out of the additional spending.
- **Background:**
  - Till 1997, the government used to sell securities **ad hoc Treasury-Bills** directly to the RBI, and not to financial market participants and this allowed the government to technically print equivalent amounts of currency to meet its budget deficit.

- In the 1990s, the funding through ad-hoc treasury bills was completely phased out following two agreements between the Government and RBI. In 2003, with the enactment of FRBM Act, RBI was completely barred from subscribing to the primary issuances of the government from April 1, 2006.

Other Key Highlights of the SBI Report

- The GDP collapse is pushing up the debt to **GDP ratio by at least 4%.**
- India's debt to GDP ratio has increased gradually from Rs 58.8 lakh crore (67.4% of GDP) in FY12 to Rs 146.9 lakh crore (72.2% of GDP) in FY20.
- Higher levels of borrowing this fiscal are likely to increase gross debt further to around Rs 170 lakh crore or 87.6% of GDP. Within this, external debt is estimated to increase to Rs 6.8 lakh crore (3.5% of GDP).
- **Challenges:** India's debt to GDP ratio has risen substantially over the years, and contraction in growth this year could raise questions over debt sustainability.
  - The real challenge is the contraction of economic growth, which can turn interest rate negative growth differential which is a key metric watched by agencies to gauge debt sustainability into positive territory.
  - A negative differential denotes growth is higher than the interest rate on debt and is important from a sustainability perspective.
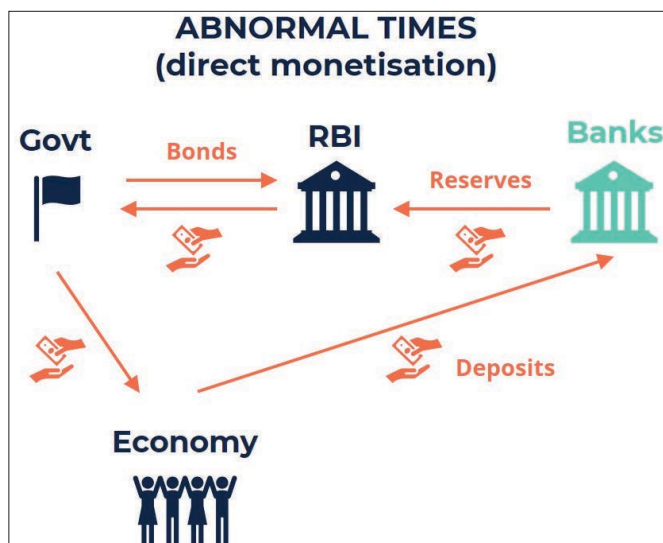
What are Ad-hoc Treasury Bills?

- Treasury bills are of two kinds: Ad hoc and regular (or ordinary).
- **Ad hoc means 'for the particular end or case at hand'.** Thus ad hoc treasury bills are issued for a particular cause. They are not sold to the general public (or banks) and are not marketable.
  - It means that the holders can sell them back to RBI only and not in secondary market.
  - It enabled the automatic monetisation of central government budget deficits.

- ◆ Ad Hoc treasury bill were eliminated in 1997 and a new system of ways and means advances was introduced.
- ◆ All T-bill issuances now represent market borrowings of the central government.
- The treasury bills sold to the public or banks are regular or ordinary treasury bills and they are freely marketable.
- All treasury bills, ad hoc or ordinary, are sold by the RBI on behalf of the central government.

About Fiscal Responsibility Budget Management (FRBM) Act:

- It was enacted in August 2003 and sets targets for the government to achieve fiscal stability.
- It provides the provisions for required flexibility for RBI to deal with inflation, to improve the management of public funds, to strengthen fiscal prudence and to reduce fiscal deficits.
  - ◆ **Fiscal Deficit:** It is the difference between the total income of the government (total taxes and non-debt capital receipts) and its total expenditure. A Fiscal Deficit situation occurs when the government's expenditure exceeds its income.
- It proposed that revenue deficit, fiscal deficit, tax revenue and the total outstanding liabilities be projected as a percentage of gross domestic product (GDP) in the medium-term fiscal policy statement.
- It made mandatory to place annually the Union Budget documents, Medium Term Fiscal Policy Statement, Macroeconomic Framework Statement and Fiscal Policy Strategy Statement in the Parliament.
- **FRBM Act exemptions:** On grounds of national security, calamity, etc, the set targets of fiscal deficits and revenue could be exceeded.
- FRBM Act has been amended several times.
  - ◆ In 2013, the government introduced a change and introduced the concept of effective revenue deficit. This implies that effective revenue deficit would be equal to revenue deficit minus grants to states for the creation of capital assets.
  - ◆ In 2016, a committee under N K Singh was set up to suggest changes to the Act. According to the government, the targets set under FRBM Act previously were too rigid.

Way Forward:

- Shrinking revenues means the government has to look for funds to meet its own requirements as well as for providing any further stimulus. The monetisation of the deficit could help in resolving this challenge.
- The Fiscal Responsibility and Budget Management (FRBM) Act "clearly mentions that direct monetization of deficit can be used by the Government in certain exceptional circumstances.
- The current Corvid pandemic is one amongst them and the stagnant demand and low money multiplier, monetization will not be inflationary.

N K Singh Committee

N K Singh Committee's recommendations were as follows:

- **Targets:** The committee suggested using debt as the primary target for fiscal policy and that the target must be achieved by 2023.
- **Fiscal Council:** The committee proposed to create an autonomous Fiscal Council with a chairperson and two members appointed by the Centre (not employees of the government at the time of appointment)
- **Deviations:** The committee suggested that the grounds for the government to deviate from the FRBM Act targets should be clearly specified.
- **Borrowings:** According to the suggestions of the committee, the government must not borrow from the RBI, except when
  - ◆ The Centre has to meet a temporary shortfall in receipts
  - ◆ RBI subscribes to government securities to finance any deviations.
  - ◆ RBI purchases government securities from the secondary market.

AAI LEASE OUT AIRPORTS THROUGH PUBLIC PRIVATE PARTNERSHIP MODEL

Recently, the Union Cabinet approved leasing out three airports of the Airports Authority of India (AAI) through Public-Private Partnership (PPP).

About:

- The 3 airports are in **Jaipur, Guwahati and Thiruvananthapuram airports.** These three airports form a part of the original six that were auctioned last year, wherein Adani Enterprises won the bid.

- This is just like when the government leased out AAI's airports at Delhi and Mumbai on PPP for Operation, Management and Development, around a decade ago.

- The PPP model has helped **create world-class airports and helped in the delivery of efficient and quality services** to the airport passengers.

- The **PPP model helped AAI in enhancing its revenues and focusing on developing airports** and Air Navigation infrastructure in the rest of the country.

What is a Public-Private Partnership (PPP) Model?

- It is an agreement between a public/ government entity and a private entity which is usually entered into with the purpose of providing public goods and/or services for an agreed time period.

- Under this model, each entity has a clearly **defined set of roles and responsibilities** and the private entity is selected on the basis of open competitive bidding.

- This model involves full retention of responsibility by the government for providing the services, **it doesn't amount to privatization.**
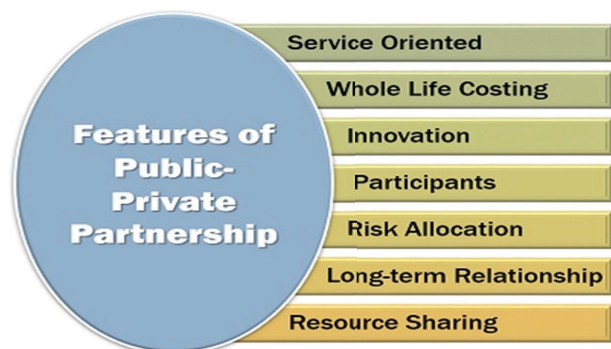
Types of PPP Models:

- Some of the commonly adopted forms of PPPs include **Build-Operate-Transfer (BOT)** and its variants, build-lease-transfer (BLT), design-build-operate-transfer (DBFOT), operate-maintain-transfer (OMT), etc.

- These models are different on the level of investment, ownership control, risk sharing, technical collaboration, duration, financing etc.

- **Management contract:** It is a contract to the private sector for all of the operations and maintenance of a public facility or service ranging from short term (3 to 5 years) to medium term (10 years).
    - The private entity is paid on predetermined rate and ultimate obligation for service provision vested in the public sector ambit, daily management control and authority is assigned to the private entity.

- **Lease Contract:** Under this system, assets are released to a private entity for maintenance and management for a particular period of time (5 to 10 years).

- **Joint Venture (PPP):** A JV is a business arrangement in which two or more parties agree to pool their resources for the purpose of accomplishing a specific task. They are a partnership in the colloquial sense of the word but can take on any legal structure. A common use of JVs is to partner up with a local business to enter a foreign market.

- **Engineering Procurement and Construction (EPC):** Under this model, the cost is completely borne by the government. Government invites bids for engineering knowledge from the private players. Procurement of raw material and construction costs are met by the government.
    - The private sector's participation is minimum and is limited to the provision of engineering expertise. A difficulty of the model is that financial is the high financial burden for the government.

- **Hybrid Annuity Model (HAM):** The HAM is a mix of engineering, procurement and construction (EPC) and build-operate-transfer (BOT) formats, in which the government and the private companies sharing the total project cost in the ratio of 40:60 respectively.

- **Build-Operate-Transfer (BOT) and its various sub-types:**
    - **Build Operate and Transfer (BOT):** A BOT model is generally used to develop a discrete asset rather than a whole network, for example, a toll road. This simple structure provides the most freedom for the private sector partner during construction and the public sector bears equity risk.
    - **Build-Own-Operate (BOO):** This is a similar structure to BOOT (below), but the facility is not transferred to the public sector partner. A BOO transaction may qualify for

tax-exempt status and is often used for water treatment or power plants.

◆ **Build-Own-Operate-Transfer (BOOT):** The private sector builds and owns the facility for the duration of the contract, with the primary goal of recouping construction costs (and more) during the operational phase. At the end of the contract, the facility is handed back to the government.

◆ This structure is suitable when the government has a large infrastructure financing gap as the equity and commercial risk stays with the private sector for the length of the contract. This model is often used for school and hospital contracts.

◆ **Build-Operate-Lease-Transfer (BOLT):** BOLT is a model for the development of infrastructure projects. Under this, the government gives a concession (project sanction) to a private entity to build a facility (and possibly design it as well), own the facility, lease the facility to the public sector and then at the end of the lease period transfer the ownership of the facility to the government.

Advantages of Public-Private Partnership:
- Early Completion Bonus
- Cut Downs Tax
- Project Completion Efficiency
- Project Feasibility
- Superior Quality Standards
- Excellent Infrastructure Solutions
- Better Return on Investment
- Transfer of Risk
- Reduces Budget Deficits
- Ensures Efficient Government Investment
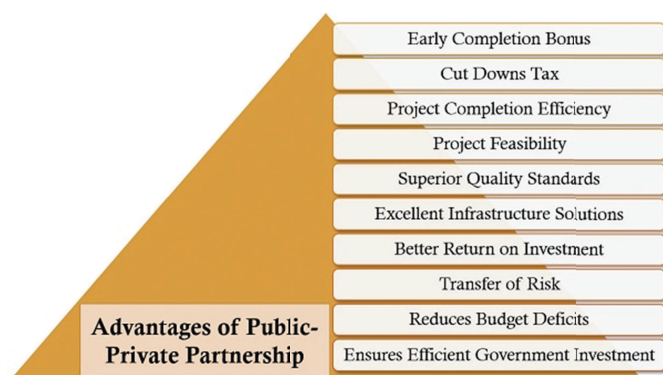
Concerns/Challenges:

• It may have issues such as disputes in existing contracts, **non-availability of capital and regulatory hurdles** related to the acquisition of land etc.

Disadvantages of Public-Private Partnership: Varying Profitability, Raise Government Expenses, May Not be Cost-Efficient, Involves Risk for Private Firms, Dependancy on Private Sector

• The performance of PPPs has been very mixed and some projects have become **sites of crony capitalism for private companies.**

• Some PPP **projects may have "politically connected firms"** which have used political connections to win contracts and this gives rise to a political – private nexus.

• Frequent renegotiations also resulted in the **drain of a larger share of public resources** and the **private firms created a moral hazard** by their opportunistic behaviour.

Kelkar Committee for PPP Models:

The PPP model of infrastructure development needs to be revisited and revitalised in the Union Budget 2015-16, for this a Committee on **Revisiting & Revitalising the PPP model of Infrastructure Development** was **set-up under the chairmanship of Dr Vijay Kelkar.**

Some important recommendations are:

• Contracts need to focus more on service delivery instead of fiscal benefits.

• Better identification and allocation of risks between stakeholders.

• Prudent utilization of viability gap funds where user charges cannot guarantee a robust revenue stream.

• Improved fiscal reporting practices and careful monitoring of performance.

• Given the urgency of India's demographic transition and the experience India has already gathered in managing PPPs, the government must move the PPP model to the next level of maturity and sophistication.

• An Infrastructure PPP Adjudication Tribunal ("IPAT") chaired by a Judicial Member (former Judge SC/Chief Justice HC) with a Technical and/or a Financial member, where benches will be constituted by the Chairperson as per needs of the matter in question.

• An Infrastructure PPP Project Review Committee ("IPRC") may be constituted to evaluate and send its recommendations in a time-bound manner upon a reference being made of "Actionable Stress" in any Infrastructure Project developed in PPP mode beyond a notified threshold value.

• Sector-specific institutional frameworks may be developed to address issues for PPP infrastructure projects.

• Umbrella guidelines may be developed for stressed projects that provide an overall framework for the development and functioning of the sector-specific frameworks.

• Amendment of the Prevention of Corruption Act, 1988 to distinguish between genuine errors in decision-making and acts of corruption.

• Set up an institution for invigorating private investments in infrastructure, providing guidance for a national PPP policy and developments in PPP.

• An institutionalized mechanism like the National Facilitation Committee (NFC) to ensure time-bound resolution of issues.

• Ensure the adoption of principles of good governance by the Special Purpose Vehicle (SPV).

RBI'S NEW LOAN RECAST SCHEME

RBI cleared a loan restructuring scheme for borrowers who are under stress because of the pandemic.

About:

- This one-time restructuring window is available across sectors and is expected to provide relief to companies that were servicing loan obligations on time but could have found it difficult after March, as the pandemic affected their revenues.
- Only those companies and individuals whose loans accounts are in default for not more than 30 days as on March 1, 2020, are eligible for one-time restructuring.
- The restructuring will enable borrowers to reschedule their loan payment, or get a limited loan repayment holiday, or lower interest rates on their existing loans depending on the agreement they reach with their bank(s).
  - Even before the RBI announcement, banks could have changed the loan repayment terms for their borrowers. But in that case, they would first have to declare the borrower a defaulter and set aside more money from their profits to cover for potential risk of the loan never being repaid.
- Key sectors, such as micro, small and medium enterprises (MSMEs), hospitality, aviation, retail, real estate and auto, which are facing a liquidity crunch, will benefit from this scheme.

Details about the Scheme:

- The RBI scheme will allow the banks to change repayment terms for their borrowers who have been hit by the COVID-19 lockdown.
- Lenders can now do this while keeping the borrower's account standard, and will not have to tag them as defaulters/ their account as a non-performing loan.
  - Non-performing loans are those that remain unpaid for over 90 days.
- Lenders can now also restructure debt without changing the owners of a stressed company, which was the case under existing rules. However, these easier terms are only allowed for those borrowers who have been impacted by COVID19, and no others.

Implementation:

- The RBI has set up a five-member **expert committee headed by K V Kamath**, former Chairman of ICICI Bank, which will make recommendations on the financial parameters required.

- The panel will **recommend the sector-specific benchmark ranges** for such parameters to be factored into each resolution plan for borrowers with aggregate exposure of Rs 1,500 crore or above at the time of invocation.
- The committee will undertake a **process validation of resolution plans** for accounts above a specified threshold. The RBI will have the last word on who will be eligible and the parameters.

Safeguard Measures:

- The RBI has built-in safeguards in the resolution framework this time to ensure it does not lead to ever-greening of bad loans as in the past.
- Restructuring of large exposures will require independent credit evaluation done by rating agencies and process validation by the Kamath-led expert committee.
- For personal loans, there will be no requirement for third party validation by the expert committee, or by credit rating agencies, or need for ICA.
- The RBI has said that the term of loans under resolution cannot be extended by more than two years and in the case of multiple lenders to a single borrower, banks need to sign an ICA.
- To mitigate the impact of expected loan losses, banks need to make a 10% provision against such accounts under resolution and for banks not willing to be part of the ICA, a penal provision of 20% has been specified.

How it is different from Past Schemes?

- The earlier restructuring schemes did not have any entry barrier, unlike the current scheme that is available only for companies facing COVID-related stress, as identified by the cut-off date of March 1.
- Strict timelines for invocation of resolution plan and its implementation have been defined in the scheme, unlike in the past when this was largely open-ended.
- The structuring of the scheme makes the signing of the ICA largely mandatory for all lenders once the resolution plans have been majority-voted for, otherwise, they face twice the amount of provisioning required.
- Independent external evaluation, process validation and specific post-resolution monitoring are further safeguards.

■ ■ ■ ■

AMENDMENT TO GENERAL FINANCIAL RULES, 2017

About 200 investment proposals from China are awaiting security clearance from the Ministry of Home Affairs (MHA).

About:

- This comes after new rules were notified early this year, making **prior government approval mandatory for foreign direct investments (FDI)** from countries which **share a land border with India.**

- The **General Financial Rules** are those rules that must be **followed while using public finances.**

Background:

- FDI is allowed in **non-critical sectors through the automatic route** and earlier these proposals would have been cleared without the MHA's nod.

- Prior government approval or security clearance from MHA was required for investments in critical sectors such as defence, media, telecommunication, satellites, private security agencies, civil aviation and mining and any investments from Pakistan and Bangladesh.

- India and China have been engaged in a standoff along the Line of Actual Control (LAC) in Eastern Ladakh as there has been a massive buildup of Chinese troops since April-May which has further aggravated the problem.

BACKING UNICORNS | Many Indian unicorns (start-ups with valuation >$1 billion) have a Chinese investor. The chart depicts the estimated investment by Chinese companies in select start-ups

700 million

Data sourced from Gateway House

Snapdeal Ola Paytm.com BigBasket Hike
Swiggy Flipkart Zomato Paytm Mall
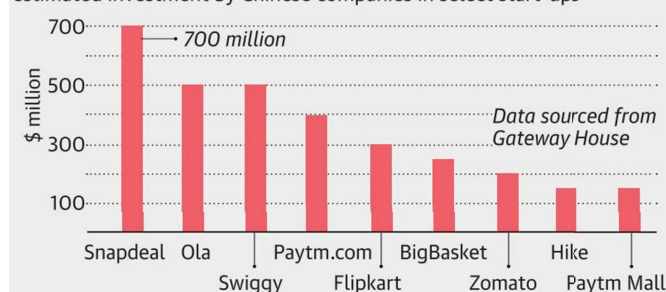
What Changes were Made in the FDI Policy?

- The amendment was **aimed at preventing "opportunistic takeovers" of Indian companies** amid the COVID-19 pandemic. The move is intended to **monitor and check investments into Indian companies** from neighbouring countries.

- The amendment was to enable the **imposition of restrictions on bidders** from countries which share a land border with India in relation to public procurement for reasons of national security and other factors directly or indirectly related to the country's defence.

Key Highlights:

- Any FDI proposal by investors from the bordering countries will **now require government clearance**, even if foreign investments for that sector are placed under the automatic route.

- Any bidder from countries sharing a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the **bidder is registered with the Competent Authority.**

- The Competent Authority for registration will be the Registration Committee constituted by the **Department for Promotion of Industry and Internal Trade (DPIIT).**

- The amendments **take into its ambit public sector banks and financial institutions**, autonomous bodies, Central Public Sector Enterprises (CPSEs) and public-private partnership projects.

- Political and security clearance from the Ministries of External and Home Affairs respectively will be mandatory.

- The Central government has written to the State Governments for invoking the **provisions of Article 257(1) of the Constitution** of India for the implementation of these amendments in procurement by State Governments and state undertakings etc.
    - **Article 257 (1)** says that the executive power of the union shall be extended to give directions to the state.

China's economic footprint in India

Chinese investment in India increased from $1.6 billion in 2014 to $8 billion in 2017 according to a Brookings India report. The investments span a range of sectors with a significant share in the start-up space

INVESTMENT VALUE The chart depicts the estimated value of China's investments in India since 2016 across various sectors such as ■ infrastructure, ■ consumer goods, ■ energy, ■ real estate and ■ automobiles. The chart includes both actual and planned investments. Data sourced from Brookings India

Figures in $ million

2016 2017 2018 2019
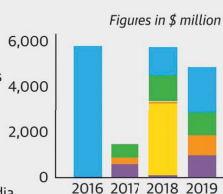
Concerns:

- The new rules will pose operational difficulties for many entities like many **companies might withdraw due to the delay or stringent conditions put in place.**

- Some sectors like automobile, the real estate already marred with **less demand and weakness in capital formation** might face the brunt of change in the rules.

- This could result in **less potential buyers and further depress** the value of Indian firms in the market.

SCRAPPING OF
ALL INDIA POWERLOOM BOARD

The Ministry of Textiles disbanded another advisory body "All India Powerloom Board"
after All India Handicrafts and Handloom boards.

About:

- It has also changed the status of all the **Textiles Research Associations (TRAs)** from **'affiliated bodies'** to **'approved bodies'** for conducting testing, research and developmental activities related to the textiles sector.

- **Reason for disbanding:** It failed to impact policy-making and became vehicles of "political patronage" with the emergence of a 'middleman culture' that did not help the interests of weavers.

- The boards have been scrapped with a view to achieving **"minimum government and maximum governance".**

- The Textile Research Associations will now act as approved bodies to conduct tests, researches and development activities of the textiles sector.

- **Concern:** The textile sector is the most prominent employer after agriculture in rural India and the move to abolish the board can be "disastrous for small-scale artisans.

All India Powerloom Board

- The **All India Powerloom Board** was first constituted as an Advisory Board to the Government of India in November 1981. Powerloom is a mechanised loom that was developed during the early Industrial Revolution.

- **Aims:** It aims to advise the Government generally on matters concerning the healthy development of Powerlooms within the power-operated weaving sector.
  - It includes measures to be taken to achieve better productivity, increased efficiency, improve the welfare of workers and locational dispersal of Powerlooms.

- The Government of India reconstitutes **AIPB from time to time.**

- The present AIPB was reconstituted for a period of two years in 2013.

- The Handloom Board was **scrapped on the National Handloom Day (August 7).**

Status of Textiles Sector in India:

- India's power loom sector employs almost 65 lakh people and gives 70% of the total jobs in the textile industry. Their cost of production is high, which has rendered them uncompetitive. At present, the units get a capital subsidy to switch over to new shuttle-less looms.

- The percentage of contribution of Textile industry to industrial production is **2.3% of GDP of India**. Textiles industry provides the **second largest employment in the country** providing employment to more than 45 million people. For the overall development of the sector, the government is **formulating a New Textile Policy.**

- The textile industry is facing problems like technological obsolesce, high input cost (power & capital), poor access to credit, fragmented units, absence of fiber neutrality etc.

Rescue Mission

Only 2 lakh of 25 lakh powerlooms upgraded so far

Powerlooms in Maharashtra, Gujarat facing high input costs, reduced off-take

India's powerloom sector employs nearly 65 lakh people

This would be the second in a series of incentives for the textile sector

Package includes
- Upgradation of obsolete looms
- Social welfare schemes
- Insurance cover
- Cluster development
- Loans likely under MUDRA

Some Schemes to Provide Support to Textiles:

- **Knitting and Knitwear Sector scheme:** For the development and Knitwear Sector to boost production in knitting and knitwear cluster at Ludhiana, Kolkata and Tirupur.

- **Amended Technology Up-gradation Fund Scheme (ATUFS):** Government is implementing Amended Technology Up-gradation Fund Scheme (ATUFS) for technology up-gradation of the textile industry to incentivize production with an outlay of Rs. 17,822 crore during 2016-2022.

- **Power Tex India:** A comprehensive scheme for Powerloom sector.

- National Handicrafts Development Programme (NHDP) and Comprehensive Handicraft Cluster Development Schemes.

- **Silk Samagra:** An integrated Scheme for development of silk.

- **Scheme for Integrated Textile Park (SITP)** which provides support for the tion of world-class infrastructure facilities for setting up of textile units.

PM CARES FUND

Recently, SC said that funds received into the PM-CARES Fund need not be credited to the National Disaster Response Fund (NDRF)

About:

- The court held that voluntary donations under the **PM-CARES is entirely different from NDRF.**
- The court mentioned that there is **no statutory prohibition on individuals to make voluntary contributions to NDRF,** under **Section 46(1)(b) of the Disaster Management Act of 2005**.
- The court also did **not find it necessary to intervene with the "minimum standards of relief"** and the necessary guidelines issued by the government under **Section 12 of the Disaster Management Act, 2005.**

Government's Stand:

- The government mentioned that the **PM-CARES was a "public charitable trust" to which "anyone can contribute".**
- The government mentioned that it is a "misconception" that contributions received by a public trust such as PM-CARES could be transferred to a statutory fund such as the NDRF.

Section 12 of the Disaster Management Act 2005:

- The National Authority shall recommend guidelines for the minimum standards of relief to be provided to persons affected by disaster, which shall include the minimum requirements to be provided in the relief camps in relation to shelter, food, drinking water, medical cover and sanitation.
- Special provisions to be made for widows and orphans, ex gratia assistance on account of loss of life as also assistance on account of damage to houses and for restoration of means of livelihood, among other things.

National Disaster Response Fund:

- It is defined in **Section 46 of the Disaster Management Act, 2005.**
- **National Calamity Contingency Fund (NCCF)** was renamed as National Disaster Response Fund (NDRF) with the enactment of the Disaster Management Act in 2005.
- It is **managed by the Central Government for meeting the expenses** for emergency response, relief and rehabilitation due to any threatening disaster situation or disaster.

- It is placed in the "Public Account" of Government of India under "reserve funds not bearing interest".
- It supplements the **State Disaster Response Fund (SDRF)** in case of a disaster of severe nature, provided adequate funds are not available in the SDRF.
- **Finance:**
  - It is financed through the levy of a cess on certain items, chargeable to excise and customs duty, and approved annually through the Finance Bill.
  - Currently, a National Calamity Contingent Duty (NCCD) is levied to finance the NDRF and additional budgetary support is provided as and when necessary.
  - Comptroller and Auditor General (CAG) audits the accounts of NDRF.

About PM CARES Fund:

- To deal with any kind of emergency or distress situation, like posed by the COVID-19 pandemic, and to provide relief to the affected, a public charitable trust under the name of 'Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund' (PM CARES Fund)' has been set up.
- **Constitution of the Trust:** Prime Minister is the ex-officio Chairman of the PM CARES Fund and Minister of Defence, Minister of Home Affairs and Minister of Finance, Government of India are ex-officio Trustees of the Fund.
  - The Chairperson of the Board of Trustees (Prime Minister) shall have the power to nominate three trustees to the Board of Trustees who shall be eminent persons in the field of research, health, science, social work, law, public administration and philanthropy.
- **Finance:** The fund consists entirely of voluntary contributions from individuals/organizations and does not get any budgetary support. The fund will be utilised in meeting the objectives as stated above.
  - Donations to PM CARES Fund would qualify for 80G benefits for 100% exemption under the Income Tax Act, 1961. Donations to PM CARES Fund will also qualify to be counted as Corporate Social Responsibility (CSR) expenditure under the Companies Act, 2013.

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PARTIAL CREDIT GUARANTEE SCHEME 2.0

Recently, the Government of India extended the Partial Credit Guarantee Scheme (PCGS) 2.0 by another three months.

About:

- The Centre had announced the PCGS in July 2019 which allowed **public sector banks to purchase high-rated pooled assets from financially sound NBFCs and housing finance companies (HFCs).**
- A **pool of assets is basically a securitization of loan portfolio** i.e. conversion of a loan into a marketable security, typically for the purpose of raising cash by selling them to other investors.
- These are sold by NBFCs/HFCs to banks in return for an advance payment. NBFCs/HFCs get the much needed money and banks get the interest paying assets.
- Credit ratings is an analysis of the credit risk associated with a financial instrument or a financial entity. These range from AAA to C and D.

What is Non-Banking Financial Company (NBFC)?

- 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.
- 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.
- 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.

What is Housing Finance Company (HFC)?

- HFCs are specialized NBFCs. Recently, RBI came up with the new definition of HFCs. To qualify as HFCs, a NBFC must have 50% assets as housing loans and 75% of which should be for individual homebuyers.
- HFCs are regulated by RBI. In 2019, regulation of HFCs was handed over to RBI from National Housing Bank.

Basis for Comparism	NBFC	Bank
Meaning	An NBFC is a company that provides banking services to people without holding a bank license.	Bank is a government authorized financial intermediary that aims at providing banking services to the general public.
Incorporated under	Campanies Act 1956	Banking Regulation Act, 1949
Demand Deposit	Not Accepted	Accepted
Foreign Investment	Allowed up to 100%	Allowed up to 74% for private sector banks
Payment and Settlement System	Not a part of system	Integral part of the system
Maintenance of Reserve Ratios	Not required	Compulsory
Deposite insurance facility	Not available	Available
Credit creation	NBFC do not create credit	Banks create credti
Transaction services	Not provided by NBFC	Provided by banks

About Partial Credit Guarantee Scheme (PCGS) 2.0:

- **It was announced as part of the 'Atmanirbhar Bharat Abhiyan' package** resulting in liquidity infusion of ₹ 45,000 crores into the system.
- It allows public sector banks to purchase high-rated (BBB+ or above) pooled assets from financially sound NBFCs and Housing Finance Companies (HFCs).
- Under the scheme government provides a sovereign guarantee for the first 20% loss to public sector banks buying AA and below rated paper issued by NBFCs/HFCs/MFIs.
- **One of the criticism** of this scheme is that it helps in increasing the funding for bigger NBFCs which have higher ratings, while the actual objective was to provide greater funding to small and medium NBFCs

DRAFT DEFENCE PRODUCTION & EXPORT PROMOTION POLICY 2020

The Ministry of Defence (MoD) has formulated a draft Defence Production and Export Promotion Policy 2020 (DPEPP 2020).

About:

- The Draft Policy is envisaged as an overarching guiding document of MoD to provide a focused, structured and significant thrust to defence production capabilities of the country for self-reliance and exports.

Objectives of the Policy:

- To achieve a turnover of Rs 1,75,000 Crores (US$ 25Bn) including export of Rs 35,000 Crore (US$ 5 Billion) in Aerospace and Defence goods and services by 2025.
- To develop a dynamic, robust and competitive Defence industry, including Aerospace and Naval Shipbuilding industry to cater to the needs of Armed forces with quality products.
- To reduce dependence on imports and take forward "Make in India" initiatives through domestic design and development.
- To promote the export of defence products and become part of the global defence value chains.
- To create an environment that encourages R&D rewards innovation creates Indian IP ownership and promotes a robust and self-reliant defence industry.

Strategies for Effective Implementation of Policy:

- **Procurement Reforms**
  - It also aims to move away from licensed production to design, develop and produce indigenously.
  - A **Project Management Unit (PMU)** to be set up for the development and production of technologies involved, life cycle costs and maintenance requirements of platforms, equipment and weapon systems.

- **Indigenization & Support to MSMEs/Startups.**
  - It aims to create an industry ecosystem to **indigenise the imported components** (including alloys and special materials) and sub-assemblies for defence equipment and platforms manufactured in India. 5,000 such items are proposed to be indigenised by 2025.

- **Optimize Resource Allocation**
  - The share of domestic procurement in overall Defence procurement is about 60% and to increase the procurement from domestic industry, the procurement needs to be doubled from the current Rs. 70,000 crore to Rs. 1,40,000 crore by 2025.

- **Investment Promotion, FDI & Ease of Doing Business**
  - The opportunities in the aerospace industry lie in the field of aircraft build work, aircraft Maintenance, Repair and Overhaul (MRO), helicopters, engine manufacturing and MRO work, line replaceable units, Unmanned Aerial Vehicles (UAVs) and upgrades and retrofits etc.
  - The improvement in market size, demographic dividend and availability of diverse skill sets are evident from India's ranking in the World Bank's 'Ease of Doing Business' (EoDB) report.

- **Innovation and R&D**
  - Defence Research & Innovation lies at the heart of the development of cutting-edge technologies and systems. By harnessing the nationwide R&D capabilities, future requirements of the services could be met and critical gaps in related technologies would get addressed.
  - **Innovations for Defence Excellence (iDEX)** has been operationalized to provide necessary incubation and infrastructure support to the start-ups in the defence area. More than 50 startups are currently developing new 'fit-for-military-use' technologies/ products. iDEX would be further scaled up to engage with 300 more startups and developing 60 new technologies/ products during the next five years, and their procurement under the Make-II route of DPP.
  - **Mission Raksha Gyan Shakti** was launched to promote a greater culture of innovation and technology development and file a higher number of patents in Defence Public Sector Undertakings (DPSUs), Ordnance Factory Board (OFB). It would be scaled up for promoting the creation of Intellectual Property in the sector and its commercial utilisation.

- **DPSUs and OFB**
  - Ordnance factories will be corporatized to make them competitive and to improve their productivity.
  - Efforts will be made to position DPSUs as system integrators and create a multi-tier domestic supply chain.
  - OFB/DPSUs will be mandated to maximize outsourcing from indigenous sources.
  - Disinvestment of DPSUs will be pursued.
  - The focus would be laid for modernization and technological up-gradation in coordination with Services/DRDO.

- **Quality Assurance & Testing Infrastructure**
  - Competitiveness of the Defence Industry depends on robust quality assurance practices and mechanisms and this needs to be ensured in all phases of the product life cycle.

- The quality control and assurance process will be comprehensively reviewed and streamlined.
- The entire process of quality assurance and its time-bound delivery would be rationalized and monitored by developing an IT platform with an industry interface.
- The pool of test beds/firing ranges/Quality Assurance (QA)-Quality Control (QC) labs/testing infrastructure will be mapped in the country and enhanced to meet the growing requirements of the Industry.

- **Export Promotion**
  - Defence exports have grown manifold over the last few years. In order to achieve the target of Rs 35,000 crore (US$ 5 Bn) of Defence Exports by 2025, the following strategies are proposed.
  - Subject to strategic considerations, domestically manufactured defence products will be promoted through Govt to Govt agreements and Lines of Credit/Funding.
  - Export Promotion Cell set up to promote Defence exports through coordinated action to support the industry would be further strengthened and professionalized.
  - The end-to-end export clearance process in the Department of Defence Production would be further upgraded to make the process seamless and time-bound.

- **Governance**
  - The concerned departments of the Ministry of Defence would take necessary action to implement the respective strategies outlined in this Policy.
  - The Department of Defence Production would be the nodal department for coordination on various components of the Defence Production & Export Promotion Policy (DPEPP) 2020 including obtaining approvals of the competent authorities for various schemes, programs and projects outlined in the strategies to achieve the objectives set in this Policy.

FOREIGN MFG TIE-UPS ALLOWED

WHEN | 101 weapon systems and platforms from abroad will be progressively **banned from Dec 2020 to Dec 2025**

WHAT | Some types of ammo, sonar, radar, artillery guns, assault rifles, missile destroyers, transport aircraft, light combat helicopters, wheeled armoured fighting vehicles, conventional diesel-electric subs and communication satellites

260 deals worth ₹ 3.5 lakh crore for products being embargoed were contracted between April 2015 and Aug 2020

Domestic contracts will be placed in 6-7 years

Indian companies can still tie up with foreign manufacturers to produce notified products in India

❝ This decision will offer a great opportunity to the Indian defence industry to manufacture the items in the negative list by using their own design and development capabilities —RAJNATH SINGH | DEFENCE MINISTER

Other steps taken for Indigenization of Defence are:

- The Ministry of Defence has decided to impose a **ban on 101 import items to boost indigenisation** of defence production.
- MoD has **bifurcated the capital procurement budget for 2020-21** between **domestic and foreign capital procurement routes.**

What us a Negative Imports List?

- The negative list means that all the defence forces will only procure all of these 101 items from the domestic manufacturers.
- The list comprises simple parts to high technology weapon systems like artillery guns, assault rifles, sonar systems, transport aircraft, radars, and many other items.
- The manufacturers could be private sector players or Defence Public Sector Undertakings (DPSUs).
- The list has been prepared by the Ministry after several rounds of consultations with all stakeholders, including the Armed Forces, public & private industry to assess current and future capabilities of the Indian industry for manufacturing various ammunition & equipment within India.

Benefits of Indigenisation of Defence:

- **Reducing Fiscal Deficit:** As India is the second-largest arms importer in the world after Saudi Arabia, this move will decrease the fiscal deficit as high import could lead to high Fiscal Deficit.
- **In the interest of national security:** Indigenisation in defence is important to national security as well as it keeps intact the technological expertise and innovations.
- **Increase in Forex Reserve:** If we export defence equipment, it can generate forex. India's space missions and nuclear R&D have dual civil-military use, so does defence manufacturing.
- **Promote R&D:** This could lead to innovation and R&D in the defence sector.

Way Forward:

- For Make in India in defence, **FDI will be needed for heavy capital and technology requirements**, to build global supply chains involving multiple vendors in India, to rapidly implement projects to avoid obsolescence.
- To become a major defence manufacturer, **India needs to reexamine its structure of governing defence production**, as the Chinese did in 2000. Earlier, the Chinese defence industry was separated, Soviet-style, between R&D and manufacturing units.
- The R&D element (the DRDO) functions separately from the manufacturing segment (the defence PSUs). That has to change.

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COMMON ELECTORAL ROLL

The idea of Common Electoral Roll for elections to the panchayat, municipality, state assembly, and the Lok Sabha is being discussed

About:

- Recently, the PMO held a meeting with representatives of the Election Commission and the Law Ministry to discuss the possibility of having a common electoral roll for elections to the panchayat, municipality, state assembly, and the Lok Sabha.
- **What is Electoral Roll:** The names of eligible electors ordinarily residing in an assembly constituency are enlisted in the voter's list by the registering authority, these lists are called the Electoral Roll of that constituency.

Types of Electoral Roll in India:

- At present in many Indian states, the voters' list for the panchayat and municipality elections is different from the one used for Parliament and Assembly elections.
- This distinction arises from the fact that the supervision and conduct of elections in our country are entrusted with two constitutional bodies—
  - **Election Commission (EC) of India:** It was set up in 1950 and is charged with the responsibility of conducting polls to the offices of **the President and Vice-President of India, and to Parliament, the state assemblies and the legislative councils.**
  - **State Election Commissions (SECs):** They supervise municipal and panchayat elections. They are free to prepare their own electoral rolls for local body elections, and this exercise does not have to be coordinated with the EC.
- Each SEC is governed by a separate state Act. Some state laws allow the SEC to borrow and use the EC's voter's rolls in toto for the local body elections.
- The state commission uses the EC's voters list as the basis for the preparation and revision of rolls for municipality and panchayat elections.
- Currently, all states, except Uttar Pradesh, Uttarakhand, Odisha, Assam, Madhya Pradesh, Kerala, Odisha, Assam, Arunachal Pradesh, Nagaland and the Union Territory of Jammu and Kashmir, adopt EC's rolls for local body polls.

Why there is a push for a common electoral roll by the Central Government?

- The pitch for a single voters list is not new. The Law Commission recommended it in its 255th report in 2015. The EC too adopted a similar stance in 1999 and 2004.
- The common electoral roll is among the promises made by the BJP in its manifesto for the Lok Sabha elections last year and it ties in with the idea of holding elections simultaneously to the Lok Sabha, state assemblies and local bodies, which is also mentioned in the manifesto.
- The government has pitched a common electoral roll and simultaneous elections as a way to save an enormous amount of effort and expenditure.
- It has argued that the preparation of a separate voters list causes duplication of essentially the same task between two different agencies, thereby duplicating the effort and the expenditure.

The Latest Pitch & Roadblocks

CLASH OF ROLES

The Law Commission raised common voter list issue with the EC on Wednesday

EC prepares electoral roll for polls to Parliament and state legislatures while States do it for Panchayati Raj institutions and municipal bodies

While some states rely on EC's roll, others do it de novo

₹500 crore Required for preparing common roll

SETTING BOUNDARIES

As far as EC's purview is concerned, the delimitation of constituencies is frozen until 2031

There is no such bar on states for determining the boundaries of wards for local election

To enable a common electoral roll, all states will have to amend respective laws to freeze constituency boundaries to synch to a uniform calendar

₹300 crore Proposed to be allocated in Budget

LOGISTICAL ISSUES

EC says it's difficult to prepare list for over 78 cr electors as there is no uniform system for preparation of rolls by SECs

It would not be possible for the ECI to collect the data of Panchayat, municipal body and ward numbers and feed it into a common database

Implementation:

In the meeting primarily two options were discussed for the implementation of a single electoral roll. They are

- A constitutional amendment to Articles 243K and 243ZA to that give the power of superintendence, direction and control of preparation of electoral rolls and the conduct of local body elections to the SECs and the amendment would make it mandatory to have a single electoral roll for all elections in the country.
- To persuade the state governments to tweak their respective laws and adopt the Election Commission's (EC) voters list for municipal and panchayat polls.

ARUNACHAL GROUPS PUSH FOR 6TH SCHEDULE STATUS

Recently, Arunachal Pradesh Assembly resolved to persuade the Centre to include the State in the Sixth Schedule of Constitution and amend Article 371(H).

About:

- The demand for inclusion of Arunachal Pradesh in the 6th Schedule of the Constitution is aimed at protecting tribal rights of the indigenous people.
  - At present, Arunachal Pradesh is under the 5th Schedule and not 6th Schedule of the Constitution.
- The assembly further resolved that the special provision with respect to the State be further strengthened by amending Article 371(H) by inserting provisions for protection of:
  - religious or social practices of the tribes of the State,
  - customary law and procedure of the States tribes,
  - administration of civil and criminal justice involving decisions according to customary law of the tribes and
  - ownership and transfer of land and its resources.
- **Article 371(H)** has special provisions in respect of the governor and the total seats in its assembly.
  - It is protested that Article 371(H) does not ensure full protection to the people of Arunachal as it provides **no special rights to the indigenous people.**
  - On the other hand, Nagaland and Mizoram come under the purview of Article 371(A) and (G) which provide adequate provisions for protection of tribal rights.
  - It is argued that inclusion of state in the 6th schedule and amending article 371(H) will make the **Arunachalees owner of all natural resources instead of being protectors only.**
- People of Arunachal also complain that there is no act to protect the State's people even though the Bengal Eastern Frontier Regulation (BEFR) Act of 1873 and the Chin Hill Regulation are in force.
  - The BEFR Act prohibits all citizens of the country from entering Arunachal Pradesh without a valid Inner Line Permit.

What is Sixth Schedule?

- The 6th Schedule of the Constitution provides for the **administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram** to safeguard the rights of the tribal population in these states.
- This special provision is provided under **Article 244(2) and Article 275(1)** of the Constitution.
- The 6th schedule areas remain **within executive authority of the state.**

- The tribal areas in the 6th Schedule area have been constituted as autonomous districts and these **autonomous districts** have been given degrees of autonomy within the State Legislature.

Autonomous District Councils (ADC):

- ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature. The governors of these states are empowered to reorganise boundaries of the tribal areas. The **ADCs are empowered with civil and judicial powers.**
- It provides for separate Regional Councils for each area constituted as an autonomous region. In all, there are **10 areas in the Northeast that are registered as autonomous districts** – three in Assam, Meghalaya and Mizoram and one in Tripura.
- Each autonomous district and regional council consists of not more than 30 members, of which four are nominated by the governor and the rest via elections. All of them remain in power for a term of five years.

Governor's Control:

- The 6th Schedule area does not fall outside the executive authority of the state concerned.
- The governor is empowered to organise and re-organise the autonomous districts. He can increase or decrease the areas of autonomous districts or change their names or define their boundaries and so on.
- If there are different tribes in an autonomous district, the governor can also divide the district into several autonomous regions.

What is Fifth Schedule?

- According to the Article 244(1) of the Constitution, expression Scheduled Areas means such areas as the President may by order declare to be Scheduled Areas.
- The criteria followed for declaring an area as Scheduled Area are:
  - Preponderance of tribal population;
  - Compactness and reasonable size of the area;
  - Under-developed nature of the area; and
  - Marked disparity in economic standard of the people
- The Union Government has executive powers to give directions to the States for the administration of the 5th Scheduled Areas.

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NATIONAL COUNCIL FOR TRANSGENDER PERSONS

The Union Ministry of Social Justice and Empowerment constituted the National Council for Transgender Persons under the Transgender Persons (Protection of Rights) Act, 2019.

About:

Aim:

- To **mainstream the transgender community's concerns,** focusing on **livelihood issues** as well as to raise awareness about the trans community, so that transpersons are accepted within families and in the larger society.

- To ensure that **transgender welfare boards** are set up in all States and essential needs of the transgender community, like housing, food, healthcare and education are met.

Composition:

- The **Union Minister and the Minister of State (MoS)** in the Ministry of Social Justice and Empowerment will be its **ex-officio Chairperson and ex-officio Vice Chairperson** respectively. The Council **will also consists of:**

  - Officials of the Ministries of Health and Family Welfare, Home Affairs, Housing and Urban Affairs, Minority Affairs, Human Resources Development, Rural Development and Labour and Employment, the Department of Legal Affairs, the Department of Pensions and Pensioners Welfare and the NITI Aayog.

  - The **representatives of the National Human Rights Commission (NHRC)** and the National Commission for Women (NCW).

  - The **representatives of the State Governments and Union territories by rotation,** one each from the North, South, East, West and North-East regions and also the five representatives of the transgender community, one each from the North, South, East, West and North-East regions.

  - **Five experts, representing non-governmental organisations or associations,** working for the welfare of transgender persons are also included in the Council.

Functions:

- **Advisory function:** It will advise the Centre on the **formulation of policies, programmes, legislation** and **projects** with respect to transgender persons.

- **Monitory role:** It will **monitor** and **evaluate** the **impact of policies and programmes** designed for achieving equality and full participation of transgender persons.

- **Reviewing:** It will also review and coordinate the activities of all the departments of Government and other Governmental and non-Governmental Organisations which are dealing with matters relating to transgender persons.

- **Grievances Addressal:** It will redress the grievances of transgender persons and perform such other functions as may be prescribed by the Centre.

- To **perform** such other **functions** as may be **prescribed by the Central Government.**

PROTESTERS SAY the Transgender Persons (Protection Of Rights) Bill, 2018, **ignores the real issues** faced by the community and doesn't reflect the NALSA judgment of 2014

THE NALSA JUDGMENT

For the first time, the SC identified transgender people as 'third gender'

PROBLEMS WITH THE BILL

1 **Two-tier system within transgender community.** People without sex-reassignment surgery can only identify as transgender and not as male or female

2 **Identification as transgender** depends on scrutiny and certification by district screening committee

3 **Traditional hijra livelihoods** and family structures criminalised

4 **Institutionalisation of transgender** persons who can't live with biological families

5 Light punishment for violence against trans-people

The Transgender Persons (Protection of Rights) Act, 2019

- It was introduced in Lok Sabha in July 2019 by the Minister for Social Justice and Empowerment.

- It provides a mechanism for **social, economic** and **educational empowerment** of transgender persons in India.

Background:

- In 2013, the government set up an expert committee to study the problems of transgenders and recommend solutions. The committee, made recommendations right from **allowing a 'third gender' in official forms,** to **setting up of special toilets, and customising health interventions.**

- In 2014, **a private member Bill**, The Rights of Transgendered Persons, was introduced in the Rajya Sabha which looked at a **range of entitlements** of such persons, specifically in health, education sectors, skill development and employment opportunities, and protection from abuse and torture. It was passed in the Rajya Sabha.

- In 2016, the **Government introduced its own Bill in the Lok Sabha** and it was referred to a Standing Committee, which made a number of recommendations including defining the term persons with intersex variations, granting reservations for socially and educationally backward classes, and recognition of civil rights including marriage, partnership, divorce and adoption.

- In 2019, The **Parliament passed the Transgender Persons (Protection of Rights) Bill, 2019** and now in 2020 the Government establishes the **National Council for Transgender Persons.**

What are the Key Features of the Act?

- **Definition of a transgender person:** The Bill defines a transgender person as one **whose gender does not match the gender assigned at birth.**
  - It includes trans-men and trans-women, persons with intersex variations, gender-queers, and persons with socio-cultural identities, such as kinnar and hijra.
  - Intersex variations are defined to mean a person who at birth shows the variation in his or her primary sexual characteristics, external genitalia, chromosomes, or hormones from the normative standard of the male or female body.

- **Prohibition against discrimination:** The Bill prohibits discrimination against a transgender person, including denial of service or unfair treatment in relation to:
  - Education
  - Employment
  - Access to, or enjoyment of goods, facilities, opportunities available to the public
  - Right to movement

- Right to reside, rent, or otherwise occupy the property
- Opportunity to hold public or private office.

- **Health care:** The government must take steps to provide health facilities to transgender persons including separate HIV surveillance centres, and sex reassignment surgeries.

- **Certificate of Identity:** The Act provides that a transgender person shall have the right to self-perceived gender identity and for this **a certificate of identity** can be obtained at the **District Magistrate's office and a revised certificate** is to be obtained if sex is changed.

- **Punishment:** It states that the **offences against transgender persons will attract imprisonment between six months** and two years, in addition to a fine.

TRANSGENDER PERSONS
(PROTECTION OF RIGHTS) BILL 2019
UPHOLDING THE RIGHTS OF TRANSGENDERS

The law now defines rights of transgenders and prohibits discrimination

Every transgender person shall have a right to reside and be included in their household

No government or private entity can discriminate against a transgender person in employment

Formulation of programs and welfare schemes

National Council for Transgender Persons to advise, monitor, and evaluate measures for the protection of rights

What are the issues with the act?

- The Act is **silent on granting reservations** to transgender persons.

- It has **prescribed punishments for organised begging.** However, the Act doesn't provide anything to better to condition in those areas, it doesn't provide for reservation.

- The **application to District Magistrate for legal recognition** and proof of surgery which contradicts NALSA judgment of Supreme Court.

- It also does not mention any punishments for rape or sexual assault of transgender persons as according to Sections 375 and 376 of the Indian Penal Code, rape is only when a man forcefully enters a woman.

Way Forward:

- The government will take measures to ensure the full inclusion and participation of transgender persons in society.

- It must also take steps for their rescue and rehabilitation, vocational training and self-employment, create schemes that are transgender sensitive, and promote their participation in cultural activities.

SWACHH BHARAT MISSION ACADEMY

The Union Minister of Jal Shakti launched the Swachh Bharat Mission Academy.

About:

- It is a part of the ongoing week-long behaviour change campaign **'GandagiMukt Bharat.**
- It is a **phone-based academy** that will **provide free of charge training courses** with high quality and standardized content.
- It is an Interactive Voice Response (IVR) -based training course with modules on **Open Defecation Free (ODF) Plus** programme and contains a 60-minute module spanning various topics under ODF as well as SLWM.
- The content of SBM Academy is in Hindi as of now.

Significance:

- It will significantly **boost the capacity building efforts** in training of Swachhagrahis as well as PRIs members, community-based organizations, NGOs, SHGs and others who are associated with phase 2 of SBM(G).
- It will be crucial in achieving goals underlined in Phase – 2 of the Swachh Bharat Mission (Gramin).
- It also **improves knowledge and interpersonal communication skills** in order to enhance the quality of interaction with the beneficiaries.

Swachh Bharat Mission

- The Prime Minister of India had launched the **Swachh Bharat Mission on 2nd October 2014** to accelerate the efforts to achieve **universal sanitation coverage.**
- **It aimed** at eliminating the open defecation in rural areas during the period 2014 to 2019 through mass scale behaviour change, construction of household-owned and community-owned toilets.
- **Coverage:** Under the mission, all villages, Gram Panchayats, Districts, States and Union Territories in India declared themselves "open-defecation free" (ODF) by 2 October 2019 by constructing over 100 million toilets in rural India.
- **Phase II:** The Mission is moving towards the next Phase II of SBMG i.e ODF-Plus.
- ODF Plus activities under Phase II of Swachh Bharat Mission (Grameen) will reinforce ODF behaviours.

Objectives

- To sustain the ODF programme and to take up Solid and Liquid Waste Management (SLWM).

- To encourage cost-effective and appropriate technologies for ecologically safe and sustainable sanitation.
- To create a significant positive impact on gender and promote social inclusion by improving sanitation especially in marginalized communities.

SBM: GIVING CREDIT WHERE IT IS DUE

Hailing the Swacch Bharat Abhiyan, the World Health Organization in a study found that the mission would be able to save around 3 lakh lives from diarrhoeal disease. The study also finds that the project has been able to cover 89% of the country.

3lakh Deaths that can be averted due to the implementation of Swachh Bharat Mission

199mn Number of cases of diarrhoea reported before SBM came into effect

14mn Disability-Adjusted Life Years will be prevented due to diarrhoea and malnutrition

18.1% prevalence of diarrhoea in non–ODF areas

34% stunted growth among children in ODF areas

39% stunted growth among children in non-ODF areas

12.1% prevalence of diarrhoea in ODF areas

28.3% underweight children in ODF areas

41.2% underweight children in non-ODF areas

Rashtriya Swachhata Kendra

Recently, the Prime Minister inaugurated Rashtriya Swachhata Kendra, an interactive experience centre on the Swachh Bharat Mission.

About:

- It was first announced on 10th April 2017, the occasion of the centenary celebrations of Mahatma Gandhi's Champaran Satyagraha.
- It is an interactive experience centre on the Swachh Bharat Mission and will introduce future generations to its successful journey as the world's largest behaviour change campaign.
- A balanced mix of digital and outdoor installations in the RSK will impart information, awareness and education on Swachhata and related aspects.
- The complex interplay of processes and activities will be presented through assimilative learning, best practices, global benchmarks, success stories and thematic messages in an interactive format.
- It will impart information, awareness and education on Swachhata (sanitation) and related aspects and the installations at RSK will include audiovisual immersive shows, interactive LED panels, hologram boxes, interactive games etc.

LOCKDOWN HIT
TREATMENT UNDER PMJAY SCHEME

The nationwide lockdown had a significant negative impact on inpatient care utilisation under the Pradhan Mantri Jan Arogya Yojana (PMJAY).

About:

- **Fall in Claims:** The claim volumes under the scheme is fell by over 50%, with wide variation across the States amidst the lockdown situation.
  - Demographic groups, women, younger and older populations (under 20 and over 60) reduced their utilisation by more than men, young adults or the middle-aged.
- **Performance of states:** The steepest decline (over 75%) was registered in Assam, followed by Maharashtra and Bihar, while much smaller declines (about 25% or less) were observed in Uttarakhand, Punjab and Kerala.
- **Status of surgeries done:** There were declines in admissions for child delivery and oncology; also a sharp fall in cardiovascular surgeries.
  - The utilisation of neo-natal packages declined by 24 per cent during the lockdown.
- **Reasons for fall in claim volume:**
  - Hospitals being preoccupied with COVID-19 preparations, resulting in fewer resources for non-COVID-19 cases.
  - Delay in seeking treatment or foregoing it due to the fear of infection at a hospital.
  - Public transport shutdowns and mobility constraints.
  - The nascent economic crisis had an effect on financial considerations related to seeking care.

About AYUSHMAN BHARAT PM-JAY:

- Ayushman Bharat, a **flagship scheme** of Government of India, was **launched in September 2018** as recommended by the **National Health Policy 2017**, to achieve the vision of **Universal Health Coverage (UHC).**
- It is a **Centrally Sponsored Scheme** having central sector component under Ayushman Bharat Mission.
- This programme has been developed to **meet Sustainable Development Goals (SDGs)** and it's underlining commitment, which is to "leave no one behind."
- PM-JAY is the world's largest health insurance scheme fully financed by the government providing a **cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization.**

How will it Benefit?

- **Affordable access to Health facilities:** Insured families can visit a public or empanelled private hospital anywhere in the country and get free treatment.

- **Fast delivery mechanism:** It will provide cashless and paperless access to services and help reduce catastrophic expenditure for hospitalizations.
- **Universal Health Coverage:** It is a visionary step towards advancing the agenda of Universal Health Coverage (UHC).
- **Boost employment:** It will boost employment in the health sector and eventually expand the health industry.
- **Dealing Out of Pocket Expenditure:** Hospitalisation expenses – including registration, nursing, and boarding charges in a general ward – are all covered by the insurance policy.
- The scheme also takes care of surgical equipment, consultation fees, and procedure charges, as well as the cost of implants, medicines, diagnostic tests, and food for patients during their hospital stay.

What are the Challenges and Concerns?

- **Poor infrastructure:** The **absence of primary health care centres in remote areas** and **infrastructure & manpower issues** need to be addressed immediately.
- **Large out of pocket expenditure:** The **non-inclusion of outpatient cost in the five lakh coverage** is a problem for many. Out of pocket expenditure constitutes a major part of healthcare.
- **Low prescribed rates:** The prescribed rates for standard procedures are way too low and has been declared unsustainable by many hospitals and doctors. This might lead to a situation where a hospital might deny care to a patient.
- **Low prescribed budget:** Although the scheme works on the principle of risk pooling, the allotted 12000 crores has been described as too low for it. **India spends a paltry 1.3% of its GDP on health.** Our spending on healthcare is substantially lower than that of most other countries, including some of our neighbours (for e.g., Bhutan spends 2.5 percent of its GDP and Sri Lanka spends 1.6 percent of its GDP on healthcare).

Way Forward:

- Continued and close monitoring is the need of the hour.
- There is a need for an **increase in expenditure on health** so that India can improve existing facilities as well as add more of them.
- Recently, the chairman of the 15th Finance Commission said that "over the next 5 years, the Centre alone should be able to spend at least 2.1 per cent of GDP on health.
- In the urban areas, large hospitals should be **set up on a Public-Private Partnership (PPP) basis.**

WORLD DAY AGAINST TRAFFICKING IN PERSONS 2020

The world day against trafficking in persons is observed on July 30 every year.

About:

- This year's theme **focuses on first responders to human trafficking**.
- It aims to **raise awareness** about the condition of victims of human trafficking and to promote and protect their rights.

What is Human Trafficking?

- **UN: International Labour Organization (ILO)** defines **human trafficking as the trade of humans**, most commonly for the purpose of forced labour, commercial sexual exploitation or sexual slavery for the trafficker or others.
- It estimates that **21 million people are victims of forced labour globally** which includes victims of human trafficking for labour and sexual exploitation.
- According to the UNODC, people are being trafficked **for various exploitative purposes** including forced marriage, begging, labour, sexual exploitation, organs removal, selling children etc.

Who are First Responders?

- The first responders are those who work in different fields like identifying, supporting, counselling and working to provide justice for victims of trafficking, people who are working to challenge the impunity of traffickers.

Blue Heart Campaign of UN

- It has been initiated by the UN to **raise global awareness to fight human trafficking** and its **impact on society.**
- It aims to **encourage the involvement of the governments, civil society, the corporate sector and individuals** to inspire action and help prevent this heinous crime.
- It allows people to **show their solidarity with the victims of human trafficking** and increasing their visibility by **wearing the Blue Heart.**

- The role of first responders has become even more challenging amid the COVID-19 pandemic as with restrictions on the

Human Trafficking

Human Trafficking is a crime against humanity. It involves an act of recruiting, transporting, transfering, harbouring or receiving a person through a use of force, coercion or other means, for the purpose of exploiting them.

Human trafficking is a **$32-billion** industry worldwide.

The United Nations estimates that between 800,000 and 4 million men, women and children are deceived, recruited, transported from their homes and sold into slavery around the world each year.

Between 800,000 and 4 million

men, women and children are deceived, recruited, transported from their homes and sold into slavery around the world each year.

117,000 people are made victims of human trafficking on average in Ukraine every year.

Moldova	57,000
Romania	28,000
Belarus	14,000
Bulgaria	9,500

Human Trafficking Cases

Sexual exploitation and forced labor are the most common forms of human trafficking in the world.

200,000 people in Eastern Europe

150,000 non-Japanese women
Largest sex industry market for Asian women

2.3 million in India

200,000 in Bangladesh

142,000 people in Malaysia

The Numbers of Sexual Trafficking in The World.

20% human trafficking cases involve the labour industry.

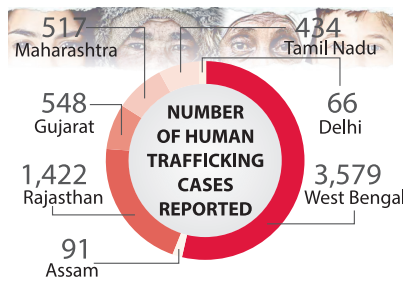**80%** human trafficking cases involve the sex industry.

movement, the work of detecting trafficking has become more difficult.

- The **UN Office on Drugs and Crime (UNODC)** has decided to honour the hard work of first responders amid these trying times.

Constitutional & Legislative Provisions Related to Trafficking in India:

- **Article 21** provides the **Right to Life and Personal Liberty.**

- Trafficking in Human Beings or Persons is prohibited under the **Constitution of India under Article 23 (1).**

517 Maharashtra
434 Tamil Nadu
548 Gujarat
66 Delhi
1,422 Rajasthan
3,579 West Bengal
91 Assam
NUMBER OF HUMAN TRAFFICKING CASES REPORTED

- **Article 24** prohibits the employment of children (below the age of fourteen years) in factories, etc.

- **Article 39** directs the State to secure the health and strength of workers, men and women, and to see the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.

- **Article 42** directs the State to make provision for securing just and humane conditions of work and for maternity relief.

- The **Immoral Traffic (Prevention) Act, 1956 (ITPA)** is the premier legislation for prevention of trafficking for commercial sexual exploitation.

- **Criminal Law (Amendment) Act 2013** has come into force wherein **Section 370 of the Indian Penal Code** has been substituted with Section 370 and 370A IPC which provide for comprehensive measures to counter the menace of human trafficking including trafficking of children for exploitation in any form including physical exploitation or any form of sexual exploitation, slavery, servitude, or the forced removal of organs.

- **Protection of Children from Sexual Offences (POCSO) Act, 2012**, which has come into effect from 14th November 2012 is a special law to protect children from sexual abuse and exploitation. It provides precise definitions for different forms of sexual abuse, including penetrative and non-penetrative sexual assault, sexual harassment.

- There are other specific legislations enacted relating to trafficking in women and children like **Prohibition of Child Marriage Act, 2006, Bonded Labour System (Abolition) Act, 1976, Child Labour (Prohibition and Regulation) Act, 1986, Transplantation of Human Organs Act, 1994**, apart from specific Sections in the IPC, e.g. Sections 372 and 373 dealing with selling and buying of girls for the purpose of prostitution.

- State Governments have also enacted specific legislation to deal with the issue. **(e.g. The Punjab Prevention of Human Smuggling Act, 2012).**

TRAFFICKING FROM BANGLADESH TO INDIA
The border along Jashore, Bangladesh, has long been a hotspot for trafficking women into India, many of whom are eventually sold to brothels in the neighbouring country for hefty money. But as law enforcers increased vigilance on the route, the traffickers are adapting and changing tactics.

1 TRAFFICKERS ABDUCT LURE AND OFTEN MARRY VICTIMS
2 SELL A GIRL OR WOMAN FOR USD 29-35 THOUSAND
3 MAKE FAKE PASSPORTS, MARRIAGE CERTIFICATES
4 ALL MEN 'CONTROL' TRAFFICKING POINTS — BRIBE LAW ENFORCERS
5 Permanent rehabilitation measures
6 Rights Jessore, an NGO, rescued 1,117 from India

GLOBAL/REGIONAL ESTIMATES
- 6-8 hundred thousand trafficed annually (worldwide)
- Victims include 72pc female, 28pc male (worldwide)
- 50pc trafficked for sexual exploitation, 49pc for forced

Initiatives by the Government:

Domestic initiatives:

- **Anti-Trafficking Cell (ATC):** Anti-Trafficking Nodal Cell was set up in the Ministry of Home Affairs (MHA) to act as a focal point for communicating various decisions and follow up on action taken by the State Governments to combat the crime of Human Trafficking.

- MHA conducts coordination meetings with the **Nodal Officers of Anti Human Trafficking Units** nominated in all States/UTs periodically.

- **Judicial Colloquium on human trafficking** is held at the High court level to train and sensitize the trial court judicial officers. It aims to sensitize the judicial officers about the various issues concerning human trafficking and to ensure speedy court process.

Global Initiatives:

- India has ratified the **United Nations Convention on Transnational Organised Crime (UNCTOC)** which has as one of its Protocols Prevention, Suppression and Punishment of Trafficking in Persons, particularly Women and Children.

- India has ratified the **SAARC Convention on Preventing and Combating Trafficking in Women and Children for Prostitution**. A Regional Task Force was constituted to implement the SAARC Convention.

- In June 2015, a **Memorandum of Understanding (MoU) between India and Bangladesh** on Bi-lateral Cooperation for Prevention of Human Trafficking in Women and Children, Rescue, Recovery, Repatriation and Re-integration of Victims of Trafficking was signed.

STATES CAN HAVE SUB-GROUPS AMONG SCs/STs: SC

Recently, a five-judge Bench of the SC held that States can sub-classify SC and ST in the Central List to provide preferential treatment to the "weakest out of the weak".

About:

- The judgment is based on a reference to the Constitution Bench the question of law involving Section 4(5) of the Punjab Scheduled Caste and Backward Classes (Reservation in Services) Act, 2006.
  - This section allows 50% of the reserved Scheduled Castes seats in the State to be allotted to Balmikis and Mazhabi Sikhs.

Highlights of the Judgement:

- The court ruled that there is a **"caste struggle" within the reserved class** as a benefit of reservation is being usurped by a few.
- The **constitutional goal of social transformation cannot be achieved** without taking into account changing social realities.
- The **State cannot be deprived of the power to take care of the qualitative and quantitative difference** between different classes to take ameliorative measures".
- It mentions that **"once a mortgage always a mortgage"** cannot be pressed into service for submitting that once a backward class of citizens, always such a backward class and citizens cannot be treated to be socially and educationally backwards till perpetuity; those who have come up must be excluded like the creamy layer.
- The Bench took a contrary view to a **2004 judgment** delivered by another Coordinate Bench of five judges in the **E.V. Chinnaiah case.**
  - The **Chinnaiah judgment** had held that allowing States to unilaterally "make a class within a class of members of the Scheduled Castes" would amount to tinkering with the Presidential list.
- As two numerically equal Benches of judges holding contrary viewpoints, the issue has been referred to a seven-judge Bench of the court.

What is the Sub-Categorisation of SCs?

- States have argued that among the Scheduled Castes, there are some that remain grossly **under-represented despite reservation** in comparison to other Scheduled Castes.
- The **inequality within the Scheduled Castes** is underlined in several reports, and special quotas have been framed to address it.

- For example, in Andhra Pradesh, Punjab, Tamil Nadu and Bihar, special quotas were introduced for the most vulnerable Dalits.
- This sub-categorisation would achieve **equitable representation of all SCs in government service.**

Some Arguments against Sub-Categorisation:

- The test or requirement of social and educational backwardness cannot be applied to Scheduled Castes and Scheduled Tribes.
- The special treatment is given to the SCs due to untouchability with which they suffer.
- In a **1976 case, State of Kerala v N M Thomas**, the Supreme Court laid down that "Scheduled Castes are not castes, they are class."
- A watertight President's list was envisaged to protect from such potential arbitrary change.

Important Constitutional Provisions Regarding Reservations:

- **Article 16(1) and 16(2)** assure citizens equality of opportunity in employment or appointment to any government office.
- **Article 15(1)** generally prohibits any discrimination against any citizen on the grounds of religion, caste, sex or place of birth.
- **Articles 15(4) and 16(4)** state that the equality provisions do not prevent the government from making special provisions in matters of admission to educational institutions or jobs in favour of backward classes, particularly the Scheduled Castes (SCs) and the Scheduled Tribes (STs).
- **Article 16(4A)** allows reservations to SCs and STs in promotions, as long as the government believes that they are not adequately represented in government services.
- In the **Indra Sawhney case of 1992,** the Supreme Court fixed the upper limit for the combined reservation quota should not exceed 50% of seats.
- In 2019, the **103rd Constitution Amendment Act** was passed empowering both Centre and the states to provide 10% reservation to the EWS category of society in government jobs and educational institutions.

■■■■

ONE NATION, ONE RATION CARD SCHEME

Four more States and Union Territories (UTs) have joined the One nation, one ration card' scheme, taking the total number of States and UTs enrolled under the scheme to 24.

About:

- The **implementation of this scheme** has been ramped up following the COVID-19 pandemic and its economic consequences on marginal sections.

- In this system, eligible beneficiaries would be able **to avail entitled food grains under the National Food Security Act (NFSA) from any Fair Price Shop(FPSs)** in the country using the same ration card.

- The eligible beneficiaries will be able to buy **subsidized foodgrains, rice at ₹3 per kg, wheat at ₹2 per kg, and coarse grains at ₹ 1 per kg,** from anywhere in the country.

- **100 percent of national portability** of these cards has been **assured by March 31, 2021.**

- The new system is based on a technological solution to identify a beneficiary through biometric authentication on **electronic Point of Sale (ePoS) devices** installed at the FPS's.

- The **Integrated Management of Public Distribution System (IM-PDS) portal** provides the technological platform for the inter-state portability of ration cards.

- A **standard format for ration card** has been prepared after taking into account the format used by different states and it has been advised that ration card to be issued in a **bi-lingual format having Hindi or English** apart from the local language.

EASY ACCEESS

Under the 'One nation, one ration card' system, beneficiaries can buy subsidised foodgrains from a ration shop in any part of the country

Ration card-Aadhaar linkage must to access the portability scheme

The scheme will be rolled out across the country on: July 1, 2020

A migrant will be allowed to buy a maximum of 50% of the family quota. This is to ensure that the individual, after shifting to another place, does not buy the entire family quota in one go

States providing portability of PDS entitlements:

- Andhra Pradesh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Maharasthra, Rajasthan, Telangana and Tripura

- A person will only be eligible for the subsidies supported by the Centre, which include rice sold at ₹3/kg and wheat at ₹2/kg

- Even if a beneficiary moves to a State where grains are given for free, he/she will not be able to access those benefits

Significance:

- **Easy Accessibility across the nation:** This will make all PDS shops across the country accessible to the beneficiaries.

- **Reduce corrupt practices:** It will reduce their dependence on shop owners and curtail instances of corruption.
  - With the help of the scheme, the government would be able to rightly target the beneficiaries to provide them with the **foodgrains under the PDS**. The scheme is linked with Aadhaar and biometrics, this removes most possibilities of corruption.

- **No additional cost:** There will be no additional cost as the scheme goes on the entitlements that are mandated in the National Food Security Act.

- **Provides choice:** The scheme will give the beneficiaries **the opportunity to opt for the dealer of their choice.** If any dealer misbehaves or misallocates, the beneficiary can switch to another FPS shop instantly.
  - This will let the beneficiaries choose the PDS shop that best delivers on the attributes.

- **Beneficial to depressed sections:** This will be particularly beneficial for women and other disadvantaged groups, given how social identity (caste, class and gender) and other contextual factors (including power relations) provide a strong backdrop in accessing PDS.

Challenges:

- **Non-Compliance & interstate issues:** Every state has its own rules for the Public Distribution System (PDS).
  - Within some states, there are issues of intrastate portability.
  - Different states have different rates and this mismatching rate will be a big challenge.

- **Technical issues:** Since the scheme is based on technology, the government may face some technical challenges during the implementation of the scheme.

- **Corruption still a major issue- If 'One Nation, One Ration Card'** is implemented, it may further boost corruption in an already corrupted Public Distribution System.
  - The scheme may increase the woes of the common man as the middlemen and corrupt PDS shop owners may exploit them.

- **Against Federal Structure:** Tamil Nadu has opposed the proposal of the Centre, saying it would result in undesirable consequences and is against federalism.

ONE WORLD, ONE SUN, ONE GRID PLAN

The Prime Minister in his Independence Day address mentioned about the mega plan of "One Sun, One World, One Grid" (OSOWOG).

About:

- It is a trans-national electricity grid supplying solar power across the globe.
- **Purpose:** It can generate round the clock electricity from the sun as it sets in one part of the world but rises in another part. The sun never sets for the entire earth.
- **Background:** This idea was first floated by Modi in 2018 during the first assembly of the **International Solar Alliance (ISA).**
  - Policy experts describe it as part of **India's answer to China's "One Belt One Road" project.**

Key Highlights:

- According to the draft plan of the **Ministry of New and Renewable Energy (MNRE), the ambitious OSOWOG** will connect 140 countries through a common grid that will be used to transfer solar power.
- The **blueprint for the OSOWOG will be developed under the World Bank's technical assistance programme** that is implemented to accelerate the deployment of grid connected rooftop solar installations.
- With India at the fulcrum, the solar spectrum can easily be divided into two broad zones viz. far East, which would include countries like Myanmar, Vietnam, Thailand, Lao, Cambodia etc, and far West, which would cover the Middle East and the Africa Region.
- **Three Phases of Plan:** The first phase will entail interconnectivity within the Asian continent; the second phase will add Africa and the third phase will globalize the whole project.

Need and Significance:

- Through this India can **generate round the clock electricity** from the sun.

### PM Modi's 10 points Action Plan to Promote Solar Power

Prime Minister Narendra Modi on Sunday listed out 10 action points at the founding conference of the International Solar Alliance, to bring about a solar revolution worldwide. They include:

- Ensuring that cheap and improved solar technology is easily available
- Increasing the percentage of solar energy in countries' national energy mix
- Encouraging innovation for development of solutions to problems/challenges
- Ensuring concessional and risk-free funding for solar project

- Developing regulatory aspects and norms to speed up adoption of solar technologies solutions
- Consultancy support for bankable solar projects in developing nations
- Ensuring efforts to propagate solar revolution stress on partnerships and assimilation
- Ensuring creation of network of centres of excellence that takes into account local circumstances and factors
- Ensuring solar energy policies are seen in the context of development that will help in achieving Sustainable Development Goals
- Making the ISA secretariat at strong and professional body

- The **proposed integration would lead to reduced project costs**, higher efficiencies and increased asset utilization for all the participating entities.
- **India's counter to China's Belt and Road initiative (BRI)** that is primarily an economic diplomacy strategy to boost its domestic economy by improving connectivity and cooperation among the current 78 partner countries.
  - China has already launched a global transmission grid project under the aegis of the **Global Energy Interconnection Development and Cooperation Organization**, dedicated to promote the sustainable development of energy worldwide.
- It will allow **national renewable energy management centres** in India to grow as regional and global management centres.
- This move, during the time of the Covid-19 pandemic, gives **India the opportunity to be seen as taking a lead in evolving global strategies.**
- Several African nations are devoid of reliable electricity supply and that makes them a **ready market for electricity infrastructure.**
- This will have **economic benefits that would positively impact poverty alleviation** and support in mitigating water, sanitation, food and other socio-economic challenges.
- India has taken small steps with the ISA, but still a **lot need to done through OSOWOG.**

Coal   Gas   Hydro   Bio   Nuclear   Wind   Solar
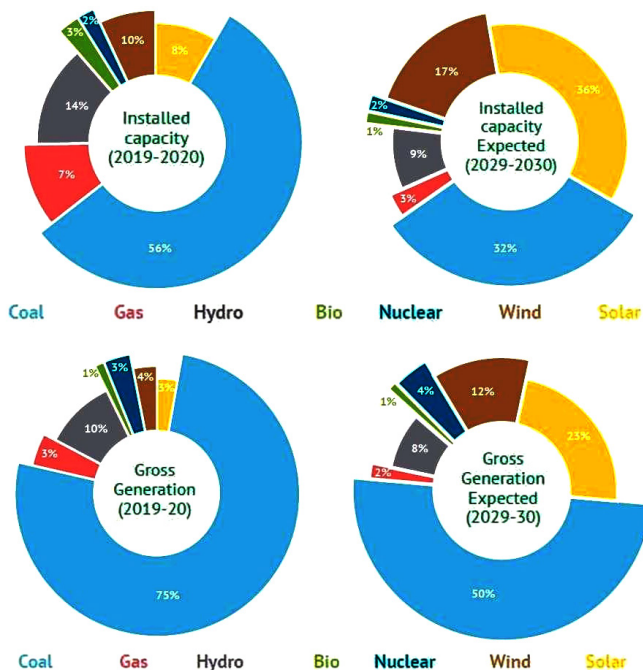
What can be the Issues in Achieving this?

- **Geopolitics:** The project is seen as an Indian endeavour for world leadership. But under COVID-19 uncertainties, the geopolitical implications of project are hard to decipher. The mechanism of cost-sharing will be challenging, given the varied priorities of participating countries depending on their socio-economic orders.
  - It might turn out to be an expensive, complex and a very slow progress project.
- **Against Self Reliant Policy:** The project also contradicts the Prime Minister's Aatmanirbhar Bharat (self-dependent India) vision, as it extends the reliance for a major strategic entity i.e. energy supply to other countries through this grid.
- **Distribution Issue:** There is a difference in voltage, frequency and specifications of the grid in most regions. Maintaining grid stability with just renewable generation would be technically difficult.
  - Supply of energy through this grid, in a time zone with a six-hour difference will require thousands of kilometers of transmission of the electricity, which will add up a huge cost and energy losses.
- This also comes in the **backdrop of the US withdrawal from the Paris climate deal and China's attempts to co-opt countries** into its **ambitious One Belt One Road (OBOR) initiative,** a programme to invest billions of dollars in infrastructure projects, including railways, ports and **power grids**, across Asia, Africa and Europe.

- **Competition:** Australia-based Sun Cable is also developing the **Australian-ASEAN Power Link (AAPL)** under which it will supply renewable electricity from **Australia to Singapore and later to Indonesia.**

India: Top 10 Solar States with Cumulative Installations
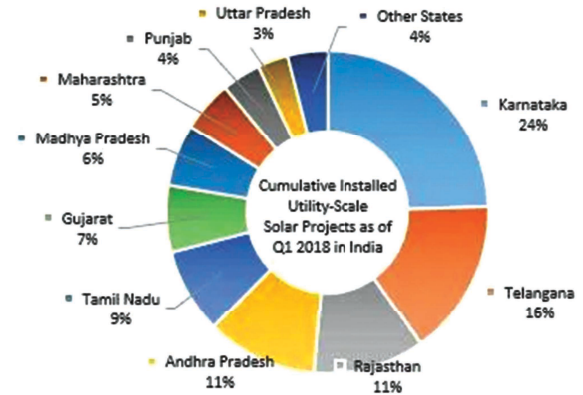
International Solar Alliance (ISA)

- The **International Solar Alliance (ISA)** is a treaty-based **inter-governmental organization.**
- It was established during the **UN Climate Change Conference in Paris in 2015** and it has 75 signatory countries.
- It is working to **create a global market system** to tap the benefits of solar power and promote clean energy applications.
- **Objectives:** It paves the way for future solar generation, storage and technologies for Member countries' needs by mobilising over USD 1000 billion by 2030.
  - The ISA plays a four-fold role in establishing a global solar market: it is an accelerator, an enabler, an incubator, and a facilitator.
  - It strengthens the climate action in member countries, helping them fulfil the commitments expressed in their **Nationally Determined Contributions (NDCs).**

India's Contribution of ISA

NTPC to contribute $1 million to the corpus fund of $15 million that India is providing to the ISA

The Indian Renewable Energy Development Agency (IREDA) and the Solar Energy Corpo-ration of India (SECI), both of them arms of the Ministry of New and Renewable Energy (MNRE) have already committed **$1 million each**

Coal India & NALCO are also likely to announce similar contributions soon

India has also set aside five acres of land in Gurgaon, next to the National Institute of Solar Energy, to house the headquarters of the ISA

SATLUJ-YAMUNA LINK CANAL CONTROVERSY

Recently, the Punjab Chief Minister asked the Central government to be cautious on the contentious Sutlej-Yamuna Link (SYL) canal issue.

About:

- The Supreme Court on July 28, 2020, had directed the chief ministers of both the states to settle the dispute by way of talks within three weeks.


DRAGGING ON FOR DECADES

- **1966 |** Reorganisation of Punjab; it is decided that Haryana will get share of Sutlej water.
- **1977 |** Land acquisition starts for 214 km Sutlej-Yamuna link - 122km of it in Punjab and 92 km in Haryana.
- **1980 |** Haryana completes its portion. Punjab skips deadlines, moves SC repeatedly.
- **2004 |** SC orders Punjab to complete canal. State govt passes Act terminating water-shareing pacts. Matter referred to SC for presidential reference. Still pending
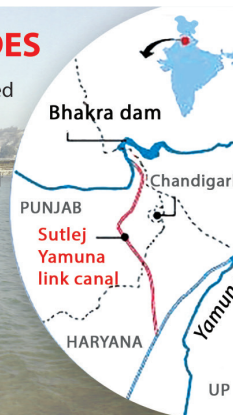
Why is Punjab not willing to Share Water?

- Punjab is **facing severe water crisis** due to **over-exploitation of its underground aquifers** for the wheat/paddy monocycle.
- According to the Central Underground Water Authority's report, its underground water is over-exploited to meet the agriculture requirements in about 79 per cent area of the state.

Constitution Provision for River Water Sharing in India:

- Water is a state subject as per **entry 17 of State List** with respect to water supplies, irrigation and canals, drainage and embankments, water storage and water power, subject to the provisions of Entry 56 of List 1.
- Entry 56 of Union List gives power to the Union Government for regulation and development of inter-State rivers and river valleys.
- **Article 262:** Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, in any inter-State river or river valley.
- **Article 143(1):** Power of President to consult Supreme Court (1) If at any time it appears to the President that a question of law or fact has arisen, or is likely to arise, which is of such a nature and of such public importance that it is expedient to obtain the opinion of the Supreme Court upon it, he may refer the question to that Court for consideration and the Court may, after such hearing as it thinks fit, report to the President its opinion thereon.

Why SYL has been a Bone of Contention between Haryana and Punjab?

- **Satluj-Yamuna Link Canal (proposed in 1976)** is a **214-kilometre** (133 mi) **long canal in India to connect the Sutlej and Yamuna rivers** of which 122 km was to be in Punjab and 92 km in Haryana.
- The **creation of Haryana from Punjab in 1966** threw up the problem of giving Haryana its share of river waters. Since then, Punjab has opposed sharing waters of the Ravi and Beas Rivers with Haryana, citing riparian principles, and arguing that it had no water to spare.
- Haryana constructed the portion of SYL in its territory and moved SC seeking direction to Punjab to construct SYL.

E-AUCTION PORTAL FOR THE TRADING OF GI-TAGGED 'KASHMIR SAFFRON'

Recently, Jammu and Kashmir's agriculture department created an e-auction portal to promote trading of GI-tagged 'Kashmir Saffron'.

About:

- The Department, under the aegis of India International Kashmir Saffron Trading Centre (IIKSTC), has created the portal in collaboration with NSE-IT, with the sole motive to assure buyers to have access to quality 'Kashmir Saffron'.

- The Saffron growers of Kashmir valley and buyers across India have been requested to register themselves as sellers and buyers for E-trading so that hassle-free e-Trading between registered growers and buyers is ensured.

About Kashmir Saffron:

- It is cultivated and harvested in the Karewa (highlands) of Jammu and Kashmir in the districts of **Pulwama, Budgam, Kishtwar and Srinagar.**

- It is grown at an altitude of 1,600 meters and it has been given the GI tag.

- Kashmir saffron faces stiff competition from **Iranian saffron,** which has captured over **90% share** of the world market.

- **Characteristics** – Natural deep-red colour, aroma, bitter flavour, etc.

- **Types of Saffron:** There are three types of saffron available in Kashmir namely **Lachha Saffron, Mongra Saffron** and **Guchhi Saffron**.

Significance of providing GI Certification for Kashmir Saffron:

- The GI certification would stop the prevalent adulteration of Kashmir Saffron.

- With the GI tag, Kashmir saffron will acquire more prominence in the export market and would help farmers get the best remunerative price.

What is a GI Tag?

- A geographical indication is a name or sign used on products which correspond to a specific geographical location or origin.

- It possesses the qualities or reputation that are inherent in the products due to that origin.

- It is used for natural, agricultural and manufactured goods.

- The Department for promotion of industry and internal trade (DPIIT) under the Ministry of Commerce and Industry, provides the GI tag in India.

Benefits of Registration of Geographical Indications:

- It confers legal protection to Geographical Indications in India.

- Prevents unauthorized use of a Registered Geographical Indication by others.

- It provides legal protection to Indian Geographical Indications which in turn boost exports.

- It promotes the economic prosperity of producers of goods produced in a geographical territory.

FASTAG

Recently, the Government made FASTag mandatory to allow users to avail any discount at the highway toll plazas across the country.

About:

- The decision has been taken to promote a digital mode of payment and ensure seamless travel on the National Highways.

What is Electronic Toll Collection (ETC)/FASTag?

- FASTag device are under the National Electronic Toll Collection (NETC) program.

- It is designed to employ Radio Frequency Identification (RFID) technology to make toll payments directly from the prepaid account linked to it.
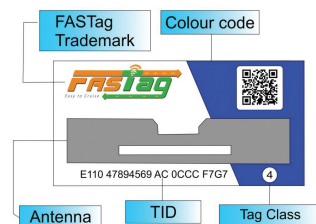
- It is affixed on the windscreen of the vehicle and enables the customer to drive through toll plazas, without stopping for any toll payments.

- FASTag has a validity of 5 years and after purchasing it, you only need to recharge/ top up the FASTag as per your requirement.

- FASTag can be purchased from any of the NETC Member Banks.

What are the benefits of using FASTag?

- Ease of payment – No need to carry cash for the toll transactions, saves time.

- Online Recharge – FASTag can be recharged online through Credit Card / Debit Card / NEFT/ RTGS or Net banking.

- **Environmental benefit:** Reduced air pollution, Reduced use of paper.

- **Social benefit:** Reduced toll payment hassles, Analytics for better highway management.

- **Economic benefit:** Reduced effort in management at the toll plaza, Reduced effort in monitoring centrally.

ONLINE DASHBOARD FOR NATIONAL INFRASTRUCTURE PIPELINE

Recently, the Finance Minister inaugurated the National Infrastructure Pipeline (NIP) Online Dashboard.

About:

- In the budget speech of 2019-2020, the Finance Minister announced an outlay of ₹ 100 lakh crore for infrastructure projects over the next 5 years.

- A high-level Task Force submitted a final report on the National Infrastructure Pipeline with projected infrastructure investment of ₹ 111 lakh crore during FY 2020-25.

About National Infrastructure Pipeline (NIP):

- It is a great step in the direction of implementing NIP — **giving a fillip to infrastructure development** in the country.

- It will provide a **boost to the vision of an AatmaNirbhar Bharat** and availability of NIP projects on IIG will ensure easy accessibility to updated project information and **attract investors for PPP projects.**

- It is a **first-of-its-kind initiative to provide world-class infrastructure** across the country and improve the quality of life for all citizens.

- It will improve project preparation, attract investments (both domestic & foreign) into infrastructure, and will be crucial for attaining the target of becoming a $5 trillion economy by FY 2025.

- It **covers both economic and social infrastructure projects**– based on the updated Harmonized Master List of Infrastructure.

Online Dashboard:

- It will be a one-stop solution for all stakeholders looking for information on infrastructure projects in India.

- It is being hosted on the India Investment Grid (IIG).

What is the India Investment Grid (IIG)?

- It is an interactive and dynamic online platform that showcases updated and real-time investment opportunities in the country.

- It serves as the gateway to investments in India and is also widely used by Indian missions and embassies across the world.

- It allows investors to search a Pan-India database for investment opportunities across sectors; Track the progress of preferred projects and indicate interest and Directly communicate with project promoters.

NATIONAL STRATEGY FOR FINANCIAL EDUCATION

Recently, RBI released the National Strategy for Financial Education (NSFE): 2020-2025 document.

About:

- **National Strategy for Financial Education (NSFE)** is a document published by RBI. It aims at developing financial services, financial literacy across the country through the implementation of various targets.

- The NSFE 2020-2025 is the second NSFE. The first one was released in 2013.

- It has been prepared by the National Centre for Financial Education (NCFE) in consultation with all the Financial Sector Regulators namely RBI, SEBI, IRDAI, PFRDA, etc. under the aegis of the Technical Group on Financial Inclusion and Financial Literacy (TGFIFL).
  - NCFE is a Section 8 (Not for Profit) Company under the Companies Act, 2013 promoted by RBI, SEBI, IRDAI and PFRDA.

- The NSFE aims to Integrate financial education content in school curriculum, various professional and vocational courses.
  - This will be undertaken by the Ministry of Skill Development and Entrepreneurship (MSD&E) through their sector skilling missions and the likes of B.Ed./M.Ed. programmes.

- It emphasizes a multi-stakeholder-led approach for empowering various sections of the population to develop adequate knowledge, skills, attitudes and behavior which are needed to manage their money better and to plan for the future i.e. ensuring their financial well-being.

Highlights of the Strategy:

- **Objectives**
  - To **inculcate financial literacy concepts** among various sections of the population through financial education to make them an important life skill.
  - To **encourage participation in financial markets** to meet financial goals and objectives.
  - To **manage risk at various life stages** through relevant and suitable insurance cover besides planning for old age and retirement through coverage of suitable pension products.
  - To **improve the usage of digital financial services** in a safe and secure manner; as well as bringing awareness about rights, duties and avenues for grievance redressal.

- It has recommended a **'5 C' approach for dissemination of financial education** in the country. The components of the approach are
  - **Content:** Financial Literacy content for various sections of population.
  - **Capacity:** Develop the capacity and 'Code of Conduct' for financial education providers.
  - **Community:** Evolve community led approaches for disseminating financial literacy in a sustainable manner.
  - **Communication:** Use technology, media and innovative ways of communication for dissemination of financial education messages.
  - **Collaboration:** Streamline efforts of other stakeholders for financial literacy.

- The Strategy suggests adoption of a robust **'Monitoring and Evaluation Framework** to assess the progress made and TGFIFL would be responsible for periodic monitoring and implementation of NSFE under the oversight of Financial Stability and Development Council (FSDC).

- It will empower **those imparting financial education and develop the capacity of various intermediaries** who can be involved in providing financial literacy, and develop a 'Code of Conduct' for financial education providers, is among the main agendas. It also talks about the preparation of an information dashboard for the general public.

What is Financial Literacy?

- According to the **Organization for Economic Co-operation & Development (OECD)**, it is defined as a combination of financial awareness, knowledge, skills, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being.

## WHAT IS THE BHADBHUT PROJECT?

> *Recently, the Gujarat government awarded the contract for a barrage project to a joint venture of Dilip Buildcon Ltd and Hindustan Construction Company Ltd.*

About:

- It is planned to be a **1.7-km causeway-cum-weir barrage** with 90 gates, **across the river Narmada,** 5 km from Bhadbhut village, and 25 km from the mouth of the river, where it flows into the Gulf of Khambha.

- The project **is part of the larger Kalpasar Project**, which entails the construction of a 30-km dam across the **Gulf of Khambhat between Bharuch and Bhavnagar districts.**

- The project has faced protests from local fishermen for its likely impact on fishing patterns, notably those of hilsa.

Objectives:

- The barrage **will stop most of the excess water flowing out of the Sardar Sarovar Dam** from reaching the sea and thus create a "sweet water lake" of 600 mcm (million cubic metres) on the river.

- The barrage will have a six-lane road that will connect the left and right banks of the river and will **shorten the land distance between two large industrial estates** in Surat and Bharuch.

- It also aims to **prevent flooding** in years when rainfall is higher than normal and 22 km long embankments will be made and will extend upstream towards Bharuch, from either side of the river.
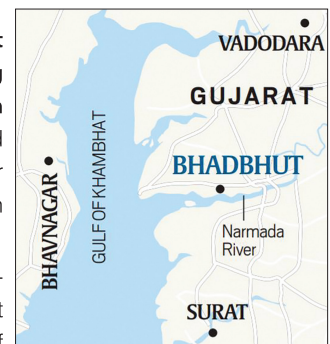
How it will Prevent Salinity Ingress?

- The main purpose of the project is to **prevent salinity ingress.**

- At the beginning of the 21st century, an estimated 16.30 million acre feet (MAF) of water used to be released from the dam and by 2017, when the height of the dam rose, flow into the river reduced to 4.7 MAF.

- Due to the reduced flow of fresh water, saline seawater gushes into the Narmada estuary during high tide, thus increasing salinity along the banks.

- The sweet water from the reservoir will aim to meet the residential and industrial water requirements of Bharuch, Ankleshwar and Dahej.

- The reservoir is meant to provide the waters of the Narmada, Mahisagar and Sabarmati.

Concerns of Fishermen:

- The barrage is expected to **interfere with the migration and breeding cycle of Hilsa.**
  - **Hilsa is a marine fish** which **migrates upstream and arrives in the brackish water of the Narmada estuary near Bharuch** for spawning usually during the monsoon months of July and August, and continues till November.

◆ The reduced outflow of water from the dam, industrial effluents flowing into the river and salinity ingress are believed to be the major causes of this decline.

Government's Stand:

- Government states that the **entry of hilsa will not be restricted** on account of the barrage as dedicated passageways for hilsa fish have been planned.

- The barrage will also have a **fishermen navigation channel** that will allow fishermen owning boats and living upstream on the Narmada beyond the barrage to get access to the sea.

- The barrage design also has a navigation lock to enable any future plans to run a ferry service or boats under the inland waterway scheme.

WHAT IS THE NEW 'POSITIVE PAY' MECHANISM?

Recently, RBI introduced the new 'Positive Pay' mechanism to make cheque payments safer and reduce instances of frauds.

About:

- It is a **fraud detection tool** adopted by banks to protect customers against **forged, altered or counterfeit cheques.**

- It **cross verifies all details of the issued cheque** before funds are encashed by the beneficiary.

- It ensures that **every high-value cheque valued at Rs 50,000 and above is crossed checked** with details provided by the issuing party or the individual.

- This will cover approximately **20 per cent of transactions by volume and 80 per cent by value.**

Process of Positive Pay Mechanism:

- The Positive Pay system demands that an account holder **electronically uploads the details of the high-value cheque** through the bank's net banking system.

- Customers will have to **put in a cheque number,** issuance date, payee name, account number, amount payable along with an image of the front and reverse side of the instrument on the Positive Pay system.

- In the next stage, the **cheque is submitted for encashment to the beneficiary's bank** and forwarded to the clearing branch of the drawee bank.

- The drawee bank then compares the details mentioned on the cheque with the details provided online by the customer through the Positive Pay system.

- Only a match of details will lead to the drawee's bank clearing the cheque and in the event of a mismatch scenario, the issuing authority/individual will be contacted for verification, cancellation or withdrawal of the cheque.

- *NOTE:* Private sector lender **ICICI Bank adopted this feature in 2016** for all cheques, irrespective of the amount, via its iMobile application.

INNOVATION AND AGRI-ENTREPRENEURSHIP DEVELOPMENT PROGRAMME

Recently, a component named Innovation and Agri-entrepreneurship Development programme has been launched under Rashtriya Krishi Vikas Yojana.

About:

- **Innovation and Agri-entrepreneurship Development programme** aims to **promote innovation and agripreneurship** by providing financial support and nurturing the incubation ecosystem.

- These start-ups are in various categories such as agro-processing, artificial intelligence, digital agriculture, farm mechanisation, waste to wealth, dairy, fisheries etc.

- These start-ups will lead to employment to youth. Besides, they, directly and indirectly, will contribute to enhancing the income of farmers by providing opportunities to them.

Components of the Scheme:

- **Agripreneurship Orientation:** 2 months duration with a monthly stipend of Rs. 10,000/- per month. Mentorship is provided on financial, technical, IP issues etc.

- **Seed Stage Funding of R-ABI Incubatees:** Funding upto Rs. 25 lakhs (85% grant & 15% contribution from the incubatee).

- **Idea/Pre-Seed Stage Funding of Agripreneurs:** Funding up to Rs. 5 lakhs (90% grant and 10% contribution from the incubatee).

Rashtriya Krishi Vikas Yojana

- It was initiated in 2007 as an umbrella scheme for ensuring holistic development of agriculture and allied sectors.

- **Objectives of the programme-**
  - ◆ To incentivize the states that increase their investment in Agriculture and allied sectors.
  - ◆ To provide flexibility and autonomy to the States in planning and executing programmes for agriculture.
  - ◆ To ensure the preparation of Agriculture Plans for the districts and states.
  - ◆ To achieve the goal of reducing the yield gaps in important crops.
  - ◆ To maximize returns to the farmers
  - ◆ To address the agriculture and allied sectors in an integrated manner.

AGRICULTURE INFRASTRUCTURE FUND

> *Recently, the Prime Minister launched a new financing scheme under the ₹1 lakh crore Agriculture Infrastructure Fund.*

About:

- It is meant for setting up storage and processing facilities, which will help farmers get higher prices for their crops.
- It is a medium – long term debt financing facility for investment for post-harvest management infrastructure and community farming assets through interest subvention and credit guarantee.
- The funds will be provided for setting up of cold stores and chains, warehousing, silos, assaying, grading and packaging units, e-marketing points linked to e-trading platforms and ripening chambers, besides PPP projects for crop aggregation sponsored by central/state/local bodies.

CABINET DECISIONS

More Job Opportunities in Agriculture Sector

Central Sector Scheme 'Agriculture Infrastructure Fund' Approved

To provide debt financing facility for post-harvest management Infrastructure & community farming assets

₹1 lakh crore to be provided by banks as loans to PACS*, FPOs, SHGs, Farmers, Startups, other farm processing-based activities

Loans to be disbursed in 4 years; **₹10,000 crore in 2020 & ₹30,000 crore each in next 3 FYs**; to be implemented from FY2020 to FY2029

Interest subvention of 3% per annum up to ₹2 crore for a max. period of 7 years; Moratorium for repayment from 6 months up to 2 yrs

Agri Infra fund to be managed through MIS platform; National, State & District level Monitoring Committees to be set up

*Primary Agricultural Credit Societies

Implementation:

- Rs. 1 Lakh Crore will be provided by banks and financial institutions as loans with interest subvention of 3% per annum and credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore

- It will be valid from 2020 to 2029.
- Loans will be disbursed in four years starting with the sanction of Rs. 10,000 crore in the current year and Rs. 30,000 crores each in next three financial years and moratorium for repayment may vary subject to a minimum of 6 months and maximum of 2 years.
- The fund will be managed and monitored through an online Management Information System (MIS) platform. It will enable all the qualified entities to apply for a loan under the Fund.
- National, State and District level monitoring committees will be set up to ensure real-time monitoring and effective feedback.

Intended Benefits:

- It will support farmers, primary agriculture cooperatives (PACs), Farmer Producer Organizations (FPOs), Agri-entrepreneurs, etc. in building community farming assets and post-harvest agriculture infrastructure.
- It will enable farmers to get higher prices for their crops as they will be able to store and sell at higher prices, reduce wastage, and increase processing.

STUDENT ENTREPRENEURSHIP PROGRAMME 2.0

> *Recently, Niti Aayog's Atal Innovation Mission (AIM) in collaboration with Dell Technologies launched Student Entrepreneurship Programme 2.0 (SEP 2.0).*

About:

- **The Student Entrepreneurship Programme 2.0 (SEP 2.0)** is for young innovators of **Atal Tinkering Labs (ATLs).**
- The **Student Entrepreneurship Programme (SEP) 1.0** was launched in January 2019.
- The top 6 teams of ATL Marathon got a chance to transform their innovative prototypes into fully functioning products through a 10-month-long rigorous programme.
- 50 teams were selected for the **Student Innovator Programme** after two rigorous rounds.
- The teams were then mentored by **Atal Incubation Centres for months** via the Student Innovator Programme 2.0.
- The top 8 will now take their prototypes to the product through SEP 2.0.

About the Programme 2.0:

- SEP 2.0 will allow student innovators to work closely with Dell volunteers.
- **Support:** They will receive mentor support, prototyping and testing support, end-user feedback, intellectual property registration and patenting of ideas, processes, and products.

• It will provide manufacturing support as well as the launch support of the product in the market.

• **Significance:** The programme will help students in receiving support and guidance for manufacturing fully-functional and market-ready products.

  ◆ It encourages young aspiring school students, as well as creates a value-adding recognition platform for innovative talent across the country.

About Atal Innovation Mission:

• It has been launched by **NITI Aayog as a flagship program** to promote a culture of **innovation and entrepreneurship** in a holistic manner through various initiatives at school, university and industry levels. It has

Some initiatives of AIM are

• **Atal Tinkering Labs:** To promote creative, innovative mindset in schools.

• **ATL Marathon:** It is a nationwide contest where students identify community challenges and create grassroots innovations and solutions within their ATLs)

• **Atal Incubators:** To promote entrepreneurship in universities and industry.

• **Atal New India Challenges and Atal Grand Challenges:** To promote specific product innovations with social/economic impact.

• **Mentors of Change:** To mentor students at ATL and AIC Incubators / Startups.

• **Atal Research and Innovation for Small Enterprises (ARISE):** To stimulate innovation and research in the MSME industry.

• **Atal Community Innovation Center:** To stimulate community centric innovation and ideas in the unserved/underserved regions of the country including Tier 2 and Tier 3 cities.

KRISHI MEGH: STEP TOWARDS DIGITAL AGRICULTURE OF NEW INDIA

Recently, the Union Minister of Agriculture & Farmers' Welfare launched the Krishi Megh.

About:

• Krishi Megh is the **data recovery centre of ICAR (Indian Council of Agricultural Research)** set up at National Academy of Agricultural Research Management (NAARM), Hyderabad.

  ◆ It has been **built to mitigate the risk**, enhance the quality, availability and accessibility of e-governance, research, extension and education in the field of agriculture in India.

  ◆ It is **equipped with the latest technologies** like **artificial intelligence and deep learning software for building** and deploying deep learning-based applications through image analysis, disease identification in livestock, etc. This will enable providing **real-time data to the researchers.**

• Krishi Megh has been set up under the **National Agricultural Higher Education Project (NAHEP)**, funded by both the Indian government and the World Bank.

  ◆ NAHEP is designed for strengthening the national agricultural education system in the country with the overall objective to provide more **relevant and high-quality education to the agricultural university students** that are in tune with the **New Education Policy – 2020.**

• *Note:* The Minister also launched the **KVC ALUNET (Krishi Vishwavidyalaya Chhatr Alumni Network)** and **Online Accreditation System for Higher Agricultural Educational Institutions (HEI).**

  ◆ **KVC ALUMNET** is for social networking for the alumnus of the Agricultural Universities.

  ◆ It will enable the alumni of all the 74 Agricultural Universities in connecting with each other and making it possible to assist the students in internship, placements and to provide support to their alma maters.

What is Cloud Storage?

• Cloud storage is a **cloud computing model that stores data on the Internet through a cloud computing** provider who manages and operates data storage as a service.

• It's **delivered on-demand with just-in-time capacity and costs**, and eliminates buying and managing your own data storage infrastructure and gives agility, global scale and durability, with "anytime, anywhere" data access.

• **Benefits of Cloud Storage:**

  ◆ **Total Cost of Ownership:** With cloud storage, there is no hardware to purchase, storage to provision, or capital being used for "future" scenarios.

◆ **Time to Deployment:** When development teams are ready to execute, infrastructure should never slow them down. Cloud storage allows IT to quickly deliver the exact amount of storage needed, right when it's needed.

◆ **Information Management:** Centralizing storage in the cloud creates a tremendous leverage point for new use cases. By using cloud storage lifecycle management policies, you can perform powerful information management tasks including automated tiering or locking down data in support of compliance requirements.

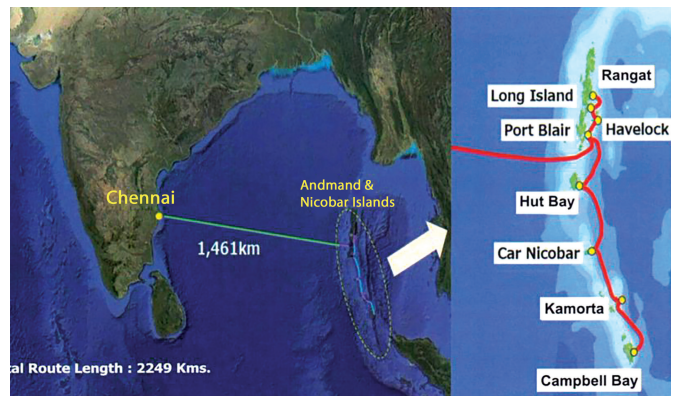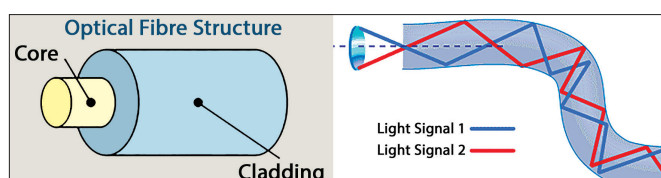# CHENNAI-ANDAMAN AND NICOBAR ISLAND SUBMARINE CABLE SYSTEM (CANI-SMCP) PROJECT

Recently, the Prime Minister launched a submarine optical fibre cable connecting Andaman & Nicobar Islands with the mainland.

About:

- The optical fibre cable will give residents of the islands a faster Internet connection.

- A submarine communications cable is a cable laid on the sea bed between land-based stations to carry telecommunication signals across stretches of ocean and sea.

- These cables use optical fibre technology to carry digital data, which includes telephone, Internet and private data traffic.

- They are laid down by using specially-modified ships that carry the submarine cable on board and slowly lay it out on the seabed.

- The first submarine communications cables laid beginning in the 1850s carried telegraphy traffic, establishing the first instant telecommunications links between continents, such as the first transatlantic telegraph cable which became operational on 16 August 1858.

What is Optical Fibre?

- It is used to transmit data using light pulses travelling along with a long fibre which is usually made of plastic or glass.

- The fibre optical cable uses the application of total internal reflection of light. The fibres are designed such that they facilitate the propagation of light along with the optical fibre depending on the requirement of power and distance of transmission.

Optical Fibre Structure

Benefits of the Project:

- Submarine OFC link will **deliver bandwidth of 2 x 200 Gigabits per second (Gbps)** between Chennai and Port Blair, and 2 x 100 Gbps between Port Blair and the other islands.

  ◆ The Indian Ocean and the Andaman & Nicobar Islands had been important centres for trade and strategic cooperation. The Andaman & Nicobar Islands had an **important role to play in India's "Act East".**

  ◆ This will help A&N in getting cheaper & better connectivity and all the benefits of Digital India, especially in improving online education, telemedicine, banking system, online trading and in boosting tourism.

- Experts have an opinion that this move will open up a **host of opportunities for India in the ASEAN region**, where China provides a majority of the submarine optical fibre.

- The cable system with the incremental submarine length of 1,050 km can **take connectivity to the nearest port of Thailand.**

- India will gain politically if 1,925 km of incremental submarine cable can connect three ASEAN countries such as Myanmar, Thailand and Indonesia.

  ◆ This will **increase the connectivity in the region** and further facilitate e-governance services such as telemedicine and tell education.

- It is expected to play an instrumental role under **India's new trade strategy for the Indo-Pacific region.**

- The system route, if extended, to three countries, as suggested along with OFC ring architecture in select ASEAN countries will bring in many **more projects for the Indian domestic manufacturing industry.**

Other Important Projects for Andaman & Nicobar Islands

- Several projects are in progress including the enhancement of the capacity of the Port Blair airport, new airports at Diglipur, Car Nicobar and Campbell Bay, and passenger terminals at Swaraj Dweep, Shaheed Dweep and Long Island.

- The islands would be developed as a hub of "port-led development" as they were located at a competitive distance from many other ports.
- The **Island Development Agency** was formed in 2017 under the aegis of Ministry of Home Affairs to look into the holistic development of islands. Home Minister of India is its chairman and CEO of NITI Aayog (Amitabh Kant at present) acts as its convener.

FOOD VISION 2050 PRIZE

Recently, Rockefeller Foundation selected Naandi Foundation as one of the 'Top 10 Visionaries' in the world for the Food Vision 2050 Prize.

About:

- The award recognised the application of **Arakunomics** model in regions of Araku, Wardha and New Delhi.
- It is leading to the **Food Vision 2050** that follows an **"ABCDEFGH"** framework centring on:
  - Agriculture, Biology, Compost, Decentralised decision-making, Entrepreneurs, Families, Global Markets, and 'Headstands', or turning current approaches on their head.
- Naandi's vision **titled "Arakunomics"** was based on work with tribal farmers in Araku for nearly 20 years.

What is Arakunomics?

- It is a new integrated economic model that ensures **Profits for farmers, Quality for consumers through Regenerative Agriculture (PQR)**.
- The economic model is a tribute to the tribal farmers of Araku region for the world-class coffee produced and launched in Paris in 2017, as well as for the high carbon landscape transformation they did in over 955 villages thereby planting 25 million trees.
- Arakunomics success in Araku led to Naandi replicating the model to support the livelihoods of farming communities in the villages of Wardha infamous for agrarian distress, as well as later in New Delhi, as part of an Urban Farms Co programme.

Significance:

- It can reveal a path forward to a nourishing, resilient, sustainable and equitable food system for 2050.
- It hopes to expand its "food-print" by creating thousands of farm livelihoods by transforming their agriculture over one million acres spread across India.

About Naandi:

- Naandi, which in Sanskrit means a **new beginning**, is **one of the largest and fastest-growing social sector organisations** in India working towards poverty eradication.
- Naandi was founded on November 1, 1998, as a Public Charitable Trust.
- Naandi was **expected to serve as a new experiment** in the **socio-development sector** of India.
- A bulk of Naandi's investments have come from the **CSR funds of the Mahindra Group of companies** and long term grants from **Paris-based Livelihoods Fund.**

TRANSPORT BUBBLE AGREEMENT

Recently, the DGCA said that a 'transport bubble' arrangement has been signed with Kuwait "to uplift stranded passengers both to and from India.

About:

- To allow gradual movement of passenger traffic during the Covid-19 situation, India has signed 'Transport Bubble' agreements with USA, France, and Germany prior to Kuwait.
- Travel bubbles join states that have largely eliminated the virus, fully or partially contain the outbreak, and who trust in each other's testing and case numbers.
- It is also known as air bridges or Covid-safe travel zones and is agreed upon mutually by consenting countries.
  - Movement of passengers among the countries in the bubble is allowed and travel restrictions like quarantining or testing of passengers on arrival are discarded.
  - It is way of connecting countries which have shown a good level of success in containing the Covid-19 pandemic domestically.
  - Such a bubble would allow the members of the group to restart trade ties with each other and open travel and tourism.

MONETARY POLICY REPORT: WHY THE RBI HAS LEFT INTEREST RATES UNCHANGED?

RBI kept interest rates on hold in order to contain a rise in retail inflation even as growth remains a concern.

About:

- This decision was **taken in the RBI monetary policy review** for the month of August 2020.
- The RBI has claimed that cumulative reduction of 250 basis points in the repo rate since February 2019 is working its way through the economy, lowering interest rates in money, bond and credit markets, and narrowing down spreads.

- RBI says transmission to bank lending rates has improved, with the weighted average lending rate on fresh rupee loans declining by 91 bps during March-June. On the other hand, deposit rates have also fallen, hitting savers.

Policy Rates are Unchanged:

- The repo rate – or the rate at which the RBI lends short-term funds to commercial banks – **stands at 4.0 per cent and the reverse repo rate – or the rate at which the RBI borrows – is at 3.35 per cent.**

- RBI has kept the policy rates unchanged taking stock of a recent rise in consumer inflation.
  - There has been spike in food prices because of floods in eastern India, lockdown-related disruptions and cost-push pressure etc.
  - Supply chain disruptions on account of Covid-19 persist, with implications for both food and non-food prices.

What is Monetary Policy?

- It is the process of regulating the supply of money in an economy by the monetary authority of the country.

- It is meant to adjust the inflation rates or interest rates to sustain the price stability and to maintain the predictable exchange rates with foreign currencies.

- The Reserve Bank of India that is the central banking authority, controls the monetary policy in resonance with the central government's developmental goals.

- Four major objectives of the Monetary Policy are-
  - To stabilize the business cycle.
  - To provide reasonable price stability.
  - To provide faster economic growth.
  - Exchange Rate Stability.

Some Steps taken by RBI

- The RBI has slashed policy rates by 115 basis points since February this year and pumped close to Rs 10 lakh crore liquidity into the financial system.

- In May 2020, the MPC had cut the repo rate by 40 bps to 4%, while maintaining its accommodative policy stance.

- The RBI announced an additional **special liquidity facility of Rs 10,000 crore** at the policy repo rate Rs 5,000 crore each to the **National Housing Bank and NABARD.**
  - The liquidity facility to both **NABARD and NHB will be offered at the policy repo rate** in order to **improve fund flow** to the housing sector, NBFCs and microfinance institutions.

About Monetary Policy Committee:

- It is a committee constituted by the Reserve Bank of India and is tasked with framing monetary policy using tools like the repo rate, reverse repo rate, bank rate, Cash Reserve Ratio (CRR). It has been established on the recommendation of the **Urjit Patel Committee constituted in 2013.**

- The **RBI Act, 1934 was amended by Finance Act (India), 2016** to constitute MPC to bring more transparency and accountability in fixing India's Monetary Policy.

- It comprises **six members – three officials of the RBI and three external members nominated by the Government of India**. The Governor of RBI is the chairperson ex officio of the committee.

- Deputy governor of RBI in charge of the monetary policy will be a member, as also an executive director of the central bank.

- The government nominees to the MPC will be selected by a Search-cum-Selection Committee under Cabinet Secretary with RBI Governor and Economic Affairs Secretary and three experts in the field of economics or banking or finance or monetary policy as its members.

- Members of the MPC will be appointed for a period of four years and shall not be eligible for reappointment.

DIRECTORATE GENERAL OF FOREIGN TRADE (DGFT) ON TRADE RELATED ISSUES

The Directorate General of Foreign Trade (DGFT) is undergoing a revamp to address issues related to trade barriers as well as help build capacities to accelerate exports.

About:

- By the end of this year, the overhaul work will be completed and many changes will be brought about to address the trade barriers and to ensure ease of doing business.

- This development comes after the government earlier this year had to **block exports of crucial devices like ventilators** when it was found that there was not enough domestic capacity for these products to allow the industry to meet foreign commitments.

- The DGFT is working in consultation with the industry to **augment domestic manufacturing and boost exports** in several electronics and hardware items, especially those in the healthcare and pharmaceutical sector.

About Directorate General of Foreign Trade (DGFT):

- It is an **agency of the Union Ministry of Commerce and Industry** and is responsible for implementing the country's foreign trade policy. It was **established in 1991.**

- It has **headquarters in New Delhi** with 38 regional offices all over the country.

- It is headed by the Director-General of Foreign Trade. The Appointments Committee of Cabinet (ACC) appoints the DGFT.

- It is responsible for administering laws regarding foreign trade and foreign investment in India and for the execution of India's import and export Policy.
- It offers facilitation to **exporters in connection with developments** in international trade such as WTO Agreements, Rules of Origin etc. to aid them in their export and import decisions in an international dynamic environment.

CONTRACTION IN INDIA'S MANUFACTURING SECTOR

As per the Purchasing Managers' Index (PMI) released by IHS Markit, India's manufacturing sector activity contracted at a faster pace in July 2020.

About:

- The reason behind the contraction is dispirited demand conditions amid the prolonged closures, following which firms reduced both staff numbers as well as purchasing activity.
- This is the fourth straight month of contraction for the Indian manufacturing sector.

About Purchasing Managers' Index:

- Purchasing Managers' Index (PMI) is an economic indicator of business activity, published by Markit Limited.
  - The Markit limited is a leading global diversified provider of financial information services. It provides independent data, trade processing of derivatives, foreign exchange and loans, customised technology platforms and managed services.
- PMI is a **survey-based** measure that asks the respondents about changes in their perception about key business variables as compared with the previous month in the manufacturing and services sectors.
- It is calculated separately for the manufacturing and services sectors and then a composite index is constructed.
  - The PMI is a number from 0 to 100.
  - PMI **above 50 represents an expansion** when compared to the previous month;
  - PMI **under 50 represents a contraction,** and
  - A reading **at 50 indicates no change.**
- It is different from the Index of Industrial Production (IIP), which also measures the level of activity in the economy. PMI is more dynamic compared to a standard IIP.
- The PMI is usually **released at the start of every month.** It is, therefore, considered a **good leading indicator** of economic activity.

WHAT ARE PRE-PACKS?

The Ministry of Corporate Affairs (MCA) has set up a committee to look into the possibility of including "pre-packs" under the current insolvency regime.

About:

- A pre-pack is an agreement for the resolution of the **debt of a distressed company** through an agreement between **secured creditors** and **investors instead of a public bidding process.**
- The practice of pre-packs was first developed in the US, following the enactment of the Bankruptcy Reform Act of 1978.
- This system of insolvency proceedings has become an increasingly popular mechanism for insolvency resolution in the **UK and Europe** over the past decade.
- Pre-packs will offer **faster insolvency resolution under the Insolvency and Bankruptcy Code (IBC)** while maintaining business continuity and thereby preserving asset value and jobs.
- Slow progress in the resolution of distressed companies has been one of the key issues raised by creditors regarding the **Corporate Insolvency Resolution Process (CIRP)** under the IBC with 738 of 2170 ongoing insolvency resolution processes having already taken more than 270 days at the end of March.

Benefits of Pre-Pack:

- One major **benefit of pre-pack is the speed of sale,** which often results in higher returns for creditors when compared with alternative routes into insolvency.
- Pre-pack would act as an important **alternative resolution mechanism** to the Corporate Insolvency Resolution Process (CIRP) and would help lower the burden on the NCLTs.

Corporate Insolvency Resolution Process (CIRP)

- CIRP is procedure provided in the **The Insolvency and Bankruptcy Code, 2016** providing resolution of insolvency.
- The CIRP may include **necessary steps to revive the company** such as raising fresh funds for operation, looking for a new buyer to sell the company as going concerned.
- In the event a resolution plan is not submitted or not approved by the **committee of creditors (COC)**, the CIRP process is deemed to have failed. In such a situation the liquidation proceeds.

Drawbacks of Pre-Pack:

- The key drawback of a pre-packaged insolvency resolution is the **reduced transparency** compared to the **CIRP as financial creditors** would reach an agreement with a potential investor privately and not through an open bidding process.

- This could lead to stakeholders such as operational creditors raising issues of **fair treatment when financial creditors** reach agreements to reduce the liabilities of the distressed company.

- Unlike in the case of a full-fledged CIRP which allows for price discovery, in the case of a pre-pack, the NCLT would only be able to evaluate a resolution plan based on submissions by the creditors and the investor.

Insolvency and Bankruptcy Board of India

- The **Insolvency and Bankruptcy Board of India** was established on 1st October 2016 under the **Insolvency and Bankruptcy Code, 2016 (Code).**

- It is responsible for the **implementation of the Code that consolidates and Amends** the laws relating to reorganization and insolvency resolution of corporate persons, partnership firms and individuals in a time-bound manner for maximization of the value of assets of such persons, to promote entrepreneurship, availability of credit and balance the interests of all the stakeholders.

TRANSPARENT TAXATION – HONORING THE HONEST

Recently, the Prime Minister launched the 'Transparent Taxation – Honoring The Honest' platform to honour the honest taxpayers of the country.

About:

- The main features of the platform are faceless assessment, faceless appeal and taxpayer charter. The faceless assessment and taxpayer charter will come into place immediately from the launch, while the faceless appeal is going to be applicable from 25th September 2020.
    - **Faceless Assessment:** It aims to eliminate human interface between the taxpayer and the income tax department.
    - **Faceless Appeal:** Under the system, appeals will be randomly allotted to any officer in the country. The identity of the officer deciding the appeal will remain unknown.
    - **Taxpayer Charter:** This outlines the rights and responsibilities of both tax officers and taxpayers.

- The focus is on making the **tax system "people-centric and public friendly."**

- The government introduced **faceless income tax assessment to reduce the scope for corruption and overreach by officials.**

- It aims to **bring transparency in income tax systems** and empower the taxpayers.

- The new facilities are in consonance with, and further strengthened, the government's **motto of 'minimum government, maximum governance.**

Significance:

- The taxpayer base had expanded by 2.5 crore in the past six-seven years in the country and it is a matter of grave concern that only about 1.5 crore people were paying income-tax in a country of over 130-crore population.

- In the previous system, income-tax notices had become an instrument for harassing taxpayers. It could not help expand the taxpayer base and rather created conditions for the business of "black and white" [money] to flourish.

- The assessment system seeks to **eliminate corrupt practices** by doing away with the territorial jurisdiction of income-tax offices.
- With the help of technology, the cases of scrutiny will now be allocated randomly to any official in any part of the country and the document identification numbers will be issued from the central database.
- From now on, officials in the Directorate General of Income Tax (Investigation) and the Principal Commissioner of I-T/ Chief Commissioner of I-T (TDS) will be the only competent authorities for approving survey actions to gather information for scrutiny and assessment.

WHAT THE CHARTER SAYS

I-T dept will treat every taxpayer as hones unless there is a reason to believe otherwise

Will provide fair and impartial appeal and review mechanism

Will collect only the amount due in accordance with the law

Will provide a mechanism for lodging a complaint and prompt disposal thereof

EXPECTIONS FROM TAXPAYERS

They will be honest and compliant

Will respond in time, pay in time

Can approach the Taxpayers' Charter Cell in their zone for compliance to this Charter

Other Direct Tax Reforms:

- To effectively **reduce taxpayer litigation**, the monetary thresholds for filing of departmental appeals in various appellate Courts have been raised.
- Promoting digital transactions.
- **Easing compliances during the Covid times** by extending statutory timeliness for filing returns.
- **Releasing refunds expeditiously** to increase liquidity in the hands of taxpayers.
- The **Corporate Tax rates were reduced from 30 percent to 22 percent** and for new manufacturing units the rates were reduced to 15 percent.
- **Dividend distribution Tax** was also abolished.
- **Increasing transparency in official communication:** Document Identification Number (DIN) wherein every communication of the Department would carry a computer generated unique document identification number.

Direct Tax Reforms
MEASURES UNDERTAKEN TO CURB TAX EVASION & WIDENING OF TAX BASE
NOBODY ESCAPES!

#HonoringTheHonest

- The Black Money Act (2015) to curb black money stashed abroad
- Benami Law (2016) to enable confiscation of Benami property & prosecution of benamidar
- Expansion of Scope of TDS/TCS
- Encouraging digital transactions
- Equalisation Levy of 2% extended under The Finance Act 2020
- Form 26AS amended to provide information electronically to the taxpayers

ATAL INNOVATION MISSION (AIM) LAUNCHED AIM ICREST

Recently, NITI Aayog's Atal Innovation Mission (AIM) launched AIM iCREST.

About:

- AIM iCREST is an **Incubator Capabilities enhancement program** for a Robust Ecosystem focused on creating high performing Startups.
- It has been designed to enable the incubation ecosystem and act as a growth hack for AIM's Atal and Established incubators across the country.
- **Implementation:** AIM has joined hands with Bill & Melinda Gates Foundation and Wadhwani Foundation – organizations that can lend credible support and expertise in the entrepreneurship and innovation space.
  - The partnerships will provide global expertise and showcase proven best practices to the AIM's incubator network.
  - This programme is unique also in its design it is a combination of interactive practices in the field of incubation; enabling the incubators to support sustainable and successful startups.
- The AIM's incubators are set to be upscaled and provided requisite support to foster the incubation enterprise economy
  - Additionally, training will be provided to entrepreneurs, through technology driven processes and platforms.

PAKISTAN AND SAUDI ARABIA RIFT: IMPLICATIONS FOR INDIA

Recently, a delegation led by Pakistan Army Chief Gen Qamar Javed Bajwa visited Saudi Arabia, but were denied a meeting with Crown Prince Mohammed bin Salman (MBS).

About:

- This shows that the rift between Pakistan and Saudi Arabia over Jammu and Kashmir is out in the open.
- The tension between Saudi Arabia and Pakistan has been brewing for some time. In 2015, Pakistan's Parliament decided not to support the Saudi military effort to restore an internationally recognised government in Yemen.
- In February 2019, after the Pulwama terror attack, it was Saudi Arabia and the UAE that pulled their weight to get Wing Commander Abhinandan released, apart from the US.
- The Saudi Crown Prince visited Pakistan and India at that time, and made it clear that he valued economic opportunities. He did not wade into the Kashmir issue in India, or the terrorism issue in Pakistan.
- A year after Article 370 was revoked Pakistan's accusation that Saudi Arabia has failed to deliver on the Kashmir cause was an indication of Islamabad and Rawalpindi's frustration that OIC had not played a leadership role in backing Pakistan against India.
- This criticism by Pakistan angered Saudi Arabia. Saudi Arabia demanded the return of the $3 billion loan and refused to sell oil to Islamabad on deferred payment and Pakistan immediately returned $1 billion, displaying the rift.
- Saudi Arabia is of opinion that Pakistan has been trying to pander to Turkey and Malaysia and also the Turkey's President Recep Tayyip Erdogan is seen as trying to position himself as the new leader of Muslim world, challenging Saudi Arabia's long-held position.

Saudi-Pakistan Background:

- The relationship between Saudi Arabia and Pakistan was most prominent during the 1971 war between India and Pakistan.
- According to reports of that time, Saudi Arabia had denounced the Indian action as "treacherous and contrary to all international covenants and human values" and found no justification for the Indian aggression except "India's desire to dismember Pakistan and tarnish its Islamic creed".

- Saudi Arabia is also reported to have transferred arms and equipment including the loan of some 75 aircraft to Pakistan during the war time.

After War Scenario:

- Saudi Arabia consistently supported the call for the return of Pakistan's prisoners of war and for dropping the Dacca (Dhaka) Trial against 195 of them.
- Saudi Arabia gave loans to Pakistan enabling it to buy arms worth about $1 million by 1977, including F-16s and Harpoon missiles from the US.
- Saudi oil and dollars have kept Pakistan's economy on its feet after sanctions following the nuclear tests and over the last two decades, Saudi Arabia has provided oil on deferred payments to Pakistan whenever it ran into economic difficulty.
- Saudi Arabia funded madrasas which has led to their mushrooming and later giving rise to religious extremism.
- In 1990, Pakistan sent its ground forces to defend Saudi Arabia against Iraq's invasion of Kuwait.

The Saudi Perspective:

- Saudi Arabia is India's fourth largest trade partner (after China, US and Japan) and a major source of energy: India imports around 18% of its crude oil requirement from the Kingdom. Saudi Arabia is also a major source of LPG for India.
- Saudi Arabia's change in position has been a gradual process under Crown Prince MBS and it seeks to diversify from its heavily oil-dependent economy, it sees India as a valuable partner in the region.
- MBS, who is looking to invest in India, has taken a realistic view, along with UAE's crown prince Mohammed bin Zayed.

The China Factor:

- Pakistan and China have called themselves "all-weather allies" and "iron brothers". Over the last one year and China has supported Pakistan on Kashmir, raising the issue at the UN Security Council thrice.
- China has also emerged as Pakistan's biggest benefactor through its funding of the China-Pakistan Economic Corridor. Originally valued at $46 billion, China's commitment to Pakistan now stands at $62 billion.
- Saudi Arabia has also invested in CPEC projects, to the tune of $10 billion, but Pakistan now looks towards Beijing for both diplomatic and economic support as the relations between Saudi Arabia and Pakistan have soured.

Implications for India:

- India is closely watching the developments between Pakistan and Saudi Arabia and has not said anything publicly on the issue.
- Saudi Arabia's silence on J&K as well as CAA-NRC has emboldened the Indian government.
- At a time when India and China are locked in a border standoff, India would be wary of Pakistan and China teaming up and with Saudi Arabia in its corner for now, it may have a leverage over Pakistan.
- What is key to India's calculus is that the Pakistan-China and the Pakistan-Saudi axes are not fused together at the moment: It is not a Saudi-Pakistan-China triangle and how India leverages that may decide the future of the region.

ABRAHAM ACCORD

> *The U.S. President announced that Israel and the United Arab Emirates (UAE) reached a peace agreement.*

About:

- The agreement will be known as **the Abraham Accord.**
- The UAE is the third Arab country and the first in the Gulf region to establish diplomatic relations with Israel.
- Israel will suspend declaring sovereignty over areas of the West Bank and "focus its efforts on expanding ties with other countries in the Arab and Muslim world".
- The delegations from Israel and the UAE would meet in future to sign bilateral agreements regarding "investment, tourism, direct flights, security, telecommunications, technology, energy, healthcare, culture, the environment, the establishment of reciprocal embassies, and other areas of mutual benefit".
- One of the major factors that brought them closer has been their **shared antipathy towards Iran.**
- It was welcomed by **allies of the United States and Israel** but denounced by Iran, Turkey and the Palestinians.

Significance of the Agreement:

- Israel **gets a diplomatic and economic opening with the big power** in the Gulf, that could open other doors, give its security interests legitimacy and,
- The deal gives UAE pole position as the premier Gulf Arab power, with diplomatic leverage with Israel and the US.

What are the Geopolitical Implications of the Deal?

- Opening direct ties between two of the Middle East's most dynamic societies and advanced economies will transform the region by spurring economic growth, enhancing technological innovation and forging closer people-to-people relations and promoting Middle East peace.
- According to experts, the normalisation of ties between Israel and the UAE could be followed by similar actions by other Gulf countries, including the Kingdom of Saudi Arabia, and strong reactions from other countries in a region.

Significance for India:

- India has **deep stakes in terms of energy supplies and expatriate populations** in middle east.
- The **deal opens up new opportunities for India** to play a much larger **role in the regional security and stability in the Gulf.**
- India should **use this unexpected opportunity** to give itself a bigger role in a region which is its strategic backyard.
- The first step should be to ramp up defence and security relations with the UAE.
- **Israel is already a very close defence partner.** But India should restart joint exercises with the UAE, and even Saudi Arabia.
- India will also need to watch ties with Iran, which has slammed the agreement and will see Arab-Israeli tie-ups as a direct threat to its security.

Historical Background

- Arab-Israeli ties have **historically been conflict-ridden.**
- Arab countries, including Egypt, Transjordan, Syria and Iraq, fought their first war with Israel in 1948 after the formation of the state of Israel was announced.
- The **war ended with Israel capturing more territories**, including West Jerusalem that was originally proposed for a Jewish state by the UN Partition Plan.
- After that, Israel and Arab states fought three more major wars: the **1956 Suez conflict, the 1967 Six-Day War and the 1973 Yom Kippur War.**
- **Egypt made a peace deal with Israel in 1979**, followed by Jordan in 1994.
- In February 2019, the **U.S. brokered a security conference in Warsaw** to build a global strategy against Iran.
- The meeting brought leaders from Israel, Saudi Arabia, the UAE and several other countries.
- Following this conference, in August 2019, the U.S. arranged secret talks between the UAE and Israel.
- These meetings laid the foundations for the agreement.

Where is West Bank?

- It is a **landlocked territory near the Mediterranean coast of Western Asia**, bordered by Jordan to the east and by the Green Line separating it and Israel on the south, west and north.
- The **West Bank also contains a significant section** of the western Dead Sea shore.

INDIA ANNOUNCES $500 MILLION PACKAGE FOR THE MALDIVES

> *India announced a $500 million package to fund a project in the Maldives to connect the capital Male to three nearby islands.*

About:

- India will support the **Male connectivity project** with a grant of $100 million and a new line of credit of $400 million.
- **Greater Male Connectivity Project:** This will be the largest civilian infrastructure project in the Maldives, connecting Malé (the capital) with three neighbouring islands **Villingili, Gulhifalhu** (where a port is being built under Indian line of credit) and **Thilafushi** (new industrial zone) by the construction of a bridge-and-causeway link spanning 6.7 km.
- The project includes **air connectivity "bubble" for travel, a direct ferry service, a submarine cable for telecom connectivity** and assistance for the Greater Male Connectivity project (GMCP).
- Both sides were finalising an additional soft loan arrangement as part of India's decision to extend "urgent financial assistance" to the Maldives to cope with the COVID-19 situation.
  - **Background:** Since November 2018 India and Maldives have embarked on a dynamic and ambitious phase of the partnership that builds ties based on mutual trust and shared interests.

- Maldives President had personally sought India's assistance for the Greater Male Connectivity project (GMCP) during his visit to New Delhi in September 2019.

Significance:

- It will **help the Indian Ocean Islands to deal with the economic impact** of the COVID-19 pandemic.
- It will **anchor the economic and industrial transformation** of the Maldives.
- The project would **render the Chinese built Sinemale Friendship bridge** connecting Male to two other islands.
- The **air travel bubble** between India and Maldives is expected to facilitate the movement of people for **employment, tourism and medical emergencies.**
- It will promote holistic urban development in the Male region.

Other Important Announcements Made:

- A **regular cargo ferry service between India and Maldives** will be started to boost trade and commerce.
- India has decided to **renew quotas for supply of essential commodities** to Maldives for the year 2020-21.
  - The commodities include food items like potatoes, onions, rice, wheat, flour, sugar, dal and eggs as well as river sand and stone aggregates and the quotas assure food security and hence provide certainty and price stability for essential items in the Maldives.

India-Maldives Relations:

Background:

- India and Maldives **share ethnic, linguistic, cultural, religious and commercial links.**
- India was among the **first to recognize the Maldives after its independence in 1965** and later established its mission at Male in 1972.
- India and Maldives officially and amicably decided their maritime boundary in 1976.
- **Diaspora:** There are 25,000 Indian nationals living in the Maldives (second largest expatriate community).

India's crucial help to Maldives:

- **Operation Cactus:** It was an attempt by a group of Maldivians led by Abdullah Luthufi and assisted by armed mercenaries of a Tamil secessionist organization from Sri Lanka, the People's Liberation Organisation of Tamil Eelam (PLOTE), to overthrow the government in the island republic of Maldives on 3rd November 1988. The coup d'état failed due to the intervention of the Indian Army, whose military operations efforts were code-named Operation Cactus.
- Maldives urged India for help following the collapse of the island's only water treatment plant, India helped by sending

its heavy lift transporters like C-17 Globemaster III, II-76 carrying bottled water.

Political Relations:

- Both nations are **founding members of the South Asian Association for Regional Cooperation (SAARC)**, the **South Asian Economic Union** and signatories to the **South Asia Free Trade Agreement.**

- Maldives is an important aspect of **India's 'Neighbourhood First' policy and 'India First'** has been a stated policy of the Government of Maldives. Both nations are working together to counter China's presence in the IOR.

Strategic Importance:

- In the Indian Ocean, Maldives archipelago comprising 1,200 coral islands lies next to key shipping lanes which **ensure uninterrupted energy supplies to countries** like China, Japan, and India.

- Since 1988, defence and security have been a major area of cooperation between India and Maldives. India has adopted a very flexible and accommodating approach in meeting Maldivian requirements of defence training and equipment.

- India **provides the largest number of training opportunities for Maldivian National Defence Force (MNDF)**, meeting around 70% of their defence training requirements.

- Ekuverin'is a joint military exercise between India and Maldives.

Trade and Economy:

- Maldives has extended its support for India's candidature for permanent membership of an **expanded and reformed UN Security Council.** The Maldives also has reiterated support for India's candidature for a non-permanent seat for the year 2020-21.

- **India is Maldives' 4th largest trade partner** after UAE, China and Singapore. In 2018, India was the 5th largest source of tourist arrivals in the Maldives.

- At present, India-assisted projects in the region include water and sewerage projects on 34 islands, reclamation of the project for the Addl island, a port on Gulhifalhu, airport redevelopment at Hanimadhoo, and a hospital and a cricket stadium in Hulhumale.

10 REASONS WHY MALDIVES IS IMPORTANT FOR INDIA

7 **Under Yameen, radicalisation grew rapidly** and it was often said that archipelago accounted for one of the highest numbers of foreign fighters in Syria in terms of per capita. Indian can ill-afford a neighbour which fails to check Islamic radicalisation

8 There are **25,000 Indian nationals living in Maldives** (second largest expatriate community). Indian tourists also account for close to 6% of tourists Maldives receives every year

1 Strategically located in the Indian Ocean, **Maldives archipelago comprising 1,200 coral islands lies next to key shipping lanes** which ensure uninterrupted energy supplies to countries like China, Japan and India

2 Since **China started to send naval ships to Indian Ocean** roughly 10 years ago – and right up to Gulf of Aden in the name of antipiracy operations – Maldives' significance has steadily grown and now it's at the **heart of international geopolitics**

3 As the pre-eminent South Asian power and a '**net security provider**' in the Indian Ocean region, India needs to **cooperate with Maldives in security and defence sectors**

4 **China's massive economic presence in Maldives** is a major concern for India. With the country now said to owe 70% of its external aid to China, many believe that Yameen has done to Maldives what Rajapaksa did to Sri Lanka. India had to push back at some stage and the current political crisis

migh just have offered India the right opportunity

5 **A large section of population** which supports the opposition parties like Nasheed's MDP **wants India to act against Yameen**

6 **Maldives is also a member of SAARC. It is important for India** to have Maldives onboard to maintain its leadership in the region. Maldives was the only SAARC country which seemed reluctant to follow India's call for boycott for SAARC summit in Pakistan after the Uri Attack.

9 There are **25,000 Indian nationals living in Maldives** (second largest expatriate community). Indian tourists also account for close to 6% of tourists Maldives receives every year

10 **India is also a preferred destination for Maldivians for education, medical treatment, recreation and business.** According to MEA, more and more Maldivians are seeking long term visa for pursuing higher studies/medical treatment in India

Development Assistance Programme:

- India has helped Maldives in many diverse areas to bolster the development of Maldives e.g. Indira Gandhi Memorial Hospital, Maldives Institute of Technical Education (now called the Maldives Polytechnic), India-Maldives Faculty of Hospitality & Tourism Studies, Technology Adoption Programme in Education Sector in the Maldives etc.

Concerns:

- As China's naval expansion into the Indian Ocean has been growing, the significance of Maldives has steadily grown and now it's at the heart of international geopolitics.

- India-Maldives ties had deteriorated significantly under its President Yameen who was perceived to be close to China.

INDUS WATER TREATY (IWT)

Recently, India refused a request by Pakistan to hold a meeting on issues around the Indus Water Treaty (IWT) at the Attari check post near the India-Pakistan border.

About:

- The request for the meeting has been denied because of restrictions on movement in light of the COVID-19 pandemic, travelling to the border for a meeting isn't advisable.

- The **Indus Waters Treaty, brokered by World Bank**, was signed by the then-Indian Prime Minister Jawaharlal Nehru and Pakistani President Ayub Khan on 19 September 1960.

- It administers **how Indus River and its tributaries would be utilized.**

- India **governs Beas, Ravi, and Sutlej; Pakistan governs Indus, Chenab, and Jhelum.**

- However, India is allowed to **use 20% of Indus water** for irrigation, power generation, and transportation.

- The treaty has set out a mechanism for the exchange of information about the rivers through the **Permanent Indus Commission.**

- Disputes have to be referred to **seven-member arbitral tribunal called the "Court of Arbitration".**

The Indus Waters Treaty (IWT)

- The distribution of waters of the Indus and its tributaries between India and Pakistan is governed by the Indus Water Treaty (IWT).

- Was signed on Sept 19, 1960, between India, Pakistan and a representative of World Bank after eight years of negotiations.

- Partition of India cut across the Indus river basin, which has the Indus river, plus five of its main tributaries.

Western rivers
Chenab, Jhelum, Indus

India's rights over these rivers: Limited — can set up certain irrigation, run-of-the-river power plants, very limited storage, domestic and non-consumptive use, all subject to conditions

Eastern rivers
Sutlej, Beas, Ravi

India's rights over these rivers: All exclusive rights lie with India.

Indus Waters Commission a success story

- Once every five years, conducts a general inspection of all rivers in parts. Total inspection tours so far: Over 100

- Regularly meets once a year. Total meetings thus far, including those for taking up Pak objections: Over 100

Baglihar dam on Chenab

Present Developments:

- To utilize the waters of the Eastern rivers which have been allocated to India for exclusive use, India has constructed following dams:
  - Bhakra Dam on Satluj
  - Pong and Pandoh Dam on Beas
  - Thein (Ranjit Sagar) on Ravi

- **Shahpurkandi Project:** It will help in utilizing the waters coming out from the powerhouse of Thein dam for irrigation and power generation in J&K and Punjab. The construction work is being undertaken by the Govt of Punjab under the monitoring of Govt of India.

- **Construction of Ujh multipurpose project:** It will create storage of water on river Ujh , a tributary of Ravi for irrigation and power generation in India. This project is a National Project whose completion period will be 6 years from the beginning of the implementation.

- **The 2ⁿᵈ Ravi Beas link below Ujh:** It is being planned to tap excess water flowing down to Pakistan through river Ravi, even after construction of Thein Dam, by constructing a barrage across river Ravi for diverting water through a tunnel link to Beas basin. Govt. of India declared this project as National Project.

- Projects like Beas-Sutlej Link, Madhopur-Beas Link, Indira Gandhi Nahar Project etc has helped India utilize nearly the entire share (95 %) of waters of Eastern rivers.

Limitations for India under the Treaty:

- The treaty's provisions **do not allow for a unilateral abrogation.**

- Even if India decides to back down from the treaty, the **1969 Vienna Convention** on the law of treaties should be abided by.

- The treaty undermines the country's image internationally. **Other neighbouring countries like Bangladesh and Nepal may ask for similar treaties** with them which will trouble India's position in Asia.

- Under the IWT, India does indeed have a **right to "limited hydropower generation" upstream** on the western tributaries allotted to Pakistan, including the Chenab and the Jhelum. However, many in Pakistan worry that even though these proposed dams may individually abide by the technical letter of the treaty, their effects will add up downstream.

- Pakistan has **raised a dispute over construction of Ratle Dam** over Chenab River. Pakistan has been flagging concerns over the designs of some other Indian hydroelectric projects: 1000 MW Pakal Dul, 120 MW Miyar, and 48 MW Lower Kalnai.

Indus River System

- The Indus River system is one of the largest river basins in the world. It comprises of **five rivers namely Indus River, Jhelum, Chenab, Ravi, Beas and Sutlej.**

- The basin is mainly shared by India and Pakistan with a small share for China and Afghanistan.

- It flows in a north-west direction from its source (Glaciers of Kailas Range – Kailash range in Tibet near Lake Manasarovar) till the Nanga Parbhat Range.

- Its length is about 2,900 km. Its total drainage area is about 1,165,000 square km [more than half of it lies in semiarid plains of Pakistan]. It is joined by Dhar River near Indo-China border.

- After entering J&K it flows between the Ladakh and the Zaskar Ranges. It flows through the regions of Ladakh, Baltistan and Gilgit.

Jhelum River:

- It originates in spring at Verinag in the south-eastern part of the Kashmir Valley.
- It flows northwards into Wular Lake (north-western part of Kashmir Valley). From Wular Lake, it changes its course southwards. At Baramulla, the river enters a gorge in the hills.

Chenab River:

- It originates from near the Bara Lacha Pass in the Lahul-Spiti part of the Zaskar Range.
- Two small streams on opposite sides of the pass, namely Chandra and Bhaga, form its headwaters at an altitude of 4,900 m.
- The united stream Chandrabhaga flows in the north-west direction through the Pangi valley, parallel to the Pir Panjal range.

Ravi River:

- It originates in Kullu hills near the Rohtang Pass in Himachal Pradesh.
- It drains the area between the Pir Panjal and the Dhaola Dhar ranges.
- After crossing Chamba, it takes a south-westerly turn and cuts a deep gorge in the Dhaola Dhar range.

Beas River:

- It originates near the Rohtang Pass, at a height of 4,062 m above sea level, on the southern end of the Pir Panjal Range, close to the source of the Ravi.
- It crosses the Dhaola Dhar range and it takes a south-westerly direction and meets the Satluj river at Harike in Punjab.
- It is a small river with a length of 460 km only and it lies entirely within the Indian territory.

Satluj River:

- It originates from the Manasarovar-Rakas Lakes in western Tibet at a height of 4,570 m within 80 km of the source of the Indus.
- Like the Indus, it takes a north-westerly course up to the Shipki La on the Tibet-Himachal Pradesh boundary.
- After entering the plain at Rupnagar (Ropar), it turns westwards and is joined by the Beas at Harike.
- From near Ferozepur to Fazilka it forms the boundary between India and Pakistan for nearly 120 km.
- The famous Bhakra dam has been constructed on this river.

ENRICA LEXIE CASE

The Supreme Court refused to pass any order on the Centre's plea seeking closure of cases against two Italian marines, who are facing charges of killing two Indian fishermen in February 2012.

About:

- The court ruled that it would not pass any order without hearing the victims' families who should be given adequate compensation.
- India lost jurisdiction over two Italian marines who are facing charges of killing two Indian fishermen in February 2012.
- Now they will not be tried in India and will face criminal proceedings in Italy.
- The case is also called the **"Enrica Lexie" case.**

Background:

- In Feb 2012, two Italian Marines on board an **oil tanker "Enrica Lexie"** had opened fire on a fishing boat and killed two fishermen mistaking them as pirates.
- The incident took place in the contiguous zone waters at a distance of 20.5 nautical miles off Kerala coast. India arrested the two marines on murder charges following the incident.
- This incident had resulted in a long bilateral dispute and had soured relations between India and Italy since 2012.
- Italy challenged the arrest of marines before Kerala High Court stating that India has no jurisdiction to try Italian naval marines. Italy provoked **Article 97 of the United Nations Convention on the Law of the Sea (UNCLOS).**
- The matter was taken up by the Supreme Court and the apex court ruled that as per the Indian government notification issued in pursuant of the Convention on the Law of the Sea, India has jurisdiction over the entire 200-mile Exclusive Economic Zone, and thus the case can be triable in India.
- It stated that only the Indian Government can exercise jurisdiction, not the state government.
- In **2015 Italy approached the International Tribunal for the Law of the Sea, an arbitral tribunal** under the International Court of Justice and filed an arbitration case under **Annex VII of UNCLOS.**
- The ITLOS ruling of 2015 asked Italy and India to suspend all prosecutions in the case.
- Italian marines Massimiliano Latorre and Salvatore Girone returned from India to Italy in 2014 and in 2016 respectively on health grounds.
- The **Permanent Court of Arbitration** heard the case in July 2019.

Recent Ruling by the Tribunal:

- It upheld that the actions of the Italian marines, and, consequently, Italy breached India's freedom of navigation under **UNCLOS Article 87(1)(a) and 90** and observed that India and Italy had "concurrent jurisdiction" over the incident.

- It ruled that the **Italian marines enjoyed diplomatic immunity** as Italian state officials under the United Nations Convention on the Law of Sea and cannot be tried in India. The ruling saw a 3:2 voting.

- It took note of the "commitment expressed by Italy" to resume its criminal investigation into the incident, and the tribunal said India must cease to exercise its jurisdiction.

- It mentioned that India was entitled to compensation and asked India and Italy to consult on the amount of compensation due.

- It struck down Italy's claim for compensation for the marines for the duration of their stay at the Italian Embassy.

- The Italian government said that it would carry out the decision of the arbitration court "in a spirit of cooperation" with India and will resume its criminal investigation into the 'Enrica Lexie' case.

Permanent Court of Arbitration:

- It was **established in 1899** and has **headquarters at the Hague in the 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.

- In **real terms it is not a court**, it is an organizer of arbitral tribunals to resolve conflicts between member states, international organizations, or private parties.

- All decisions delivered by it are **called "awards" are binding on all the parties** in the dispute and have to be carried out without delay.

What is the United Nations Convention on the Law of the Sea (UNCLOS)?

- It is an **international agreement** that came into force in 1982. It is also known as the **Law of the Sea Convention or the Law of the Sea Treaty.**

- It divides marine areas into five main zones namely- Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ) and the High Seas.

- It provides a framework for state jurisdiction in maritime spaces. It provides a different legal status to different maritime zones.

CARTOGRAPHIC CHALLENGE: PAKISTAN UNVEILS NEW MAP

Pakistan released a new political map which includes all of Jammu & Kashmir, Ladakh, Sir Creek and Junagadh.

About:

- The map was released on the occasion of the **first anniversary of the abrogation of Article 370** and special status to Jammu and Kashmir.

- **Reason:** This move is a response to India's inclusion of Pakistan Occupied Kashmir as part of the union territory of Jammu & Kashmir, and of Gilgit Baltistan, as part of Ladakh in the new map, the government released on November 2, 2019.

- The new map shows the entire Jammu & Kashmir as a disputed territory and does not show any borders in the east of Kashmir. It has renamed the Kashmir Highway in Islamabad as Srinagar Highway.

- The new map also shows the Federally Administered Tribal Areas (FATA) as being part of Khyber Pakhtunkhwa province.

- Pakistan's claim to all of Jammu and Kashmir, but not Ladakh, goes against its own commitment to adjudicate the future of all six parts of the erstwhile royal state of Jammu-Kashmir (Jammu, Kashmir, Ladakh, Gilgit-Baltistan, Pakistan occupied Kashmir (PoK) and Aksai Chin) with India and the claims to Siachen and Sir Creek, that have been the subject of several discussions between India and Pakistan, are also a regressive step.

India's Response:

- India has called Pakistan's move as an exercise in political absurdity, which lays untenable claims to the Indian territories.

- It stated that the assertions have neither legal validity nor international credibility and it only confirms the reality of Pakistan's obsession with territorial aggrandisement supported by cross-border terrorism.

Way Forward:

- As India considers its next moves on this provocation, it should be prepared for Pakistan taking all the issues it has raised with its new map to the international stage.

- China, Pakistan and Nepal objected to the map New Delhi had issued in November 2019, albeit for different reasons, and India must be well-prepared to deal with the three-pronged cartographic challenge it will face in the coming months.

About Sir Creek:

- It is a 96 km long strip of water disputed between India and Pakistan in the Rann of Kutch marshlands.

- It opens up in the Arabian Sea and roughly divides the Kutch region of Gujarat from the Sindh Province of Pakistan.

- Pakistan claims the entire width of the estuary, while India says the demarcation should be in the middle.

- The International Boundary in the Sir Creek area and International Maritime Boundary line (IMBL) between India and Pakistan have not been demarcated.

- In the support of its claim, India cites the Thalweg Doctrine in International Maritime Law, which states that river boundaries between two states may be divided by the mid-channel if the water-body is navigable.

About Junagarh:

- It is located in coastal Gujarat. It was a part of the Kathiawar region.

- In 1947 it decided to join independent India and the decision was formalised through a Plebiscite in 1948. The decision was not accepted by Pakistan then, but later on, Pakistan agreed to it.

About Siachen Glacier:

- The Siachen Glacier is part of Union Territory of Ladakh and is the Second-Longest glacier in the World's Non-Polar areas.

- It is located in the Eastern Karakoram range in the Himalayas, just northeast of Point NJ9842 where the Line of Control between India and Pakistan ends.

- It is the world's highest battlefield.

NO VOTE FOR CUBA ON HUMAN RIGHTS COUNCIL

Recently, the U.S. Secretary of State urged UN members not to support Cuba's bid to join the Human Rights Council.

About:

- As the US had earlier **withdrawn from the council in 2018** because the council adopted resolutions condemning Israel.

- Cuba sat on the UN Human Rights Council in 2014-2016 and 2017-2019 and has applied to fill one of the regional vacancies for 2021-2023.

Reasons for Opposing Cuba:

- U.S. Secretary of State has described Cuba's sale of medical services, which is the main source of foreign exchange for Cuba, as a form of human trafficking.

- Havana's main source of foreign exchange comes as a form of human trafficking.

About United Nations Human Rights Council:

- It is an **inter-governmental body** within the United Nations system which was created in 2006 to replace the Commission on Human Rights headquartered at Geneva.

- It is made up of 47 member states chosen by direct and secret ballot.

- It is responsible for the **promotion and protection of all human rights** around the globe.

- It has the ability to **discuss all thematic human rights issues** and situations that require its attention throughout the year.

- The seats are **distributed geographically and are awarded for a period of three years.** Members are not eligible for immediate reelection after serving two consecutive terms.

OPERATION LEGEND

Recently, the US President announced a "surge of federal law enforcement" in cities run by the Democrats, including Chicago, as part of an expanded 'Operation Legend'.

About:

- It has been named after LeGend Taliferro, a four-year-old Black child who was shot dead in Kansas City, Missouri, on June 29 while sleeping in his apartment.

- The operation was announced by the United States Department of Justice in early July 2020 to **help the local police battle the "sudden surge of violent crime" in the city.**

- Over 200 arrests were made in the city, which has reportedly seen a 40 per cent spike in murders in the last year, after over 100 federal troops were ushered in.

- The President denounced the "bloodshed" across the nation and said he might deploy agents to New York, Chicago, Philadelphia, Detroit, Baltimore and Oakland, California, "cities controlled by liberal Democrats. All run, really, by the radical left."

Portland Crisis:

- Since the killing of George Floyd by police officers in Minneapolis on May 25, there have been anti-racism protests on the streets of the city to seek police reforms.

- In early July, federal troops were moved into the city "to protect federal property", but have often violently clashed with protesters and detained many in unmarked vehicles.

- The president has called the unrest in Portland as "worse than Afghanistan".

BACKDOOR BUGS: INFORMATION SECURITY AUDIT FOR TELECOM NETWORKS

> *The Department of Telecommunications (DoT) is set to direct all telecom operators to undertake an 'information security audit' of their networks and submit the report.*

About:
- DoT asked telecom companies to get this external audit done by an agency empaneled **with the Indian Computer Emergency Response Team (Cert-IN)** in order to check for **any 'backdoor' or 'trapdoor' bugs installed on their networks.**
- A **'backdoor' or a 'trap door'** is a **bug installed in the telecom hardware** which allows companies to listen in or collect data being shared on the network which can be exploited to extract information and pass on illegally to agencies around the world.

Background:
- After the border skirmish at Galwan Valley in Ladakh, in which 20 Indian soldiers were killed, the government moved to bar all Chinese companies from India.
- As a part of its measures, the DoT had asked state-run BSNL and MTNL not to use Chinese equipment for the roll-out of its 4G network.
- The DoT had then also hinted it would announce guidelines asking even private telcos to refrain from using Chinese equipment but no such guidelines have, however, been issued till now.

What is an Information Security Audit for Telecom Networks?
- An **information security audit is a step-by-step assessment** of the complete network infrastructure which checks for the equipment installed and the latest upgrades done in order to prevent any data leakages.
- The **auditors also check the data storage** and **security policies of the company** and check whether all sections of the company adhere to the norms set by the company itself.

Need for the Audit:
- This audit is necessary since there were **reports from other parts of the world of such bugs being installed in Telecom networks.**
- The audit is likely to **increase the scrutiny on Chinese vendors Huawei Telecommunication Company and ZTE**, which have been alleged to **spy for the Chinese government.**

- Almost **30 percent of Bharti Airtel's network** comprises Chinese telecom equipment, and it is as much as 40 per cent for Vodafone Idea.
- The **State-run Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Telephone Nigam Limited (MTNL)** also have equipment from Chinese vendors, including Huawei and ZTE in their 3G and older networks.
- In January 2020, the **US had released a report alleging that Huawei had inserted 'backdoors' in telecom networks** it had helped build in mobile phone networks in the US and across the world.

Conclusion:
- Though such internal and external audits are done by companies every three or four years, it will be the first time that the audit will be done by an agency specified by the DoT.
- The report of the audit will help **DoT put in a concrete plan to bar Chinese vendors** from the Indian telecom market space if any problems are found.

NAVAL INNOVATION AND INDIGENISATION ORGANISATION (NIIO)

> *The Union Minister of Defence launched the Naval Innovation and Indigenisation Organisation (NIIO) to boost self-reliance in the defence manufacturing sector.*

About:
- A compendium of Indian Navy's Indigenisation perspective plans titled **'SWAVLAMBAN'** was released on the occasion.
- The Indian Navy signed Memorandum of Understanding (MoU) with Uttar Pradesh Expressway Industrial Development Authority, Raksha Shakti University of Gujarat, Maker Village in Kochi and Society of Indian Defence Manufacturers.

Naval Innovation and Indigenisation Organisation:
- It will provide dedicated structures for the end-users to interact with academia and industry towards fostering innovation and indigenisation for self-reliance in defence.
- **It is a three-tiered organisation:**
  - The **Naval Technology Acceleration Council (N-TAC)** will bring together the twin aspects of innovation and indigenisation and provide apex level directives.
  - A **working group** under the N-TAC will implement the projects.

◆ A **Technology Development Acceleration Cell (TDAC)** has also been created for the induction of emerging disruptive technology in an accelerated time frame.

- The **Draft Defence Acquisition Policy 2020 (DAP 20)** envisages the service headquarters establishing an Innovation and Indigenisation Organisation with the existing resources.

- **Significance:** The NIIO puts in place dedicated structures for the end users to interact with academia and industry towards fostering innovation and self-reliance in defence in keeping with the vision of Atmanirbhar Bharat.

SPY AND STALKERWARE APPS

Recently, Avast warned that there was a 51 percent increase in the use of spyware and stalkerware during the lockdown period from March to June.

About:
- Stalkerware is a software that allows a master device to track someone's location, access their personal photos and videos, intercept emails, texts and communications apps such as WhatsApp and Facebook.
- They have the ability to make phone calls and record conversations over the internet, get SIM serial numbers, without the target's knowledge.
- Stalkerware is a growing category of domestic malware with disturbing and dangerous implications.
- Spyware and info stealers seek to steal personal data and stalkerware steals the physical and online freedom of the victim.
- Viruses and malware can be detected by anti-virus software but spyware and stalkerware apps disguise themselves as useful like anti-theft applications and send out stolen data to central servers without the knowledge of the users.

How do such Apps Work?
- They seek permissions such as access to gallery locations, call logs among other things at the time of their installation.
- Once the app is installed in the phone, the master device which has a dashboard can see whatever is going on with the other device.

Why has the usage of such Apps increased during a Lockdown?
- One of the main reasons is the increased usage of the internet by everyone due to various lockdown measures.
- Everything has gone online and anything could be bought online where the opportunities are available for cybercriminals.

FROM PINAKA TO ASTRA, THE NEW WEAPONS DAC HAS APPROVED

In the midst of India's tense border standoff with China, the defence ministry approved procurement of 33 frontline fighter jets, a number of missile systems and other military hardware at a cost of Rs 38,900 crore to bolster the combat capability of the armed forces.

About:
- 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.

Indigenous Development:
- The indigenous content in some of these projects is up to 80% of the project cost. A large number of these projects have been made possible due to Transfer of Technology by DRDO to the Indigenous Industry.
  ◆ These include Pinaka ammunitions, BMP armament upgrades and Software Defined Radios for the Army, Long Range Land Attack Cruise Missile Systems and Astra Missiles for Navy and Air Force.
- All equipment is to be manufactured in India involving the defence industry with the participation of several MSMEs as prime-tier vendors.

Pinaka Missile Systems:
- Pinaka is an all-weather, indirect fire, free flight artillery rocket system. It provides a unique capability to accurately deliver a devastatingly lethal and responsive fire against a variety of area targets such as exposed enemy troops, armoured and soft skin vehicles, communication centres, air terminal complexes, fuel and ammunition dumps.
- The Pinaka weapon system consists of rocket, multibarrel rocket launcher, battery command post, loadercum-replenishment vehicle, replenishment vehicle and Digicora MET radar.

CLAUSE 6 OF THE ASSAM ACCORD

Recently, a high-level committee constituted by the Ministry of Home Affairs released the report on recommendations for implementation of Clause 6 of the Assam Accord.

About:

- The **Assam Accord (1985) was a Memorandum of Settlement (MoS)** signed between representatives of the Government of India and the leaders of the Assam Movement in 1985.
- It followed a six-year agitation that started in 1979.
- The accord brought an end to the Assam Agitation and paved the way for the leaders of the agitation to form a political party and form a government in the state of Assam.
- According to accord, the Bangladeshis who came between 1966 and 1971 will be barred from voting for ten years.
- It mentions that the international borders would be sealed and all persons who crossed over from Bangladesh after 1971 are to be deported.

What is Clause 6 of the Assam Accord?

- It is a part of the Assam Accord that came at the culmination of a movement against immigration from Bangladesh.
- **Clause 6 reads:** "Constitutional, legislative and administrative safeguards, as may be appropriate, shall be provided to protect, preserve and promote the cultural, social, linguistic identity and heritage of the Assamese people.".
- The Accord sets March 24, 1971, as the cutoff for recognition as citizens.
- **Significance:** Clause 6 was inserted to safeguard the socio-political rights and culture of the **"indigenous people of Assam".**

Recent Recommendations:

- The report of the 14-member committee recommends that the definition of 'Assamese People' for the purpose of implementation of Clause 6 of the Assam Accord should include **Indigenous Tribes as well as other Indigenous Communities of Assam, all other citizens of India residing in the territory of Assam on or before 01.01.1951 and Indigenous Assamese and their descendants.**
- The panel recommends the Assamese people be given:
  - 80 to 100% reservation in the parliamentary seats of Assam, Assembly seats and local body seats be reserved for the "Assamese people".
  - 80 to 100% of jobs under the Government of Assam and state government undertakings and 70 to 100% of vacancies arising in private partnerships.
  - Land rights, with restrictions imposed on transferring land by any means to persons other than "Assamese people".
  - Assamese language shall continue to be an official language throughout the state with provisions for use of local languages in Barak Valley, Hill Districts and the Bodoland Territorial Area Districts.
  - Mandatory provision of an Assamese language paper for recruitment in state government services with alternatives for Barak Valley districts, BTAD and Hills Districts.
  - To set up Academies for all-round development of each of the indigenous tribal languages including, Bodo, Mishing, Karbi, Dimasa, Koch-Rajbongshi, Rabha, Deuri, Tiwa, Tai and other indigenous languages.

SECTION 306 IPC: ABETMENT OF SUICIDE

Recently, father of late actor Sushant Singh filed an FIR for abetment of suicide against an actor and five others.

About:

- **Section 306 of the Indian Penal Code, 1860** makes abetment of suicide a punishable offence and prescribes either a jail term of up to ten years or a fine or both.
- Section 306 mentions that if any person commits suicide, whoever abets the commission of such suicide shall be punished with imprisonment for a term which may extend to ten years, and shall also be liable to fine.
- **Section 108 of the IPC** defines the abettor. Abetment is defined as instigating, engaging in a conspiracy or assisting in committing the offence.

Seriousness of the Offence:

- Abetment of suicide is a serious offence that is tried in a Sessions court and is cognizable, non-bailable and non-compoundable.
  - A cognizable offence is one in which a police officer can make an arrest without a warrant from a court.
  - A non-bailable offence means bail is granted to the accused at the discretion of the court, and not as a matter of right.
  - A non-compoundable offence is one in which the case cannot be withdrawn by the complainant even when the complainant and the accused have reached a compromise.

- **A person is guilty of abetment when:**
  - He/She instigates someone to commit suicide.
  - He/She is part of a conspiracy to make a person commit suicide.
  - He/She intentionally help the victim to commit suicide by doing an act or by not doing something that he was bound to do.

Is the Abetment of Suicide same as Murder?

- The abetment of suicide is **different from murder.** The Supreme Court clarified this issue in 1997 in the **case of 'Sangarabonia Sreenu v State of Andhra Pradesh'.**
- Despite the intention of the accused to drive a person to commit suicide, **abetment of suicide is not the same as murder.**
- In the case of a murder, the final 'act' of causing the death of a person is committed by the accused which is not the case in abetment of suicide.

MPs OPPOSE EXEMPTIONS UNDER THE DATA PROTECTION LAW

Recently, at the meeting of the Joint Committee on the Personal Data Protection Bill, 2019, MPs opposed certain sections of the legislation.

About:

- The MPs opposed certain sections of the **Personal Data Protection Bill, 2019** that can be invoked to exempt government agencies, such as the National Investigation Agency (NIA), National Crime Record Bureau, Narcotics Control Bureau and the Registrar of General of India from the provisions of the law.
- These agencies would be **exempt from the provisions of the data protection law under Section 35 and Section 36 of the law.**
  - The members demanded that both these clauses of the law need to be revisited. They also argued that the government does not have a clear justification for seeking these exemptions.
- **What are Section 35 and Section 36?**
  - **Section 35 of the law** says that "in the interest of sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order" all or any provisions of this act shall not apply to any agency of the government.
  - **As per Section 36 of the law**, the "safeguards for an individual can also be suspended in the interests of prevention, detection, investigation and prosecution of any offence or any other contravention of any law for the time being in force.

What is the Data Protection Bill?

- The Personal Data Protection Bill, 2019 was introduced in Lok Sabha by the Minister of Electronics and Information Technology on December 11, 2019.
- It seeks to **provide for the protection of personal data of individuals** and establishes a Data Protection Authority for the same.
- The data can be anything from traits or attributes of identity, financial or biometric data, caste, religion or even political beliefs.

Applicability:

- **The Bill governs the processing of personal data by:** (i) government, (ii) companies incorporated in India, and (iii) foreign companies dealing with personal data of individuals in India.
- Personal data is data which pertains to characteristics, traits or attributes of identity, which can be used to identify an individual.
- The Bill categorises certain personal data as sensitive personal data. This includes financial data, biometric data, caste, religious or political beliefs, or any other category of data specified by the government, in consultation with the Authority and the concerned sectoral regulator.

Concerns regarding Section 35 and 36:

- This law flows out of a Supreme Court judgement which upheld **privacy as a fundamental right**. These clauses allow the state instruments to **remove safeguards provided to an individual**, thus completely diluting the essence of the law.
- Since the law only mentions any government agency, the exemptions could practically be extended to any government body
- Among others opposed the provisions, saying that these are in violation of civil liberties of an individual.
- The government can at **any time access private data or government agency data on grounds of sovereignty or public order**. This has dangerous implications.

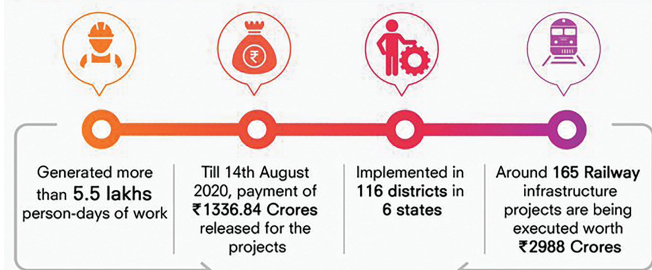## GAREEB KALYAN ROZGAR ABHIYAN

Indian Railways has generated more than 5.5 lakhs man-days of work under Gareeb Kalyan Rozgar Abhiyan in 6 States viz. Bihar, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh.

About:

- The jobs have been created in six states namely Bihar, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh.
- Around 165 Railway infrastructure projects worth two thousand 988 crore rupees are being executed in these states.
- The Railways have appointed nodal officers in each district as well as in the States so that a close coordination is established with the State Government.

Progress under Garib Kalyan Rojgar Abhiyaan

| Generated more than **5.5 lakhs** person-days of work | Till 14th August 2020, payment of ₹1336.84 Crores released for the projects | Implemented in **116 districts** in **6 states** | Around **165 Railway** infrastructure projects are being executed worth ₹2988 Crores |

Garib Kalyan Rojgar Abhiyan

- The Government of India launched the Garib Kalyan Rojgar Abhiyaan (GKRA) initiative to **tackle the impact of COVID-19 on shramik (migrant) workers in India.**
- It is an employment scheme which aims to **empower and provide livelihood opportunities to the returnee migrant workers** and rural citizens affected by COVID 19 induced lockdown.

Provisions of the Scheme:

- It will provide employment to the migrant workers and create infrastructure in rural areas with Rs. 50,000 crore investment.
- This campaign of 125 days will involve focused **implementation of 25 categories of works/activities** in 116 districts each with an I concentration on states of Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha.

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

Significance:

- It will **equip villages with public infrastructure and create livelihood opportunities** through the construction of Roads, Housing, Anganwadis, Panchayat Bhavans, various livelihood assets and Community Complexes and the laying of fibre cable and provision of the internet are also made a part of the Abhiyan.

PARIVAR PEHCHAN PATRA (PPP) INITIATIVE

The Haryana government launched a unique identity card called Parivar Pehchan Patra (PPP).

About:

- Under this, each family will be considered a single unit and allotted an 8-digit unique identification number.
- **Aim:** Through this initiative the state government aims to **monitor each of the approximately 54 lakh families** living across the state.
- **Significance:** PPP is an e-governance initiative that will enable the citizens to get the benefit of various Central and State government schemes at their door-step in a fair and transparent manner.
- **Mandatory:** In order to avail the benefits of social security schemes of the state government, it is **mandatory for each family to register themselves on the Parivar Pehchan Patra portal.**
- **Platform to give impetus:** A separate **Citizen Resources Information Department (CRID)** has been established to give further momentum to the **PPP programme.**
- **Under this ambit:** The State has taken several e-governance initiatives such as 'Meri Fasal Mera Byora Yojana', digitalisation of revenue records and the Haryana Udhyam Memorandum (HUM) Portal, among others.
- Telangana, Karnataka and Andhra Pradesh are also exploring the possibility of implementing a similar PPP project.

How is PPP different from the Aadhaar Card?

- The PPP is an integral number of Aadhaar, while Aadhaar represents an individual as a unit, a PPP represents a family as a unit.
- As most of our government schemes are structured around the family rather than structured around an individual so this initiative is best for an efficient delivery system.
- For example, ration eligibility is there for the family but the family can split it into various members as long as they are above 18 years and say they are separating entitlements for all individuals.

ROLE OF MGNREGA DURING PANDEMIC

The MGNREGA has created 153.16 crore person-days of employment during April-July 2020 period and helping in mitigating the increased rural distress due to Covid-19.

About:

- It is higher than the 107.24 person-days for the corresponding four months of the 2019 fiscal year.
- It provides **work in rural areas during the peak summer months** when the Rabi crop would already have been harvested and Kharif plantings are still to gather pace.

What is Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)?

- It is Indian labour law and social security measure that purposes to **guarantee the "Right to Work".**
- **Objective of the act:** The main objective of the Act is to **enhance livelihood security in rural areas** by providing at **least 100 days of guaranteed wage employment** in a financial year to every household whose adult members volunteer to do unskilled manual work.

Key Features:

- **Legal right to work:** The Act provides a legal right to employment for adult members of rural households. At least one-third beneficiaries have to be women. Wages must be paid according to the wages specified for agricultural labourers in the state under the Minimum Wages Act, 1948.
- **Time-bound guarantee of work and unemployment allowance:** Employment must be provided with 15 days of being demanded to fail which an 'unemployment allowance' must be given.
- **Decentralised planning:** Gram sabhas must recommend the works that are to be undertaken and at least 50% of the works must be executed by them. PRIs are primarily responsible for planning, implementation and monitoring of the works that are undertaken.

- **Transparency and accountability:** There are provisions for proactive disclosure through wall writings, citizen information boards, Management Information Systems and social audits. Social audits are conducted by gram sabhas.
- **Funding:** Funding is shared between the centre and the states. The central government bears 100% of the cost of unskilled labour, 75% of the cost of semi-skilled and skilled labour, 75% of the cost of materials and 6% of the administrative costs.

Significance:

- **Ensuring livelihood** for people in rural areas.
- **Large scale participation** of women, Scheduled Castes and Scheduled Tribes (SCs/STs) and other traditionally marginalised sections of society. SCs/STs account for 51% of the total person-days generated and women account for 47% of the total person-days generated.
- **Increasing the wage rate** in rural areas and strengthening the rural economy through the creation of infrastructure assets.
- Facilitating sustainable development, and
- **Strengthening PRIs** by involving them in the planning and monitoring of the scheme.

Concerns in MGNREGA:

- MGNREGA is perhaps the most ambitious anti-poverty scheme launched anywhere in the world. However, the scheme has shown several anomalies when it comes to effective implementation.
- **Low wage rate:** MGNREGA wage rate cannot be less than the minimum agricultural wage rate of the state. The low wage rates have resulted in a lack of interest among workers in working for MGNREGA schemes, making way for contractors and middlemen to take control, locally.
- **Insufficient budget allocation:** The funds have dried up in many states due to lack of sanctions from the Central government which hampers the work in peak season.
- **Regular payment delays:** Despite the order of the Supreme Court and initiatives and GO (Government Order) by the Union Ministry of Finance, no provision has yet been worked out in the MIS for calculation of full wage delays and payment of compensation for the same.
- **Corruption and Irregularities:** The scheme is marred by the corrupt practices like the actual funds that reach the beneficiaries are very little compared to the funds allocated for the welfare schemes.
- **Discrimination:** The cases of discrimination against the women and people from the backwards groups are reported from several regions of the country.
- **Non-payment of unemployment allowance:** There are a huge number of unemployment allowances being shown in the Management Information System (MIS) currently.

- **Inadequate awareness:** There is a lack of awareness among the public for this scheme and the government needs to work for more awareness and rights of the people especially women.
- **Poor infrastructure building:** The issue of poor quality of assets.
- **Non-purposive spending:** MGNREGA has increased the earning capacity of the rural people but the spending pattern of the workers assumes significance because there is hardly any saving out of the wage earned from MGNREGS.

Way Ahead:

- **Social auditing** - social audits of the scheme are carried out as per rules and there is an effective implementation of the provisions of the delay compensation system.
  - Under the scheme's compensation clause, agencies responsible for the delay are expected to pay 0.05% of wages per day after closure of muster roll.
- **Participation of women:** The participation of women must be increased through raising awareness about MGNREGA.
- **Utilisation of funds:** The Department of Rural Development should analyse reasons for poor utilisation of funds and take steps to improve the same. In addition, it should initiate action against officers found guilty of misappropriating funds under MGNREGA.
- **Regular monitoring:** The frequency of monitoring by National Level Monitors (NLMs) should increase and appropriate measures should be taken by states based on their recommendations. The National Level Monitors (NLMs) are deployed by the Ministry of Rural Development for regular and special monitoring of MGNREGA and to enquire into complaints regarding mis-utilisation of funds, etc.
- **Training of Functionaries:** Training and capacity building of elected representatives and other functionaries of PRIs must be done regularly as it will facilitate their involvement in the implementation of MGNREGA.

GRAMODYOG VIKAS YOJANA

Ministry of Micro Small and Medium Enterprises (MSME) approved a programme for the benefit of artisans involved in manufacturing of Agarbatti and to develop village industry under 'Gramodyog Vikas Yojana'.

About:

- As per the programme, initially, four Pilot Projects will be started, including one in the North-Eastern part of the country.
- Each targeted cluster of artisans will be **supported with about 50 Automatic Agarbatti making machines** and 10 Mixing machines.
- A total of 200 Automatic Agarbatti making machines and 40 Mixing machines will be provided to the artisans.

📝 **DO YOU KNOW?**

- **Khadi and Village Industries Commission (KVIC) a statutory organization** under MSME that will provide training, and assist artisans working in this area.
- Gramodyog Vikas Yojana is one of **the two components of Khadi Gramodyog Vikas Yojana** which aims **to promote and develop the village industries** through common facilities, technological modernization, training etc.

How this can be Helpful to the Artisans?

- This will **create sustainable employment** for the traditional artisans, by providing them with regular employment.
- This will give a **boost to the domestic agarbatti industry** in the country and will **reduce imports of agarbatti.**
- This will help in **increasing the wages of artisans** and eventually the Purchasing power.
- Earlier, the government have placed the **'Agarbatti' item from "Free" trade to "Restricted" trade in the import policy** and even enhanced the **import duty from 10% to 25% on 'round bamboo sticks'** which are used for manufacturing of Agarbatti and these two decisions could help in **boosting the indigenous industry.**

FOSTER CARE SCHEME

Some districts in Maharashtra are set to witness the implementation of a foster care scheme for orphaned children.

About:

- Under the scheme, 40 children from various orphanages under the department will be selected.
- Those who want to be foster parents can register online at the department's commissioner, which is based in Pune.
- **Significance:** Increasing public awareness and outreach campaigns will lead to many families coming forward and being a part of the scheme.
- This new scheme can be an alternative to adoptions and ensure that a child can develop mentally, physically and socially.

What is Foster Care?

- Foster Care is a **family-based non-institutional child care programme** that provides temporary/substitute care for children in difficult circumstances.
- Children in the age group of 0 to 6 years who are being considered by the Committee as legally free for adoption and those who have been declared legally free for adoption shall not be considered for placement in foster care. Such children shall be provided with a permanent family through adoption as per Adoption Regulations.

- Children in the age group of 8 to18 years, who are legally free for adoption but have not been selected by any Prospective Adoptive Parent (PAP) for one year, are eligible to be placed in family foster care or group foster care.

- If the child has remained with a foster family for a minimum of five years other than in pre-adoption foster care, then the foster family may apply for adoption of the child.

- Recently, the Ministry of Women and Child Development had issued revised guidelines for the implementation of the Foster Care scheme in the States or Union Territories.

- **Revised Guidelines:** The Foster Care, 2016 guidelines have been revised in the light of the Juvenile Justice (Care and Protection) Act, 2015.

- The revised guidelines have added components of group foster care where a group of unrelated children are placed with a foster family or under the care of foster caregivers in a family-like setting who may/may not be having their own biological children.

Juvenile Justice (Care and Protection of Children) Act, 2015:

- It was enacted to replace the existing Juvenile Delinquency law, the Juvenile Justice (Care and Protection of Children) Act, 2000.

- The Act addresses children in the 16-18 age group, in conflict with the law, as an increased incidence of crimes committed by them have been reported over the past few years.

- **Provisions:** Under the Juvenile Justice Act, 2015, orphaned children are taken care of in orphanages under the Women and Child Welfare department.
  - It addresses challenges such as delays in adoption processes, high pendency of cases, accountability of institutions, etc.
  - The act had introduced foster care in India.
  - The law had also made provision that while adopting a child, priority is given to disabled children and physically and financially incapable children.
  - Special provisions have been made to tackle child offenders committing heinous offences in the age group of 16-18 years. The Juvenile Justice Board is given the option to transfer cases of heinous offences by such children to a Children's Court (Court of Session) after conducting the preliminary assessment.

ASMITA SCHEME

The Maharashtra government informed the Bombay High Court that no vending machines for sanitary napkins have been installed across any location, school or institution under an ASMITA scheme.

About:

- The state government responded to **public interest litigation (PIL),** filed by law students seeking direction to the government to recognise sanitary napkins as an essential commodity by making changes to the **Essential Commodity Act, 1955** and supplying the same through the **public distribution system (PDS)** during the lockdown.

About the Scheme:

- It was initiated in Maharashtra to **ensure that women and young adolescent girls** in rural areas have access **to quality and affordable sanitary napkins.**

- Under the scheme, a pack of **eight sanitary napkins** is made available to **girl students (11-19 years)** of all **Zilla Parishad (ZP)** schools at a subsidised cost of ₹ 5.

- Other girls and women from rural areas can also avail them at a subsidised rate of at ₹ 24 per pack.

- Under the scheme, beneficiary girls will be given **"Asmita Cards",** and participating **Self Help Groups (SHGs)** will be entrusted with the task of the supply and sale of sanitary pads and counselling the girls and women.

What is the Essential Commodities Act?

- The Act was passed in 1955 to **regulate the production, supply and distribution of a number of commodities** that declare 'essential' in order to make them available to consumers at fair prices.

- The list of items under the Act includes drugs, fertilisers, pulses and edible oils, and petroleum and petroleum products.

- Under the Act, the government can also **fix the maximum retail price (MRP) of any packaged product**.

- The Centre can include new commodities and take them off the list once the situation improves.

- In May the Government declared Masks and Hand Sanitizer as essential commodities to curb black marketing of these during COVID-19 pandemic outbreak.

What is PDS?

- It is an Indian ration distribution system which aims for Food Security in the country.

- **Nodal Ministry:** The Ministry of Consumer Affairs, Food, and Public Distribution are the nodal Ministry for this scheme.

- It is **operated jointly by** the Central and the State Governments.

- The Central Government has the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State Governments. Food Corporation of India (FCI) is the nodal agency for this purpose.

- State Governments have the operational responsibilities which include allocation within the State, identification of eligible families, issue of Ration Cards and supervision of the functioning of Fair Price Shops (FPSs) etc.

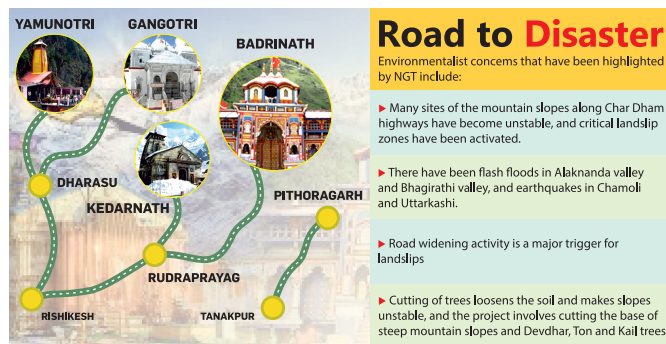## CHAR DHAM PROJECT'S IMPACT ON THE HIMALAYAS

The Supreme Court-appointed High-Powered Committee (HPC) reported that the Char Dham Project has caused incalculable and long-term damage to the Himalayan ecology.

About:

- **Purpose:** Committee Mandated to examine the ecological impact of the project and recommend remedies.
- It submitted two reports this July after **members disagreed on** the ideal width 12 m against 5.5 for hill roads.
- Both reports recommended that "a note on the emergent issues" be sent to the Environment Ministry for detailed enquiries and necessary action.

Concerns Highlighted by the High Powered Committee (HPC):

- **Work without valid permission:** Project work and felling of trees on different stretches has been continuing illegally since 2017-18.
- **Misusing old clearances:** Work started on several stretches on the basis of old forest clearances issued to the Border Roads Organisation (BRO) during 2002-2012.
  - This is **illegal and defeats the regulatory purpose** since the scope of work has changed drastically.
  - The **old clearances did not consider the impact of "enormous hill cutting"** presently undertaken for road widening.
  - This has resulted in massive muck dumps along NH-125, where the muck has just been pushed down the slope, posing a serious threat to the environment and local habitat.

Road to **Disaster**

Environmentalist concerns that have been highlighted by NGT include:

- Many sites of the mountain slopes along Char Dham highways have become unstable, and critical landslip zones have been activated.
- There have been flash floods in Alaknanda valley and Bhagirathi valley, and earthquakes in Chamoli and Uttarkashi.
- Road widening activity is a major trigger for landslips
- Cutting of trees loosens the soil and makes slopes unstable, and the project involves cutting the base of steep mountain slopes and Devdhar, Ton and Kail trees.

- **Work without clearance:** Work commenced on various stretches after withdrawing applications for forest clearance without clarifying the reasons.

- **Violation of SC directive:** Work started on stretches even though Uttarakhand government stated in an affidavit in April 2019 that stretches where work had not already commenced would be subject to the direction of the Supreme Court.

What is the Char Dham Project?

- Char Dham National Highway (NH) project comprises improvement as well as the development of 889 km length of national highways and was **launched by** the Ministry of Road Transport & Highways.
- **It will connect** Badrinath Dham, Kedarnath Dham, Gangotri, Yamunotri, and part of the route leading to Kailash Mansarovar yatra.

Chardham Yatra

- Chardham Yatra in Uttarakhand is a pilgrimage to four destinations – **Yamunotri, Gangotri, Kedarnath and Badrinath.**
- All of these four sites are devoted to a specific deity.
  - Gangotri is dedicated to the Goddess Ganga,
  - Yamunotri is dedicated to the Goddess Yamuna,
  - Kedarnath is dedicated to Lord Shiva and is one of the 12 jyotirlingas,
  - Badrinath, which is also part of India's Char Dham, is dedicated to Lord Vishnu.

INTRODUCTION OF AFRICAN CHEETAHS TO INDIA

The century-old Mysuru zoo became the second Indian zoo to house the African cheetah.

About:

- The Mysuru zoo had earlier housed four African cheetahs which had been procured from **Germany**.
- After their death, a vacuum was created in the zoo for the fastest cat.
- **The Mysuru zoo** managed to get a male and two females from a cheetah conservation centre in **South Africa under an animal exchange programme.**
- The cheetahs will remain in quarantine for 30 days under close observation.
- It was the country's first international animal exchange post-COVID-19.

- The Mysuru zoo is the **second zoo** after **Hyderabad** zoo to have African cheetahs.

African Cheetah:

- **IUCN status:** They are vulnerable under the IUCN Red List.
- **Distribution:** Around 6,500-7,000 African cheetahs present in the wild.
- **Characteristics:** They are bigger in size as compared to Asiatic Cheetah.

Asiatic Cheetah:

- **IUCN status:** The Asiatic cheetah is classified as a "critically endangered" species by the IUCN Red List.
- **Status in India:** The Asiatic Cheetah was declared extinct in India in 1952.
- **Distribution:** They are only 40-50 and found only in Iran.
- **Characteristics:** Smaller and paler than the African cheetah.
    - It has more fur, a smaller head and a longer neck.
    - Usually, they have red eyes and they have a more cat-like appearance.

MAURITIUS OIL SPILL

A Japanese ship named M V Wakashio struck a coral reef resulting in an oil spill of over 1,000 tonnes into the Indian Ocean.

About:

- The accident had taken place near two environmentally protected marine ecosystems and the Blue Bay Marine Park Reserve, which is a wetland of international importance.
- A number of popular tourist beaches and mangrove plantations are located nearby the spill.

Concerns Associated with Oil Spills:

- Oil spills **affect marine life** by exposing them to harsh elements and destroying their sources of food and habitat.
- Both birds and mammals can die from **hypothermia as a result of oil spills**, for instance, oil destroys the insulating ability of fur-bearing mammals, such as sea otters.
- It also **decreases the water repellency of birds' feathers,** without which they lose their ability to repel cold water.
- Conservationists are also anxious about oil **washing into mangrove forests**, where roots serve as nurseries for fish.
- Concerns are also growing for the thousands of local people whose **livelihoods will be impacted** by the spill.
- The damage could **impact Mauritius and its tourism-dependent economy** for decades.

Methods of Cleaning the Oil Spill:

- **Skimming:** It involves removing oil from the sea surface before it is able to reach the sensitive areas along the coastline.
- **In situ burning:** It means burning a particular patch of oil after it has concentrated in one area.
- **Release of chemical dispersants:** Releasing chemical dispersants helps break down oil into smaller droplets, making it easier for microbes to consume, and further break it down into less harmful compounds.
- **Natural actions:** Natural actions in aquatic environments such as weathering, evaporation, emulsification, biodegradation and oxidation can also help reduce the severity of an oil spill and accelerate the recovery of an affected area.

Other Instances of Oil Spills:

- Some of the **world's largest oil spills include the Persian Gulf War oil spill of 1991** when more than 380 million gallons of oil was poured into the northern Persian Gulf by Iraq's forces.
- The **2010 Deepwater Horizon oil spill in the Gulf of Mexico** is also considered to be among the largest known accidental oil spills in history. Starting April 20, 2010, over 4 million barrels of oil flowed over a period of 87 days into the Gulf of Mexico.
    - In 2016, a **United States Geological Survey (USGS)-NASA study** found that the 2010 oil spill led to "widespread" shoreline loss along with the heavily oiled areas along Louisiana's coast.
- Recently occurred **Oil spill in Russia's Arctic region.**

WORLD ELEPHANT DAY

The Union Minister of Environment, Forest and Climate Change released a booklet on "Best practices of Human-Elephant Conflict Management in India" on eve of World Elephant Day.

About:

- World Elephant Day is observed every year on **12th August.**
- It was **launched in 2012 to bring attention** to the urgent plight of Asian and African elephants.
- The current population estimates indicate that there are about 50,000 -60000 Asian elephants in the world.
- India is having 60 per cent of the global population of Asian Elephants.
- Indian Elephant has also been listed in **Appendix I of the Convention of the Migratory species** in the recently concluded 13th Conference of Parties on Conservation of Migratory Species of Wild Animals (CMS) at Gandhi Nagar, Gujarat in February 2020.
- **IUCN Status:** Asian elephants are listed as "Endangered" on the IUCN Red List of threatened species.

Threats posed to Elephant Population:

Poaching

- The demand for ivory leads to the illegal poaching of both African and Asian elephants.
- Elephants are also poached for meat, leather, and body parts with the illegal wildlife trade putting elephants increasingly in danger.

Habitat loss

- The loss of habitat due to deforestation because of increase in mining and agricultural activities has become problematic, especially for Asian elephants.
- The fragmentation of habitat also creates isolation and this makes breeding more difficult.

Human-elephant conflict

- Human-elephant conflict is a significant concern, as human populations increase and forest cover decreases, forcing elephants into close proximity with human settlements. Incidents include crop damage and economic losses, as well as both elephant and human casualties.

Mistreatment in captivity

- A lack of legislation regarding the care and treatment of elephants in zoos, circuses, and tourism often leads to their mistreatment.
- Captivity can be a serious threat to elephants, and Asian elephants are often illegally captured in the wild and trafficked into the lucrative tourism industry.

Government Initiatives:

- **Portal on Human-Elephants Conflict:** The National Portal on human-elephant conflict called "Surakhsya" for the collection of real-time information & also for managing the conflicts on a real-time basis.
  - It will help to set the data collection protocols, data transmission pipelines and data visualization tools to enable policy-makers to leverage HEC data for policy formulation and for preparation of Action Plans for mitigation of conflicts.
- **Project Elephant (PE):** It was launched in 1992 to provide financial and technical support to major elephant bearing States in the country for protection of elephants, their habitats and corridors.
  - It is a **centrally sponsored scheme** and seeks to address the issues of human-elephant conflict and the welfare of domesticated elephants.
- **Use of LiDAR technology:** Government is using LiDAR technology in order to provide fodder and water augmentation in forest areas so that animals will get food and water in forest areas and will not come outside.
- **DNA profiling** & creation of database for all captive elephants in the country is being undertaken.

- This will ensure that no elephants from the wild are included in the captive stock illegally.

STEPS TO CHECK ILLEGAL KILLING/IVORY TRADE

▶ **CITES-MIKE** (Monitoring of Illegal killing of Elephants): There are currently 28 sites participating in the MIKE programme in Asia, distributed across 13 countries. India has maximum number (10) of sites.

▶ India is signatory to South Asian Wildlife Enforcement Network (SAWEN) to combat transnational wildlife crimes.

▶ India also works with INTERPOL for intelligence sharing regarding wildlife crimes.

#HaathiHamaaraSaathi

DO YOU KNOW?

- India's first elephant reserve was the Singhbhum Elephant Reserve in 2001 in the newly formed state of Jharkhand.
- It has been declared the National Heritage Animal in 2010.
- Among the states, the highest population is recorded in Karnataka, followed by Assam and Kerala.

Measures need to be taken:

- **Improvement of habitat:** In-situ and ex-situ habitat conservation measures will help in securing animals their survival.
- Re-locating animal habitats away from residential and commercial centres will serve to minimize animal-man conflict for illegal and self-interested motives.
- **Surveillance:** Increased vigilance and protection of identified locations using hi-tech surveillance tools like sensors can help in tracking the movement of animals and warn the local population.
- **Awareness Programmes:** To create awareness among people and sensitize them about the Do's and Don'ts in the forest areas.
- **Training programs:** Training to the police offices and local people should be provided for this purpose forest department should frame guidelines.

FOREST COVER LOSS THREATENS HORNBILLS

A study based on satellite data has flagged a high rate of deforestation in a major hornbill habitat in Arunachal Pradesh.

About:

- According to the **Global Forest Watch 2020 report**, Arunachal Pradesh lost 1,110 sq.km. of the primary forest from 2002-2019.

Methodology of the Study:

- Ecologists **used fine-scale satellite imagery** to assess the changes in forest cover of the 1,064 sq.km. covering the **Papum Reserve Forest (RF)** adjoining the **Pakke Tiger Reserve** as well as a part of Assam affected by illegal felling and ethnic conflict.

- The ecologists assessed the habitat loss due to illegal logging within a 1 km radius around 29 hornbill nest trees.

Outcomes of the Study:

- The satellite data pointed to **alarming deforestation rates in Papum RF** with annual loss rates as high as 8.2 sq.km. as per estimates from 2013-2017 where forest cover declined to 76% of the total RF area.

- The result shows the loss and degradation of critical hornbill habitat in the biologically rich forests of the Indian Eastern Himalaya, underscoring the need for habitat conservation efforts.

Papum Reserve Forest

- Papum Reserve Forest (RF) is an **Important Bird and Biodiversity Areas (IBAs)** in Arunachal Pradesh.

- It is located between two IBAs, Itanagar Wildlife Sanctuary to the east and Pakke Wildlife Sanctuary to the west.

- Papum Reserve Forest **forms part of the Eastern Himalayas Endemic Bird Area**. A large part of the site is covered by Sub-tropical Dry Evergreen and Semi-evergreen Forests, while the higher areas are under Subtropical Broadleaf Hill Forest cover.

- Papum RF is a **nesting habitat of three species** of the large, colourful fruit-eating hornbills: Great, Wreathed and Oriental Pied.

Hornbills:

- The hornbills (scientific name Bucerotidae), are a family of birds **found in tropical and subtropical Africa and Asia.**

- India is **home to nine species of hornbills**. The **northeastern region of India has the highest diversity** of hornbill species.

- The **Hornbill festival celebrated in Nagaland** is named after the bird – Hornbill which is the most revered and admired bird for the Nagas.

- One of the kinds of Hornbill found in India is called the **Great Indian Hornbill.**

- **Great Indian HornbillP:** It is one of the larger members of the hornbill family, distributed along Indian Subcontinent and Southeast Asia.

- It is an important bird in many tribal cultures and rituals owing to its size and unique colour.

- The great hornbill is long-lived, living for nearly 50 years in captivity.

- Though predominantly frugivorous, it also preys on mammals, reptiles and birds.

Conservation Status:

- At present, 26 out of the 62 species (40%) of hornbills are **Globally Threatened or Near Threatened** with extinction, with all other species listed as Least Concern, according to the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.

- It is listed in **Appendix I of CITES.**

- The great hornbill is the **state bird of Kerala and Arunachal in India** and **Chin State in Myanmar.**

- The Great Hornbill is used as the **logo of Kerala Evergreen FC** an Indian professional football club based in Thiruvananthapuram, Kerala, India.

- A great hornbill called William (pictured) was the model for the **logo of the Bombay Natural History Society (BNHS)** and the name of their building.

Significance:

- Hornbills are called **'forest engineers' or 'farmers of forest'** for playing a key role in **dispersing seeds** of tropical trees, hornbills indicate the prosperity and balance of the forest they build nests in.

- Since hornbills consume and spread seeds of fruit species, they are **important for the economy and culture of local communities.**

Threats:

- Hornbills are hunted for their casques i.e. upper beak and feathers for adorning headgear.

- Tribal people hunt them for their parts for rituals and making headgears and other decorations and even as a delicacy.

- Habitat loss

- Forest clearance for agriculture.

BUTTERFLIES SPECIES OF MATHERAN

Scientists from the Bombay Natural History Society published a research paper on the forgotten butterflies of Matheran in the community peer-reviewed 'Biodiversity Data Journal'.

About:

- Scientists found 140 rare species of **butterflies,** including 77 new ones in **Matheran** after a long gap of 125 years.

- The last time butterflies have codified in this eco-sensitive zone was in 1894, when a researcher identified 78 species.

- The maximum diversity (125) of butterflies was recorded during winter, while the least (80) during monsoon.
- **Significance:** A long-term study of butterflies will surely help the scientific community to understand and conserve the health of the ecosystem.

About Matheran:

- Matheran means "forest on the forehead" (of the mountains) is an **eco-sensitive region,** declared by the Ministry of Environment, Forest and Climate Change.
- It is one of the smallest hill stations of India and is part of the Mumbai Metropolitan Region along the Western Ghats.

What is the Eco-Sensitive Region?

- It is the area which has been notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), as areas around the Wildlife Sanctuaries, National Parks and Protected Areas as requiring more protection due to their fragility.

Purpose of Eco-Sensitive Region

- To manage and regulate the activities around these areas with the intention of creating some kinds of 'shock absorbers'.
- To provide a transition zone between the highly protected and relatively less protected areas.
- To give effect to Section 3(2)(v) of the Environment Protection Act, 1986 which restricts the operation of industries or processes to be carried out in certain areas or to maintain certain safeguards to operate industries.

WORLD BIOFUEL DAY

The World Biofuel Day is observed every year on 10th August.

About:

- This day also **honours the research experiments by Sir Rudolf Diesel** who ran an engine with peanut oil in the year 1893.

- It is celebrated every year by the Ministry of Petroleum and Natural Gas since 2015.
- The theme for 2020 is **"Biofuels towards Atmanirbhar Bharat".**

What are biofuels made of?

First Generation	Food-related sources	
Second Generation	Non-food sources	
Third Generation	Algae	
Fourth Generation	Other sources	
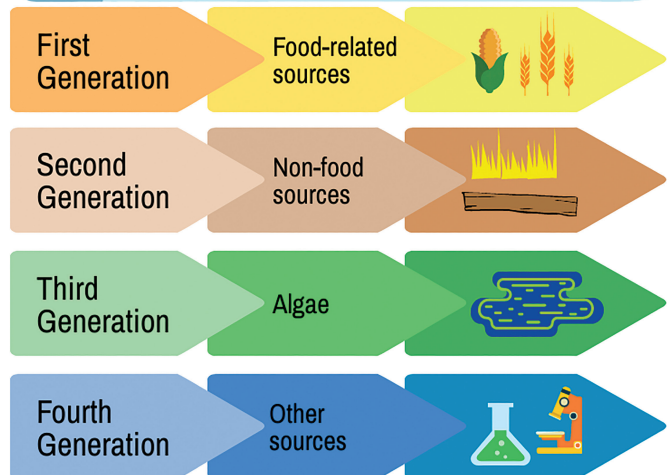
What are Biofuels?

- Any hydrocarbon fuel that is derived and produced from an organic matter, is called a biofuel. Biofuels can be solid, liquid or gaseous.
- It can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications.
- Crops used to make biofuels are generally either high in sugar (such as sugarcane, sugarbeet, and sweet sorghum), starch (such as maize and tapioca) or oils (such as soybean, rapeseed, coconut, sunflower).
- **Broadly Biofuels are of two types**
  - *Primary Biofuels:* The organic materials which are used in an unprocessed form such as fuelwood, wood chips and pellets, primarily for heating, cooking, electricity production.
  - *Secondary Biofuels:* The materials which result from the processing of biomass such as liquid fuels such as ethanol and biodiesel.

What is Biodiesel?

- It is an eco-friendly, alternative diesel fuel prepared from domestic renewable resources i.e. vegetable oils (edible or non- edible oil) and animal fats.
- These natural oils and fats are primarily made up of triglycerides. These triglycerides when reacted chemically with lower alcohols in the presence of a catalyst result in fatty acid esters. These esters show a striking similarity to petroleum-derived diesel and are called Biodiesels.

THE BIODIESEL CYCLE
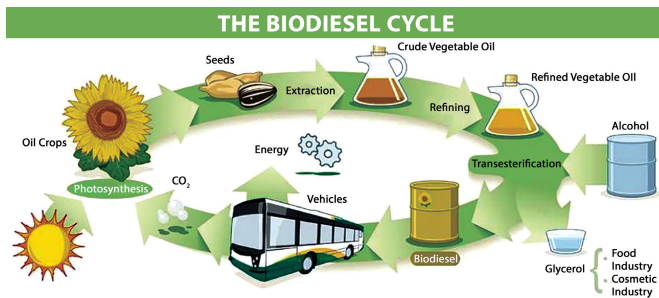
Initiatives by Government of India to Promote Biofuel:

National Biofuel Policy 2018

- It categorises biofuels as "Basic Biofuels" viz. **First Generation (1G)** bioethanol & biodiesel and "Advanced Biofuels" - **Second Generation (2G) ethanol**, Municipal Solid Waste (MSW) to drop-in fuels, **Third Generation (3G) biofuels**, bio-CNG etc. to enable the extension of appropriate financial and fiscal incentives under each category.

- It **expands the scope of raw material for ethanol production** by allowing the use of sugarcane juice, sugar-containing materials like sugar beet, sweet sorghum, starch containing materials like corn, cassava, damaged food grains like wheat, broken rice, rotten potatoes, unfit for human consumption for ethanol production.

- It allows the **use of surplus food grains for production of ethanol** for blending with petrol with the approval of the National Biofuel Coordination Committee.

Ethanol Blended Petrol (EBP) programme

- It aims at blending ethanol with petrol, thereby bringing it under the category of biofuels and saving millions of dollars by cutting fuel imports.

- Under this program, availability of ethanol will increase due to the higher price for C heavy molasses-based ethanol and enabling procurement of ethanol from B heavy molasses and sugarcane juice for the first time.

- Bharat Petroleum Corporation Limited is in the process of setting up the ethanol plant in Odisha with an investment of Rs 1,000 crore, to produce three crore litres of fuel-grade ethanol annually. The ethanol produced from this plant will be blended with petrol.

Pradhan Mantri JI-VAN Yojana, 2019

- It aims to create an ecosystem for setting up commercial projects and to boost Research and Development in the 2G Ethanol sector.

GOBAR (Galvanizing Organic Bio-Agro Resources) DHAN Scheme, 2018

- It was launched under Swachh Bharat Mission (Gramin) and aims to manage and convert cattle dung and solid waste in farms to useful compost, biogas and bio-CNG, thus keeping villages clean and increasing the income of rural households.

Repurpose Used Cooking Oil (RUCO)

- It was launched by the Food Safety and Standards Authority of India (FSSAI) aims for an ecosystem that will enable the collection and conversion of used cooking oil to biodiesel.

UTTARAKHAND, MAHARASHTRA HAD THE HIGHEST LEOPARD POACHING IN INDIA

TRAFFIC India conducted a study on the seizure and mortality of 'common leopards' (Panthera pardus fusca).

About:

- The paper titled **"SPOTTED' in Illegal Wildlife Trade: A Peek into Ongoing Poaching and Illegal Trade of Leopards in India'** also revealed that the **highest numbers of poaching incidents** were reported from the **States of Uttarakhand and Maharashtra.**

- It revealed that of the total of 747 leopard deaths between 2015-2019 in India, 596 were linked to illegal wildlife trade and activities related to poaching.

- The records indicated that **140 leopards were killed by poachers** and their carcasses were recovered from the forest areas.

Causes:

- Among all the derivatives found in illegal wildlife trade, **skin remained the most in-demand product**, accounting for 69% of all seizures, while derivatives like claws, teeth and bones were also traded.

- It is also believed that **bones of the leopard are possibly traded as tiger bones** as they have a larger international demand for traditional medicines.

- **IUCN Status:** The conservation status of common leopards was elevated from 'Near Threatened' in 2008 to 'Vulnerable' in 2015 by the **International Union of Conservation of Nature (IUCN).**

TRAFFIC

- TRAFFIC is a **leading non-governmental organisation** working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

- It is a joint program of the World Wide Fund for Nature (WWF) and IUCN.

- Its aim is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

- TRAFFIC **investigates and analyses wildlife trade trends**, patterns, impacts and drivers to provide the leading knowledge base on trade in wild animals and plants.

CONSERVATION OF DHOLE

According to a recent report, Karnataka, Maharashtra and Madhya Pradesh rank high in the conservation of the endangered dhole in India.

About:

- The report **titled 'A strategic road map for conserving the endangered dhole Cuon alpinus in India'** has been published in Mammal Review.

- The report mentions that three States were adequately equipped to maintain their high ranks in consolidating forest habitats and **recover Dhole populations** by increasing prey density and reducing the pressure on forests.

- The Arunachal Pradesh, Chhattisgarh, Odisha, Telangana and Goa will need to **increase financial investments in the forest and wildlife sectors,** and **reduce the ease of granting forest clearances** for infrastructure projects.

About Dholes:

- It is also known as the **Asiatic Wild Dog, Indian Wild Dog, the Red Dog,** Whistling dog and Mountain wolf. It plays an important role as **apex predators in forest ecosystems.**

- It is in the **endangered category (EN)** and is protected under **Schedule II of the Wildlife Protection Act, 1972** in India.

- Besides the tiger, the Dhole is the **only large carnivore in India** that is under the **International Union for Conservation of Nature's 'endangered' category.**

- High populations of Dholes are **found in the Western Ghats and central Indian forests.**

- **Threats:** Infrastructure developments, increased human intrusion in protected zones, change in land-use pattern, climate change, forest fragmentation and loss of forest cover are responsible for the decline in dhole population.

BIO-MEDICAL WASTE MANAGEMENT

The Environment Pollution (Prevention and Control) Authority (EPCA) submitted a report to the Supreme Court which states that a rise in COVID 19 cases caused a "huge increase" in biomedical waste in Delhi, Haryana, Rajasthan and UP.

About:

- **Delhi** has the highest daily share of **biomedical waste** generation out of the four states and the city is presently producing more waste than its Common Biomedical Waste Treatment Facilities (CBWTF) that it can handle.

- **Reason:** The recent huge increase in biomedical waste is due to the non-segregation of waste from households and quarantine centres.

Bio-Medical Waste and its Impact:

- It is the waste generated during the **research testing, diagnosis, treatment, immunization or any other medical procedure** of human beings or animals.

SEGREGATION OF HOSPITAL BIO-MEDICAL WASTE
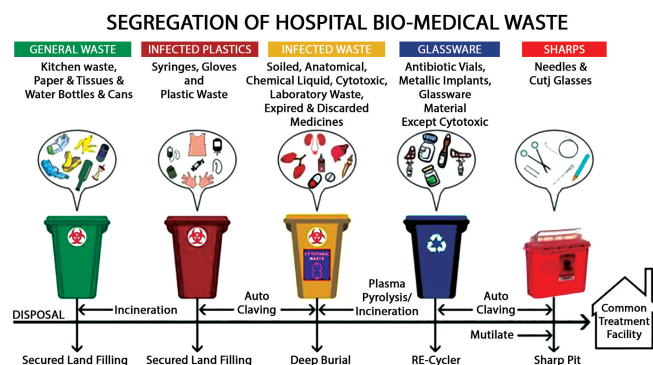
- Improper management of **Bio-medical waste** can have both direct and indirect health consequences for health personnel, community members and the environment.

- Indirect consequences in the form of toxic emissions from inadequate **burning of medical waste.**

- The most serious effect of biomedical waste is on seas as **bio-medical waste discharged** into the waters that could be consumed by ocean life creatures.

- Toxins would interject into the food chain and eventually reach humans who consume sea creatures.

- Human exposure to such toxins can stunt human growth development and cause birth defects.

What Measures are taken by the Government?

In order, to ensure safe disposal of biomedical waste generated during treatment, diagnosis and quarantine of patients with the novel Coronavirus disease (COVID-19), the Central Pollution Control Board of India has come out with special guidelines.

- Accordingly, used masks, tissues, head covers, shoe covers, disposable linen gowns, non-plastic and semi-plastic coveralls were to be disposed of in a yellow bag meant for incineration at a common biomedical waste treatment facility (CBWTF).

- The communities need to dispose of their used napkins, tissues, empty sanitizer bottles in a separate bag, to ensure the safety of municipal workers and ragpickers.

- It will also ensure that the cycle of garbage collection and plastic recycling don't get affected.

What Measures are Required?

- The government should also provide safety kits to municipal workers urgently and educate them on how to handle household waste during the outbreak, to help in halting the chain of transmission.

- Urban local bodies should engage the common bio-medical waste treatment facilities (CBWTFs) to pick up such waste either directly from such quarantine houses or from identified collection points.

- **Bio-Medical Waste Management Rules, 2016:** These rules shall apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio-medical waste in any form.

Technology Options for 'Treatment':

- **Chemical processes:** In these processes chemicals act as disinfectants. Sodium hypochlorite, dissolved chlorine dioxide, peracetic acid, hydrogen peroxide, dry inorganic chemical and ozone are examples of such chemicals. Most chemical processes are water-intensive and require neutralising agents.

- **Thermal processes:** These processes utilise heat to disinfect and they operate depending on the temperature.

- **Mechanical processes:** These processes are used to change the physical form or characteristics of the waste to facilitate waste handling or to process the waste in conjunction with other treatment steps.

- **Irradiation processes:** In these processes, wastes are exposed to ultraviolet or ionizing radiation in an enclosed chamber. These systems require post shredding to render the waste unrecognizable.

- **Biological processes:** Biological enzymes are used for treating medical waste.
  - It is claimed that biological reactions decontaminate the waste and cause the destruction of all the organic constituents so that only plastics, glass, and other inert will remain in the residues.

Way Forward:

- There is a need for better segregation of biomedical waste in households and quarantine centres housing Covid-19 patients.

- The Supreme Court must direct the Ministry of Environment, Forest and Climate Change and CPCB to work out a national bar-coding system (a portal) for tracking of biomedical waste.

- The government needs to make arrangements for dedicated trash bins for the disposal of hazardous waste such as masks and gloves.

GREEN-AG PROJECT

The Union government of India launched the Green-Ag Project in Mizoram to reduce emissions from agriculture and ensure sustainable agricultural practices.

About:

- The **Green-Ag Project** is funded by the **Global Environment Facility,** while the Department of Agriculture, Cooperation, and Farmers' Welfare (DAC&FW) is the national executing agency.
  - The **Global Environment Facility (GEF)** was established on the eve of the **1992 Rio Earth Summit** to help tackle our planet's most pressing environmental problems.

- Other key players involved in its implementation are the Food and Agriculture Organization (FAO) and the Union Ministry of Environment, Forest and Climate Change (MoEF&CC).

- **Aim and Objective:** The project is designed to achieve multiple global environmental benefits in at least 1.8 million hectares (ha) of land in five landscapes with mixed land-use systems.
  - It aims to bring at least 104,070 ha of farms **under sustainable land and water management.**
  - The project will also ensure 49 million Carbon dioxide equivalent (CO2eq) sequestered or reduced through sustainable land use and agricultural practices.

- Along with Mizoram, the project will be implemented in Rajasthan, Madhya Pradesh, Odisha and Uttarakhand.

- **Significance:** The Green-Ag project would help local people take **advantage of the rich agro-biodiversity** present in their landscape for the sustainability of agriculture and livestock production practices, promotion of secondary agriculture, the establishment of green value chains and thereby enhancing their incomes.

What is Carbon Sequestration or Carbon Dioxide Removal (CDR)?

- **Carbon sequestration** is the process of **long-term removal and capturing of carbon dioxide from the atmosphere** in order to **slow or reverse atmospheric CO_2 pollution** and to mitigate or reverse global warming.

- Carbon dioxide (CO_2) is naturally captured from the atmosphere through biological, chemical, and physical processes.
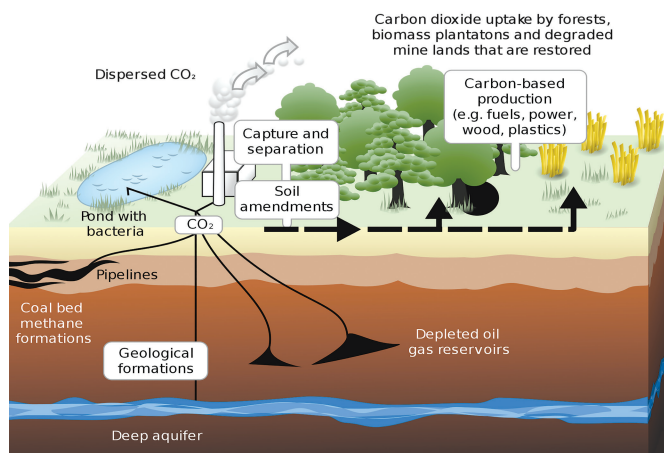
- These changes can be accelerated through changes in land use and agricultural practices, such as converting crop and livestock grazing land into land for non-crop fast-growing plants.

MISUSE OF ANTIBIOTICS IN LIVESTOCK SECTOR

> *Survey report by the Centre for Science and Environment (CSE) reveals that antibiotics are extensively misused in the dairy sector and its residues remain largely untested in milk.*

About:

- As per the survey report antibiotics are extensively misused in the dairy sector and its residues remain largely untested in milk, which is an integral part of Indian diets, particularly of children.

Highlights of the Report:

Indiscriminate use of Antibiotics

- The dairy farmers are indiscriminately using antibiotics for diseases such as mastitis i.e. infection/inflammation of the udder, a common ailment in dairy animals.
- The antibiotics used include **critically important antibiotics (CIAs) for humans**. The WHO has warned that they should be preserved in view of the growing crisis of antibiotic resistance.
- The abused antibiotics are **easily available in the market without the prescription** of a registered veterinarian and stocked at farms although there is a law against it.
- It also raised the concern that the farmers often inject animals based on their own judgment of signs and symptoms of a disease without any veterinary supervision.

Inadequate Testing

- It points towards the **inadequate focus on testing for antibiotic residues in the milk** collected by some State federations, which process it and sell packaged milk and dairy products under popular brands.

- It raises concern that the **farmers often sell milk while the animal is under treatment**, which increases the chances of antibiotic residues.
- The **milk sold directly to consumers is not tested** and also the **processed milk sold in packets is too largely unchecked** for antibiotic residues.
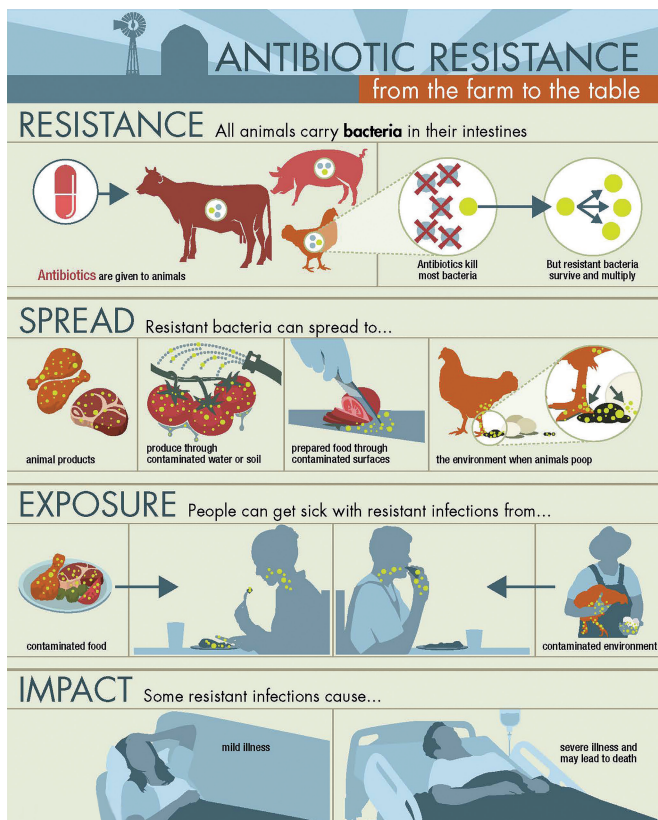
Milk Market in India

- India is the **world's largest milk producer**. It produced 188 million tonnes (MT) of milk in 2018-19.
- Milk is a **source of liquidity for the farmers**. It provides them with ready cash whereas crops fetch them cash only 2-3 times a year.
- Urban areas consume 52% of it and the unorganised sector, comprising milkmen and contractors, caters to 60% of this consumer base.
- The remaining demand is met by dairy cooperatives and private dairies which represent the organised sector.

What is Antibiotic Resistance?

- Antibiotic resistance is a **subset of antimicrobial resistance or AMR.**
- According to WHO, **Antimicrobial resistance (AMR)** is the ability of a microorganism (like bacteria, viruses, and some

parasites) to stop an antimicrobial (such as antibiotics, antivirals and antimalarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.

• It can spread between people and animals, including from food of animal origin, and from person to person.

Causes of AMR:

• **Uneven and unregulated antibiotic usage** is one of the most important causes of AMR.

• Use of Antibiotics by farmers in an unscientific manner to speed the growth of livestock.

Impact of AMR:

• Antibiotic-resistance is passed relatively easily from one bacteria to the next, as it is transmitted by way of loose genetic material that most bacteria have in common.

• Medical fraternity believes that the world is one step away from **deadly, untreatable infections which will be untreatable**. At present **MCR-1 E.coli is resistant** to that **last-resort antibiotic Colistin** and is a serious concern.

• Anti-microbial resistance causes difficulty in controlling the diseases in the community and the ineffective delivery of health care services.

• It also **increases out of pocket expenditure** on health care especially on medicines as high order drugs or second-line expensive antibiotics are prescribed which is pushing treatment cost high. Annual healthcare cost due to antibiotics resistance is also estimated to be very high.

• WHO published a list of **'priority pathogens'**, also called **superbugs which pose the greatest threat to human health.**

AMR Status in India:

• India is among the nations with the highest burden of bacterial infections.

• According to a study of ICMR on 207 individuals, 139 individuals were resistant to one or more class of antibiotics. Only 2 per cent were found to be multidrug-resistant.

• The maximum resistance was seen for cephalosporins (60%) followed by fluoroquinolones (41.5%), two commonly used antibiotics.

• India released the AMR action plan in 2017 to effectively combat antimicrobial resistance in India.

   ◆ It aims to understand the emergence, spread and factors influencing AMR.

• The Food Safety and Standards Authority of India (FSSAI) has banned the use of antibiotics and several pharmacologically active substances in fisheries.

# HIGH LEVELS OF AMMONIA IN YAMUNA WATER

The Delhi Jal Board (DJB) reduced water production capacity by 25 per cent after high levels of ammonia were detected in the Yamuna river.

About:

• The level of ammonia in raw water was 1.8 parts per million (ppm).

• The acceptable maximum limit of ammonia in drinking water, as per the Bureau of Indian Standards, is 0.5 ppm. The DJB presently has the capacity to treat approximately 0.9 ppm.

What is the Source of Ammonia Contamination?

• The sources are most likely to be discharged effluents from dye units, distilleries and other factories in Panipat and Sonepat districts in Haryana.

• Untreated sewage from some unsewered colonies in this stretch of the river.

• Mixing up of potable water and industrial wastes in the drain during transportation.
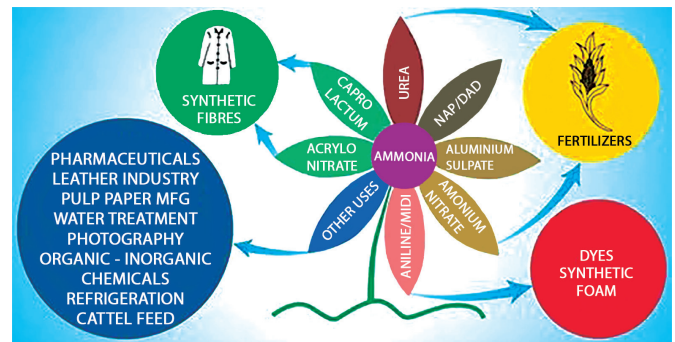
What is Ammonia & its Effects?

• Ammonia is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.

• It occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents or through contamination by sewage.

• **Permissible limit:** If the concentration of ammonia in water is **above 1 ppm it is toxic to fishes and in humans**, long term ingestion of water having ammonia levels of **1 ppm or above** may **cause damage to internal organs.**

Challenges:

• The Delhi Jal Board does **not have any specific technology** to treat ammonia and Delhi is dependent on **Haryana for up to 70 per cent of its water needs.**

- Haryana, with a large number of people involved in agriculture, **has water paucity issues of its own** which can further aggravate the supply to Delhi.

- The only available solution with DJB is to reduce production at three water treatment plants Wazirabad, Chandrawal and Okhla which are largely affected by the pollutant.

- Also, DJB mixes raw water that carries a hi h concentration of ammonia with a fresh supply of water and the amount of chlorine added to disinfect raw water is increased as per requirements to address the issue.

- The lack of a **minimum ecological flow** also means an **accumulation of other pollutants.**

What can be the Solution?

- **Stringent implementation of guidelines** against dumping harmful waste into the river, and making sure untreated sewage does not enter the water are two things pollution control bodies are expected to do.

- Maintain a **sustainable minimum flow, called the ecological flow** which should flow throughout the river at all times to sustain underwater and estuarine ecosystems and human livelihoods, and for self-regulation.

KHAZAN AGRICULTURE

A system of estuarine agriculture called Khazan Farming is in the state of decay in present days and they need to be saved and revived.

About:

- It is practised in the region of the Salim Ali Bird Sanctuary, Goa's smallest protected area which is a low-lying floodplain of Goa.

- This system is a carefully designed topo-hydro-engineered agro-aquacultural ecosystem mainly based on the regulation salinity and tides.

- In **low-lying brackish coastal floodplains and mangrove forests, bunds** are made using locally available material to prevent the ingress of saltwater.

- To control the flow of tidal waters, openings are built in the bunds fitted with one-way gates. These channels fill in with the oncoming tide and bring with them fish, crab and shrimp, and the gates would automatically shut when the water level was equal on both sides.

- This prevents the water from overflowing into the fields used to grow paddy and which has a low tolerance to salt. When the tide receded, these gates would open outwards automatically, allowing the water to drain out.
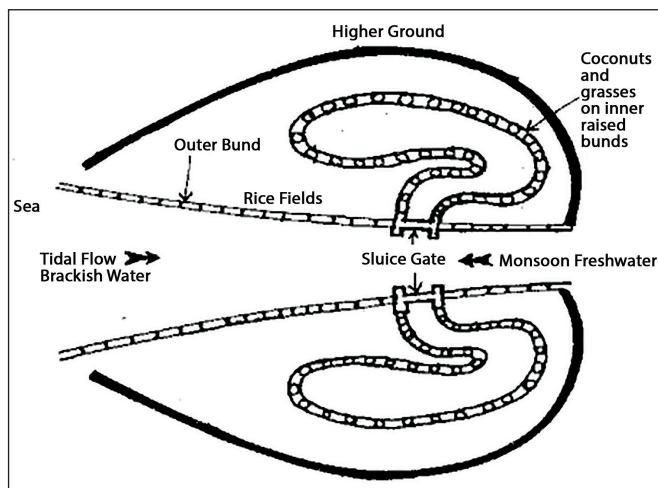
Advantages of Khazan:

- Every bit of **space is used efficiently.** The bunds are used to grow a variety of vegetables.

- The Khazan system allows for the farmer and the fisher to harmoniously coexist and was the key to sustaining what is considered Goa's staple — fish, curry and rice.

Why is it Neglected?

- In Post-independence agrarian reforms of 1961, these **lands largely lie fallow and are in a state of decay.**

- **Lack of cultivation and maintenance of the bunds** and sluice gates is leading to their breaching and the natural reclamation of these fallow lands by mangroves.

- The **mangroves are protected by law and it is illegal to cut them**. So there has been natural reclamation of these fallow lands by mangroves.

- Areas that have trees growing on them also come under the purview of the **Coastal Regulation Zone (CRZ)**; according to the 2011 notification, the mangrove areas are classified as **CRZ I and cannot be developed upon.**

Salim Ali Bird Sanctuary

- It is **Goa's smallest protected area** and comprises barely **two square kilometres of lush mangrove forests.**

- It is located on Chorão, one of Goa's estuarine islands in the Mandovi river approximately five kilometres from capital Panaji.

- The sanctuary and its surrounds are home to marsh crocodiles, smooth-coated otter, the unique glossy-marsh snake that feeds on crabs, mud lobsters, sap-sucking sea slugs, among others.

ASSESSMENT OF CLIMATE CHANGE OVER INDIAN REGION

The Ministry of Earth Sciences released the first Assessment of Climate Change over the Indian Region.

About:

- The projections, based on modelling conducted by the Indian Institute of Tropical Meteorology (IITM), Pune and they are for the decades which will lead to the end of the 21st century.

Current Status and Projections as per the Assessment:

Temperature

- Surface air temperature over India has risen by 0.6°C per year during 1901-2018.

- Regions of North India have undergone warming more than the South.

- Sea surface temperatures on the tropical Indian Ocean have been rising by an average 1°C annually over 1951-2015.

- **Projection:** The frequency of warm days is projected to increase by 55% and that of warm nights by 70%, both are relative to 1976- 2005.
  - The average duration of heatwaves during April-June is projected to double in the coming decades and their frequency to rise by 3 to 4 times as compared to 1976-2005.
  - By the end of the 21st century average temperature over India is projected to rise by 4.4°C which is relative to the average temperature during 1976-2005.

Monsoon

- Annual rainfall over India showed a declining trend during 1951-2015 and the reduction ranged between 1-5 mm over central India, Kerala and the far Northeast regions.

- Contrarily, precipitation increased over J&K and Northwest India.

- **Projection:** The coming decades are projected to witness a considerable **rise** in the mean, extreme and inter-annual variability of rainfall associated with the monsoon.

Droughts and Floods

- The frequency and intensity of both heavy rainfall events and dry days have gone up Since the 1950s.

- These trends are prominent over Central India and South Peninsular regions during the southwest monsoon (June-September) and northeast monsoon (October-December) respectively.

- There is an increase in the area under drought along with frequency and severity during 1951-2016.

- Flood risks are higher over the east coast, West Bengal, eastern Uttar Pradesh, Gujarat, Konkan and cities like Mumbai, Chennai and Kolkata.

- **Projections** suggest an increase by one or two events per decade over Central and Northern India. Eastern India could face two more droughts per decade compared to what was experienced during 1976-2005, while the Southern Peninsula is projected to experience one or two droughts fewer.

Sea Level

- The sea level over the North Indian Ocean (Arabian Sea and Bay of Bengal) rose by 3.3 mm per year, which is in tune with the **Global Mean Sea Level (GMSL)** rise during 1993-2015.

- A risk of inundation looms over Andhra Pradesh and Ganga-Brahmaputra-Meghna delta basins in an extreme climate scenario.

- **Projection:** Some 340 million coastal residents of the North Indian Ocean and its islands would be exposed to coastal hazards by 2030.

Tropical Cyclones

- The number of extremely severe cyclonic storms formed in the Arabian Sea has increased in the last 20 years.

- **Projection:** Severe Cyclonic storms in the Arabian Sea are gaining more strength and the trend is projected to continue.

Himalaya Snow Cover

- The Hindukush Himalayas have warmed at an average 0.2°C per decade, leading to a decline in snow cover during the last seven decades and glaciers in the last four to five decades.

- The Karakoram Himalayas have reported an increase in snowfall during winter.

- **Projection:** The Hindukush Himalayas is projected to be warmer by 2.6-4.6°C by the end of the century.

Cause & Effect:

- The main contributor to climate change is **anthropogenic activities which are** pushing up concentrations of greenhouse gases and this has led to rise in **temperature and atmospheric moisture content.**

- A higher concentration of water vapour, in turn, leads to intense rainfall during monsoon.

- Heating leads to vaporisation, which is directly linked to decreasing soil moisture, resulting in droughts and this can lead to a reduction in food production and in the availability of potable water.

- **Projection:** Rising sea levels would make India's big cities vulnerable to erosion and damage to coastal projects.

GLOBAL FOREST RESOURCES ASSESSMENT 2020

The Food and Agriculture Organization (FAO) of the United Nations released the Global Forest Resources Assessment (FRA) Report of the year 2020.

About:

- FAO has brought out this **comprehensive assessment every five years** since 1990.

- The report assesses the **state of forests, their conditions and management** for all member countries.

Key Highlights:

- **Maximum Net Gains: The top 10 countries that have recorded the maximum average annual net gains** in a forest area during 2010-2020 are China, Australia, India, Chile, Vietnam, Turkey, the United States, France, Italy and Romania.

- Among the continents, the **Asian continent reported the highest net gain in forest area** in 2010-2020. It recorded a 1.17 million hectares (ha) per year net increase in forests in the last decade.

- The **South Asia sub-region** reported net forest **losses during 1990-2020.**

Status of India:

- India among **top 10 countries gaining forest area** in the world.

- As of now, **India accounts for two per cent of total global forest area.**

- India reported **0.38 per cent annual gain in the forest**, or 266,000 ha of forest increase every year at an average.

- The FRA 2020 has credited the government's **Joint Forest Management programme** for the significant increase in community-managed forest areas in the Asian continent.

- The forest area managed by local, **tribal and indigenous communities** in India increased from zero in 1990 to about 25 million ha in 2015.

- However, the naturally regenerating forest rate is disappointing, according to the assessment. It is also an indicator of the policies that India is pursuing.

- India reported **maximum employment in the forestry sector** in the world.

Measures taken by India:

- **National Forestry Policy, 1988:** The policy lays emphasis on the **concept of Joint Forest Management** where villages and the relevant forest department manage specific forest blocks together to meet the basic needs of rural and tribal populations, increase forest productivity.
  - Under joint forest management (JFM), village communities are entrusted with the protection and management of nearby forests. The areas concerned are usually degraded or even deforested areas.

- **Schedules Tribes and Other Traditional Forest Dwellers (Recognition and Forest Rights) Act, 2006:** This Act came into the play to exclusively grant rights and concessions and to protect the way of life of forest-dependent communities that depend on forests for their daily subsistence their livelihoods.

- **National Afforestation Programme:** The ministry is implementing **three major schemes for development of forest areas i.e. National Afforestation Programme (NAP) scheme, National Mission for a Green India (GIM)** and **Forest Fire Prevention & Management Scheme (FFPM).**

- NAP is being implemented for afforestation of degraded forest lands. NAP is a **centrally sponsored scheme** which is implemented with the fund sharing pattern of 60: 40 percent between Centre and States wherein the sharing pattern for **Northeastern and hilly States is 90:10.**

- **Green India Mission** is one of the eight missions launched under the **National Action Plan on Climate Change (NAPCC).**
  - It aimed at protecting, restoring and enhancing India's diminishing forest cover and responding to climate change by a combination of adaptation and mitigation measures.

- The FFPM takes care of **forest fire prevention and management measures**. It is specifically dedicated to assisting the states in dealing with Forest Fires.
  - It replaced the Intensification of Forest Management Scheme (IFMS)in 2017. It has increased the amount dedicated for forest firework.
  - It allocates funds with 90:10to the Northeast and Western Himalayan regions and 60:40 ratios for all other states.

- Besides, the funds collected under **Compensatory Afforestation Fund Management and Planning Authority (CAMPA),** as compensatory levies from states inter-alia, is also used in plantation activity including compensatory afforestation by States/UTs.

DEATH VALLEY RECORDS HIGHEST GLOBAL TEMPERATURE

Death Valley in California recorded the highest global temperature in over 100 years.

About:

- The National Weather Service's automated weather station close to the Death Valley's Furnace Creek in Southern California desert hit the extremely high temperature of **130 degrees Fahrenheit (54.4 Celsius).**

- Before this, the highest temperature reliably recorded on Earth was 129.2F (54C) – also in Death Valley in 2013.

Factors leading to its High Temperature:

- **Solar heating:** The valley's surface undergoes intense solar heating because the air is clear and dry, and the land is dark and sparsely vegetated. This is especially noticeable in summer when the sun is nearly directly overhead.

- **Trapping of warm air:** Warm air naturally rises and cools; in Death Valley, this air is subject to continual reheating as it is trapped by high, steep valley walls and recycled back to the valley floor.

- **Migration of warm air from other areas (advection):** Warm desert regions adjacent to Death Valley, especially to the south and east, often heat air before it arrives in Death Valley.

- **Warm mountain winds:** As winds are forced up and over mountains (e.g., the numerous ranges west of Death Valley), the winds can be warmed in several ways. The resulting dry, warm winds are known as foehn winds.

What are the Effects of Extreme Heat?

- According to the World Health Organization (WHO), extreme **heat can exacerbate pre-existing health conditions**, including **respiratory diseases, heart conditions and kidney disorders.**

- The immediate effects on the human body are **heat cramps, dehydration and even potentially fatal heat strokes.**

- It can also have a **severe impact on agriculture and forests.**

- It either causes vegetables to wilt and die or encourage the spread of plant diseases.

- It **causes wildfires** which lead to **forest cover reduction and death of fauna.**

- It **affects infrastructure too by straining power grids** and causing blackouts. It can ground planes, melt roads and cause the inside of vehicles to overheat to dangerous levels.

About Death Valley:

- Death Valley is the lowest and driest place in the US and one of the hottest locations in the world at the height of summer.

- It lies in the northern part of the **Mojave Desert, along the eastern border of California near Nevada** and close to the Great Basin Desert.

- The valley is extremely dry because it lies in the rain shadow of four major mountain ranges (including the Sierra Nevada and the Panamint Range).

TUTING-TIDDING SUTURE ZONE (TTSZ)

Wadia Institute of Himalayan Geology (WIHG) an autonomous institute of the Department of Science & Technology (DST) conducted a study to explore the elastic properties of rocks and seismicity in the easternmost part of India.

About:

- The Eastern Himalayas in Arunachal Pradesh is generating moderate earthquakes at two different depths. **Low magnitude earthquakes are concentrated at 1-15 km depth**, and slightly higher than **4.0 magnitude earthquakes** are mostly generated from **25-35 km** depth.

- The crustal thickness in this area varies from 46.7 km beneath the Brahmaputra Valley to about 55 km in the higher elevations of Arunachal, with a marginal uplift of the contact that defines the boundary between the crust and the mantle technically called the **Moho discontinuity.**

- The intermediate-depth is devoid of seismicity and coincides with the zone of fluid/partial melts.

- It indicated the presence of fluid or partial melt at crustal depths at higher parts of the Lohit Valley.

- **Extremely high Poisson's ratio** was also obtained in the higher parts of the **Lohit Valley**, indicating the presence of fluid or partial melt at crustal depths.

📝 DO YOU KNOW?

Poisson's ratio: It is a measure of the Poisson effect that describes the expansion or contraction of material in directions perpendicular to the direction of loading. The value of Poisson's ratio is the negative of the ratio of transverse strain to axial strain.

What is Tuting-Tidding Suture Zone (TTSZ)?

- It is a major part of the **Eastern Himalaya**, where the Himalaya takes a sharp southward bend and connects with **the Indo-Burma Range.**

- This part of the **Arunachal Himalaya which** has gained significant importance in recent times due to the growing need of constructing roads and hydropower projects.

- **Significance of the study:** This detailed assessment of seismicity in this region will be helpful for planning any large scale construction in this region in the future and also improve earthquake preparedness in the area.

Reasons for Seismic Hazard:

- The unearthing and growth of the Himalaya is a continuous process that results predominantly from reverse faults in which the rocks on the lower surface of a fault plane move under relatively static rocks on the upper surface, a process called **under-thrusting** of the Indian plate beneath its Eurasian counterpart.

- This process keeps modifying the drainage patterns and landforms and is the pivotal reason for causing an immense seismic hazard in the Himalayan mountain belt and adjoining regions.

SUPER APPS

> *Tata Group is planning to launch an all-in-one super app by the end of this year.*

About:

- A super app is a **platform developed** by a company offering various services **under one umbrella.**
- It is expected to **bring together all the consumer-facing businesses** of the group.
  - **For Examples:** China's WeChat, which started out as a messaging app, expanded into payments, cabs, shopping, food ordering, cab services to become a super app.
- It will provide its **customers with a range of products** and services offered by different platforms of Tata Group, including shopping app Tata CLiQ, grocery e-store StarQuik and online electronics platform Croma.

Significance of these Apps:

- **Increase Revenue:** This model increases the revenue realization due to consolidation services at one place.
  - It is significant for those countries whose large base of the population is using a smartphone-like India.

- **Access to diverse services:** Apart from increased revenue realisation, these apps also provide diverse services at one place, thus it will save a lot of time.
- **Large Data Consolidation:** Such apps also provide companies with large swaths of consumer data which can then be harnessed to learn more about user behaviour.
  - Data collected by the master app could then be used to train machines in artificial intelligence and predict consumer behaviour even more accurately.
- **Market Access:** It enables domestic and foreign retailers to easily get access to the market.

Concerns:

- **Monopoly:** Companies are trying to keep a customer within their own ecosystem for most services that increase the possibility of a monopoly.
- **Privacy Issue:** Concerns of privacy in cases where a super app has onboarded third-party service providers.
- **Language problem:** As India is a multi-lingual nation, so the super app must be available in vernacular language to maximise the reach.
- **Financial System Issue:** There are risks of financial data thefts as these apps are disintermediating banks from their customers.

China's 'Copycat' Tech Industry is Now Being Copied

Global technology companies are now replicating successful concepts from their Chinese counterparts, from the Super App to social+ ecommerce to short video.

The Super App

| WeChat | Alipay | Meituan | Facebook | LINE | Go-Jek |
| 1bn+ MAU | 1bn+ MAU | 289mn MAU | 1bn+ MAU | 220mn MAU | 27mn MAU |

China has pioneered the "Super App," a one-stop shop for services from shopping to ride hailing to money transfers to flight bookings.

Facebook's standalone messaging app now has multiple features including chatbots, games and mobile payments.

LINE started as a messaging platform and now offers services, including a digital wallet, news streaming, video on demand and digital comic distribution.

Go-Jek started as a motorcycle ride-hailing service but has since expanded its offering to 18+ services, including food delivery, mobile payments and massage services.

ASTEROID 2018VP1

According to the Center for Near Objects Studies at NASA's Jet Propulsion Laboratory, an asteroid named 2018VP1 will pass very close to earth.

About:

- The asteroid is also called **'Election Day Asteroid'** as it will zip past earth one day before US Presidential elections.
- **Asteroid 2018VP1** is very small (approx. 2 meters in diameter) and poses no threat to Earth.
- **Discovery:** The asteroid was first discovered at the Palomar Observatory in California's San Diego County two years ago.
- According to NASA, it has only 1 in 240 chance of impacting the earth.

What is Asteroid?

- Apart from the stars, planets and satellites, there are numerous tiny bodies which also move around the sun. These bodies are called asteroids. They are **found between the orbits of Mars and Jupiter.**
- Asteroids are **left over from the formation of our solar system**. Our solar system began about 4.6 billion years ago when a big cloud of gas and dust collapsed.

Features:

- Asteroids aren't all round like planets. They have jagged and irregular shapes.
- Some asteroids are hundreds of miles in diameter, but many more are as small as pebbles.
- Most asteroids are made of different kinds of rocks, but some have clays or metals, such as nickel and iron.
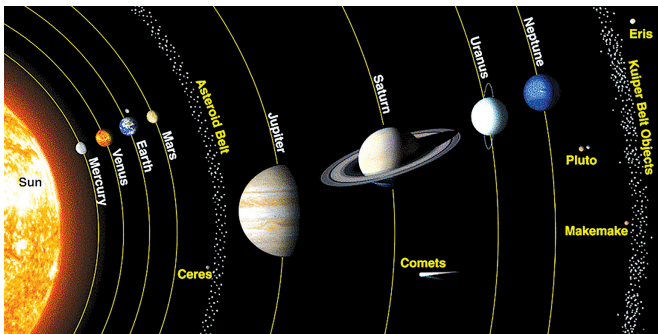
NASA Space Missions:

- Several NASA space missions have also flown by and observed asteroids. The **NEAR Shoemaker spacecraft** landed on Eros, an asteroid near Earth, in 2001.
- The **Dawn spacecraft** traveled to the asteroid belt in 2011 to orbit and study the second largest object there, Vesta.

- In 2016, NASA launched the **OSIRIS-REx spacecraft** to study an asteroid near Earth named Bennu.

Deflecting Asteroids Mission:

- **Asteroid Impact and Deflection Assessment (AIDA):** This includes NASA's Double Asteroid Redirection Test (DART) mission and the European Space Agency's (ESA) Hera.
  - The **mission's target is Didymos, a binary near-Earth asteroid**, one of whose bodies is of the size that could pose the most likely significant threat to Earth.
  - **Double Asteroid Redirection Test (DART) Mission:** NASA in 2018 has announced that it had started the construction of DART, scheduled to be launched in 2021 with an aim to slam into the smaller asteroid of the Didymos system in 2022.
  - **Hera mission:** It is the asteroid deflection mission of European Space Agency (ESA) that scheduled to be launched in 2024 to measure the impact crater produced by the DART collision and study the change in the asteroid's orbital trajectory. It will arrive at the Didymos system in 2027.

INDIA'S ASTROSAT

A global team discovered one of the earliest galaxies in extreme ultraviolet light by using ASTROSAT.

About:

- The global team was led by scientists of the Inter-University Centre for Astronomy and Astrophysics (IUCAA).
  - The team comprises scientists from India, Switzerland, France, USA, Japan and the Netherlands.
- ASTROSAT detected extreme UV light from a galaxy called **AUDFs01, 9.3 billion** light-years away from Earth.

Background:

- Earlier, NASA's Hubble Space Telescope (HST), which is significantly larger than the Ultra Violet Imaging Telescope (UVIT) stationed on Astrosat, did not detect any UV emission from this galaxy because it is too faint.
- AstroSat/UVIT was able to achieve this unique feat because the background noise in the UVIT detector is much less than the ones on HST.

Significance:

- This is a very important clue to how the dark ages of the Universe ended and there was light in the Universe.
- Since UV radiation is absorbed by Earth's atmosphere, it has to be observed from space for better understanding.

What is AstroSat?

- AstroSat, **India's first multi-wavelength satellite** that has **five unique X-ray and ultraviolet telescopes** working in tandem.

- AstroSat with a **lift-off mass of 1515 kg** was launched on September 28, 2015, into a 650 km orbit inclined at an angle of 6 deg to the **equator by PSLV-C30 from Satish Dhawan Space**.

- The minimum **useful life of the AstroSat mission is expected to be 5 years.**

- **Features:** It enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite.
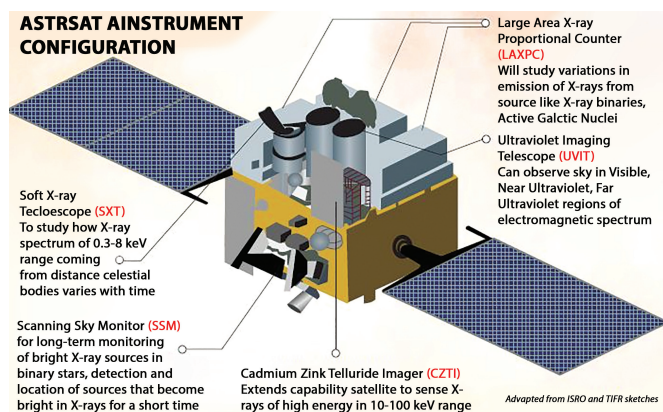
Objectives:

- To **understand high energy processes in binary star systems** containing neutron stars and black holes.

- Estimate magnetic fields of neutron stars.

- **Study star birth regions and high energy processes in star systems** lying beyond our galaxy.

- **Detect new briefly bright X-ray sources** in the sky.

- **Perform a limited deep field survey** of the Universe in the Ultraviolet region.

PERSEIDS METEOR SHOWER

The Perseids meteor shower is active from August 17-26.

About:

- It is the **annual celestial event** that considered the best meteor shower because many bright meteors and fireballs shooting through the sky making it easy for people to watch it from Earth.

What are Meteor and Meteor Showers?

- **Meteor:** A meteor is **a space rock or meteoroid** that enters Earth's atmosphere.
  - They are **ejected from comets** as they manoeuvre around their orbits around the sun.

- As meteors fall towards the Earth, the resistance makes the space rocks extremely hot and, as meteorites pass through the atmosphere, they leave behind streaks of glowing gas.

- For instance, the **Orionids meteors** emerge from the **comet 1P/Halley** and make their yearly presence in October.

- **Meteor showers:** When a meteor reaches the Earth, it is called **a meteorite and a series of meteorites**, when encountered at once, is termed as a **meteor shower.**
  - They are witnessed when Earth passes through the trail of debris left behind by a comet or an asteroid.
  - According to NASA, over 30 meteor showers occur annually and are observable from the Earth.
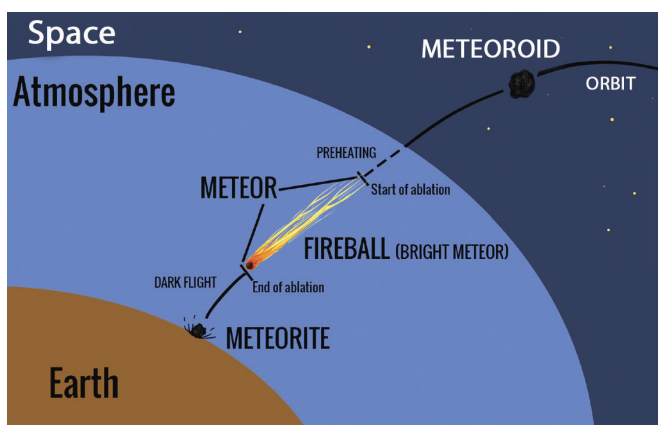
What is the Perseids Meteor Shower?

- The Perseids meteor **shower peaks every year in mid-August.**

- It was first observed **over 2,000 years ago.**

- The **Perseids occur as the Earth runs into pieces of cosmic debris** left behind by the comet **Swift-Tuttle**.

- It gets its name from the constellation Perseus.

Visibility:

- Pollution and monsoon clouds make the Perseids difficult to view from India.

- These meteor showers are best viewed from areas in the Northern Hemisphere in pre-dawn hours.

Where do the Perseids Meteor Showers Come from?

- The comet Swift-Tuttle, which was discovered in **1862 by Lewis Swift and Horace Tuttle**, takes **133 years to complete one rotation around the sun.**

- The last time it reached its closest approach to the sun was in 1992 and will do so again in 2125.

- Every time comets come close to the sun, they leave behind dust that is essentially the debris trail, which the Earth passes through every year as it orbits around the Sun.

OMEGA CENTAURI GLOBULAR CLUSTER

> *Recently, Scientists at Indian Institute of Astrophysics (IIA) found some Helium (He)-enhanced cool bright in Omega Centauri.*

About:

- The first time **He** abundance has been found in **Omega Centauri** and the work has been published in **'The Astrophysical Journal'.**
- IIA is an **autonomous institute of Department of Science & Technology (DST).**

What is Omega Centauri?

- Omega Centauri is a **globular cluster** in the constellation of **Centaurus**.
- It was first identified as a non-stellar object by Edmond Halley in 1677 and as **globular star cluster** orbiting **Milky Way galaxy by** John Herschel in 1830s.
- Omega Centauri contains **approximately 10 million stars** and is about 16,000 light-years away.
- It also includes **stars of a variety of ages,** whereas other **globular clusters contain stars** from only one generation.
- **Different from Globular Cluster:** It has several characteristics that mark it as different from the typical globular cluster.
  - For example, Omega Centauri is ten times more massive than other globular clusters.
  - It is the **largest** and **brightest** globular cluster in the **Milky Way.**

What is a Globular Cluster?

- The **globular clusters are stellar systems consisting of millions of stars** that are formed from the **same gaseous cloud**.
- Globular clusters contain some of the **oldest stars in a galaxy** and are thought to have formed early in its history.
- Stars present in this cluster are **homogeneous** in their chemical composition of elemental form.
- However, some clusters deviate from this norm. One of the examples is **Omega Centauri.**

Significance of the Study:

- The different stars of Omega Centauri do not show the same metal content, a parameter that indicates its age, but a large range in it. The study provides a **very important clue for the origin of the He-enhanced population** establishing that these are the second generation of stars formed from the metal-rich and He-enhanced material from the first generation of stars.

About Milky Way Galaxy:

- It large spiral system consisting of several hundred billion stars, one of which is the Sun.

- It takes its **name from the Milky Way,** the irregular luminous band of stars and gas clouds that stretches across the sky as seen from Earth.
- **Galileo Galilei first resolved the band of light** into individual stars with his telescope in 1610.

SWADESHI MICROPROCESSOR CHALLENGE

> *Recently, Union Minister of Law & Justice, Communications and Electronics & Information Technology launched "Swadeshi Microprocessor Challenge - Innovate Solutions for #Aatmanirbhar Bharat".*

About:

- The tagline of the Swadeshi Microprocessor Challenge is 'Innovate Solutions for #Aatmanirbhar Bharat'.
- It will provide further impetus to the **strong ecosystem of Start-up, innovation and research** in the country.

About the Swadeshi Microprocessor Challenge:

- IIT Madras and Center for Development of Advanced Computing (CDAC) have developed two microprocessors named **SHAKTI (32 bit)** and **VEGA (64 bit).**
- They used Open Source Architecture under the aegis of Microprocessor Development Programme of Ministry of Electronics and IT.

Significance:

- It is aimed at meeting India's future requirements of strategic and industrial sectors.
- It has the potential to **mitigate the issues of security, licensing, technology obsolescence** and most crucially cutting dependency on imports.
- It offers **benefits to the contestants by providing internship opportunities** and regular technical guidance from the best VLSI & Electronics System Design Experts in the country.
- It also provides the **business mentorship & funding support, facilitated by Incubation Centres.**

Microprocessor Development Programme:

- Under the aegis of Microprocessor Development Programme of Ministry of Electronics and IT (Meity), India's premier technology institute, IIT Madras and government's **Center for Development of Advance Computing (CDAC)** have jointly developed two microprocessors **named SHAKTI (32 bit) and VEGA (64 bit) respectively** using **Open Source Architecture.**
- The development of an **indigenous microprocessor is necessary** in order to meet the domestic requirements and shield the country from potential future embargoes on transfer of critical technology.

Open Source Architecture:

• Open-source architecture uses open standards of collaboration and enables sharing of all resources and designs by both amateur and experienced professionals.

• It allows future modifications or add-ons to the architecture are possible for the best interest of the end user.

Centre for Development of Advanced Computing:

• It is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.

• The setting up of C-DAC in 1988 was to build Supercomputers in order to avoid import of Supercomputers by USA. Since then C-DAC has been undertaking building of multiple generations of Supercomputer starting from PARAM with 1 GF in 1988.

SARABHAI CRATER

Recently ISRO named a crater as Sarabhai Crater on completion of one year of centenary celebrations.

About:

• Chandrayaan 2 orbiter has captured a **photograph of the Sarabhai Crater on the Moon.**
  ◆ A crater is a **bowl-shaped depression** produced by the impact of a meteorite, volcanic activity, or an explosion.

• The **Sarabhai Crater** is around 250 to 300 kilometres east of the crater where the Apollo 17 and Luna 21 Missions had landed.

Significance of the Discovery:

• The Sarabhai crater is **an 'excellent example' to study the impact process of the Mare Serenitatis.**

• **What is Mare Serenitatis:** It was formed between 3.9 and 3.8 thousand million years ago with vast lava plains creating a flat surface. It was during this period when the Moon was heavily bombarded by asteroids and the major impact basins on the Moon were formed.

About Dr. Vikram Sarabhai:

• He was born on 12 August 1919 in the city of Ahmedabad in an influential Jain business family.

• He earned his doctorate from Cambridge University. During his time at Cambridge, he studied cosmic rays and published many research papers on it.

• He is considered as the **Father of the Indian space program.**
  ◆ He was an astrophysicist and the Founder of Physical Research Laboratory as well as a distinguished cosmic-ray and space scientist.

◆ He was also Chairman of the Atomic Energy Commission.

◆ He along with other Ahmedabad-based industrialists played a major role in the creation of the Indian Institute of Management, Ahmedabad.

◆ The establishment of ISRO was one of his greatest achievements.

RAILWAYS DEPLOYED "NINJA UAVS"

Recently, Indian Railways started deploying "Ninja UAVs" (unmanned aerial vehicles) for establishing a drone-based surveillance system.

About:

• Mumbai Division of Central Railway procured **two Ninja UAVs (drones)** for **better security** and **surveillance** in Railway areas like station premises, Railway track sections, yards, workshops, etc.

• A team of Railway Protection Force (RPF)has been trained for drone flying, surveillance and maintenance.

• NINJA UAVs are capable of real-time **tracking, video streaming** and may be operated on **Automatic Fail-Safe mode.**

• They are **lightweight** and **economical micro contraptions** built for mapping and surveillance.

What is the Unmanned Aerial Vehicle (UAV)?

• **Unmanned Aerial Vehicle (UAV)** popularly known as **Drone**, is an airborne system or an aircraft.

• It is operated remotely by a **human operator or autonomously by an onboard computer.**

• Drone surveillance technology has emerged as an **important and cost-effective tool for security surveillance** over large areas with limited manpower.

• Drones were used to **enforce lockdown and monitor the movement of migrants** during the COVID-19 lockdown.

DWARF PLANET CERES

Recently, researchers have shed new light on the dwarf planet Ceres, which lies in the asteroid belt between Mars and Jupiter.

About:

• Ceres now has the **status of an "ocean world",** after scientists analysed data collected by NASA's Dawn spacecraft.

What is Ocean World?

• The observations from Dawn suggest the presence of briny liquid (saltwater) water under Ceres's surface.

- The brine reservoir is estimated to be located about 40 km deep and is hundreds of miles wide, making the dwarf planet "water rich".

Ceres Exploration

- The **dwarf planet** was first **spotted by Giuseppe Piazzi in 1801**, who assumed that Ceres was the missing planet between Mars and Jupiter.
- It was **classified as a dwarf planet in 2006** and is the first dwarf planet to be orbited by a spacecraft.
- Dawn was launched in 2007 by NASA and it reached Ceres in 2015.

What is Dwarf Planet?

- There are 4 criteria for a celestial body to be considered as a Dwarf Planet. These criterias are set by the International Astronomical Union (IAU). They criterias are
  - The body orbits around the Sun,
  - It is not a moon,
  - It has not cleared the neighborhood around its orbit (which means it is not the dominant body in its orbit around the Sun and this is what differentiates a planet from a dwarf planet) and
  - Has enough mass for its gravity to pull it into a roughly spherical shape.
- At present there are officially five dwarf planets in our Solar System. Pluto is the most famous dwarf planet. It was downgraded from the status of a planet in 2006.
- Other four, in the order of size are Eris, Makemake, Haumea and Ceres.
- The sixth claimant for a dwarf planet is Hygiea, which so far has been taken to be an asteroid.

AFRICAN SWINE FEVER

African swine fever (ASF) has spread to Meghalaya, more than 17,000 pigs have died due to the highly-contagious disease in adjoining Assam.

About:

- African Swine Fever (ASF) has killed at least 17,000 domesticated pigs in Assam and an unspecified number in Arunachal Pradesh.
- The disease is believed to have been **transmitted from China** where it has resulted in the death of several animals in 2019.

What is African Swine Fever?

- **Viral disease:** It is a contagious **hemorrhagic viral disease** affecting domestic and wild pigs.

- **Geographical distribution:** The disease was **first detected in Kenya in 1909** and are later found in regions of Asia, Europe and Africa.
- **No Vaccine developed:** As of now, there is **no approved vaccine against ASF unlike classical swine fever (Hog Cholera)** which is caused by a different virus. Although signs of ASF and classical swine fever (CSF) may be similar, the ASF virus is unrelated to the CSF virus.
- **Transmission and spread:** African Swine Fever persistently infects its natural hosts, warthogs, bushpigs, and soft ticks, which likely act as a vector, with no disease signs.
  - According to the **World Organisation for Animal Health, ASF is caused by a large DNA virus** of the **Asfarviridae family**. African swine fever virus is the only virus with a double-stranded DNA genome known to be transmitted by arthropods.
  - The virus can be **spread by ticks** and can also be transmitted by direct or indirect contact with infected pigs, faeces or body fluids.
- **Public health risk:** African Swine Fever **does not cause disease in humans.**
- **Prevention and control:** Classic sanitary measures may be employed including early detection and humane killing of animals (with proper disposal of carcases and waste); thorough cleansing and disinfection and **opting strict biosecurity norms.**
- **Symptoms of illness:** It includes weight loss, intermittent fever, respiratory signs, chronic skin ulcers and arthritis. Acute forms of ASF is characterised by high fever, anorexia, loss of appetite and haemorrhages in the skin.

Concerns and Way Forward:

- The national parks, wildlife sanctuaries and reserve forests should be **scanned and guarded properly.**
- The **wild pig populations must be stopped from leaving their natural habitats** to prevent any contact with the infected pigs.
- If infected culling and disposal of carcases should be done with the utmost care and opting **biosafety guidelines.**

About World Organisation for Animal Health (OIE):

- The need to fight animal diseases at the global level led to the **creation of the Office International des Epizooties (OIE)** through the international Agreement signed on January 25th 1924.
- In May 2003 the Office became the **World Organisation for Animal Health** but kept its historical acronym OIE.
- The OIE is the **intergovernmental organisation** responsible for improving animal health worldwide.
- It is recognised as a reference organisation by the **World Trade Organization (WTO)** and in 2018 has a total of 182 Member Countries.

NASA'S SOLAR DYNAMICS OBSERVATORY

> *Recently, NASA's Solar Dynamics Observatory (SDO) observed a massive Sunspot group named AR2770.*

About:

- The Solar Dynamics Observatory (SDO) is a NASA mission which has been observing the Sun since 2010.
  - The goal of the SDO is to understand the influence of the Sun on the Earth and near-Earth space by studying the solar atmosphere on small scales of space and time and in many wavelengths simultaneously.
- SDO is part of the Living With a Star (LWS) program aimed at understanding aspects of the Sun–Earth system directly affecting life and society.

What are Sunspots?

- A **sunspot is a dark area on the sun's surface** which is relatively cooler than the surrounding parts.
- These sunspots have electrically charged gases that generate areas of powerful magnetic forces and some sunspots are as large as 50,000 km in diameter.
- Sunspots are a common sight on our Sun during the years around solar maximum.
- Solar maximum or solar max is the **period of greatest solar activity in the solar cycle of the Sun**, where one solar cycle lasts about 11 years.
- The **current solar cycle, which began in 2008**, is in its 'solar minimum' phase, where the number of Sunspots and solar flares is at a routine low.
- **Types of Sunspots:** They typically consist of a dark region called the **'umbra'**, which is surrounded by a lighter region called the **'penumbra'**.
- In every solar cycle, the number of Sunspots increases and decreases.

PENUMBRA

UMBRA
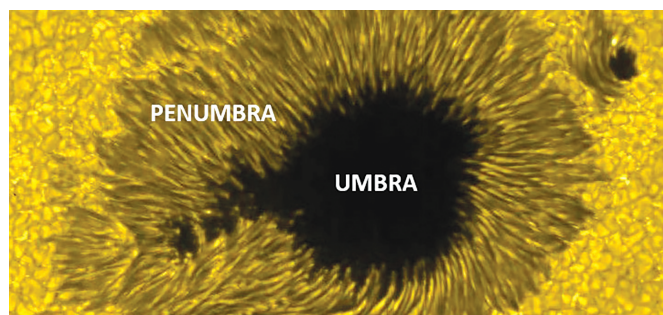
What are Solar Flares and Coronal Mass Ejections?

- Solar flares are the **result of changes in magnetic fields on the sunspots** that cause a huge explosion. These solar flares are often released into space.

- At times, **solar flares are accompanied by Coronal Mass Ejections (CME)** in which large bubbles of radiation and particles emitted by the Sun that explodes into space at high speed.
- CMEs can trigger intense light in the sky on Earth, called **auroras**.
- Recently, scientists developed a new model that can successfully predict seven of the Sun's biggest flares from the last solar cycle out of a set of nine with the help of **NASA's Solar Dynamics Observatory.**
- Solar flares can have a major effect on radio communications, Global Positioning Systems (GPS) connectivity, power grids, and satellites.

US FDA NOD FOR SALIVADIRECT TEST

> *Recently, the U.S. FDA approved a new rapid diagnostic test for the novel coronavirus (SARS-CoV-2) infection that uses saliva samples.*

About:

- The test, **called SalivaDirect,** is an **inexpensive test developed by a team led by Yale School of Public Health** in association with the National Basketball Association and National Basketball Players Association.

Advantages of this:

- The sample collection of **saliva is non-invasive unlike the nasopharyngeal specimens.**
- It **reduces the need for trained healthcare workers** to collect the samples and reduces the risk of virus spread to healthcare workers at the time of sample collection.
- It will likely **increase testing compliance as Collecting nasopharyngeal samples** can be uncomfortable to people but in this test the sample collection is quite comfortable.
- The saliva sample can be collected in any sterile container and the diagnostic test also **does not require the use of preservatives at sample collection**, does not require specialised reagents or equipment for nucleic acid extraction which is not in the case of other tests.
- It can **help to realise large-scale testing of the general public** to facilitate isolation and contact tracing of cases with the ultimate goal of preventing the spread of SARS-CoV-2.

Some Tests available for COVID-19 in India

- **RT-PCR Test:** It is for the identification of SARS-CoV-2 RNA. In the test the **RNA is converted to DNA** through a process called **'reverse transcription'** for detecting viruses.

- **RT-nPCR Test:** The nested PCR (RT-nPCR) approach does not depend on real-time quantitative RT-qPCR but uses standard RT-PCR as part of an endpoint assay.

- **Rapid Antigen Detection Tests:** It detects antigens i.e. foreign substances that induce an immune response in the body, that are found on or within the SARS-CoV-2 virus. Like RT-PCR, the rapid antigen detection test too seeks to detect the virus rather than the antibodies produced by the body.

- **ELISA Antibody Test:** It sands for the **Enzyme-Linked Immunosorbent Assays (ELISAs) based test** is used for the detection of antibodies that are produced by the body to fight against antigens or foreign substances. The test involves drawing the blood of the person.
  - The National Institute of Virology (NIV) Pune has developed and validated the 1st indigenous **IgG ELISA test "COVID KAVACH ELISA" for antibody detection of COVID-19.**

- **Feluda Test:** It is an acronym for FNCAS9 Editor Linked Uniform Detection and is based on Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) technology.
  - It uses the gene-editing tool-Crispr-Cas9 to target and identify genomic sequences of the novel coronavirus in suspected individual samples.

- **TrueNAT Test:** It is a chip-based test. It works by detecting the SARS-CoV-2 E-gene, which helps build the envelope that holds the components of the coronavirus together, and the gene for the RNA-dependent RNA polymerase, an enzyme that enables the virus to replicate.

NEXT GENERATION SEQUENCING MACHINES (NGS)

CSIR is working on developing "mega labs" to ramp up testing for COVID-19 using Next-Generation Sequencing machines (NGS).

About:

- The **Next-Generation Sequencing machines (NGS)** will be **repurposed to sequence 1,500-3,000 viral genomes** at a go for detecting the SARS-CoV-2 novel coronavirus in the mega labs.

What are Next-Generation Sequencing Machines (NGS)?

- Next-Generation Sequencing is massively parallel or deep sequencing DNA sequencing technology which has revolutionised genomic research.

- NGS is normally used for sequencing human genomes and has the ability to sequence entire human genome **within a single day.**

Benefits of using NGS Machines:

- **Higher accuracy:** The **NGS machines** can substantially detect the possible presence of the virus even in several instances where the traditional RT-PCR tests miss out on them.
  - The genome method can read a bigger chunk of the virus genome and thereby **provide more certainty, unlike the RT-PCR test** that identifies the SARS-CoV-2 virus by exploring only specific sections of the virus.

- NGS identified cases as **either positive and negative when RT-PCR found them to be 'inconclusive'**. So this can also be used as a confirmatory test.

- It can also **trace the evolutionary history of the virus and track mutations** more reliably and it can help identify more places where SARS-COv-2 viruses differ from other related viruses.

- The NGS does **not need primers and probes** and only needs custom reagents, unlike the RT-PCR that needs primers and probes, which is a key hurdle in the scaling of tests.
  - **Primers are short sequences of DNA** used to **amplify a particular DNA sequence**. A probe is a small radioactively or fluorescently labelled DNA sequence used to identify a particular DNA sequence.
  - Reagent for DNA is designed to easily prepare DNA extracts from animal tissues that can be used directly in PCR.
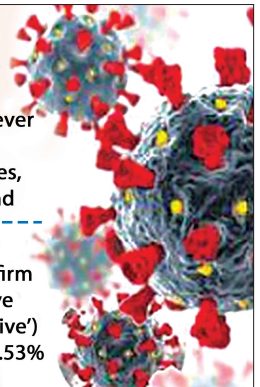

Geonome Study

A look at how next Generation Sequencing works

Next Generation Sequencing (NGS) involves scanning the entire virus genome

This can help identify more places where the SARS-CoV-2 virus differs from related viruses and can also help develop new diagnostic tests

Two lineages of the virus, never seen before in Indian genomes, were also found

The sensitivity (ability to confirm those who have virsus as 'positive') of NGS was 97.53%
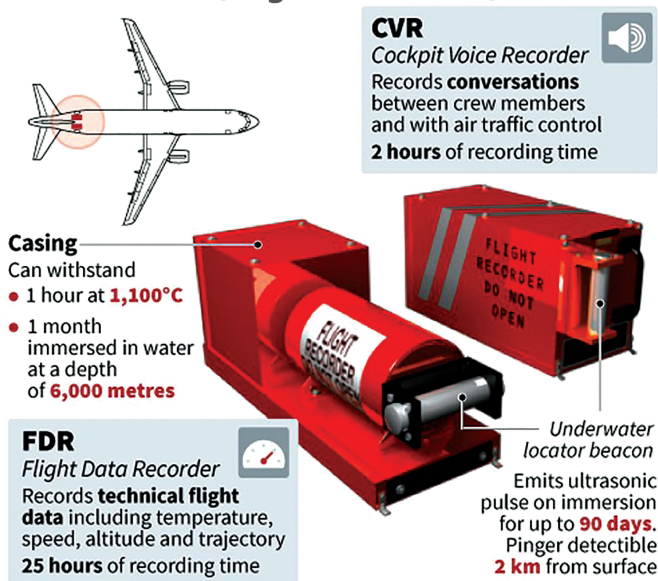
BLACK BOXES

Recently, Investigators found the "black boxes" of the ill-fated Boeing 737-800 aircraft.

About:

- A black box is an **electronic recording device** placed in an aircraft to **facilitate the investigation of aviation accidents** and incidents and they are also known as flight recorders.

- **There are two different flight recorder devices:**
  - The **Flight Data Recorder (FDR):** It records more than 80 different types of information such as altitude, airspeed, flight heading, vertical acceleration, etc.
  - **The Cockpit Voice Recorder (CVR):** It preserves the recent history of the sounds in the cockpit, including the conversation of the pilots and engine noises.
- In the initial days of the black box, the information was recorded on to a metal strip, which was then upgraded to magnetic drives succeeded by solid-state memory chips.

Black Boxes (Flight Recorders)

How do the Black Boxes Survive the Crash?

- The recording devices are stored inside a unit that is **generally made out of strong substances** such as steel or titanium and they are also insulated.
- To protect these black boxes, they are equipped towards the tail end of the aircraft where the impact of a crash is the least.
- There have been cases where planes have crashed into water bodies, therefore, they are equipped with a beacon that sends out ultrasound signals for 30 days.
- It usually takes at least 10-15 days to analyse the data recovered from the black boxes. Meanwhile, the investigators will be looking for other clues such as taking accounts from air traffic control personnel and recordings of the conversation between ATC and the pilots moments before the crash.

AMMONIUM NITRATE

The massive blast in Beirut, Lebanon's capital, was caused by over 2,700 tonnes of ammonium nitrate kept in storage for over six years.

About: Ammonium Nitrate

As a Compound-

- In its pure form, ammonium nitrate (NH_4NO_3) is a white, **crystalline chemical which is soluble in water.**
- It is nitrogen-rich and a common chemical ingredient of agricultural fertilisers
- It is also the main component of the explosive composition known as **ANFO – ammonium nitrate fuel oil** – commercial explosives used in mining and construction.
- In India, The **Ammonium Nitrate Rules, 2012, under The Explosives Act, 1884**, define ammonium nitrate as the "compound with formula NH_4NO_3 including any mixture or compound having more than 45 per cent ammonium nitrate by weight.

Ammonium nitrate as an explosive-

- Pure ammonium nitrate is **not an explosive on its own**. It is classified as an oxidiser (Grade 5.1) under the United Nations classification of dangerous goods.
- If mixed with ingredients, like fuel or some other contaminants, it can be very explosive. However, for combinations to explode, triggers like detonators are required.
- For Example, many Improvised Explosive Devices (IEDs) used by terrorists around the world have ANFO as the main explosive, triggered by primary explosives like RDX or TNT.

Regulations in India about Ammonium Nitrate:

- As it is used as an ingredient for the production of industrial explosives, anaesthetic gases, fertilisers, cold packs and has a strong possibility of misuse, ammonium nitrate is highly regulated in India.
- The manufacture, conversion, bagging, import, export, transport, possession for sale or use of ammonium nitrate is covered under **The Ammonium Nitrate Rules, 2012.**
- For the manufacture of ammonium nitrate, an Industrial licence is required under the **Industrial Development and Regulation Act, 1951.**
- A license under the **Ammonium Nitrate Rules, 2012** is also required for any activity related to ammonium nitrate.

ELECTRIC VEHICLE POLICY LAUNCHED BY DELHI

Recently, the Delhi Government launched the Electric Vehicle Policy.

About:

- The policy aims to make a quarter of all new vehicle registrations battery operated by 2024.
- The policy will be an addition to the centre's scheme known as **"Fame India Phase II".**

- The policy will waive the registration fee and road tax among other things. Also, it will provide an incentive of up to Rs 1.5 lakhs for new cars in the NCR region.

- According to the VAHAN database of the Ministry of Road Transport and Highways, electric vehicles comprised only 3.2 per cent of the new vehicles registered in Delhi in 2019-20 and this will boost the demand of electric vehicles.

- **EV Cell for implementation:** Under the policy, state EV fund is being created which will cater to the needs of this policy, and the EV board will be chaired by the Transport & Environment minister of Delhi.

What is FAME INDIA Scheme?

- It stands for **Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles** and it was launched by the Ministry of Heavy Industries and Public Enterprises in 2015.

- It aims to incentivize the production and promotion of eco-friendly vehicles including electric vehicles and hybrid vehicles.

- It has two phases: *Phase I:* Started in 2015 and was completed on March 31st, 2019. *Phase II:* Started from April 1st, 2019, will be completed by March 31st, 2022

Features of Phase I:

- Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises was the implementing agency.

- It is a part of the **National Electric Mobility Plan** and provides the incentive in the form of subsidies to manufacturers of electric vehicles and infrastructure providers of electric vehicles.

- The focus areas under the scheme are
  - Technology development
  - Demand creation
  - Pilot projects
  - Charging infrastructure

Features of Phase II:

- It has a total outlay of Rs 10000 Crores over a period of three years (2019-20 to 2021-22).

- It aims to give a push to electric vehicles (EVs) in public transport and seeks to encourage the adoption of EVs by way of market creation and demand aggregation.

- It proposes for the establishment of charging infrastructure, whereby about 2700 charging stations will be established in metros, other million-plus cities, smart cities and cities of Hilly

AIM TO REGISTER 5 LAKH
NEW EVs IN 5 YEARS

25% of all new vehicle registrations by 2024 to be Evs

0.1% Share of electric cars in annual car sales at present

0.2% Share of electric two-wheelers in annual two-wheeler sales at present

35,000 Electric vehicles planned to be brought by Delhi government in next one year, including 1,000 Evs for last-mile connect

250 Public charging/ swapping stations to come up in Delhi

5 lakh new Evs targeted to be registered in Delhi in the next 5 years

FEATURES OF POLICY

▶ Focus on electric two-wheelers, auto-rickshaws, buses and goods vehicles, since they contribute to chunk of vehicular pollution

▶ Open permit system for e-autos

▶ Ride-hailing service

Providers to be allowed to operate electric two-wheeler taxis

▶ Open permit system for e-autos

▶ All vehicles used by Delhi government officials to shift to electric within a year

▶ Road tax and registration fees to be waived for all battery electric vehicles during the period of this policy

▶ All new home and workplace parking will need to be 'EV ready'

with 20% of all vehicle holding capacity/parking required to be EV ready

▶ A dedicated EV cell within transport department for effective day-to-day implementation of policy

PURCHASE INCENTIVES TO USE E-VEHICLES

₹**10,000** for an average electric two-wheeler with 2 kWh battery

₹**30,000** For electric autos (e-autos)/ e-rickshaws/ e-carriers

100% Subsidy for purchase of charging equipment up to ₹**6,000** Per charging point

states across the country so that there will be the availability of at least one charging station in a grid of 3 km x 3 km.

- It will offer incentives to manufacturers, who invest in developing electric vehicles and its components, including lithium-ion batteries and electric motors.

National Electric Mobility Mission Plan 2020

- It is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country.
- This plan has been designed to enhance national fuel security, to provide affordable and environmentally friendly transportation and to enable the Indian automotive industry to achieve global manufacturing leadership.
- It has an ambitious target to achieve 6-7 million sales of hybrid and electric vehicles by the year 2020.

INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR: INTERNATIONAL NUCLEAR FUSION PROJECT

Recently, the world's largest experimental nuclear fusion project (ITER) achieved a key milestone.

About:

- Recently, the assembling of major components of fusion reactor was started. It is expected that five years later, the first plasma will be generated by nuclear fusion.

About ITER:

- International nuclear fusion research and engineering megaproject will be the world's largest magnetic confinement plasma physics experiment. It was launched in 1985 and is located in France.
- It aims to build the world's largest tokamak to prove the feasibility of fusion as a large-scale.
  - The tokamak is an experimental machine and has been designed to harness the energy of fusion.
  - Inside a tokamak, the energy produced through the fusion of atoms is absorbed as heat in the walls of the vessel.
  - This heat is used to produce steam and then electricity by way of turbines and generators.
- The project is funded and run by seven member entities—the European Union, India, Japan, China, Russia, South Korea and the United States.
- The member states share the cost of project construction, operation and decommissioning and they also share the experimental results and any intellectual property generated by the fabrication, construction and operation phases.

- The eventual goal is full power and getting a 10-times-return on input energy i.e. 500 MW of fusion power for 50 MW of injected heating power.

India's Contribution to ITER:

- India was responsible for fabricating and delivering nine packages including the cryostat made by L&T Heavy Engineering.
  - Cryostat is the outer vacuum shell for the thermonuclear reactor made of stainless steel.
- India was also responsible for the delivery of the cryogenic system. This system will keep the ITER magnets cool.
  - Magnets are critical in a tokamak as they produce the magnetic fields that confine and control the plasma.
- Some other India-made components include external heating systems for ITER plasma, vacuum vessel in-wall shields, a unique cooling water system, power supply systems, and diagnostic subsystems — all key components for the reactor, some of the first of their kind.

What is Nuclear Fusion?

- It is the nuclear reaction where a single heavy nucleus is formed by the combination of two lighter nuclei, thus releasing huge amount of energy which is several times more than fission reaction.
  - **Fission** is the nuclear reaction where the nucleus of an atom splits into lighter nuclei through a nuclear reaction.
  - This decay can be natural spontaneous splitting by radioactive decay, or can actually be simulated in a lab by achieving necessary conditions i.e. by bombarding with neutrinos.

SPACEX'S SN5 STARSHIP PROTOTYPE

Recently, SpaceX's full-scale SN5 Starship prototype successfully flew to an altitude of over 500 feet for a little less than 60 seconds.

About:

- It is a stainless steel test vehicle which is a part of the Starship spacecraft.
- It is powered by a single Raptor engine.

What is Starship?

- Starship is a spacecraft and **super-heavy booster rocket.**
- It acts as a **reusable transportation system** for crew and cargo to the Earth's orbit, Moon and Mars.
- SpaceX has described Starship as **"the world's most powerful launch vehicle"** with an ability to carry over 100 metric tonnes to the Earth's orbit.

- Starship has been under development since 2012 which is a part of Space X's central mission to make interplanetary travel accessible and affordable. The company is working on building a fleet of reusable launch vehicles.
- SpaceX is planning its first cargo mission to the red planet by 2022 and by 2024.

Significance:

- Starship can ferry both cargo and crew to the International Space Station (ISS) and other destinations in the solar system.
- Starship is also expected to help in carrying large amounts of cargo to the Moon for human spaceflight development and research.
- It could reduce the cost of travelling to space by a hundredfold.

BEIDOU NAVIGATION SATELLITE SYSTEM

Recently, China has recently completed its BeiDou Navigation Satellite System constellation.

About:

- It is the **fourth global satellite navigation system** in the world.
- The name BeiDou comes from the Chinese word for the **Big Dipper or Plough constellation.**
- China's BeiDou navigation project **was launched in the early 1990s** thereafter it became operational within China in 2000 and in the **Asia-Pacific region in 2012.**
- The navigation system has around 35 satellites in three kinds of orbits namely **Geostationary Earth Orbit (GEO)**, Inclined Geo-Synchronous Orbit (IGSO) and Medium Earth Orbit (MEO). The **second-generation BDS-2 is also known as COMPASS.**

Significance:

- BDS-3 is also capable of **providing precise point positioning services (PPP)** with a decimeter-level dynamic accuracy and centimetre-level static accuracy.
- It will work with other members of the network, allowing global users to access high-accuracy navigation, positioning and timing, as well as communication services.
- Having an independent navigation system will **boost China's military strength,** especially amidst rising US-China tensions. It may also help China to reduce dependency on American owned GPS.
- This has also given China a competitive edge over India, whose **IRNSS-NavIC** is still a regional navigation system.

Other Satellite Navigation Systems

- **GPS:** Initiated in 1978 and achieved global coverage in 1995.
  - Owned by the United States government and operated by the United States Air Force.
  - It consists of 24 to 32 medium Earth orbit satellites in six different orbital planes.
  - GPS typically provides positioning accuracies of under 2.2 meters, which can be improved to as low as a few centimetres with the use of augmentation systems.
- **GLONASS:** Russia's Global Navigation Satellite System (GLONASS) is operated by **Roscosmos**, a state corporation responsible for the space flight and cosmonautics program for the Russian Federation.
  - Initiated in 1982 and achieved global coverage in 1996, and again in 2011 (after the system had fallen into disrepair).
  - GLONASS has full global coverage with 24 satellites.
  - GLONASS provides positioning accuracies of 2.8 meters.
- **GALILEO:** The European Space Agency's Galileo system, initiated in 2005 and projected to provide global coverage by 2020 with 30 satellites.
  - Galileo is expected to be compatible with the modernized GPS system.
  - The receivers will be able to combine the signals from both Galileo and GPS satellites to greatly increase the accuracy.
- **NAVIC:** The NAVIC or **NAVigation with Indian Constellation** is an autonomous **regional** satellite navigation system developed by ISRO.
  - It consists of a constellation of 7 navigational satellites. 3 of the satellites will be placed in the Geostationary orbit (GEO) and the remaining 4 in the Geosynchronous orbit (GSO).
  - It is intended to provide an all-weather absolute position accuracy of better than 7.6 meters throughout India and within a region extending approximately 1,500 km around it.
- **QZSS:** The Quasi-Zenith Satellite System (QZSS) is a project of the Japanese government.
  - It is a four-satellite regional time transfer system and enhancement for GPS covering Japan and the Asia-Oceania regions.
  - QZSS services are available on a trial basis since January 2018.
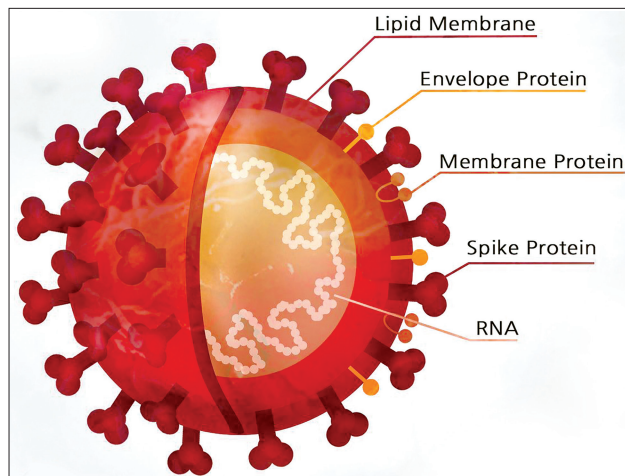
SPIKE PROTEIN

> *Recently, researchers found that the spike protein of SARS-CoV-2 changes its form after attaching to a human cell.*

About:

- The **spike protein of SARS-CoV-2** folds itself and assumes a **rigid hairpin shape.**

What is the Spike Protein?

- It is a protein that protrudes from the surface of a coronavirus, like the spikes of a crown or corona hence called 'coronavirus'.
- In the SARS-CoV-2 coronavirus, it is the spike protein that initiates the process of infection in a human cell.
- It attaches itself to a human enzyme, called the ACE2 receptor, before going on to enter the cell and make multiple copies of itself.

Significance of this change in the Spike Protein Shape:

- Assuming the alternative shape may help SARS-CoV-2 from breaking down. Studies have shown that the virus remains viable on various surfaces for various periods of time.
- The researchers speculate that the post-fusion form may also protect SARS-CoV-2 from our immune system.
- The researchers believe the findings have implications for vaccine development.
- Many vaccines that are currently in development use the spike protein to stimulate the immune system.
- If the protein is not stable, antibodies may be induced but they will be less effective in terms of blocking the virus.

What is Cryo-Electron Microscopy (Cryo-EM)?

- It is a type of transmission electron microscopy that allows for the specimen of interest to be viewed at cryogenic temperatures. Following years of improvement, the cryo-

electron microscope has become a valuable tool for viewing and studying the structures of various biological molecules.

- In 2017, the Nobel Prize in Chemistry was awarded to Jacques Dubochet, Joachim Frank, and Richard Henderson "for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution.

TIANWEN-1 MARS ROVER MISSION

> *Recently, China launched its most ambitious Mars mission Tianwen-1.*

About:

- Tianwen-1 was **launched on a Long March-5** carrier rocket from Hainan Island's Wenchang Satellite Launch Center.
- **Tianwen-1** will arrive at the **Red Planet in February 2021.**
- It consists of an **orbiter** and a **lander/rover duo.** The rover will then spend about 90 Martian days, or sols, studying its surroundings in detail. (One sol is roughly 40 minutes longer than an Earth day)
- It will **relay information home from the rover and collect science data of its own using seven science instruments:** two cameras, the Mars-Orbiting Subsurface Exploration Radar, Mars Mineralogy Spectrometer, Mars Magnetometer, Mars Ion and Neutral Particle Analyzer and Mars Energetic Particle Analyzer.
- China earlier launched a **Red Planet orbiter** called **Yinghuo-1** in November 2011 accompanying a **Russia's Phobos-Grunt mission** which was lost when the spacecraft failed to get out of Earth's orbit after launching from **Kazakhstan,** eventually burning up in the atmosphere.

Objectives of Tianwen-1:

- To investigate the **surface soil characteristics and water-ice distribution.**
- To analyze the **surface material composition.**
- To **measure the ionosphere and the characteristics of the Martian climate** and environment at the surface.
- To perceive the **physical fields (electromagnetic, gravitational)** and the internal structure of Mars.

Recent Mars Missions:

- The **United Arab Emirates' Hope orbiter** launched in earlier from Japan atop an H-2A rocket to study the Martian atmosphere and climate.
- **Hope (also known as the Emirates Mars Mission)** is the first interplanetary mission ever developed by an Arab state.
- The U.S. is aiming to launch **Perseverance**, its most sophisticated Mars rover ever, from Cape Canaveral, Florida, next week.

- **Perseverance,** the centrepiece of the $2.7 billion Mars 2020 mission, will hunt for signs of ancient life inside the 28-mile-wide (45 km) Jezero Crater, which harboured a lake and a river delta billions of years ago.
- In **November 2011**, the **Russian spacecraft Fobos-Grunt,** destined for Mars and Phobos, was launched.
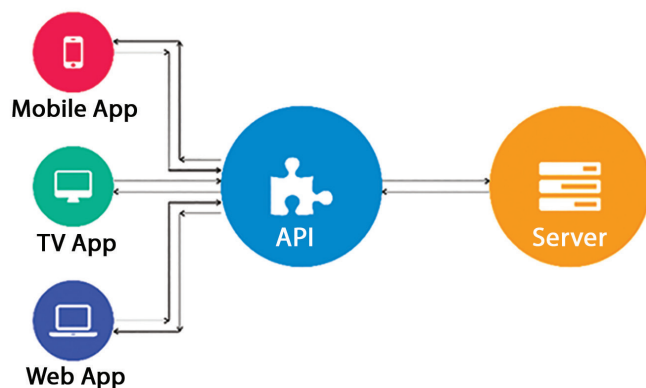
OPEN API SERVICE IN AAROGYA SETU

> *Recently, the Aarogya Setu App has come up with a new innovative feature which is called 'Open API Service'.*

About:

- The Open API shall only **provide the Aarogya Setu status and name of the Aarogya Setu User (with User's consent)**. No other personal data shall be provided through the API.
- The Open API Service of Aarogya Setu, can be availed by organizations and business entities, who are registered in India with more than 50 employees.

What is Open API and API?

- An open API, also called public API, is an Application Programming Interface (API) made publicly available to software developers.
- An API is a software intermediary that makes it possible for application programs to interact with each other and share data. They act as the interface between software programs or apps.

Benefits of Open API:

- It addresses the fear/risk of Covid-19 infections and help the people, businesses and the economy to return to normalcy.
- Organizations can use the Open API Service to query the Aarogya Setu Application in real-time and get the health status of their employees or any other Aarogya Setu User, who have provided their consent for sharing their health status with the organization.

Aarogya Setu Introduces 'Open API Service'
A Novel Feature To Help Businesses Return To Normalcy

The service will enable organizations to get real-time health status of their employees (with User's consent) without violating any data privacy

It can be availed by business entities, registered in India with more than 50 employees

Registration for Open API Service can be done at https://openapi.aarogyasetu.gov.in
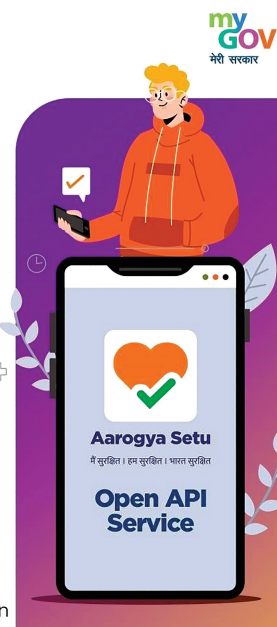
About Aarogya Setu:

- The Government of India launched **'Aarogya Setu' an app to track the cases of COVID-19** and alert the citizens of the country to keep safe.
- Aarogya Setu app has been launched by the **Ministry of Electronics and Information Technology (Meity)** and **developed by National Informatics Centre (NIC) in a public-private partnership model.**
- It will calculate risk based on the user's interaction with others, using cutting edge Bluetooth technology, algorithms etc.
- The personal data collected by the App is encrypted using state-of-the-art technology Collected data stays secure on the phone until it is needed for facilitating medical intervention.

How it Works?

- **Cross verification:** The app collects data on people's location and cross-refers it with the Indian Council of Medical Research's database of COVID-19 tests.
- **Access to Bluetooth is the key:** The app establishes a close range of proximity between two people.
- When two smartphones with Aarogya Setu installed come in each other's Bluetooth range the app will collect information.
- If one of the two people have already tested positive, the app will alert the other person and, in the process, allow the government to trace potential cases.
- Those who get symptoms similar to coronavirus gets a phone call and are also connected to the doctors. They are provided with necessary suggestions and what steps they should take.

NATIONAL DIGITAL HEALTH MISSION

> *On the eve of 74th Independence Day, the Prime Minister launched the National Digital Health Mission.*

About:

- It is going to be another flagship **initiative of the government like Ayushman Bharat.**
- It will be a voluntary healthcare programme that would reduce the gap among stakeholders such as doctors, hospitals and other healthcare providers, pharmacies, insurance companies and citizens by bringing them together and connecting them in an integrated digital health infrastructure.
- **Aim & Objective:** To 'liberate' citizens from the challenges of finding the right doctors, seeking appointment with them, payment of consultation fee, making several rounds of hospitals for prescription sheets, the Health Ministry said in a statement.
- It will be a major stride towards the achievement of the United Nations Sustainable Development Goal 3.8 of Universal Health Coverage, including financial risk protection.

Components of the Mission:

- It comprises six key building blocks or digital systems namely HealthID, DigiDoctor, Health Facility Registry, Personal Health Records, e-Pharmacy & Telemedicine.
- All of these digital products except e-Pharmacy and Telemedicine have been deployed and are up and running.
- Private stakeholders will have an equal opportunity to integrate with these building blocks and create their own products for the market. But, core activities and verifications shall remain with the government.
- Additional components, like Personal Health Record (PHR) and Electronic Medical Record (EMR) solutions can be developed by private players as well, in line with the guidelines that will be issued.

Technology Driven:

- The vital feature of this mission is the technology part and it will leverage open digital systems to provide high-quality healthcare for all.
- It will integrate various digital health services to create an ecosystem which can assimilate existing health information systems.
- The government has said that it will ensure security and privacy of personal information.

Digital Health ID:

- It is basically a digital format of all his/her health records which will be linked to the registry of doctors and health facilities across the country.

- It will be in the form of a mobile application or website and will help in improving the efficiency, effectiveness and transparency of health service delivery.

Implementation:

- The National Health Authority (NHA), the attached office of the Ministry of Health & Family Welfare which will design, build, roll-out and implement the NDHM.
- The scheme would first be tested on a pilot basis in the Union Territories of Chandigarh, Ladakh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Andaman & Nicobar Islands and Lakshadweep.

SEVERE FEVER WITH THROMBOCYTOPENIA SYNDROME

> *A disease called Severe Fever with Thrombocytopenia Syndrome has killed 7 and infected at least 60 in China.*

About:

- A large number of the cases of Severe Fever with **Thrombocytopenia Syndrome** were reported in East China's Jiangsu and Anhui provinces.
- The disease is transferred to humans through tick bites but Chinese virologists have warned that human-to-human transmission of the virus cannot be ruled out.
- The disease is caused by a **tick-borne virus** and has set off alarm bells among the health officials.

About SFTS Virus:

- Severe fever with **Thrombocytopenia Syndrome Virus (SFTSV)** belongs to the **Bunyavirus family** and it is transmitted to humans through tick bites.

- Virologists believe an **Asian tick called Haemaphysalis longicornis** is the primary vector, or carrier, of the virus. The disease is known to spread between March and November and peaks between April and July.

- It has a current case fatality rate of approximately between 16 and 30 per cent. Due to the rate at which it spreads and its high fatality rate, SFTS has been listed among the top 10 priority diseases blueprint by the World Health Organisation (WHO).

- Farmers, hunters and pet owners are particularly vulnerable to the disease as they regularly come in contact with animals that may carry the Haemaphysalis longicornis tick.

- The virus is often **transmitted to humans from animals** like goats, cattle, deer and sheep and despite being infected by the virus, animals generally do not show any symptoms associated with SFTSV.

- The virus has eventually travelled to other East Asian nations, including Japan and South Korea and this spread poses a threat of the magnified spread of the disease.

Symptoms of the SFTFS Virus:

- The **incubation period** is anywhere between seven and 13 days after the onset of the illness.

- It shows a whole range of symptoms, including, fever, fatigue, chill, headache, lymphadenopathy, anorexia, nausea, myalgia, diarrhoea, vomiting, abdominal pain, gingival haemorrhage etc.

- Some of the early warning signs of the disease include severe fever, thrombocytopenia or low platelet count and leukocytopenia i.e. low white blood cell count.

Treatment and Prevention:

- A vaccine to treat the disease is yet to be successfully developed.

- The **antiviral drug Ribavirin** is known to be effective in treating the illness. In case of severe illness intensive life support system is effective in the treatment of the disease.

- The health agencies urge the general public to avoid wearing shorts while walking through tall grass, the woods, and any other environment where ticks are likely to thrive.

eSANJEEVANI

Recently, the Union Minister for Health and Family Welfare presided over a review meeting with States/UTs on the "eSanjeevani" and "eSanjeevaniOPD" platforms.

About:

- eSanjeevani is a web-based comprehensive telemedicine solution.

- *NOTE:* Telemedicine is a term coined in the 1970s, which uses ICT to improve patient outcomes by increasing access to care and medical information and e-Sanjeevani is the type of Tele-Medicine platform.

- **Aim:** It aims to make healthcare services equitable by bridging the digital divide that exists in both rural areas and isolated communities.

- **Types of telemedicine services:** This eSanjeevani platform has enabled **two types of telemedicine services** viz. **Doctor-to-Doctor (eSanjeevani)** and **Patient-to-Doctor (eSanjeevani OPD) Tele-consultations.**
  - The former is being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.

- **Benefits:** It has made it convenient for people to avail health services without travel.
  - It can also be used to provide medical education to interns, people across Various Common Service Centers (CSCs), etc.
  - It includes **demographic and other patient data** like clinical examination reports, physical examination reports along with the patient's medical history, family's medical history, etc.
  - It **enables doctors** to have a video/audio conversation with the consulting medical experts at the remote end.

ELECTRONIC VACCINE INTELLIGENCE NETWORK (eVIN)

The Electronic Vaccine Intelligence Network (eVIN) has ensured essential immunization services during the COVID pandemic.

About:

- **Electronic Vaccine Intelligence Network (eVIN)** is an innovative technological solution aimed at **strengthening immunization supply chain systems** across the country.

- It is being **implemented under the National Health Mission (NHM)** by the Ministry of Health and Family Welfare.

- It aims to provide **real-time information on vaccine stocks and flows**, and storage temperatures across all cold chain points in the country.

- It has **helped create a big data architecture** that generates actionable analytics encouraging data-driven decision-making and consumption-based planning that helps in maintaining optimum stocks of vaccines leading to cost savings.

- It helps in **maintaining optimum stocks of vaccines** leading to cost savings. Vaccine availability at all times has increased to 99% in most health centres in India.

CODE OF ETHICS FOR PHARMACEUTICAL MARKETING

4 years on, promised mandatory pharma ethics code elusive

About:

- More than four years after the government told Parliament that it had decided to make the uniform code for pharmaceutical marketing practices mandatory because the voluntary code hadn't worked, the Department of Pharmaceutical (DoP) is still holding meetings with the industry on implementation of the voluntary code.

- In December 2014, the DoP had notified the **Uniform Code of Pharmaceuticals Marketing Practices (UCPMP)** to be complied with by the pharma industry on a voluntary basis for six months starting from January 2015. In 2017, the DoP tried to bring in a legally enforceable order to regulate unethical practices.

- The draft order was turned down by the law ministry for not being legally sound under the Essential Commodities Act. Since then, DoP has not made any further attempt to develop a legally binding instrument.

What are the Ethical Issues in Pharmaceutical Marketing?

- Pharma firms dole out freebies, cruise tickets, paid vacations, and sponsorships for educational conferences and seminars to doctors in return for doctors choosing their drugs for prescribing to their patients.
  - While the doctors face punishment on account of taking freebies from pharma companies under the MCI Code of Medical Ethics, no such regulations stop the pharma companies from bribing doctors to boost their product sales.

- Furthermore, freebies for doctors are against both the MCI ethics of doctors as well as the Uniform Code of Pharmaceuticals Marketing Practices (UCPMP) and (Professional Conduct, Etiquette and Ethics) Regulation, 2002.
  - As per the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulation, 2002, doctors are mandatorily prohibited from taking gifts, travel facilities, hospitality, and cash or monetary grants from the pharmaceutical and allied health sector industries.
  - The said regulation authorizes the Medical Council of India (MCI) and respective State Medical Councils to award punishment to a doctor against any act in violation of the code of Ethics for doctors.
  - However, unlike the MCI regulations, UCPMP is a voluntary code for pharmaceutical companies implying its violations could not bring any kind of punishment to the pharma companies.

Uniform Code of Pharmaceuticals Marketing Practices:

- It is a voluntary code issued by the Department of Pharmaceuticals relating to marketing practices for Indian Pharma Companies and as well medical devices industry.

- **Applicability:** At present, the UCPMP Code is applicable on Pharmaceutical Companies, Medical Representatives, Agents of Pharma Companies such as Distributors, Wholesalers and Retailers.

- **Key features and provisions:**
  - No gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised, to persons qualified to prescribe or supply drugs, by a pharmaceutical company or any of its agents.
  - As regards travel facilities, the UCPMP Code prohibits extending travel facility inside the country or outside, including rail, air, ship, paid vacations, etc., to Health Care Professionals and their family members for vacation or for attending conference, seminars, workshops, CME programme etc. as a delegate.
  - The Code also provides that free samples of drugs shall not be supplied to any person who is not qualified to prescribe such product.
  - Further, as per the UCPMP Code, in order to appoint Medical Practitioners/HCPs as Affiliates there should be written contract, legitimate need for the services must be documented, and criteria for selecting affiliates must be directly related to the identified need.
  - The UCPMP Code also provides that the number of affiliates retained must not be greater than the number reasonably necessary to achieve the identified need and that the compensation must be reasonable and reflect the fair market value of the services provided.

Way Ahead:

- The UCPMP is voluntary in nature and there is no provision for the Department of Pharmaceuticals (DoP) to directly deal with complaints received regarding unethical practices.

- The demand for mandating UCPMP has been the long-sought demand of doctors as they have been bearing the brunt of the accusations of freebies from the pharma companies.

- In the context of unethical marketing and promotion, it is demanded that DoP should immediately implement a mandatory mechanism for company disclosures of payments towards doctors and professional bodies.

■■■■

TIME CAPSULES

The Ram Janmabhoomi Teerth Kshetra Trust has denied reports about placing of a time capsule under the ground at Ram Temple construction site in Ayodhya.

About:

- This denial comes after there were claims about placing a time capsule at Ram Temple construction site in Ayodhya.

What is a Time Capsule?

- It is a container of any size or shape, which accommodates documents, photos and artefacts typical of the current era and is buried underground, for future generations to unearth.
- It requires special engineering so that the contents don't decay, even if pulled out after a century.
- Material such as aluminium and stainless steel are used for the encasing, and documents are often reproduced on acid-free paper.
- The term "time capsule" was coined in the 20th century, and the earliest examples date back to 1777 which was found by historians inside the statue of Jesus Christ in a church in Spain during restoration work in December 2017.
- The International Time Capsule Society (ITCS), based in the US and formed in 1990, is now defunct but continues to estimate the number of time capsules in the world. As per its present records, there are "10,000-15,000 times capsules worldwide".

Significance of Time Capsules:

- They are seen as a means of communication with future people. It aims to help future archaeologists, anthropologists and historians to know about the past and carry on research accordingly.
- Historians often criticise the idea of being motivated. They have an opinion that "This exercise is inevitably a subjective exercise, geared towards glorification not to construct the real picture."
- Many historians look at this time capsule exercise with suspicion and express that It's not a valid historical method who decides what matter, what artefacts, written documents are going into it?

Time Capsules in India:

- One is outside the Red Fort and placed underground in 1972 by then PM Indira Gandhi. It was retrieved by the successor government in 1977.
- One is on the IIT Kanpur campus. It was put in 2010 and contains an aerial map of the institute, annual reports of 1961, 1984 and 2008, a menu of the hostel mess, the blazer crest, a DVD of a film on IIT Kanpur, some photographs etc.
- In 2019, a square time capsule, which contains 100 items that represent modern-day technology in India, was installed at Jalandhar's Lovely Professional University. It is supposed to be unearthed after 100 years and contains items such as landline telephone, a smartphone, weighing machine, water pump, stop-watch etc.

MUSIC LEGEND PANDIT JASRAJ PASSES AWAY

Indian classical vocalist Pandit Jasraj passed away at the age of 90.

About:

- Born in a village in Hisar district of Haryana, Pandit Jasraj started as a tabla player and was known as an able accompanist in the classical circuit in Kolkata before turning to classical singing.
- He learnt from his father Pandit Motiram and elder brother Pandit Maniram but drew inspiration from various sources, including Begum Akhtar.
- His association with his spiritual guru Maharana Jaywant Singh of the erstwhile princely state of Sanand in Gujarat that made him believe in the miracles of bhakti.
- He was the foremost **exponent of the Mewati gharana** moved away from Dhrupad and brought an element of devotional singing to **Khayal** by employing harkats and murkis that were associated with light classical music. **Khayal** is a **musical form** based on the elaboration of a Raga with lyrical composition consisting of two stanzas.
- He had the **mastery over shuddha madhyam notes** and his ability to play with light and heavy and popular and rare ragas like Durga, Jog and Abeer Todi with equal felicity.
- He created a **unique form of jugalbandi called Jasrangi**, in which a male and a female singer sing different ragas in their respective scales to merge their individual displays into one unified performance.

- He was also a **master of haveli sangeet.**

- He was awarded the **Padma Vibhushan for his contributions.**

- **Minor Planet named 'Panditjasraj':** In 2019, International Astronomical Union had named a minor planet had named a minor planet after Pandit Jasraj. The minor planet is located between Mars and Jupiter.

What is Haveli Sangeet?

- It refers to the **performances which are held in temples and the compositions** are sung in praise of Lord Krishna.

Gharana

- It is a **community of performers** who share a **distinctive musical style** that traces to a particular instructor or region or ancestry and the style must be passed down through at least three generations before it and its practitioners may be considered a gharana.

- It includes **peculiarities of performance and repertoire** as well as a broader ideology of music, aesthetics and pedagogy.

- Gharanas exist for vocal and instrumental traditions as well as for dance.

- Some of the **gharanas well known for singing are**: Agra, Gwalior, Mewati, Bhendibazar, Jaipur for Khyal Singing and Mathura, Rampur, Darbhanga for Dhrupad Singing.

PUDUCHERRY CELEBRATES ITS 'DE-JURE' DAY

The Union Territory of Puducherry celebrated its 59th anniversary of the "De-Jure"day on 16th August.

About:

- The treaty of cession signed between the French and Indian governments was ratified by the French Parliament on August 16, 1962. So, on that day the **"De-Jure" (The Legal Merger of the UT with the Indian Union)** came into effect.

- The people of the union territory of Puducherry won freedom after seven more years of struggle after India became free on August 15, 1947.

- **India signed an agreement with France in June 1948** which gave power to people to determine the political status of their land.

- On March 18, 1954, members of the executive council, mayors of then Pondicherry and seven adjoining communes proclaimed their decision to merge with India without a referendum.

- The agreement for the de facto transfer of the four remaining French settlements to India was signed on October 21, 1954 and came into effect on November 1, 1954.

- A treaty was entered into between France and India, establishing the cession by the French Republic to the Indian Union of the French **establishments of Pondicherry, Karikal, Mahe and Yanam.**

About the Referendum:

- Puducherry became independent by **virtue of a referendum on October 18,1954.**

- 178 representatives participated in the referendum in which **170 voted in favour of a merger with India** and 8 against it.

- The **referendum was taken at Keezhoor near Villianur** here and to commemorate the occasion a memorial was constructed at Keezhoor.

WHAT IS V-J DAY?

15 August 1945 is remembered in history as Victory in Japan or V-J Day.

About:

- On this date the Allied forces mark their victory over Imperial Japan during **World War II.**

- Japan was the part of Axis bloc which consist of **Nazi Germany and Fascist Italy, it entered the war in September 1940 and had occupied** several parts of Asia during the international conflict.

- In May 1945, Axis powers in Europe had been defeated **(the Victory in Europe or V-E Day is marked every year on May 8)** but Allied forces continued fighting Japan in East Asia in the following months.

- Things started changing rapidly after the US dropped an **atomic bomb** on the **Japanese city** of **Hiroshima** on August 6, 1945, and three days later, another one on Nagasaki, killing hundreds of thousands of people.

- On August 15, the Japanese emperor in his first radio address ever announced Japan's surrender.

Relations between V-J Day, India's Independence Day and Republic Day:

- Before India became independent, the country's freedom fighters had been **celebrating January 26 as "Poorna Swaraj Day"** because on this day Congress leaders demanded complete independence from British rule over dominion status at the **Lahore session of 1929-30.**

- When India got independence in 1947, British rulers coincided the date of transfer with the second anniversary of V-J Day on August 15.

- The **historian Ramachandra Guha** notes, **"freedom finally came on a day that resonated with imperial pride rather than nationalist sentiment."**
- When Indian leaders finished writing the country's Constitution, it was decided to **adopt the document on Poorna Swaraj Day (26 January) in 1950** as it was associated with national pride.
- January 26 has since been celebrated as India's Republic Day.

Japanese Rule in India:

- **Background:** Japan had forced its exploitative control over one of India's territories during the war.
  - Japanese forces landed in South Andamans on March 23, 1942, and gradually gained complete control over the area.
- **Japnese butality:** Japanese control over the Andamans coincided with **Subhash Chandra Bose-led Indian National Army (INA)'s occupation** over the area and due to their internal understanding Japanese faced no resistance while trying to take over the Andamans.
  - Gradually, things turned bitter as the Japanese force erupted over the island's population with barbarity as administration remained only nominally in the hands of the INA.
  - It is estimated that close to **2,000 Indians in the Andamans died as a result of Japanese brutality.** Finally, the islands were again taken over by the British in October 1945.
- As a part of the British Empire, India also played a key role in the war with Japan, its troops helped in securing Singapore and Hong Kong for the Allies in August 1945.

Reasons for Cooperation with Japan:

- Subhash Chandra Bose believed that India could never achieve independence without resorting to revolutionary forces, and held faith in **acquiring help from international powers for expelling the British** from Indian soil.
- Once freed from the British, Bose **convinced the Japanese to hand over the islands to him** and consequently hoisted the tricolour there on December 30, 1943.
- He also named the **islands Shaheed (martyr) and Swaraj (self-rule).**

WHAT IS BLACK RAIN?

Recently, a district court in Hiroshima recognised survivors of the post-explosion "black rain" caused due to the atomic bomb incident in 1945, who were outside a government-defined zone at the time of the event.

About:

- The court clears the way for them to receive medical benefits just days before the 75th-anniversary Hiroshima bombings.
- In 1976, the Japanese government used the 1945 study in Hiroshima to demarcate the area within which people could claim to have been affected by black rain and be recognised as survivors of the nuclear blast.

What is Black Rain?

- An estimated 69 per cent of the buildings in Hiroshima were destroyed by the atomic bomb and the debris and soot from this, mixed with the radioactive fallout from the bomb, rose high into the atmosphere in the form of a mushroom cloud.
- This material combined with the vapour in the atmosphere and came down as dark drops of liquid that have been called **Black Rain.**
- It has been described as consisting of large, greasy drops that are much heavier than normal raindrops by survivors.
- **Its Impact:** Black rain is full of highly radioactive material, and studies have shown that exposure to it can result in serious illnesses.
  - A study of 1945 showed that black rain had come down as far as 29 km away from ground zero and contaminated everything it came in contact with, and dead fish were reported floating in water bodies.
  - It has caused acute radiation symptoms (ARS) in many who were exposed to it, with reports of people suffering from nausea and diarrhoea for weeks, fever, sore throat and loss of hair. Many exposed people developed cancer over a period of time.

KARIYE MUSEUM

The Turkish government formally converted a former Byzantine church into a mosque.

About:

- The decision to transform the Kariye Museum into a mosque came just a month after a similarly controversial conversion for the UNESCO World Heritage-recognised Hagia Sophia.
- The **Holy Saviour in Chora** was a medieval Byzantine church decorated with 14th century frescoes and mosaics of the Last Judgement that remain treasured in the Christian world.
- It was originally converted into the Kariye Mosque half a century after the 1453 conquest of Constantinople by the **Ottoman Turks.**
- It became the **Kariye Museum after the Second World War** as Turkey pushed ahead with the creation of a more secular new republic out of the ashes of the Ottoman Empire.

MANSER REJUVENATION & DEVELOPMENT PLAN

> *Minister of State in PMO reviewed the Comprehensive Manser Rejuvenation and Development Plan.*

About:

- The plan is for development, rejuvenation and beautification of Mansar Wetlands.
- The plan aims at **increasing tourist footfall and boosting the social-economic development** of Jammu region.
- **Mansar Lake has situated 62 km from Jammu.** It is a lake fringed by forest-covered hills, over a mile in length.
- **Surinsar-Mansar Lakes** were designated as **Ramsar Convention in November 2005.**

Ramsar Convention

- It is an international treaty for the conservation and wise use of wetlands. It is named after the Iranian city of Ramsar, on the Caspian Sea, where the treaty was signed on 2 February 1971.
- The treaty is officially known as 'the Convention on Wetlands of International Importance especially as Waterfowl Habitat' (or, more recently, just 'the Convention on Wetlands'), it came into force in 1975.

WORLD URDU CONFERENCE

> *Recently, the Union Education Minister addressed the inaugural session of the two days World Urdu Conference.*

About:

- The Conference was organised by National Council for Promotion of Urdu Language (NCPUL) in New Delhi.
- The Education Minister also announced that Urdu writers and the literators will be honoured with awards and honours in the name of important personalities of **Urdu like Amir Khusrow, Mirza Ghalib, Agha Hashar, Ram Babu Saxena and Daya Shankar Naseem** to encourage Urdu writers for literary and creative services by the Urdu Council from next year.
- Urdu is a **major language of South Asia**. It is spoken in countries including India, Pakistan, Afghanistan, Bangladesh, and Nepal.
    - It has become the culture language and lingua franca of the South Asian Muslim diaspora outside the sub-continent, especially in the Gulf and the Middle East, Western Europe, Scandinavia, USA and Canada.
- Both **Urdu and Hindi belong to the new Indo-Aryan group** sharing the same Indic base and Urdu is one of the languages mentioned in the **8th Schedule to the Constitution.**

National Council for Promotion of Urdu Language (NCPUL)

- It is an **autonomous body under the Ministry of Human Resource Development (HRD)**, Department of Secondary and Higher Education, Government of India.
- It was set up in 1996 as the National Nodal Agency for the promotion of the Urdu language.

THEATRE LEGEND EBRAHIM ALKAZI

> *Recently, the theatre director Ebrahim Alkazi passed away at the age of 94.*

About:

- He is revered as the **father of Indian theatre.**
- He is credited to revolutionise Indian theatre and was the **longest-serving director of the National School of Drama.**
- He is revered for his **contribution towards modern Indian theatre**, including bringing in technical aspects of the craft and making the NSD the premier training institute for theatre.
- He was the first person to bring regional language plays to NSD, he built a strong institutional structure and brought Indian theatre to the world.
- He completely **overhauled the syllabus to a more modern one** and taught Western and Asian drama and direction.
- He trained some of the country's finest actors, including Naseeruddin Shah, Om Puri, Anupam Kher and Pankaj Kapoor.
- He was the **first recipient of Roopwedh Pratishtan's the Tanvir Award (2004)** for lifetime contribution to the theatre.

- He was awarded **Padma Vibhushan 2010** for his contributions to Indian theatre.

NEP DROPS MANDARIN FROM LANGUAGE LIST

Under the National Education Policy (NEP) 2020, the government has dropped Mandarin or 'Chinese' from its list of examples of foreign languages that can be taught in schools.

About:

- According to the official, there have been **security concerns involving Mandarin language** instruction in Indian institutions, which are under the scanner as well.
- The plan for teaching Mandarin in Indian schools and Hindi language instruction in Chinese schools as part of an **Education Exchange Programme** signed by both countries in 2006.
- In 2014, the CBSE then introduced Mandarin in some schools, but the plan floundered due to unavailability of Chinese language teachers.
- Since 2017, the government has systematically curbed annual scholarship programmes with China.
- The U.S., Australia, Japan and South Korea are offering Chinese at the school level.

Mandarin:

- Mandarin is a group of **Sinitic (Chinese) languages** spoken across most of northern and southwestern China.

TURKEY DISCOVERS LARGE NATURAL GAS RESERVE OFF BLACK SEA

Recently, the Turkish President announced the discovery of a large natural gas reserve off the Black Sea coast.

About:

- The Turkish drilling ship, Fatih, had been carrying out exploration operations in the western Black Sea for the past month.
- Turkey hopes to start extracting and using the gas by 2023, when Turkey marks the centenary of the founding of the republic.
- While the find is significant, it's smaller than other discoveries in the nearby eastern Mediterranean. It's about a third of Egypt's Zohr field, one of the largest discovered in the Mediterranean, which is estimated to hold 850 billion cubic meters, or 30 trillion cubic feet of natural gas.

- The discovery comes as tensions between NATO allies Turkey and Greece are running high over oil and gas exploration in disputed waters in the eastern Mediterranean.

NUAKHAI JUHAR

The Prime Minister of India greeted the people on the auspicious occasion of Nuakhai Juhar.

About:

- It is **agricultural festival** also called **Nuakhai Parab or Nuakahi Bhetghat.**
- Nuakhai is a combination of two words signifies eating of **new rice as 'nua' means new and 'khai' means eat.**
- It is one of the most ancient festivals celebrated in Odisha, Chhattisgarh and areas of neighbouring states to welcome the new crop of the season.
- On this day, **people worship food grain and prepare special meals.** Farmers offer the first produce from their lands to Goddess Samaleswari, the famous 'Mother Goddess' of Sambalpur district of Odisha.

NATIONAL SPORTS AWARDS 2020

Recently, the government of India announced the National Sports Awards 2020.

About:

- **Rajiv Gandhi Khel Ratna Award:** The Award is conferred on sportspersons for spectacular and most outstanding performance in the field of sports for over a period of four years.
  - **Award winners:** Cricketer Rohit Sharma, Para-Athlete Mariyappan Thangavelu, Table Tennis player Manika Batra, Wrestler Vinesh Phogat and Indian Women's Hockey team captain Rani Rampal.

- **Dronacharya Award:** It goes to the coaches for producing medal winners at prestigious international sports events.
  - **In Life-Time Category, Dronacharya Award winners:** It will be given to Dharmendra Tiwary for Archery, Purushotham Rai for Athletics, Shiv Singh for Boxing, Romesh Pathania for Hockey, Krishan Kumar Hooda for Kabaddi, Vijay Bhalchandra Munishwar for Para Powerlifting, Naresh Kumar for Tennis and Om Parkash Dahiya for Wrestling.
  - **In Regular Category, Dronacharya Award:** It will be given to Jude Felix Sebastian for Hockey, Yogesh Malviya for Mallakhamb, Jaspal Rana for Shooting, Kuldeep Kumar Handoo for Wushu and Gaurav Khanna for Para-Badminton.

ALIPORE ZOOLOGICAL GARDEN

The West Bengal Forest Department will soon start live streaming of animals from Alipore Zoological Garden, Kolkata, and Padmja Naidu Himalayan Zoological Park in Darjeeling.

About:

- The zoos have been closed since March due the outbreak of the COVID-19 pandemic.
- **Alipore Zoological Garden** houses around 1,100 wild animals, along with an **aviary and a snake enclosure.** It was set up in 1876.
- The **PNHZP is one of the high-altitude zoos** in the country which houses species like **snow leopard and red panda.** It was set up in 1958.

ATL AI STEP UP MODULE

Recently, NITI Aayog in collaboration with NASSCOM have launched the 'ATL AI Step Up Module' for students on the eve of India's Independence Day.

About:

- This module has been launches after a successful launch of a **unique initiative to take Artificial Intelligence (AI)** to schools through **'ATL AI Modules', Atal Innovation Mission.**
- This module is the next step in bringing AI to Indian classrooms and is a successor to the AI Base module launched in February this year.

RIHAND PROJECT

NTPC Limited developed infrastructure at Rihand project in Uttar Pradesh.

About:

- It consists of 934 m long and 92 m high straight gravity concrete dam across the **Rihand River (a tributary of the Son)** near Pipri in Mirzapur district.
- **Significance of recent step:** The innovation will help for efficient and safer transportation of fly ash from the power plants to cement production units located at a distance in larger quantities.

PROJECT DOLPHIN AND PROJECT LION

Prime Minister of India announced to launch Project Dolphin and Project Lion to conserve India's lion and dolphin population.

About:

- Apart from **protecting these species in their natural habitat** in a holistic manner this project will also **address human-wildlife conflict** by involving local communities living in the vicinity of the lion landscape and creating livelihood opportunities for them.
- **Gangetic River Dolphin:** It is declared as a **National Aquatic species in 2010** and acts as ideal ecological indicators of a healthy riverine ecosystem.
  - It's a species of freshwater, dolphins **primarily found in the Ganges and Brahmaputra rivers** and their tributaries in India, Bangladesh and Nepal.
  - At present, there are about **3,700 Gangetic river dolphins in the Indian river systems**.
  - The Project Dolphin will cover **both freshwater (river) and marine (oceanic) dolphins.**
- **Asiatic Lion:** Asiatic lions are found in protected areas and agro-pastoral landscape of Saurashtra, covering nine districts in Gujarat. Its current estimated population is 674. India has recorded a 29% increase in its population in the past five years.
  - India had last year launched the Asiatic lion conservation project with a budgetary contribution of nearly Rs 98 crore.
  - **Project Lion** will entail habitat development, engage modern technologies in lion management and address the issues of disease in lion and its associated species through advanced world-class research and veterinary care.

NATIONAL INSTITUTE OF SOCIAL DEFENCE

Union Minister for Social Justice & Empowerment, e-inaugurated the new building of National Institute of Social Defence (NISD).

About:

- NISD is the nodal training and research institute in the field of social defence.
  - **Three main divisions,** National Centre for Drug Abuse Prevention (NCDAP), Old Age Care Division and Social Defence.
- **Objectives:** It focuses on human resource development for drug abuse prevention, the welfare of senior citizens and transgenders, beggary prevention, and other social defence issues.
  - It provides inputs for the social defence programmes to the Government of India.
  - It also conducts training and research in the field, apart from ensuring the implementation of various programmes under the National Action Plan for Drug Demand Reduction and National Action Plan for Senior Citizens.

MONTREAL CONVENTION

The crash of the Air India Express plane at Kozhikode has brought focus on the Montreal Convention.

About:

- The limits of liability during international flights for airlines have been defined **under The Carriage By Air (Amendment) Act** of 2016, based on India's **adoption of the Montreal Convention in 2009**, which unifies rules governing compensation to passengers globally.
- The convention came into force in 1999 and we called MC99.
- It establishes airline liability in the case of death or injury to passengers, as well as in cases of delay, damage or loss of baggage and cargo.
- It unifies all of the different international treaty regimes covering airline liability that had developed haphazardly since 1929. MC99 is designed to be a single, universal treaty to govern airline liability around the world.

WHAT IS TABLETOP AIRPORT?

Recently, an Air India Express flight on a special 'Vande Bharat' repatriation flight from Dubai to Kozhikode overshot the runway at Kozhikode.

About:

- Kozhikode's runway is a tabletop runway and is surrounded by deep gorges on both sides.
- A tabletop runway is located and **built on top of a plateau or hilly surface,** with one or both ends of the runway overlooking a drop.

- There is no such term as a 'tabletop airport' in any International Civil Aviation Organisation (ICAO) technical document. India's statutory aviation body, the Directorate General of Civil Aviation (DGCA), refers to these airports in this manner by highlighting safety measures during operations to these runways.
- In **"tabletop"** airport operations, the ICAO says a RESA (Runway End Safety Area) of 90 metres is mandatory, while 240 metres is recommendatory.
  - RESA is to limit the consequences when there is an aircraft overrun during landing, a rejected take-off, or even undershoots the landing area.
- The airports in the country which would count as "tabletops", are namely Lengpui (Mizoram), Shimla and Kullu (Himachal Pradesh), Pakyong (Sikkim), Mangaluru (Karnataka), Kozhikode and Kannur (both Kerala).

PROJECT CHEETAH OF INDIAN ARMED FORCES

The Indian Armed Forces have decided to revive "Project Cheetah" amidst tensions with China.

About:

- It has been **revived by the armed forces after being pending for a long time** and is expected to cost over Rs 3,500 crores to the government.
- Under the project, the **armed forces are planning to arm their Heron UAVs with laser-guided bombs,** precision-guided munitions and anti-tank missiles for taking out enemy positions and armoured regiments.
- The upgraded UAVs can be used against conventional military operations as well as in counter-terrorism operations in future if required.
- The Indian fleet of medium altitude long endurance drones also known as unmanned aerial vehicles includes mainly Israeli equipment including the Herons.
- They have been deployed by both the Army and Air Force in the forward locations of Ladakh sector along the China border there.

INDIA WATER RESOURCES INFORMATION SYSTEM

The Ministry of Jal Shakti launched a new version of the India Water Resources Information System (India-WRIS) with new functionalities and features.

About:

- The Ministry of Jal Shakti (MoJS), under the National Hydrology Project, launched the first version of India Water Resources Information System (India-WRIS) in 2019.

- It is a strong database and a reliable information system for proper planning of water resources.

- The MoJS has established a dedicated organization, National Water Informatics Centre (NWIC) to maintain and update India WRIS.

- **The key features:** Water information easily made available to users and the general public, for decision-makers, water managers, farmers & experts, Direct access to hydro-met information from Central and State agencies, Real-time data available with one click, Variety of modules for different needs, Latest technologies, continuous development and improvement.

COVAX PLATFORM

Recently, WHO invited countries to join its Covid-19 Vaccine Global Access (COVAX) facility.

About:

- It is a mechanism designed to guarantee rapid, fair and equitable access to COVID-19 vaccines worldwide.

- The goal of COVAX is to deliver two billion doses of safe, effective vaccines that have passed regulatory approval and/ or WHO pre-qualification by the end of 2021.

PYROLYSIS PROCESS TO DECOMPOSE PPE SUITS

According to a new study in the journal Biofuels, the plastic from used Personal Protective Equipment (PPE) can be transformed into renewable liquid fuels.

About:

- The PPE waste will be converted into fuel using chemical a process called pyrolysis. Pyrolysis breaks down the plastic **at high temperature between 300-400°C for an hour without oxygen.**

- The transformation into biocrude, a type of synthetic fuel, will prevent the severe after-effects to humankind and the environment and will also produce a source of energy.

THUMBIMAHOTSAVAM 2020

It is the first-ever State Dragonfly Festival in Kerala.

About:

- **World Wide Fund for Nature-India (WWF–India)** State unit has joined hands with **the Society for Odonate Studies (SOS) and Thumbipuranam** for the festival which is named as Thumbimahotsavam 2020.

- **Official mascot of the festival:** Pantalu.

National Dragonfly Festival:

- This is part of **a national dragonfly festival** being organised by the WWF India, Bombay Natural History Society & Indian Dragonfly Society in association with the National Biodiversity Board, United Nations Environment Programme, United Nations Development Programme and IUCN – Centre for Environment Conservation.

- The **Dragonfly Festival started in 2018** to educate and inform the public about the integral role that dragonflies, and their lesser known siblings damselflies, play in our environment.

The World Wide Fund for Nature

- It is an international **non-governmental organization.**

- **Founded** in 1961

- **Headquarter:** Gland (Switzerland).

- **Aim:** Wilderness preservation & the reduction of human impact on the environment.

Reports & programmes by WWF:

- **Living Planet Report -** published every two years by WWF since 1998; it is based on a Living Planet Index and ecological footprint calculation.

- **Earth hour -** a worldwide movement organized by WWF annually, encouraging individuals, communities, and businesses to turn off non-essential electric lights, for one hour, from 8:30 to 9:30 p.m. on a specific day towards the end of March, as a symbol of commitment to the planet.

- **Debt-for-nature swaps -** financial transactions in which a portion of a developing nation's foreign debt is forgiven in exchange for local investments in environmental conservation measures.

- **Marine Stewardship Council (MSC) -** independent non-profit organization which sets a standard for sustainable fishing.

- **Healthy GrownPotato -** eco-brand that provides high-quality, sustainably grown, packaged, and shipped potatoes to consumers by leveraging integrated pest management (IPM) farming practices on large scale farms.