

OFFICERS' Pulse

ISSUE NO. 26 | 1ST DECEMBER TO 7TH DECEMBER, 2019

Coverage.

The Hindu
PIB
Yojana
Rajya Sabha TV
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At a Glance & In Depth.

Polity and Social Issues
Economy
International Relations
Environment
Science and Tech
Culture



CURRENT AFFAIRS
WEEKLY
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News @ a glance

POLITY

1) Centre seeks review of SC/ST creamy layer

What is the 'creamy layer'?

- The creamy layer principle distinguishes the well-to-do among disadvantaged sections for granting the benefits of reservation in government jobs and admissions in public educational institutions.
- At present, the creamy layer applies only to Other Backward Classes (OBCs) following a nine-judge Supreme Court bench judgement in the Indra Sawhney case.

Indra Sawhney Versus Union of India

- The judgment describes the 'creamy layer' as "some members of a backward class who are highly **advanced socially as well as economically and educationally**."
- They constitute the forward section of that particular backward class — as forward as any other forward class member.
- The Indra Sawhney judgment had upheld the government's move, based on **the Mandal Commission report, to give 27% reservation to Other Backward Classes**.
- But it held that the **creamy layer (socially advanced persons) "can be and must be excluded from backward classes"**.
- The court said "economic criteria could be adopted as an indicium or measure of social advancement" in order to identify members of a creamy layer in a class or a group.
- The court asked the **Central government to fix the norms for income, property and status for identifying the creamy layer**.
- In 1993, the creamy layer ceiling was fixed at ₹1 lakh. It was subsequently increased to ₹2.5 lakh in 2004, ₹4.5 lakh in 2008, ₹6 lakh in 2013, and at **₹8 lakh since 2017**.
- The Court also held that the test or

requirement of social and educational backwardness **cannot be applied to Scheduled Castes and Scheduled Tribes**, who indubitably fall within the expression "backward class of citizens". Thus, **they do not have to prove their backwardness**.

- The Scheduled Castes and Scheduled Tribes are the most backward among backward classes and it is, therefore, presumed that once they are contained in the Presidential List under **Articles 341 and Article 342** of the Constitution of India, there is no question of showing backwardness of the Scheduled Castes and Scheduled Tribes all over again.
- It further held that creamy layer principle is **only confined to Other Backward Classes** and has no relevance in the case of Scheduled Tribes and Scheduled Castes.
- There shall be **no reservation in promotions and the reservation should be confined to initial appointments only**.

How was the creamy layer made applicable to SC/ST members?

- **77th Constitutional Amendment Act (1995)**
- The government further felt that representation of **SCs and STs in the services in the state had not reached the required level**.
- Hence to continue to provide reservation in promotion, the legislature passed the Constitution 77th amendment act of 1995 and added.

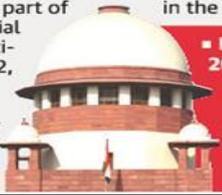
Case history

Salient points from the past verdicts which dealt with the application of creamy layer concept in reservation

▪ **Nine-judge Bench in 1992 Indra Sawhney case:** SCs/STs are the most backward among backward classes. Once part of the Presidential List under Articles 341 & 342, there is no question of showing their backwardness again

▪ **Five-judge Bench in 2006 M. Nagaraj case:** Quota benefits should go to the weakest of weak and not be snatched away by members of the class who are in the "top creamy layer"

▪ **Five-judge Bench in 2018 Jarnail Singh case:** Creamy layer ensures that only the deserving among the SCs/STs get the benefits of reservation



- **Article 16(4A)** - State can make any provision for **reservation in matters of promotion if SC/STs are not adequately represented in the services in the state.**
- **Article 16(4B)** provides that reserved promotion posts for SCs and STs that remain unfilled can be carried forward to the subsequent year.

The Nagaraj versus Union of India (2006)

- The five-judge constitution bench of the Supreme Court delivered its judgment in M. Nagaraj vs Union of India, validating parliament's decision to extend reservations for SCs and STs to include promotions with three riders.
- It required the state to **provide proof for the backwardness of the class** benefitting from the reservation,
- Its inadequate representation in the position/service for which reservation in promotion is to be granted and
- To show how reservations in promotions would further **administrative efficiency**

- **Article 335-** The claims of the members of the Scheduled Castes and Scheduled Tribes shall be taken into consideration, consistently with the maintenance of efficiency of administration, in the making of appointments to services and posts in connection with the affairs of the Union or of a State.

- The judgment gave rise to misgivings that it failed to recognise that the SCs and STs continued to suffer from centuries of discrimination, by requiring the state to reassess their backwardness in the case of reservations in promotions.
- The application of the creamy layer principle to the SCs and STs was the most

contentious part of the Nagaraj judgment, which the critics claimed was inconsistent with the nine-judge bench ruling in Indra Sawhney.

Jarnail Singh vs Lachhmi Narain Gupta (2018)

- In this case the Supreme court upheld the 2006 verdict's reasoning that the creamy layer principle was based on the **right to equality.**
- The court held that quota benefits should **go to the weakest of the weak and not be snatched away by members of the same class who were in the "top creamy layer"**.
- It also held that the creamy layer concept ensured that only the genuinely deserving members of an SC/ST community get reservation benefits and States no longer need to collect quantifiable data on the backwardness of SCs and STs in granting quota in promotions.
- However, the states will have to back it with data to show their inadequate representation in the cadre.
- The judgment said that when the court applied creamy layer to SCs and STs in the Nagaraj case, it did not tinker with the Presidential List under under **Articles 341 (Scheduled Castes) or Article 342 (Scheduled Tribes)** of the Constitution. The caste, group or sub-group named in the List had remained intact.
- The Court said that the principle of creamy layer **can be extended to members of SC/ST for promotions in government jobs.**
- The court had **thus refused the government's plea to refer the case to a seven-judge Bench.**

Why in News?

- The Centre asked the Supreme Court that its 2018 verdict excluding the creamy layer within the SC/ST community from reservation benefits be referred to a seven-judge bench for review.

2) Citizenship Amendment Bill

What is the Citizenship (Amendment) Bill?

- The Citizenship (Amendment) Bill seeks to amend the **Citizenship Act, 1955** in order to grant **Indian citizenship to non-Muslim refugees from Pakistan, Bangladesh and Afghanistan** (all Muslim-

majority nations) escaping religious persecution there.

- Once the bill is enacted, immigrants belonging to Hindu, Sikh, Christian, Buddhist, Jain and Parsi communities from the three countries will not be treated as illegal.
- They will also be eligible to get naturalised citizenship.
- One of the requirements for citizenship by naturalization is that the applicant must have resided in India during the last 12 months, and for 11 of the previous 14 years.
- The Bill relaxes this 11-year requirement to six years for persons belonging to the same six religions and three countries.
- They will also be no longer deported or jailed under the Foreigners Act of 1946 and the Passport (Entry into India) Act of 1920.
- December 31, 2014 will be the cut-off date after which any person moving to India from these neighbouring countries will be considered for citizenship.
- However, the new law will not apply to parts of the north-east, where the Bill has been met by protests.
- The Bill provides that the **registration of Overseas Citizen of India (OCI) cardholders may be cancelled if they violate any law.**

Who are illegal migrants?

- According to the Citizenship Act, 1955, illegal migrants in Indian cannot get citizenship. The law says all those who have entered India without valid travel documents like passports and visas or have come to India with valid documents but stay here longer than the period mentioned therein are considered illegal migrants.

Concerns and criticisms:

- The Bill is perceived to be a demographic threat to indigenous communities.
- The Centre's move to grant citizenship to non-Muslim minorities from Bangladesh, Pakistan and Afghanistan is believed to pose a huge threat, which will affect the spirit of democracy.
- The Bill makes illegal migrants eligible for citizenship on the basis of religion. This may violate Article 14 of the Constitution which guarantees the right to equality.
- The Bill implies that illegal migrants from Afghanistan, Bangladesh and Pakistan who

are Muslims, other minorities who do not belong to the groups stated in the bill (eg. Jews), or atheists who do not identify with a religious group will not be eligible for citizenship, which is also seen as a violation of Article 14.

- The Bill is believed an attempt to naturalise the citizenship of illegal immigrants in the region. Civil Society groups have strongly opposes the proposed bill in its present form that seeks to make drastic changes in the citizenship and immigration norms of the country by relaxing the criteria to become an Indian citizen.
- The Bill allows cancellation of OCI registration for violation of any law. This is a wide ground that may cover a range of violations, including minor offences (e.g. parking in a no-parking zone).

Difference between Citizenship (Amendment) Bill and National Register of Citizens (NRC)?

- Assam, which implemented the NRC, targeted only illegal immigrants. Unlike the Citizenship (Amendment) Bill which is based on faiths, NRC seeks people to prove that either they or their ancestors were residing in Assam on or before March 24, 1971.

Why is the North East States protesting?

- The Bill has triggered widespread protests in northeastern states where many feel that permanent settlement of illegal immigrants will disturb the region's demography and further burden resources and decrease employment opportunities for indigenous people.
- A large section of people and organisations opposing the Bill also say it will nullify the provisions of the Assam Accord of 1985, which fixed March 24, 1971, as the cut-off date for deportation of all illegal immigrants irrespective of religion.

Why in News?

- The controversial Citizenship (Amendment) Bill was passed by the Lok Sabha after a lengthy debate and is scheduled to be tabled in the Rajya Sabha.

3) Deemed Forest

What are "deemed forests"?

- Deemed forests, are a controversial subject as they refer to **land tracts that appear to be a "forest", but have not been notified**

so by the government or in historical records.

- They comprise about 1% of India's forest land.
- The Supreme Court, in 1996 judgement, had broadened the definition of forest to include not just land classified as forest under forest or revenue departments, but also those that are forests according to the definition of a forest. It had then also asked states to form committees to identify forests, irrespective of the nature of land ownership or whether they are notified, recognised or classified in a time-bound manner.
- There are forests that are notified either with the forest department or revenue department.
- Then there are those areas that are like forests but are neither recorded, nor notified. The Supreme Court had ordered that the states identify and classify these as deemed forests.

News in Detail:

- In a recent notification, the Uttarakhand government said that in areas recorded as "deemed forest" only tracts 10 hectares and above and having a canopy density of greater than 60%, would be considered forest.
- The freedom to define which tracts of forest qualify as forest has been the prerogative of States since 1996.
- However, this only applies to forest land that has not already been historically classified as "forest" in revenue records, or categorised so by the government as "protected" or "reserve forest".
- The issue that the notification appears to extend this definition even to tracts already recorded as forest in revenue records.

Why in News?

- The Union Environment Ministry is likely to challenge a recent notification by the Uttarakhand Forest Department on its definition of a "deemed forest".

4) Reservations for Anglo-Indians Representations of Anglo-Indians

- To ensure representation of the communities in elected legislative bodies, similar to reservation for SCs and STs, Anglo-Indians were provided two nominated seats in the Lok Sabha and

nominated seats in certain state Assemblies.

- **Article 331** of the Constitution provides for the representation of the Anglo Indian,
- If President is of opinion that the Anglo Indian community is not adequately represented in the House of the people, he/she may nominate not more than two members of that community.
- For the **state Assemblies, Article 333** provided for the Governor to nominate the members.
- Article 334(b) extended it for 40 years. Subsequent amendments ensured the reservation was extended till January 2020.
- In 2009, the **95th Amendment extended it till 2020**. But, according to the new Bill, it will cease to exist in January.

Why in News?

- The Union Cabinet approved extension of reservation for Scheduled Castes and Scheduled Tribes in Parliament and state Assemblies for 10 more years, it did away with the reservation for Anglo-Indians in legislative bodies.

5) Personal Data Protection (PDP) Bill, 2019

Why does data matter?

- Data is any collection of information that is stored in a way so computers can easily read them.
- Data usually refers to information about our messages, social media posts, online transactions, and browser searches.
- The individual whose data is being stored and processed is called the data principal in the PDP Bill. This large collection of information about our online habits has become an important source of profits, but also a potential avenue for invasion of privacy because it can reveal extremely personal aspects.
- Companies, governments, and political parties find it valuable because they can use it to find the most convincing ways to advertise and influence the people online.

Provisions of the bill:

- The Bill deals with the broad guidelines on the collection, storage, and processing of personal data, the consent of individuals, penalties and compensation, and a code of conduct.

- The draft Bill classifies 'sensitive personal data' as including passwords, financial data, health data, sex life, sexual orientation, biometric data, genetic data, transgender status, intersex status, caste or tribe, and religious or political belief or affiliation.
- The draft Bill says that such sensitive personal data can be processed only with the explicit consent of the person, and this consent needs to be informed, clear, and specific, as defined by the Bill itself.
- The draft bill also has a provision for the right to be forgotten, where the person "shall have the right to restrict or prevent continuing disclosure of personal data".
- There is also a provision for the central government to notify categories of personal data as critical personal data, which will

then be only processed in a server or data centre located in India.

- Personal data is to be stored in India, but can be processed outside with the consent of the person.
- The draft Bill also specifies penalties for not following its provisions, including a penalty of 5 crore or 2% of turnover, whichever is higher, if no action is taken on a data leak.

Why in News?

- The Union Cabinet has cleared the Personal Data Protection Bill for introduction in the current session of Parliament.

ENVIRONMENT

1) India tests Swedish technology to reduce stubble burning

Why in news?

- India is testing a Swedish technology — **torrefaction** that can convert rice stubble into 'bio-coal'. Bioendev, a Swedish company, has set up a pilot plant at the National Agri-Food Biotechnology Institute in Mohali, to find the solution for stubble burning.

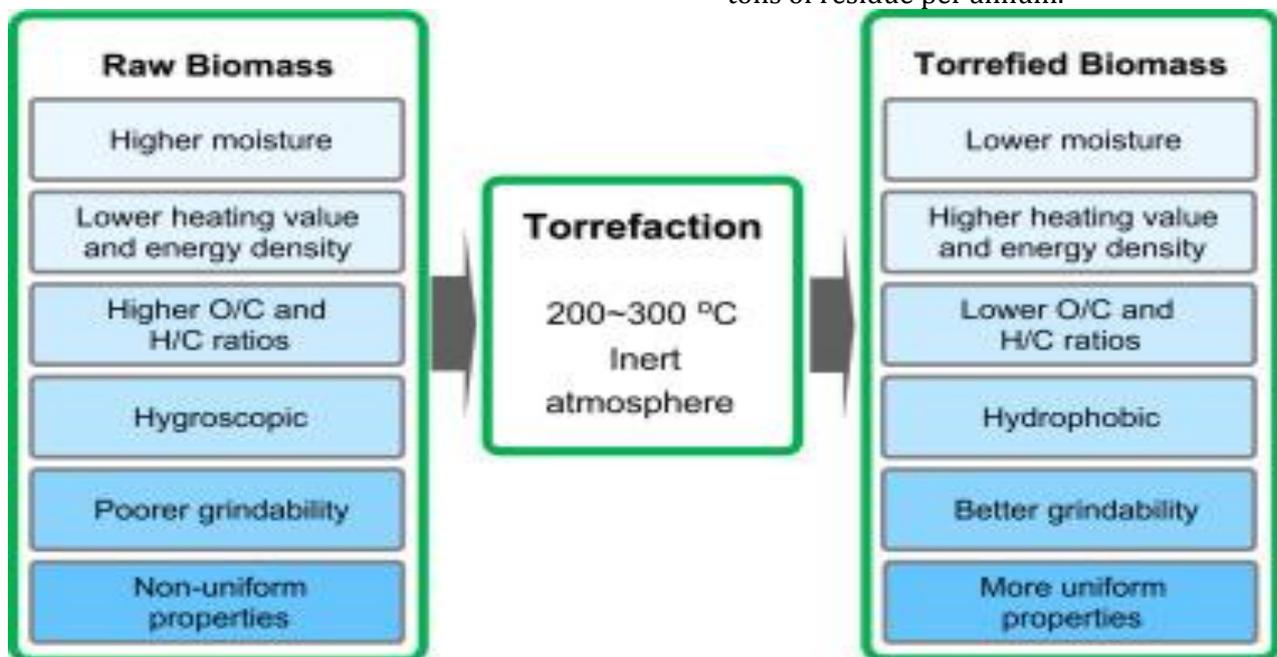
What is torrefaction?

- Torrefaction is a thermal process to convert biomass into a coal-like material, which has better fuel characteristics than the original biomass. Torrefied biomass is more brittle, making grinding easier and less energy intensive.
- Torrefaction involves the heating of biomass in the absence of oxygen to a temperature of typically 200 to 400°C.

- During the torrefaction process a combustible gas is released, which is utilised to provide heat to the process.
- The structure of the biomass changes in such a way, that the material becomes brittle, and more hydrophobic (water resistant). Although the weight loss is about 30%, the energy loss is only 10%. Main product is the solid, torrefied biomass.

Possible Advantages

- About 65% of the biomass could be converted to energy.
- The process converts the biomass into 'coal-like' pellets. These pellets can be used for combustion along with coal for industrial applications like steel and cement production.
- Alternative Income for farmers.
- Reduce coal combustion.
- If a plant is established, it can treat 30,000 tons of residue per annum.



2) Report on forests soon

Why in news?

- The Ministry of Environment, Forest and Climate Change (MoEFCC) is likely to release an update on the **state of forests** in India.
- Forest Survey of India (FSI) has been assessing the forest and tree resources of

our country on a **biennial** basis since 1987,

- The results of the assessment are published in its biennial report titled "**India State of Forest Report (ISFR)**".
- This report estimates the forest cover, the density of forest vegetation, tree cover across States, and the progress of

plantation outside regions officially designated 'forest'.

- The exercise involves both satellite mapping and surveys to map increase or decrease in forest cover.
- The last report was about to be published in 2017 but it was released in February 2018.

Highlights of 2017 report

- The total forest cover is 7,08,273 sq. km, which is 21.54% of the total geographical area of the country.
- India's tree and forest cover registered an increase of 1% or 8,021 sq. km in two years since 2015.
- The very dense forest in India increased by 1.36% as compared to 2015.
- Madhya Pradesh (77,414 sq. km) has the largest forest cover in the country in terms of area, followed by Arunachal Pradesh (66,964 sq. km) and Chhattisgarh (55,547 sq. km).
- In terms of percentage of forest cover with respect to the total geographical area, Lakshadweep with (90.33%) has the highest forest cover, followed by Mizoram (86.27%) and Andaman and Nicobar Island (81.73%).

- The survey, which has for the **first time assessed water bodies**, said that these bodies inside forest cover has increased by 2,647 sq. km during the last decade.
- **India is ranked 10th in the world, with 24.4% of land area** under forest and tree cover, even though it accounts for 2.4% of the world's surface area and sustains the needs of 17% of human and 18% livestock population

3) Operation 'Clean Art' to crackdown on illegal trade in mongoose hair

Why in News?

- **Operation Clean Art** was the first pan India operation to crackdown on the smuggling of mongoose hair in the country.
- More than 100kg of mongoose hair has been recovered all over India
- There are six species of mongoose found in India and we have mostly recovered in the raids **grey mongoose hair**.
- An adult mongoose yields over 30-40 gm of long hair, from which only 20-25 gm of "brush-making hair" is recovered.
- Brushes made of mongoose hair are preferred because they are superior and hold colour better.

Not a pretty picture
A look at the seizure of paint brushes made of mongoose hair in recent years



	Cases	No. of brushes seized	Arrests
2017	15	62,924	23
2018	16	79,021	19
2019	27	54,352	49

- For about 150 kg of mongoose hair, at least 6,000 animals would have been killed, according to an estimate
- Mongoose is listed in Schedule II Part 2 of the Wildlife Protection Act
- Any smuggling or possession of its body part is a non-bailable offence

Grey mongoose

- Indian Grey Mongoose (*herpestes edwardsii*) is listed in Schedule II Part 2 of the Wildlife Protection Act, 1972. It restricts any smuggling or possession of its body part is a non-bailable offence.
- It is listed in the IUCN Red List's status as **Least Concerned**.

- There are six species of mongoose found in India- Indian grey mongoose, Small Indian mongoose, Ruddy mongoose, Crab-eating mongoose, Stripe-necked mongoose and Brown mongoose.
- The Indian grey mongoose is the most commonly found species and also the most hunted.

4) Global Climate Risk Index 2020

Why in news?

- The Germanwatch recently released Global Climate Risk Index 2020 which is an analysis based on one of the most reliable datasets available on the impacts of extreme weather events and associated socio-economic data.
- It is the 15th edition of this annual analysis.
- Its aim is to contextualise ongoing climate policy debates – especially the international climate negotiations – looking at real-world impacts over the last year and the last 20 years.

About Germanwatch

- “Observing, Analysing, Acting” under this motto Germanwatch has been engaged since 1991 for **global equity and the preservation of livelihoods**.
- The politics and economics of the North (i.e., developed countries), with their global consequences, stand at the centre of its work.
- It is a non-profit, non-governmental organization based in Bonn, Germany.
- Germanwatch campaigns to create an environment that assures a sustainable future, **especially to marginalised people** threatened by uncontrolled globalisation and loss of their ecological and economic livelihoods.

Brief Summary

- **Japan, the Philippines and Germany** are at the top of the list of the most affected countries in 2018.
- Between 1999 and 2018, Puerto Rico, Myanmar and Haiti were the countries most affected by extreme weather events.
- Altogether, about 495 000 people died as a direct result of more than 12 000 extreme weather events globally and losses between 1999 and 2018 amounted to around US\$ 3.54 trillion (in purchasing power parities).
- **Heatwaves** were one major cause of damage in 2018. Of the ten most affected countries in 2018, **Germany, Japan and India were suffering from extended periods of heat**.
- Recent science has found a clear link between climate change and the

frequency and severity of extreme heat. In Europe, for example, extreme heat spells are now up to 100 times more likely to occur than a century ago. Furthermore, due to a lack of data, the impacts of heatwaves, for example on the African continent, may be underrepresented.

- In many cases (e.g. Puerto Rico), single exceptional disasters have such a strong impact that the countries and territories concerned also have a high ranking in the long-term index.
- Over the last few years, another category of countries has been gaining relevance: Countries like Haiti, the Philippines and Pakistan that are recurrently affected by catastrophes continuously rank among the most affected countries both in the long-term index and in the index for the respective year.
- Of the ten most affected countries and territories in the period 1999 to 2018, seven were developing countries in low income or lower-middle income country group, two were classified as upper-middle income countries (Thailand and Dominica) and one was an advanced economy generating high income (Puerto Rico).

Suggestions

- This year’s climate summit in Madrid (COP 25) needs to address the lack of additional climate finance to help the **poorest people and countries** to address Loss and Damage.
- They are hit hardest by climate change impacts because they are more vulnerable to the damaging effects of a hazard but have lower coping capacity.
- The climate summit needs to result in:
 - a) a decision on how the need for support for vulnerable countries concerning future loss and damage is to be determined on an ongoing basis and
 - b) the necessary steps to generate and make available financial resources to meet these needs.
 - c) strengthening the implementation of measures for adapting to climate change.

India as per the report

- **Heatwaves**
- India suffered from **one of the longest ever recorded heatwaves** in 2018, with

hundreds of deaths, when temperatures climbed up to 48°C.

- Prolonged drought and resultant widespread crop failures, compounded by a water shortage, brought about violent riots and increased migration.
- India is among those countries that were particularly affected by extreme heat in both 2018 and 2019.
- Since 2004, India has experienced 11 of its 15 warmest recorded year. Since 1992, an estimated 25 000 Indians have died as a result of heatwaves.
- Contributing factors include increasing temperatures, the "**El Niño Modoki**", an irregular El Niño in which the **Central Pacific Ocean is warmer than the East Pacific**, and the loss of tree cover, reducing shade as well as the moisture in the soil.
- India is particularly vulnerable to extreme heat due to low per capita income, social inequality and a heavy reliance on agriculture.
- The worst hit regions have also been among India's poorest. Additionally, a high number of people are working in areas such as agriculture and construction.
- A study by the International Labour Organization concludes that **by 2030, India would lose 5.8% of its working hours due to heat stress**, which is equivalent to 34 million full-time jobs out of a total of 80 million worldwide.
- In response to the growing number of deaths from heatwaves, the Indian government began implementing countermeasures. Heat plans include a

combination of public awareness campaigns, training for medical staff, reducing school days, building heat shelters for the homeless equipped with drinking water, free water distribution and simple policy changes

- **Floods:**

- The **yearly monsoon season**, lasting from June to September, severely affected India in 2018.
- The **state of Kerala** was especially impacted – 324 people died because of drowning or being buried in the landslides set off by the flooding, the worst in one hundred years.
- Over 220 000 people had to leave their homes, 20 000 houses and 80 dams were destroyed.³¹ The damage amounted to EUR 2.4 billion (US\$ 2.8 billion).
- **Cyclones**
- Furthermore, India's east coast was hit by the **cyclones Titli and Gaja** in October and November 2018. With wind speeds of up to 150 kilometres per hour, cyclone Titli killed at least eight people and left around 450000 without electricity ,
- **Drought**
- Temperatures of up to 50°C were measured, the extreme water stress was omnipresent.
- Due to the drought in the southern Indian state of Tamil Nadu and empty water reservoirs, Chennai, a city with over a million inhabitants, could only be supplied with water by trucks and trains. The water supplies for the population had to be accompanied by the police.

ECONOMY

1) GDP growth plunges to 4.5%, lowest since 2012

Why in News?

- Growth in the **gross domestic product (GDP)** in the **July-September quarter** hit a **25-quarter low of 4.5%**.
- This is the **lowest GDP growth in six years and three months**.

News in Detail

- Growth in **gross value added (GVA)** also **dipped to 4.3%** in **Q2 of 2019-20** from 4.9% in Q1, and 6.9% in Q2 of last year.
- The **manufacturing sector contracted 1%** in the second quarter of the current financial year, compared with a robust growth of 6.9% in the same quarter of the previous year.
- The **agriculture sector saw growth slowing down** at 2.1% in the second quarter of this year compared with 4.9% in Q2 of last year.
- Among the services sectors measured, only the 'Public Administration, Defence & Other Services' category saw growth quicken in the second quarter of this year.
- **Gross fixed capital formation grew only 1.02%** in the second quarter of this financial year, drastically lower than the growth of 11.8% seen in the Q2 of last year.

Definitions

About Gross Domestic Product

- GDP is the **final value of the goods and services produced within the geographic boundaries of a country** during a specified period of time, normally a year.
- GDP growth rate is an important indicator of the economic performance of a country.

Measuring GDP

- It can be measured by three methods, namely,
 - **Output Method** - measures the monetary or **market value of all the goods and services produced** within the borders of the country.
 - GDP (as per output method) = Real GDP (GDP at constant prices) - Taxes + Subsidies.
 - **Expenditure Method** - measures the **total expenditure incurred by all the entities**

on goods and services within the domestic boundaries of a country.

- GDP (as per expenditure method) = $C + I + G + (X-IM)$,
- {where C: Consumption expenditure, I: Investment expenditure, G: Government spending and (X-IM): Exports minus imports, that is, net exports}
- **Income Method** - measures the **total income earned by the factors of production**, that is, labour and capital within the domestic boundaries of a country.
- GDP (as per income method) = GDP at factor cost + Taxes - Subsidies.

Indian context

- In India, contributions to GDP are mainly divided into **B - agriculture and allied services, industry and service sector**.
- In India, GDP is measured as **market prices** and the **base year for computation is 2011-12**.
- GDP at market prices = GDP at factor cost + Indirect Taxes - Subsidies
- In India, GDP is **estimated by the Central Statistical Office (CSO)**.

Gross value added (GVA)

- GVA is defined as the **value of output less the value of intermediate consumption**.
- Value added represents the **contribution of labour and capital** to the production process.
- It provides the rupee value for the amount of goods and services produced in an economy after deducting the cost of inputs and raw materials that have gone into the production of those goods and services.
- It also gives **sector-specific picture** like what is the growth in an area, industry or sector of an economy.
- In the **revision of National Accounts statistics** done by CSO in January 2015, it was decided that sector-wise estimates of **GVA would be given at basic prices** instead of factor cost.
- The concept of GVA at basic prices follows from the **United Nation's System of National Accounts (SNA)** introduced in 1993.

- For **any commodity the basic price** is the amount receivable **by the producer** from the purchaser for a unit of a product **minus any tax on the product plus any subsidy** on the product.
- GVA at basic prices **will include production taxes** and **exclude production subsidies** available on the commodity.
- On the other hand, **GVA at factor cost includes no taxes and excludes no subsidies.**
- **GDP at market prices include both production and product taxes and excludes both production and product subsidies.**
- The relationship between GVA at Factor Cost and GVA at Basic Prices and GDP at market prices and GVA at basic prices is shown below:
 - *GVA at factor cost + (Production taxes less Production subsidies) = GVA at basic prices*
 - *GDP at market prices = GVA at basic prices + Product taxes- Product subsidies*

- **Production taxes or production subsidies**
- These are paid or received with **relation to production** and are **independent of the volume** of actual production.
- Some examples of production taxes are land revenues, stamps and registration fees and tax on profession.
- Some production subsidies include subsidies to Railways, input subsidies to farmers, subsidies to village and small industries, administrative subsidies to corporations or cooperatives, etc.
- **Product taxes or subsidies**
- These are paid or received **on per unit of product.**
- Some examples of product taxes are excise tax, sales tax, service tax and import and export duties.
- Product subsidies include food, petroleum and fertilizer subsidies, interest subsidies given to farmers, households, etc. through banks.

GDP vs GVA

- While **GVA** gives a picture of the state of economic activity **from the producers' side or supply side**, the **GDP** gives the **picture from the consumers' side or demand perspective.**

- **Both measures need not match** because of the **difference in treatment of net taxes.**
- A sector-wise breakdown provided by the **GVA** measure helps policymakers decide which sectors need incentives or stimulus and accordingly **formulate sector specific policies.**
- But **GDP** is a key measure when it comes to **making cross-country analysis** and comparing the incomes of different economies.

Gross Fixed Capital Formation (GFCF)

- As per RBI, Gross capital formation refers to the **'aggregate of gross additions to fixed assets** (that is fixed capital formation) **plus change in stocks** during the counting period.'
- Fixed asset refers to the **construction, machinery and equipment.**
- It is a measure of the **level of investment** in the country by **both the government and the private sector.**

2) GST revenue crosses Rs. 1 Lakh crore mark again

Why in News?

- Goods and Services Tax revenue in November came in at Rs. 1,03,492 crore, crossing the Rs.1 lakh crore-mark once again after having dipped below it for three successive months.

News in Detail

- Average collections in financial year 2019-20 so far stand at Rs. 1,00,646 crore.
- The collections in November 2019 are the **third-highest monthly collections** since the introduction of GST, next only to **April 2019** and March 2019 collections.
- Out of the gross revenue collected in November 2019, the maximum was from IGST followed by SGST and CGST respectively. (**IGST>SGST>CGST>Cess**)

Up and down

A look at the trends in GST collection

This is the eighth time since the inception of GST in July 2017 that monthly collection has crossed the mark of ₹1 lakh crore



Months	Collection (in ₹ crore)
November	1,03,492
October	95,380
September	91,916
August	98,202
July	1,02,083
June	99,939
May	1,00,289
April	1,13,865

3) Purchasing Managers' Index (PMI)

About PMI

- PMI or Purchasing Managers' Index (PMI) is an **indicator of business activity** -- both in the **manufacturing** and **services sectors**.
- India's PMI is compiled by **IHS Markit**.
- The Markit survey **covers private sector** companies, **but not the public sector**.
- It is a **survey-based measures** that asks the respondents about changes in their **perception** of some key business variables from the month before.
- It is calculated separately for the manufacturing and services sectors and then a composite index is constructed.

How does one read the PMI?

- A figure **above 50 denotes expansion** in business activity. Anything **below 50 denotes contraction**.
- Higher the difference from this mid-point greater the expansion or contraction.
- The **rate of expansion** can also be judged by comparing the PMI with that of the previous month data.
- If the figure is higher than the previous month's then the economy is expanding at a faster rate. If it is lower than the previous month then it is growing at a lower rate.

What are its implications for the economy?

- The PMI is usually **released at the start of the month**, much before most of the official data on industrial output, manufacturing and GDP growth becomes available.
- Economists consider the manufacturing growth measured by the PMI as a **good indicator of industrial output**, for which official statistics are released later.

- Central banks of many countries also use the index to **help make decisions on interest rates**.
- The PMI also gives an **indication of corporate earnings** and is closely watched by investors as well as the bond markets.
- A good reading enhances the attractiveness of an economy vis-a- vis another competing economy.

Why in News?

- The **Nikkei India Manufacturing Purchasing Managers' Index** rose to 51.2 in November, up from 50.6 in October.

4) Bharat Bond ETF

What is ETF?

- ETFs or **exchange traded funds** are similar to **index mutual funds**. However, they are **traded like stocks**.
- ETFs were started in **2001** in India. They comprise a portfolio of equity, bonds and trade close to its net asset value.
- These funds mainly track an index, a commodity, or a pool of assets.

Why in News?

- The Cabinet Committee on Economic Affairs has given its approval for creation and launch of **Bharat Bond Exchange Traded Fund (ETF)**.

What is Bharat Bond Exchange Traded Fund?

- The ETF will comprise a **basket of bonds** issued by the Central Public Sector Undertakings (**CPSUs**), Central Public Sector Enterprises (**CPSEs**), Central Public Financial Institutions (**CPFIs**), and other government organisations and all will be initially AAA-rated bonds.
- It will invest in a portfolio of bonds of state-run companies and other government entities.
- Bharat Bond ETF will have a **fixed maturity of three and ten years** and will trade on the stock exchanges. Each series will have a separate index of the same maturity series.
- Index will be constructed by an independent index provider – **National Sock Exchange**.
- Bharat Bond ETF would be the **first corporate bond ETF** in India.

Features of Bharat Bond ETF

- ETF will be a basket of bonds issued by CPSE/CPSU/CPFI/any other Government organization Bonds.
- Tradable on exchange
- Small unit size Rs 1,000
- Transparent NAV (Periodic live NAV(net asset value) during the day)
- Transparent Portfolio (Daily disclosure on website)
- Low cost (0.0005%)

Benefits to investors

- Bond ETF would provide **safety** (underlying bonds are issued by CPSEs and other government-owned entities), **liquidity** (tradability on exchange) and **predictable tax efficient returns**.
- The low unit value of Rs. 1,000 would help **deepen India's bond market** as it will encourage the participation of those retail investors who are currently not participating in bond markets due to liquidity and accessibility constraints.
- It will also provide access to retail investors **easy and low-cost access to bond markets**.

Benefits for issuers

- The bond ETFs are expected to offer CPSEs, CPSUs, CPFIs and other government organisations an **additional source of meeting their borrowing requirements**, apart from bank financing.
- It will **expand their investor base** through retail and HNI [high net worth individual] participation, which can increase demand for their bonds.
- With increase in demand for their bonds, these issuers may be able to **borrow at reduced cost** thereby reducing their cost of borrowing over a period of time.
- Further, Bond ETF trading on the exchange will help in better price discovery of the underlying bonds.
- Since a broad debt calendar to assess the borrowing needs of the CPSEs would be prepared and approved each year, it would inculcate borrowing discipline in the CPSEs at least to the extent of this investment.

5) GST revenues not enough for States' compensation

Compensation to states under GST

- As per provisions in Section 7 of the **GST (Compensation to States) Act, 2017** loss of revenue to the States on account of

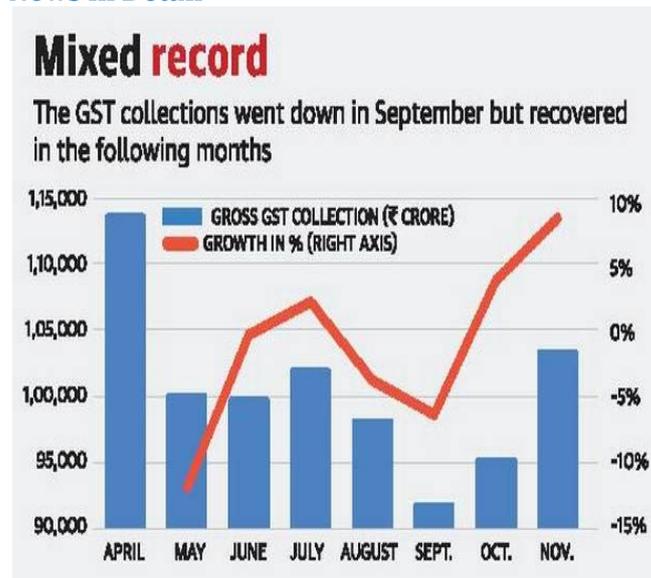
implementation of Goods and Services Tax shall be payable during **transition period of 5 years**.

- The financial year 2015-16 has been taken as the base year for calculating compensation amount payable to States for loss of revenue.
- The projected nominal growth rate of revenue subsumed for a state during the transition period shall be 14% per annum.
- The total compensation payable in any financial year shall be the difference between the projected revenue for any financial year and the actual revenue collected by a State.

Why in News?

- The Centre has written to all the States voicing concern that due to the lower Goods and Services Tax (GST) collections, the compensation cess might not be enough to pay for losses arising out of the tax system.

News in Detail



- The communication comes at a time when several States, including Rajasthan, Kerala, Delhi, Punjab and West Bengal, have publicly urged the Centre to transfer pending compensation payments as they have not received the dues for several months.
- This situation assumes significance because it was the promise of compensation to the States for losses arising out of GST implementation that convinced a large number of reluctant States to sign on to the new indirect tax regime.

- The Centre had promised compensation for any shortfall in tax revenue due to GST implementation for a period of five years.
- The government had budgeted for Rs. 6,63,343 crore in GST collections for the current financial year 2019-20, out of which it has **collected only about 50% in the first eight months.**
- It had targeted Rs. 1,09,343 crore of compensation cess collections, of which it has so far collected Rs. 64,528 crore.

6) India's forex reserves cross \$450 billion for the first time

Foreign exchange reserves of India

- The **Reserve Bank of India Act, 1935** and the **Foreign Exchange Management Act, 1999** set the legal provisions for governing the foreign exchange reserves.
- Foreign exchange reserves of India act as a cushion against rupee volatility once global interest rates start rising.
- The Foreign exchange reserves of India consists of below four categories;
 - Foreign Currency Assets
 - Gold
 - Special Drawing Rights (SDRs)
 - Reserve Tranche Position

Why in News?

- The country's **foreign exchange reserves crossed the \$450-billion mark for the first time** ever on the back of strong inflows which enabled the central bank to buy dollars from the market, thus checking any sharp appreciation of the rupee.

News in Detail

- India's foreign exchange reserves were at **\$451.7 billion on December 3, 2019** — an increase of \$38.8 billion over end-March 2019.
- At \$451.7 billion, the country's **import cover is now over 11 months.**

Significance of forex

- The rise in foreign exchange reserves will give the central bank the **firepower to act against any sharp depreciation of the rupee.**
- The Reserve Bank has always maintained that it intervenes in the foreign exchange market **to curb volatility** and does not target a particular level of exchange rate.

Background

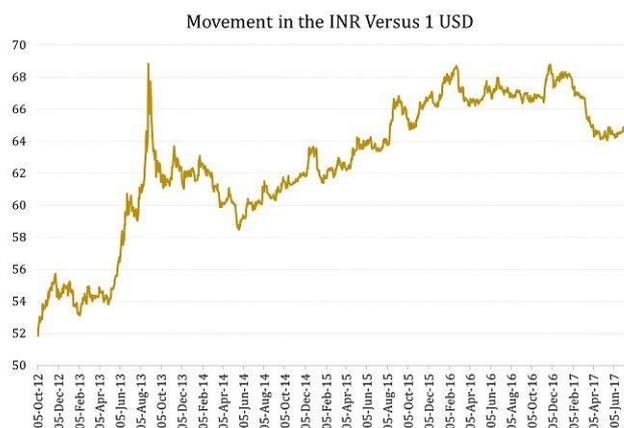
- During the **taper tantrums of 2013**, (or the **collective reactionary panic** after the **U.S. Federal Reserve** said it would apply the **brakes on its Quantitative Easing programme**), India's foreign exchange reserves fell to \$274.8 billion in September of 2013.
- It prompted the Centre and RBI to unleash measures to attract inflows.
- It has been a **steady rise** for the reserves since then, with \$175 billion added in the last six years.

What is taper tantrum?

- In reaction to the **2008 financial crisis** and ensuing recession, the **U.S. Federal Reserve** executed a policy known as **quantitative easing (QE)**, which involves **large purchases of bonds and other securities** to prop up the market.
- Investors had come to depend on ongoing massive Fed support for asset prices through its ongoing purchases.
- In **2013**, the U.S. Federal Reserve announced that the Fed would, at some future date, reduce the volume of its bond purchases.
- This prospective policy of reducing the rate of Fed asset purchases represented a **massive negative shock to investor expectations**, as the Fed had become one of the world's biggest buyers.
- As with any reduction in demand, with reduced Fed purchases (bond) prices would fall.
- Bond investors responded immediately to the prospect of future decline in bond prices by selling bonds, depressing the price of bonds as a result.

Why is India Building Forex Reserves?

- **Emerging markets** had borne the brunt of this taper tantrum as it resulted in **capital flight** (outflow) from these relatively risky countries back to the safety of US assets.
- The impact of the 'taper tantrum' can be seen from the graph below. The Indian rupee (INR) **suffered sudden depreciation** against the US dollar as depicted by the sharp spike seen on the left-hand side of the graph.



FRONTERA
www.frontera.net

Source: Bloor

- Back then, RBI did not have enough reserve assets to defend the rupee.
- With an enhanced buffer in the form of foreign currency, the RBI is now much better prepared for a monetary tightening cycle in developed markets.
- The RBI can release the excess reserves and buy Rupee to arrest the depreciation.

7) RBI lays down guidelines for payments banks' SFB licence

About Payment Banks

- A payments bank is like any other bank, but **operating on a smaller scale without involving any credit risk.**
- It can carry out most banking operations but **can't advance loans or issue credit cards.**
- It can accept demand deposits (up to Rs 1 lakh), offer remittance services, mobile payments/transfers/purchases and other banking services like ATM/debit cards, net banking and third party fund transfers.
- The main objective of payments bank is to widen the spread of payment and financial services to small business, low-income households, migrant labour workforce in secured technology-driven environment.
- With payments banks, RBI seeks to increase the penetration level of financial services to the remote areas of the country.
- It was one of the key suggestions of an RBI appointed committee, headed by **Dr Nachiket Mor** to study 'Comprehensive financial services for small businesses and low income households'.

About Small Finance Banks (SFB)

- The objectives of setting up of small finance banks will be **to further financial inclusion** by
 - provision of savings vehicles, and
 - supply of credit to small business units, small and marginal farmers, micro and small industries and other unorganised sector entities, through high technology-low cost operations.
- The small finance bank shall primarily **undertake basic banking activities** of acceptance of deposits and lending **to unserved and underserved sections** including small business units, small and marginal farmers, micro and small industries and unorganised sector entities.
- There is **no restriction in the area of operations** of small finance banks.
- The small finance bank will be **subject to all prudential norms and regulations of RBI** as applicable to existing commercial banks including requirement of maintenance of Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).
- The small finance banks will be required to **extend 75 per cent** of its Adjusted Net Bank Credit (ANBC) to the sectors eligible for classification as **priority sector lending (PSL)** by the Reserve Bank.
- At least 50 per cent of its loan portfolio should constitute loans and advances of upto Rs. 25 lakh.

Why in News?

- The Reserve Bank of India released on its website, "Guidelines for 'on tap' Licensing of Small Finance Banks in the Private Sector".

Key changes from the earlier Guidelines on Small Finance Banks, 2014

- Payments banks willing to convert themselves into small finance banks (SFBs) can apply for such a licence **only after five years of operations.**
- The **minimum capital** for setting up an SFB has been mandated at **Rs. 200 crore.**
- For **primary (urban) co-operative banks (UCBs)**, which wish to become SFBs, the initial requirement of net worth will be Rs. 100 crore, which will have to be increased to Rs. 200 crore within five years from the date of commencement of business.

International Relations

1) Countries in News frequently - Iraq Locational aspects



- Iraq is one of the easternmost countries of the Arab world, located at about the same latitude as the southern United States.
- It is located in the northern hemisphere to the **north of the Tropic of Cancer**.



- It is **bordered to the north by Turkey**, to the **east by Iran**, to the **west by Syria and Jordan**, and to the **south by Saudi Arabia and Kuwait**.
- Iraq **not land-locked** and has 36 miles (58 km) of coastline along the northern end of the **Persian Gulf**.

Geographical features



- **Tigris and Euphrates** are the two important rivers of Iraq which **drains into Persian Gulf**.
- Iraq is mountainous in the **north**, as the **Zagros Mountains** front its borders **with Iran and Turkey**.
- The **western desert** is an extension of the **Syrian Desert**.
- The **southern desert** is known as **Al-Hajarah** in the western part and as **Al-Dibdibah** in the east. Both deserts are **part of the Arabian Desert**.

Population

- Roughly two-thirds of Iraq's people are **Arabs**, about one-fourth are **Kurds**, and the remainder consists of small minority groups.
- Iraq's Arab population is divided between **Sunni Muslims** and the more numerous **Shias**.
- **Yazidis** are a religious minority in Iraq.

- **Yazidis**
- They are a member of a **Kurdish religious minority** found primarily in **northern Iraq, southeastern Turkey, northern Syria, the Caucasus region, and parts of Iran**.
- The Yazidī religion includes elements of

ancient Iranian religions as well as elements of Judaism, Nestorian Christianity, and Islam.

- They have been persecuted by the Islamic State terrorists.

Why in News?

- Iraqi Prime Minister **Adel Abdul Mahdi** submitted his resignation to parliament amid continuing **anti-government protests in the capital Baghdad and in southern Iraq.**

2) Six European nations join INSTEX

About INSTEX

- The special purpose vehicle **Instrument In Support Of Trade Exchanges (INSTEX)** aims to **facilitate trade between the EU and Iran** to get around US sanctions.
- It is an EU-backed system launched by **Germany, France and U.K.**
- The new entity acts as a sort of **euro-denominated clearing house** for Iran to conduct trade with European companies.
- In effect, INSTEX works as a **barter arrangement** operating outside of the US-dominated global financial system.
- Trade was initially expected to focus on non-sanctionable essential goods such as humanitarian, medical and farm products.
- INSTEX would be **based in Paris** and **managed by German banking expert, Per Fischer**, who is a former Commerzbank manager. **The UK will head the supervisory board.**
- It became operational by the end of June 2019.
- Iran set up and registered a counterpart to INSTEX called **Special Trade and Financing Instrument between Iran and Europe (STFI)** to pave the way for bilateral trade.
- Now it allows Iran to continue to **sell oil and import other products or services** in exchange.

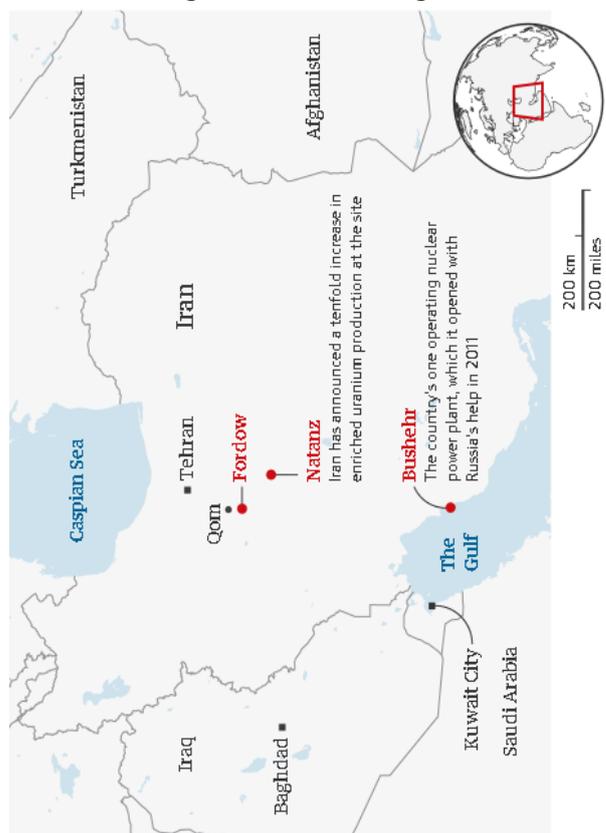
Background

- The **Joint Comprehensive Plan of Action (JCPOA)** is a nuclear deal reached by Iran and the **P5+1 (China, France, Germany, Russia, U.K., and U.S.)** on July 14, 2015.

- Under the agreement, Iran dismantled much of its nuclear program and gave international inspectors (International Atomic Energy Agency (IAEA)) extensive access to its facilities in exchange for relief from economic sanctions.
- However, the **United States unilaterally withdrew** from the agreement in May **2018**, reinstating the banking and oil sanctions.
- The US objected to the agreement's failure to address Iran's ballistic missile program or its proxy warfare in the region, and claimed that the agreement would enable Iran to pursue a nuclear bomb in the future.

Need for INSTEX

- Iran had threatened to partially withdraw from the deal if the other signatories — Germany, France, the UK, Russia, China, and the EU — can not provide a concrete incentive for it to abide by JCPOA rules.
- Iran had already begun enhancing its nuclear enrichment raising concerns among other Western powers.
- Iran has taken four steps back from the accord, including **resuming nuclear enrichment in its Fordow plant.**
- The initiative is an European Union measures to convince Iran to remain in the deal.
- It was designed to avoid using international



financial institutions that could be vulnerable to US sanctions.

- **How does it work?**
- Under mounting pressure from Washington, **SWIFT** decided to remove Iranian banks from its network last November.
- In the absence of SWIFT, the main international paying system, INSTEX can provide a channel that enables overseas trade and transactions with Iran.
- It avoids sending money to Iran by using a **virtual ledger to match imports and exports**.
- Thus, a European company wanting to import Iranian oil would pay a second European company exporting a product to Iran, such that dollars need never be sent to Iran.

▪ **SWIFT, or the Society for Worldwide Interbank Financial Telecommunication**

- It is the world's largest electronic payment messaging system, established interbank communications.
- It is used to coordinate interbank transactions.



Why in News?

- Six new European countries (**Belgium, Denmark, Finland, the Netherlands, Norway and Sweden**) joined the INSTEX barter mechanism, which is designed to circumvent U.S. sanctions against trade

with Iran by **avoiding the use of the dollar**.

3) India and Sweden sign three agreements

Why in News?

- India and **Sweden** on December 2 signed three agreements that will help both countries to cooperate in the frontier of science and technology and address climate change and maritime issues.

News in Detail



- The agreements were signed after the Indian delegation held talks with the Swedish team led by **King Carl XVI Gustaf** and **Queen Silvia** who were on a four day visit to India.

The agreements signed are

- the Protocol of Cooperation between the Department of Science and Technology of India and the Swedish Energy Agency;
- the MoU between the Ministry of Earth Sciences of India and the Ministry of Education and Research of Sweden on cooperation of polar (includes both Arctic and Antarctic) science; and
- A third agreement was sealed between the two countries on Recognition of Seafarer Certificates pursuant to Regulation I/10 of the International Convention on Standards of Training, Certification and Watch. The aim of this agreement is to promote safety of maritime environment.

▪ **International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)**

- The STCW Convention was the first to

establish basic requirements on training, certification and watchkeeping for seafarers on an international level.

- STCW was adopted in **1978** by conference at the **International Maritime Organization (IMO)** in London, and entered into force in 1984.

4) 'Power of Siberia' gas pipeline- China and Russia

About Power of Siberia

- The Power of Siberia is the **first cross-border gas pipeline between Russia and China**.

- From **Siberia to China's Yangtze River delta in Shanghai**, the massive pipeline will cover 8,000 km, with 5,111 km inside China, passing through nine provinces and municipalities.
- Gas is being sourced from **Chayandinskoye** and **Kovytkya** fields in eastern Siberia, and is then piped to **Blagoveshchensk** — the last town on the Russian side of the border.
- From there, it is tunneled under the **Amur River**, before entering **Heihe** on the Chinese side.



Significance

- Though Russia has been a primary gas supplier to Europe, this pipeline adds a prominent **eastern dimension to Russia's energy blueprint**.
- The new pipeline is an **emblem of closer energy integration in Eurasia**, with Russia and China as the key partners.
- It is not only central to China's energy security but also for bolstering special ties between Beijing and Moscow.

Why in News?

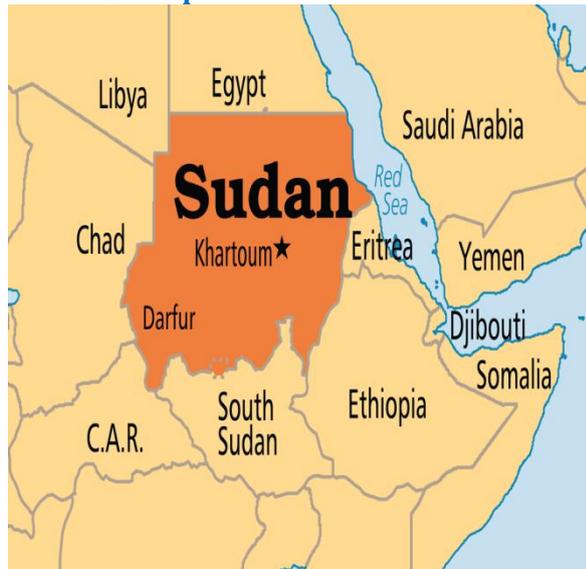
- Chinese President Xi Jinping and his Russian counterpart Vladimir Putin remotely inaugurated the "Power of Siberia" gas pipeline.

5) Sudan

About Sudan

- Sudan is the **third largest country in Africa**.
- **Oil** is currently the main export and production is increasing.
- Agriculture production is the most important sector for the economy, employing 80% of the workforce.

Locational aspects



- Sudan is located in northeastern Africa.
- Sudan's capital, **Khartoum**, is located roughly in the centre of the country, at the junction of the **Blue Nile and White Nile rivers**.
- Sudan is bounded on the **north by Egypt**, on the **east by the Red Sea, Eritrea, and Ethiopia**, on the **south by South Sudan**, on the **west by the Central African Republic and Chad**, and on the **northwest by Libya**.
- **Geographical features**



- Sudan is mainly composed of vast plains and plateaus that are drained by the Nile River and its tributaries.
- This river system runs from south to north across the entire length of the east-central part of the country.
- Most of **northern Sudan** is a sand- or gravel-covered **desert**.

Why in News?

- At least 18 Indians were among 23 people killed in an LPG tanker blast that destroyed a ceramic factory in Sudan.

SCIENCE and TECHNOLOGY

1) AWACS and AEW&C Systems

About AWACS

- AWACS, abbreviation of **Airborne Warning And Control System**, is a mobile, is a **long-range radar surveillance and control centre** for air defense.
- These radar systems **require to be mounted on a suitable aircraft** which acts as an airborne platform.
- Considered potent **“eyes in the sky”**, AWACS **can detect and track incoming fighters, cruise missiles and drones** in a 400km range much before ground-based radars.
- It has a **‘look-down capability’** for monitoring movements on the ground and it also can track maritime traffic.
- It **operates in any weather** over any terrain.
- The IAF (**Indian Air Force**) now operates **three Israeli Phalcon AWACS** and **three smaller indigenous Netra AEW&C systems mounted on Embraer aircraft**.
- Currently, the IAF use the AWACS to detect and track troop build-ups or aircraft movements in border areas and enemy territories.
- The AWACS additionally **direct air defence fighters during combat operations** against enemy planes.

- **China** has around **30 such systems**; including **Kong Jing-2000 “Mainring”**, **KJ-200 “Moth”** and **KJ-500 aircraft**.
- **Pakistan** has **eight Chinese-made Karakoram Eagle ZDK-03 AWACS** and **Swedish Saab-2000 AEW&C**, and is on course to get more from China.

About Israeli Phalcon AWACS

- The three **Israeli Phalcon systems** with India are mounted on **Russian Ilyushin Il-76 (or IL76 or A-50EI) heavy-lift aircraft**.
- The **EL/W-2090 AEW&C radar system** is developed by **Israel Aerospace Industries (IAI)** and Elta Electronics Industries of Israel.
- IAF’s long-pending quest to induct two more Phalcon AWACS systems has been

pending due to the increased price quoted both by Israel and Russia.



About Netra AEW&C

- The DRDO Airborne Early Warning and Control System (AEW&CS) is a project of India's Defence Research and Development Organisation which aimed to develop the **domestic ability to design and operationalise airborne surveillance platforms**.
- It is also referred to as **'NETRA' Airborne Early Warning and Control System (AEW&CS)**.
- The aircraft platform selected was the **Embraer ERJ 145 from Brazil**.
- It provides **240° coverage** like **Erieye (AEW&C system mounted on Swedish Saab 2000)**.



- The **first combat usage** of the Netra AEW&C by the IAF was on **26 February 2019** (Balakot airstrike or **Operation Bandar**) in which the aircraft **guided IAF’s 12 Mirage 2000 fighter jets** used to bomb multiple camps operated by the terror group.
- The **first known aerial engagement with both opposing sides using Airborne Early Warning and Control aircraft** in the world was in South Asia, during the **February 27, 2019** (post Balakot

retaliation by Pakistan) aerial engagement between India and Pakistan, with **India using A-50I Phalcon AWACS and Pakistan using the Saab 2000** (Sweden).

2) SPIKE Missiles

About Spike

- Spike is an **Israeli fire-and-forget anti-tank guided missile and anti-personnel missile** with a **tandem-charge HEAT warhead**, currently in its **fourth-generation**.
- It was developed and designed by the Israeli company **Rafael Advanced Defense Systems**.
- It is available in man-portable, vehicle-launched, and helicopter-launched variants.
- Spike is a fire-and-forget missile with **lock-on before launch and automatic self-guidance**.
- The missile is equipped with an imaging infrared seeker.
- It is known for their **precision targeting** with an ability to pierce even bunkers.
- They can be deployed in both mountains and plains.



Why in News?

- The Indian Army has successfully test-fired two newly-acquired **Spike LR (long-range)** anti-tank missiles at the Infantry School at Mhow, Madhya Pradesh.

News in Detail

- Spike LR is a fourth generation missile that can engage a target with precision at ranges up to **four km**.
- In addition to fire and forget capability, the missile also has the ability to **fire, observe and update**, providing substantial flexibility to the firer to pinpoint the impact point, as also the ability to switch to a different target mid-flight, should he want to do so.

- The firer also has the option to **fire from either low or high trajectory**.
- The missile has an inbuilt seeker, which gives the firer the **flexibility to use any of two modes: Day (CCD) and Night (IIR)**. The dual seeker adds to the missile's reliability.

Background

- The Army has placed an order for procuring Israeli anti-tank Spike missiles under **emergency purchases to meet operational preparedness**.
- **After the February 14 Pulwama attack** in which 40 CRPF personnel were killed, the three armed forces were given powers to make emergency purchases.
- Under this provision, the forces can make procurement **up to Rs 300 crore**.

3) Nag Missile

About Nag

- NAG (**meaning Cobra**) is a **third-generation, fire-and-forget, anti-tank guided missile** developed by Defence Research and Development Organisation (**DRDO**).
- The missile possesses **high single-shot kill probability**.
- It is designed to destroy modern main battle tanks and other heavily armoured targets.
- Nag can be launched from **land and air-based platforms**.
- It has the capability to **engage both static and moving targets** under **all weather conditions during the day and at night**.
- The Nag missile was **indigenously developed** under the Ministry of Defence's **integrated guided missile development programme (IGMDP)**, which also involved the development of four other missiles that are **Agni, Akash, Trishul and Prithvi**.
- NAG has a minimum range of **500 metres** and a maximum of **20 km**, depending on the launch type.
- It has a **top speed of 230 meter/second** (or 828 km/hour).

Nag variants (Range)

- Nag comes in four variants that can be launched from land and air.
- **Prospina (500m-4km)** - the **land version** meant for **infantry**.

- It can be launched from a **tracking-cum-launch vehicle** known as **NAMICA (Nag Missile Carrier)**.
- The launch system is mounted on light infantry vehicle **BMP-2** and can carry up to six missiles.
- Each launcher **can fire four missiles in one minute**.



- **HeliNa (7-10km) - helicopter-launched version** of NAG with an extended range.
- The launch system is mounted on **HAL "Rudra" (ALH WSI)** attack helicopter using "**Rudrastra**" twin-launcher system, **Dhruv** advanced light helicopter (**ALH**) (a variant called Dhruvastra) and **HAL Light Combat Helicopters**.
- The launch system is used by both Indian Army and Air Force.



- **Helina (SANT) (15-20 km)**- upgraded version of the third-generation Helina with an extended range.
- **Man Portable Anti-tank Guided Missile (MPATGM) - lighter (14.5 kg)** version in comparison to other variants and can be launched from the shoulder. It has a strike range of **2.5 km**.

Working of Nag

- **Bharat Dynamics (BDL)** produced imaging **infrared seekers** for the weapon.

- A **passive imaging infrared (IIR) homing seeker** guides the missile to the target after its launch in **all lighting conditions**.
- The **Namica** variant has **lock-on-before launch** capability, while the **air-launched** configuration uses **lock-on after launch** technology.
- After identifying the target, a **thermal reference image** of the target is captured and locked into the Nag's seeker system.
- As the missile moves towards the target at a high speed, it keeps capturing target images and cross-check it simultaneously with the reference image.
- Any deviations from the set path is corrected through Nag's four control fins.
- An 8kg tandem-shaped charge **high-explosive anti-tank (HEAT)** warhead, with a precursor and a main charge, provides the weapon with a high kill probability.
- The precursor charge (front part) penetrates the explosive reactive armour (ERA) of the tanks and the main charge is intended to destroy the main armour.

Why is Nag missile unique?

- It is **one of the world's finest** in its class.
- There are only two other fire-and-forget missiles in the world that can be compared with Nag — the **American Javelin** and the **Israeli Spike**.
- While Javelin and Spike are lighter missiles that can be carried by a soldier, Nag is more powerful as its infrared seekers can't be jammed.
- Nag's indigenously developed imaging seeker and high-tech guidance system make it **jam-proof**.

Why in News?

- DRDO has clarified that Nag ATGM is in advanced stages of development and a new Man Portable ATGM (MPATGM) was also in advanced stages of trials.

Background

- The need for third generation Nag was questioned on the backdrop of recent test firing of fourth generation Israeli Spike ATGM.

DRDO's justification for Nag programme

- The **MPATGM**, in an advanced stage of development, was a **fourth generation** ATGM.
- The Nag missile, the best in its class, was **built for Indian conditions**.

- During summers, in desert conditions the temperature of a battle tank and the sand were the same, and “identifying that and firing is a challenge.”

4) PSLV

About the Launch Vehicle

- **Polar Satellite Launch Vehicle (PSLV)** is the **third generation** launch vehicle of India.
- It is a **successor to the SLV and ASLV**.
- It is the **first Indian launch vehicle to be equipped with liquid stages**.
- After its first successful launch in October 1994, PSLV emerged as the reliable and versatile **workhorse launch vehicle** of India with 39 consecutively successful missions by June 2017.
- In a ‘career’ spanning nearly three decades, the PSLV has launched **more than 45 Indian payloads** — including **Chandrayaan 1** and Mars Orbiter Mission (Mangalyaan) spacecrafts — and **310 foreign satellites**.
- The **C37 mission** has the credit of placing a whopping **104 satellites in orbit**, a record.
- Along with Geosynchronous Satellite Launch Vehicle (GSLV), the PSLV continues to remain the mainstay of the Indian space programme.

Key features

- The PSLV has consistently delivered various satellites, especially IRS series (Indian Remote Sensing) satellites to Low Earth Orbits.
- It can take up to 1,750 kg of payload to Sun-Synchronous Polar Orbits of 600 km altitude.
- PSLV has also been used to launch various satellites into Geosynchronous and Geostationary orbits, like satellites from the IRNSS constellation.
- The PSLV is also **capable of placing multiple payloads into orbit**, thus multi-payload adaptors are used in the payload fairing.
- It comes in **three variants: PSLV-G, PSLV - CA, PSLV - XL**

- **Geosynchronous and Geostationary orbits**
- **Geosynchronous** orbits are those that **synchronizes with the rotation of the Earth** which means time taken by a

satellite in geosynchronous orbit to complete one orbital revolution is the same as the time taken by the Earth to complete one rotation on its axis

- Geostationary orbits (or **geostationary Earth orbit or GEO**) fall in the same category as geosynchronous orbits, but it’s parked over the equator.
- While geosynchronous satellites can have any inclination, the key difference to geostationary orbit is the fact that they lie on the same plane as the equator.
- A satellite that’s in a geosynchronous orbit appears at exactly the same spot in the sky after a period of one sidereal day (23 hours, 56 minutes and 4 seconds), when viewed from a specific position on Earth, while a geostationary satellite remains exactly above the Earth’s equator at all times.
- Both these orbits are at an altitude of around 35000km from the earth’s surface.

Technical Specifications

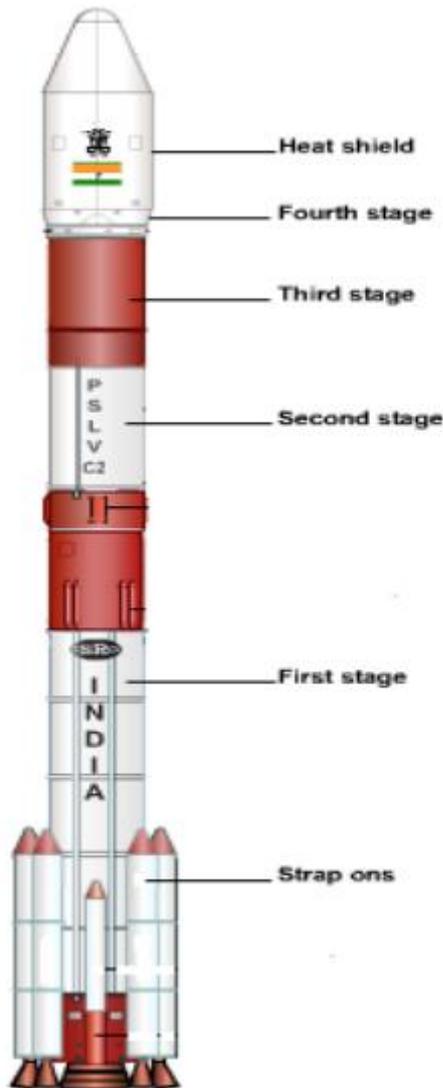
- **PS1** is the **first stage** of PSLV and it provides the launcher the **high thrust** that is required for lift off.
- **PS2** is the **second stage** of PSLV and is powered by the **Vikas liquid engine**, developed in the early 90s.
- **PS3** is the **third** and penultimate stage of PSLV, and it uses a **solid rocket** for propulsion.
- **PS4** is the **fourth and final stage** of PSLV and it uses **two liquid engines** for propulsion.
- PS4 is responsible for the correct injection of PSLV’s payloads into their respective desired orbits.
- While the **PSLV-G** uses **6 HTPB (Hydroxyl-terminated polybutadiene)** based **solid strap-on motors of 9 tonnes each** and **PSLV-XL** uses **6 extended strap-ons of 12 tonnes each**, the **PSLV-CA (core alone version)** **does not use any strap-on motors**.

Why in News?

- ISRO is preparing for the 50th flight of the PSLV.

- **Trivia**
- After the PSLV-C12 flight on April 20, 2009, the space agency nimbly leap-frogged to the C14 mission (there was no PSLV-C13).
- ISRO lore goes that the number 13 was

bypassed allegedly due to its association with ill luck.



5) Debris of Chandrayaan 2's Vikram lander found

Why in News?

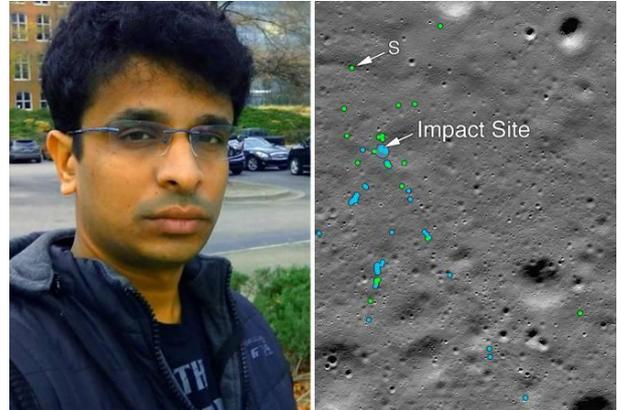
- Images of the lunar surface released by NASA confirm that the Indian lunar lander Vikram broke into pieces on crash landing on September 7.

News in Detail

- Vikram's debris was strewn across at least 750 metres of the crash site — which itself was off the landing target.
- In the images, NASA's team tentatively identified about 20 points with debris and

a few spots where the lunar 'soil' or regolith was disturbed on its impact.

- NASA also credited Indian engineer **Shanmuga Subramanian** with first finding the debris from the Chandrayaan-2 mission's lander.



Background

- Chandrayaan-2** took off from earth on **July 22** to the moon.
- It included a lunar orbiter, '**Vikram**' lander and '**Pragyan**' rover.
- On **September 7**, the **landing craft fell silent** just three minutes before it was due to touch down on the lunar surface.
- Ever since then, many space experts and amateurs have been piecing together bits of how and where the lander fell.

How it was discovered?

- NASA's **Lunar Reconnaissance Orbiter (LRO)** has been orbiting and scanning the moon since September **2009**.
- During its orbits the LRO had routinely flown over the presumed crash site on September 17, October 14 and November 11.
- The November mosaic (picture) shows best the impact crater, ray and extensive debris field.
- The debris first located by Mr. Shanmuga is about 750 metres northwest of the main crash site and was a single bright pixel identification in that first mosaic (1.3 metre pixels, 84 degree incidence angle).
- The LROC (LRO Camera) team scoured the surrounding area in these new mosaics and found the impact site (70.8810 degree S, 22.7840 degree E, 834 m elevation) and associated debris field.

Art and Culture

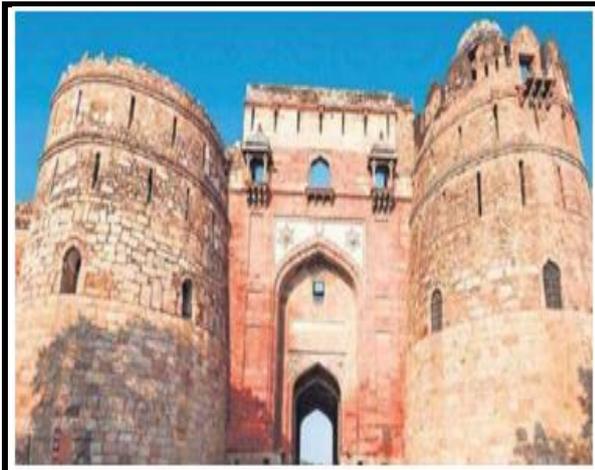
1) Archaeological Survey of India (ASI)

About ASI:

- The Archaeological Survey of India (ASI), under the **Ministry of Culture**, is the premier organization for the archaeological researches and protection of the cultural heritage of the nation. Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI.
- Besides it regulate **all archaeological activities in the country** as per the provisions of the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
- It also regulates Antiquities and Art Treasure Act, 1972.
- For the maintenance of ancient monuments and archaeological sites and remains of national importance the entire country is divided into **24 Circles**.

Why in News?

- The Government/Archaeological Survey of India (ASI) will set up another museum to house objects excavated from across India which have been lying in the Central Antiquities Collection (CAC) at Purana Quila.



About Purana Quila

- Purana Quila in Delhi has been built on a small hill standing on the banks of the river Yamuna with its massive rubble wall and imposing gateway houses.

- The structure houses a mosque, which has a double storied octagonal tower. According to Hindu literature the fort marks the site of Indraprastha, the magnificent capital of the Pandavas, though the construction was carried out by an Afghan ruler Sher Shah Suri any time between 1538 to 1545 in the 3rd century who wrested the throne of Delhi from the Mughal emperor Humayun.
- It is said that the Mughal King Humayun fell from the tower accidentally and died.

2) India's first maritime museum in Gujarat

Why in News?

- The Government of India is planning to establish a National Maritime Heritage Museum at **Lothal in Gujarat**.
- The museum will also be an independent research centre of **underwater archaeology** for reconstruction of maritime history, archaeology of boat building and materials traded.
- It will have on display salvaged material from **shipwreck sites in the Indian Ocean waters**.
- The museum is being set up with technical help from the **Portuguese Maritime Heritage Museum**.
- The central government has appointed the first Director General for the museum which will be attached to the Maritime Board of the Gujarat government.

Underwater archaeology

- Underwater archaeology is a specialized branch of archaeology that involves recovering submerged remains such as ports, shipwrecks and studying proxy records of maritime activity from archaeological excavations as well as archival and historical records.
- There are an estimated three million undiscovered shipwrecks lying on the ocean floor, according to the Unesco.
- Between 1824 and 1962, over 12,000 sailing ships and war vessels were lost at sea. Many of them got wrecked in Indian coastal waters.

- Studying sunken ships could also fill the gaps in India's maritime history and trade links with other countries.

About Lothal

- Lothal is an ancient city of Indus Valley Civilization. The city stood beside a tributary of the **Sabarmati** in Gujarat, close to the **Gulf of Khambhat**.
- It was situated near areas where raw materials such as semi-precious stones were easily available. This was an important centre for making objects out of stone, shell and metal.



- There was also a storehouse in the city.
- Many seals and sealings (the impression of seals on clay) were found in this storehouse.
- There has been a **dockyard**, where boats and ships came in from the sea and through the river channel. Through which Goods loaded and unloaded .

PIB ANALYSIS

1) Exercise Hand- in – Hand

About Exercise Hand- in – Hand:

- 8th India- China joint training Exercise HAND-IN-HAND 2019 with the theme Counter terrorism under United Nations is scheduled to be conducted at Umroi, Meghalaya.

News in Detail:

- The aim of the exercise is to practice joint planning and conduct of counter terrorist operations in semi urban terrain.
- It is focused upon training on various lectures and drills associated with counter terrorist handling & firing.
- Two tactical exercises are scheduled during the training; one on counter terrorism scenario and the other on Humanitarian and Disaster Relief (HADR) operations.



Why in News?

- Exercise Hand-in-Hand is a Joint training Exercise will be conducted between India and China at Meghalaya from 07 to 20 December.

2) National Pension Scheme for Traders and Self Employed Persons Yojana

About

- National Pension Scheme for Traders and Self Employed Persons Yojana is a **voluntary and contributory** Government Pension Scheme for **Vyaparis, retail traders, shopkeepers and self-employed persons**, with annual turn-over **not exceeding Rs.1.5 crore**.
- The scheme is implemented by the Ministry of Labour & Employment, Government of India.

- The scheme is being implemented through **Life Insurance Corporation and Common Service Centres**.
- LIC is the pension fund manager and also responsible for pension pay out.

Eligibility:

- The traders aged between 18 and 40 who have an annual turnover of less than 1.5 crore.
- With income of less than Rs 15,000 per month .
- They should not be covered under New Pension scheme (NPS), Employees State Insurance Corporation (ESIC) scheme or Employee Provident Fund Organisation and not an income tax payer.

Why in News?

- National Pension Scheme for Traders, Shopkeepers and Self-Employed Persons (originally proposed name was, Pradhan Mantri Laghu Vyapari Maan-dhan Scheme) has been launched .

3) Blue Flag Certification:

About Blue Flag Certification:

- The 'Blue Flag' beach is an Eco-tourism model endeavouring to provide to the tourists/beach goers clean and hygienic bathing water, facilities/amenities, safe and healthy environment and sustainable development of the area.
- It is a Certification accorded by international agency "Foundation for Environment Education, Denmark".
- The Certification is based on 33 Stringent criteria in four major levels i.e.
 1. Environment Education and Information
 2. Bathing Water Quality
 3. Environment and Management and Conservation
 4. Safety and Services in beach.

Blue flag Certification for Indian Beaches:

- In 2017, the Ministry of Environment, Forest, and Climate Change had started a pilot project under a Unified Coastal Areas Management Programme to develop the Indian beaches according to the Blue Flag.
- The project aims to improve the aquatic habitat by cleaning the growing pollution and garbage in the Indian beaches, develop

ecological tourism with constant progress and development of tourist facilities.

- **Chandrabhaga beach of Odisha's Konark coast was the first to complete the tag certification process will be the first in Asia to get the Blue Flag certification.**

Why in News?

- The Ministry of Environment, Forest and Climate Change has started a programme for "Blue Flag" Certification for select beaches in the country.

4) **Faster Adoption and Manufacture of Electric vehicle (FAME):**

About FAME:

- The Faster Adoption and Manufacture of Electric vehicle Scheme is an incentive scheme for the promotion of electric and hybrid vehicles in the country and it is launched by Ministry of heavy industries.
- It is divided into two phase and implemented over a period of 6 years, till 2020. **Phase I**- Started in 2015 and was completed on March 31st 2019. **Phase II** – Started from April 2019, will be completed by March 31st 2022.
- It is a part of the National Electric Mobility Plan.
- It is focused on 4 areas i.e. Technology Development, Demand Creation, Pilot Projects and Charging Infrastructure.

FAME Phase II:

- The Phase - II of the Faster Adoption and Manufacturing of Electric Vehicle Scheme proposes to give a push to electric vehicles (EVs) in public transport and seek to encourage of EVs by way of market creation and demand aggregation.
- The outlay of 10,000 crore has been made for three years till 2022 for FAME 2 scheme. Several charging stations for electric vehicles are planning to setup.
- Under the scheme the government will offer incentives for electric buses, three-wheelers and four-wheelers to be used for commercial purposes.
- The centre has asked state to frame their EV Policy and provide additional fiscal and non- fiscal incentives to manufacturers and buyers.
- Eligibility for incentives – Only buses priced up to 2 crore, strong and plug-in hybrids under 15 lakh, three-wheelers

under 5 lakh and two- wheelers under 1.5 lakh will be eligible for incentives.

Why in News?

- Promotion to manufacturing of Electric Vehicles was given by Ministry of Heavy Industries & Public Enterprises.

5) **Tiger Corridors in Country**

About NTCA

- The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, for strengthening tiger conservation.

Objective of the NTCA

- Providing statutory authority to Project Tiger so that compliance of its directives become legal.
- Fostering accountability of Center-State in the management of Tiger Reserves, by providing a basis for MoU with States within our federal structure.
- Providing for an oversight by Parliament.
- Addressing livelihood interests of local people in areas surrounding Tiger Reserves.

About Wildlife Institute of India

- Established in 1982, Wildlife Institute of India (WII) is an **autonomous Institution of the Ministry of Environment, Forest and Climate Change**, Government of India and an internationally acclaimed Institution, which offers training program, academic courses and advisory in wildlife research and management.
- The Institute is actively engaged in research across the breadth of the country on biodiversity related issues.

Why in News?

- The National Tiger Conservation Authority in collaboration with the Wildlife Institute of India has published a document titled "Connecting Tiger Populations for Long-term Conservation", which has mapped out **32 major corridors** across the country, management interventions for which are operationalised through a Tiger Conservation Plan, mandated under the Wildlife (Protection) Act, 1972.
- **For the list of Tiger corridors-** <https://pib.gov.in/newsite/PrintRelease.aspx?relid=195280>

6) **Exercise Surya Kiran – XIV**

About the exercise:

- The aim of this exercise is to conduct a battalion level combined training between Indian Army and Nepal Army with a scope to enhance interoperability at military level in jungle warfare, counter terrorist operations in mountainous terrain, humanitarian assistance, disaster relief operations, medical and environmental conservation including aviation aspects.
- As part of the exercise, important lectures, demonstrations and drills related to counter insurgency and counter terrorism operations in jungle and mountainous terrain will be conducted.
- Both the Armies will also share their valuable experiences in countering such situations and also refine drills and procedures for joint operations wherever the need arises.

Why in News?

- The 14th edition of the bilateral annual military exercise SURYA KIRAN-XIV between Indian and Nepal Army commenced in Nepal. The 13th edition was held in Uttarakhand in 2018.

7) Ratna Status to Central Public Sector Enterprises

Criteria for grant of Miniratna status to CPSEs:

- **Miniratna Category-I status:** – The CPSEs which have made profit in the last three years continuously, pre-tax profit is Rs.30 crores or more in at least one of the three years and have a positive net worth are eligible to be considered for grant of Miniratna-I status.
- **Miniratna Category-II status:** – The CPSEs which have made profit for the last three years continuously and have a positive net worth are eligible to be considered for grant of Miniratna-II status.

Criteria for grant of Navratna status to CPSEs:

- The CPSEs which are Miniratna I, Schedule 'A' and have obtained 'excellent' or 'very good' MOU rating in three of the last five years and having composite score of 60 or above in six selected performance indicators are eligible to be considered for grant of Navratna status.

Criteria for grant of Maharatna status to CPSEs:

- Having Navratna status
- Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations
- An average annual turnover of more than Rs. 25,000 crore during the last 3 years
- An average annual net worth of more than Rs. 15,000 crore during the last 3 years
- An average annual net profit after tax of more than Rs. 5,000 crore during the last 3 years
- Should have significant global presence/international operations.

List of Maharatnas CPSEs

- Bharat Heavy Electricals Limited
- Bharat Petroleum Corporation Limited
- Coal India Limited
- GAIL (India) Limited
- Hindustan Petroleum Corporation Limited
- Indian Oil Corporation Limited
- NTPC Limited
- Oil & Natural Gas Corporation Limited
- Power Grid Corporation of India Limited
- Steel Authority of India Limited

Why in News?

- The criteria was laid down by the Government for grant of Maharatna, Navratna and Miniratna status to Central Public Sector Enterprises (CPSEs).

8) Fit India School Rating Programme

About Fit India School Rating Programme:

- The Fit India School Rating was launched by Prime Minister Shri Narendra Modi and he urged all schools to enroll themselves to get the Fit India flag and Fit India Star Rating.
- It is the first-ever fitness rating for schools to be introduced in India.
- Under the Fit India School Rating system, schools will be given a Fit India Flag and 3 star and 5 star ratings, depending on the fitness levels of the students and teachers in the school, infrastructure available and participation in fitness activities.

Criteria for each level:

- **Fit India Flag:**
- Having one teacher trained in Physical Education and such teacher is physically fit and active

- Having a playground where two or more outdoor games are played.
- Having one PE period each day for every section and physical activities (sports, dance, games, yoga, PT) take place in the PE period
- Having all students spending 60 minutes or more on physical activities, daily.
- **3-Star Rating:**
- All teachers of the school should be physically fit and spend 60 minutes or more every day for physical activities
- The school has at least two trained teachers, each well versed with any two sports;
- Sports facilities to play four sports including two outdoor sports and every student learns and plays two sports, one of which could be a traditional/indigenous sport.
- **5-Star rating:**
- School conducts monthly intra-school competitions, participates in inter-school competitions and celebrates Annual Sports Day;
- All teachers are trained in physical education;
- School has two or more sports teachers who may be PE teachers;
- School follows structured PE curriculum prescribed by NCERT/school board;
- School conducts annual fitness assessment of all children and school opens its playground after school hours for neighbouring communities and the same is actively used. Reasonable fee may be charged for maintenance and security.

Why in News?

- Minister of State (I/C) for Youth Affairs & Sports, Shri Kiren Rijiju and Union HRD Minister Shri Ramesh Pokhriyal “Nishank” unveiled the Fit India School Rating brochure and Fit India flag at New Delhi.

9) Exercise INDRA:

About Exercise INDRA:

- Exercise INDRA 2019 a joint, tri services exercise between India and Russia .
- The main aim of the exercise is to practice joint planning and conduct to enhance the

interoperability of the two armies in the peacekeeping, enforcement environment under the aegis of the United Nations.

- Company sized mechanised contingents, fighter and transport aircraft as well as ships of respective Army, Air Force and Navy will participate in this exercise of ten days duration.
- The contingents of both the countries will share expertise and their professional experience.
- The esprit-de-corps and goodwill shall be the key areas during the exercise which will facilitate further strengthening of bonds between the defence forces of India and Russia.

Why in News?

- Exercise INDRA 2019 will be conducted in India from Dec 10-19 simultaneously at Babina (near Jhansi), Pune, and Goa.

10) North East Rural Livelihood Project:

About North East Rural Livelihood Project:

- It is a World Bank aided project launched in 2012.
- It is being implemented by the Ministry of Development of North Eastern Region (MDoNER).
- The Aim is to **improve rural livelihoods especially that of women, unemployed youth and the most disadvantaged people** by building community based organizations and developing partnership with Government and other institutions for knowledge, skill, credit, insurance, extension and market in **four North Eastern States of Mizoram, Nagaland, Sikkim and Tripura**
- The project focuses on five development strategies, such as **Social empowerment, Economic empowerment, Partnership development, project management and Livelihood & value chain developments.**

Why in News?

- Ministry of Development of North-East Region has published the report on institutions formed under NERLP.

News in Depth

AIR NEWS

1) International Day of Persons with Disabilities

About the International Day of Persons with Disabilities:

- Every 3rd December is observed as the International Day of Persons with Disabilities every year.
- This annual observance was initiated by the UN in 1992.
- It aims to promote the rights and well-being of persons with disabilities in all spheres of society and development, and to increase awareness of the situation of

persons with disabilities in every aspect of political, social, economic and cultural life.

2019 Theme:

- **Promoting the participation of persons with disabilities and their leadership: taking action on the 2030 Development Agenda.**

Why in News?

- Since 1992, the International Day of Persons with Disabilities (IDPD) has been annually observed on 3 December around the world. PM Narendra Modi sends message on the occasion.

Hindu Editorial Analysis

1) Taking stock of the anti-AIDS fight

SDG and AIDS

- The **Sustainable Development Goals (SDG)**, adopted by member countries of the United Nations in 2015, set a target of **ending the epidemics of AIDS, Tuberculosis and Malaria by 2030 (SDG 3.3)**.
- The **key indicator** chosen to track progress in achieving the target for HIV-AIDS is **“the number of new HIV infections per 1,000 uninfected population, by sex, age and key populations”**.
- In the terminology of HIV prevention and control, the phrase **“key populations”** refers to: men who have sex with men; people who use injected drugs; people in prisons and other closed settings; sex workers and their clients, and transgender persons.

Ambitious treatment target:

- In order to infuse energy and urgency into global efforts to combat HIV-AIDS and complement the prevention target set by the SDGs, an ambitious treatment target was also adopted through UNAIDS, the lead UN agency that coordinates the battle against HIV.

“90-90-90” target

- The “90-90-90” target stated that by 2020, 90% of those living with HIV will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained anti-retroviral therapy and 90% of all people on such therapy will have viral suppression.
- The gaps in detection, initiation of drug therapy and effective viral control were to be bridged to reduce infectivity, severe morbidity and deaths from undetected and inadequately treated persons already infected with HIV, even as prevention of new infections was targeted by SDG 3.3.

Current scenario:

- At the end of 2019, on the road to the 2020 and 2030 targets, Where do we stand?

- While much success has been achieved in the past 20 years in the global battle against AIDS, there has been a **slowdown in progress** which seems to place the targets out of reach.
- There has to be a **fresh surge** of high-level political commitment, financial support, health system thrust, public education, civil society engagement and advocacy by affected groups — all of which were part of the recipe for rapid progress in the early part of this century.

Reasons for the initial progress in decline:

- **HIV-related deaths fell by 45%**, with 13.6 million lives saved due to **Anti-Retroviral Therapy (ART)**. According to a recent report by UNAIDS, of the 38 million persons now living with HIV, 24 million are receiving ART, as compared to only 7 million nine years ago.
- **Wide availability of effective drugs** due to generic versions generously made available by Indian generic manufacturers.
- A rush of **public and private financing** flowed forth in a world panicked by the pandemic.
- Ignorance and stigma were vigorously combated by coalitions of HIV-affected persons who were energetically **supported by enlightened sections of civil society and the media**.

Why then the concern now?

- **Falling short of 90-90-90 target:**
- At the end of 2018, while 79% of all persons identified as being infected by HIV were aware of the fact, 62% were on treatment and only 53% had achieved viral suppression **falling short of the 90-90-90 target set for 2020**.
- Only **19 countries are on track** to reach the 2030 target.
- **Increase in new infections**
- Due to gaps in service provision, 770,000 HIV-affected persons died in 2018 and **1.7 million persons were newly affected**.
- There are worryingly **high rates of new infection** in several parts of the world, especially among young persons.

- While improvements have been noted in eastern and southern Africa, central Asia and eastern **Europe have had a setback**, with more than 95% of the new infections in those regions occurring among the 'key populations'.

Increased risk

- Risk of acquiring HIV infection is 22 times higher in homosexual men and intravenous drug users, 21 times higher in sex workers and 12 times more in transgender persons.

Reasons for slowdown in progress:

- The success achieved in the early part of this century, through a determined global thrust against the global threat, led to assumption of a conclusive victory. However, the slowdown indicates that victory is too far and the reasons for such slowdown could be as follows,

Focussing on other priorities

- The expanded health agenda in the SDGs stretched the resources of national health systems, even as global funding streams started identifying other priorities.

Increased awareness does not continue to pass

- The information dissemination that successfully elevated public awareness on HIV prevention did not continue to pass on the risk-related knowledge and strong messaging on prevention-oriented behaviours to a new generation of young persons.

Improved survival rates and reduced fear

- Improved survival rates reduced the fear of what was seen earlier as dreaded death and pushed the disease out of the headlines.

Need for vigil in India:

- The Indian experience has been more positive but still calls for continued vigilance and committed action.
- HIV-related deaths declined by 71% between 2005 and 2017.
- HIV infection now affects 22 out of 10,000 Indians, compared to 38 out of 10,000 in 2001-03.
- India has an estimated 2.14 million persons living with HIV and records 87,000 estimated new infections and 69,000 AIDS-related deaths annually.
- Nine States have rates higher than the national prevalence figure.

- Mizoram leads with 204 out of 10,000 persons affected.
- Assam, Mizoram, Meghalaya and Uttarakhand showed an increase in numbers of annual new infections.

Measures to combat AIDS in India:

National AIDS control Programme:

- The strength of India's well established National AIDS Control Programme, with a cogent combination of prevention and case management strategies is worth mentionable.

Prevention and treatment:

- The success of drug treatment to prevent mother-to-child transmission, pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), and male circumcision, especially among MSM population (Man who had sex with man), is well-documented.

Vaccine under trial:

- Wide diversity of the HIV virus strains, makes development of a vaccine highly challenging but a couple of candidates are in early stage trials.
- However, mere technical innovations will not win the battle against HIV-AIDS.

Way forward;

- Success in our efforts to reach the 2030 target calls for **revitalizing the combination of political will, professional skill and wide ranging pan-society partnerships** that characterised the high tide of the global response in the early part of this century.
- The theme of the **World AIDS day** this year (**"Ending the HIV/AIDS Epidemic: Community by Community**), which is communities make the difference, is a timely reminder that community wide coalitions are needed even as highly vulnerable sections of the community are targeted for protection in the next phase of the global response.

2) Rape, impunity and state of denial

Context:

- The horrific violence, gang rape and murder of the young woman veterinarian on a national highway close to Hyderabad has led to national outrage and protests in several States.

- Dreadful sexual crimes one after the other brings home the reality that there is a national emergency in India as far as crimes against women, specifically sexual crimes, are concerned.

Significant facts:

- The **2017 National Crime Records Bureau (NCRB)** report showed an alarming **increase in registered crimes against women**.
- On an average, around 1,000 crimes were registered every day, over 3.5 lakh in the year.
- On an average, 93 women were victims of rape every day of which One-third of them were minors.
- Around 88000 women registered cases of sexual harassment, an average of 241 a day.
- Every day, on an average, 28 women were burnt to death in cases registered as 'dowry deaths'.

Underlying problems:

- **1) Unreported cases**
 - The above figures reflect only a small percentage of the crimes committed against women.
 - National Family Health Survey-4 revealed that every third married woman had experienced physical and/or sexual violence but only 1.5% had sought help from the police.
- **2) Huge backlog of cases**
 - The NCRB report shows that the backlog of cases, including cases of child rape, is huge.
 - The pendency of cases is as high as 89.6% for all crimes against women.
 - Failure to reform the justice system and ensure conviction leads to an increase in the impunity with which crimes against women are committed.
- **Lack of steps to prevent crimes**
 - The government tries to turn the attention to the issue of the extent of punishment, instead of focusing on the urgent steps required for the prevention of such crimes.
- A UN report on steps required to provide safety and security for women states that "women's safety involves strategies and policies that take place before violence has occurred to prevent perpetration or victimisation... Prevention efforts involve strategic, long-term, comprehensive

initiatives that address the risk and protective factors related to perpetration, victimisation and bystander behaviour.

Solutions:

- **Justice J.S. Verma committee recommendations:**
 - It placed the responsibility on the Central and State governments to ensure the social and physical infrastructure to prevent crimes against women.
 - It added to and expanded on various proposals which had already been made.

The suggestions included

1. changes in school and college syllabi to educate young people on the social values of equality and respect for women's autonomy;
2. ensuring safe public transport, city and street lighting, CCTV cameras;
3. mapping unsafe areas and provision of increased police patrolling in such areas; and a slew of other steps.

Way forward:

- The way forward is through increased public action for social change and enforcement of a code of accountability and responsibility on the Central and State governments to implement the recommendations necessary to make India safe for its women and children.

3) Climate warnings: On unmet emission goals

Context:

- Two important reports of the **Intergovernmental Panel on Climate Change (IPCC), on the impact of higher global temperatures on land, oceans and the cryosphere**, lend further urgency to the task before countries now meeting in Madrid for the UN conference.

About IPCC:

- The Intergovernmental Panel on Climate Change (IPCC) is the **United Nations body** for assessing the science related to climate change.
- It was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
- It is an organization of governments that are members of the United Nations or WMO which currently has 195 members.

- The objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies.
- IPCC reports are also a key input into international climate change negotiations.
- The IPCC provides regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.

What does IPCC report say?

- Refer to pulse 17- Environment section

Significance of IPCC report:

- The new IPCC assessment **underscores the need for unprecedented and urgent action in all countries that have significant greenhouse gas emissions.**
- It strengthens the case for
 - industrialised nations to provide liberal, transparent funding to developing countries under the Paris Agreement,
 - **reinforcing the principle** of Common But Differentiated Responsibilities and Respective Capabilities, and
 - recognising that rich countries reduced the carbon space available to the poor.

Effects of climate change:

- In the case of oceans and frozen areas on land, accelerated rates of loss of ice, particularly in Greenland, the Arctic and the Antarctic,
- will produce a destructive rise in sea levels;
- increases in tropical cyclone winds, rainfall and extreme waves,
- combined with relative sea level rise, will exacerbate catastrophic sea level events.
- All this will deal a blow also to the health of fish stocks.

What is particularly significant for countries with a long coastline?

- Countries including India, is that local sea level anomalies that occurred once in a century may become annual events, due to the projected global mean sea level rise over the 21st century.
- This is an alarming scenario for the 680 million residents of low-lying coastal areas, whose population may go up to one billion by 2050, and for those living in small islands.

Paris Agreement and Article 6:

- At COP 21 in Paris, on 12 December 2015, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.
- The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so.
- Under the Paris Agreement, the 194 Parties to the United Nations Framework Convention on Climate Change (UNFCCC) committed to shifting the world’s course towards sustainable development and **“holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”**
- The agreement aims to increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with a low GHG emissions and climate-resilient pathway.
- In order to achieve this goal, all participating countries are required to set national GHG emissions reductions targets – nationally determined contributions (NDCs).

Nationally determined contributions:

- **The Paris Agreement requests each country to outline and communicate their post-2020 climate actions, to reduce national emissions and adapt to the impacts of climate change known as their Nationally Determined Contributions. (NDCs)**
- Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.
- There will also be a global stocktake every 5 years to assess the collective progress towards achieving the purpose of the agreement and to inform further individual actions by Parties.

- The next review of the NDCs will take place in 2020 and it will be necessary for countries

to increase ambition in order to meet the goals of the Paris Agreement, recognising that this would significantly reduce the risks and impacts of climate change.

▪ **Background about Article 6 implementation:**

- One of the keys to this increased ambition lies in the implementation of Article 6 of the Paris Agreement.
- While at COP24, in Katowice, Poland last December, participating countries reached an agreement on the implementation of the Paris Agreement – the so called Paris Rulebook – but could not reach an agreement on the implementation of Article 6.
- This is why Article 6 of the Paris Agreement was the focus of much attention at the United Nations Climate Change Conference in Bonn, which marked the first formal meeting of governments to advance negotiations on outstanding Paris Rulebook items.

So, what is Article 6 of the Paris Agreement and carbon pricing?

- Article 6 of the Paris Agreement aims at promoting integrated, holistic and balanced approaches that will assist governments in implementing their NDCs through voluntary international cooperation.
- This cooperation mechanism, if properly designed, should make it easier to achieve reduction targets and raise ambition.
- Article 6 could also establish a policy foundation for an emissions trading system, which could help lead to a global price on carbon.
- **Emission trading system:**
- Under this mechanism, countries with low emissions would be allowed to sell their exceeding allowance to larger emitters, with an overall cap of greenhouse gas (GHG) emissions, ensuring their net reduction.
- Supply and demand for emissions allowances would lead to the establishment of a global carbon price that would tie the negative externalities of GHG emissions to polluters.
- In other words, by paying a price on carbon, states exceeding their NDCs would bear the costs of global warming.
- **Significance of Article 6 implementation:**
- Through this flexible approach, GHG

emissions would undergo a strong decline, coupled with stimulation for innovative and cleaner technologies and an overall transition towards a low-carbon economy.

- In addition to being a driver for carbon pricing, the successful implementation of Article 6 could create new channels for climate finance and lead to technology transfer and capacity-building.

What next?

- COP-25 is taking place at MADRID, Spain this year.
- The negotiations for the new carbon market regime, which falls under Article 6 of the Paris agreement, will take centre stage along with the other outstanding issue of “Loss and Damage” .

What has to be done?

- The existing Nationally Determined Contributions filed under the Paris Agreement fall short and need augmenting.
- The yawning gap between planned emissions cuts, and what needs to be done by 2030 to contain global temperature rise at 1.5°C must be addressed.

4) A potential seedbed for private profits

Context:

- **The government is currently in the process of bringing a new Seed Bill which aims to ensure that farmers get the highest quality seeds, while the seed industry also experiences an ‘ease-of-doing-business’.**
- **It aims to foster competition by updating the Seed Act 1966 and Seed Rules 1968.**

Background:

- **Seed Act 1966**
- After the ‘**Green Revolution**’, India was quick to introduce the Seed Act 1966 as the first act to **govern matters of seed and seed quality.**
- It was modelled on the US legislation and aided by a later enactment of the **Seed Rules 1968**, which were also developed with the collaboration of the USDA.
- The Act has served well in making the **Indian Seed Industry vibrant and competitive** to serve the interest of the farmers.

- The labelling of seeds with notified quality parameters has been made mandatory under the 1966 Act with punitive measures against seed sellers in case of any deficiency in seed quality parameters mentioned on the label.
- Essentially, the **seed label is treated as a guarantee card** and it is given a unique identification number to ensure traceability of seed.
- The major **deficiencies in the 1966 Act** are **lack of licensing provisions and lack of varietal registration prior to sale**, which is now being incorporated in the new Seed Bill.
- The Seed Bill (2004) was proposed to replace the Seed Act (1966), however, owing to several shortcomings it was not passed. **The 2019 draft version tries to overcome the drawbacks of the 2004 Bill.**

TRIPS and UPOV:

- In 1994, India signed the agreement on **Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.
- In 2002, India also joined the **International Union for the Protection of New Varieties of Plants (UPOV) Convention**.
- Both TRIPS and UPOV led to the introduction of some form of **Intellectual Property Rights (IPR) over plant varieties**.
- **Member countries had to introduce restrictions on the free use and exchange of seeds by farmers unless the “breeders” were remunerated.**

CBD and ITPGRFA:

- In 1992, the **Convention on Biological Diversity (CBD)** provided for **“prior informed consent” of farmers** before the use of genetic resources and “fair and equitable sharing of benefits” arising out of their use.
- In 2001, the **International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)** recognised **farmers’ rights** as the rights to save, use, exchange and sell farm-saved seeds.
- National governments had the responsibility to protect such farmers’ rights.

Balancing conflicting aims

- As India was a signatory to TRIPS and UPOV (that gave priority to breeders’ rights) as well as CBD and ITPGRFA (that emphasised farmers’ rights), any Indian legislation had to be in line with all.
- It was this delicate balance that the **Protection of Plant Varieties and Farmers’ Rights (PPVFR) Act of 2001** sought to achieve.

PPVFR Act

- The PPVFR Act retained the main spirit of TRIPS viz., IPRs as an incentive for technological innovation. However, the Act also had strong **provisions to protect farmers’ rights**.
- It recognised **three roles for the farmer: cultivator, breeder and conserver**. As cultivators, farmers were entitled to plant-back rights. As breeders, farmers were held equivalent to plant breeders. As conservers, farmers were entitled to rewards from a National Gene Fund.

Need for new seed bill:

- A new Seed Bill is necessary to **enhance seed replacement rates** in Indian agriculture, **specify standards for registration of seed varieties** and **enforce registration** from seed producers to seed retailers.

Indian scenario:

- From the late-1980s, **Indian policy has consciously encouraged the growth of private seed companies**, including companies with majority foreign equity.
- Today, more than 50% of India’s seed production is undertaken in the private sector.
- These firms have been demanding favourable changes in seed laws and deregulation of seed prices, free import and export of germplasm, freedom to self-certify seeds and restrictions on the use by farmers of saved seeds from previous seasons.
- Through the various versions between 2004 and 2019, private sector interests have guided the formulation of the Seeds Bill.
- As a result, even desirable objectives, such as raising the seed replacement rates, have been mixed up with an urge to encourage and protect the business interests of private companies. Many of the Bill’s provisions deviate from the spirit of the

PPVFR Act, **are against farmers' interests** and in favour of private seed companies.

Concerns with the bill;

- Here are examples where the Bill, despite revisions, continues to be tilted against farmers' interests.

1) Compulsory Registration

- The Seeds Bill insists on **compulsory registration** of seeds while PPVFR Act was based on voluntary registration.
- **Implications:**
- Many seeds may be registered under the Seeds Bill but may not under the PPVFR Act.
- If a seed variety is developed by a breeder, but derived from a traditional variety, the breeder will get exclusive marketing rights but no gain will accrue to farmers as benefit-sharing is dealt with in the PPVFR Act, under which the seed is not registered.

Lack of information demand

- Seeds Bill demands **no information while registering a new variety** which is contradicting PPVFR act.
- As per the PPVFR Act, all applications for registrations should contain the complete passport data of the parental lines from which the seed variety was derived, including contributions made by farmers which allows for an easier identification of beneficiaries and simpler benefit-sharing processes.
- **Implication:**
- An important method of recording the contributions of farmers is overlooked and private companies are left free to claim a derived variety as their own.

Allowing re-registration :

- The Seeds Bill is **not based on an IPR like breeder's rights**, private seed companies can **re-register their seeds an infinite number of times** after the validity period, While the PPVFR Act, which is based on an IPR like breeders' rights, does not allow re-registration of seeds after the validity period.
- **Implication:**
- Many seed varieties may never enter the open domain for free use.

4) Lack of official body to regulate

- **Vague provision for regulation of seed prices** appears neither sufficient nor credible.

- Failure to address farmer's demand for creating an official body to regulate seed prices and royalties.

▪ Implications:

- In its absence, they feel, seed companies may be able to fix seed prices as they deem fit, leading to sharp rises in costs of cultivation.

5) Problems in claiming compensation:

- According to the PPVFR Act, if a registered variety fails in its promise of performance, farmers can claim compensation before a PPVFR Authority.
- This provision is diluted in the Seeds Bill, where **disputes on compensation have to be decided as per the Consumer Protection Act 1986.**
- **Implication:**
- Consumer courts are hardly ideal and friendly institutions that farmers can approach.

6) Undefined conditions

- According to the Seeds Bill, farmers become eligible for compensation if a plant variety fails to give expected results under **"given conditions"**. "Given conditions" is almost impossible to define in agriculture.
- **Implication:**
- Seed companies would always claim that "given conditions" were not ensured, which will be difficult to be disputed with evidence in a consumer court.

Way forward:

- Given the inherent nature of seeds, farmer-friendly pieces of seed legislation are difficult to frame and execute.
- This is particularly so as the private sector grows and technological advances shift seed research towards hybrids rather than varieties.
- **For the seed sector and its laws to be truly farmer-friendly, the public sector has to recapture its lost space.**

5) Lessons from Ambedkar

Context:

- B.R. Ambedkar, the **chief draftsman of the Indian Constitution** is remembered on his 63rd death anniversary on December 6.

Ambedkar's Goal:

- Ambedkar was a valiant **fighter for the cause of the Dalits.**
- His strategies to achieve the goal of empowering Dalits shifted with changing

contexts but the goal always remained the same: **attaining equality with caste Hindus** in all spheres of life.

Ambedkar and Gandhi's views on separate electorate:

- In the early 1930s Ambedkar advocated a **separate electorate for the Dalits**.
- This demand was **accepted by British Prime Minister Ramsay MacDonald** in his **Communal Award of 1932**, which granted **Dalits 18%** of the total seats in the **Central legislature** and 71 seats in the Provincial legislatures to be elected exclusively by Dalits.
- However, Ambedkar's success was short-lived because of **Mahatma Gandhi's fast unto death against a separate electorate for Dalits**, which he saw as a British ploy to divide Hindu society.
- Ambedkar gave up his demand in return for an **increased number of seats reserved for Dalits but elected by the general Hindu population**.
- Ambedkar **regretted his decision** because he soon realised that given the disparity in the number of eligible voters between caste Hindus and Dalits as well as the huge disparity in their socio-economic status, **very few of the elected Dalits** would be able to **genuinely represent Dalit interests**.

Ambedkar and Gandhi's views on Untouchability:

- Both **Gandhi and Ambedkar hated untouchability**, but the terms they used to describe the "untouchables" remains an unbridgeable area in their approaches to the issue.
- Gandhi called them "**Harijan**" (**God's children**) in order to persuade caste Hindus to stop discriminating against them.
- For Ambedkar, this was a patronising term and he used the nomenclature **Dalit both to describe the reality of oppression and to galvanise his people to challenge** and change the status quo.

Ambedkar and Muslim League:

- In the **second half of the 1930s** Ambedkar considered the **Muslim League a potential ally**.
- He concluded that if Muslims and Dalits acted jointly, they could balance the political influence of caste Hindus.

- However, he was **disillusioned** after the **Muslim League's Lahore Resolution of March 1940** demanding a separate Muslim majority state.
- He felt this undercut Dalit interests in two ways.
 - First, if the Muslim League succeeded in gaining Pakistan, it would drastically reduce the Muslims' lift in Indian politics and allow caste Hindus a free hand in running the country.
 - Second, even if the bid for Pakistan failed, the Muslim League's demand for parity in representation with the Hindus effectively marginalised all other groups, especially the Dalits.

Aftermath of Independence:

- After Independence Ambedkar made his peace with the Congress leadership believing that **he could enhance Dalits' rights from within the power structure**.
- He became **Law Minister and Chairman** of the Constitution Drafting Committee.
- He resigned from the Cabinet in 1951 when his draft of the Hindu Code Bill was stalled in Parliament because conservative Hindu members opposed it.

Problems today:

- Ambedkar's devotion to the cause of Dalit empowerment has continued to galvanise Dalits until today.
- This Dalit awakening is represented in student activism on university campuses as well as through the emergence of Dalit-based parties.
- However, there are three major problems that continue to cause great trouble to Dalit activism.
 - **Intra-Dalit differences** based on sub-castes allows forces opposed to Dalit empowerment to divide Dalits and deny them the Power and influence that they can wield in the Indian polity.
 - **Interpersonal rivalry** among Dalit politicians leads to the same result.
 - 3)The **inability** of the Dalit leadership **to stick with their non-Dalit allies**, especially in times of political adversity, makes them appear as unreliable political partners.
- **The most important lesson to learn from Ambedkar's repeated exhortations is that unless they remain united, the Dalits will be denied their due share of political power.**

RSTV Big Picture

1) Stop the Brutality



Why in news?

- The issue of the heinous rape and murder of a Hyderabad veterinary doctor was raised in both houses of the Parliament. In the Rajya Sabha, lawmakers across party lines condemned the gruesome act and called for stricter laws against perpetrators. Rajya Sabha Chairman M Venkaiah also spoke about the **dastardly crime** and said **'What is required is not a new bill. What is required is political will, administrative skill, change of mindset and then go for the kill of the social evil.'**

What is the background?

- The burnt body of the veterinary doctor was found at Shadnagar outskirts in Telangana's Ranga Reddy district last week. As per the preliminary probe, the police suspect that the doctor was sexually assaulted before being charred to death. The police arrested four persons involved in the alleged rape and murder case of the veterinary doctor.
- Meanwhile, the body of a six-year-old girl who was allegedly raped and strangled to death with her school belt, was found in Tonk district of Rajasthan on 1st December 2019. Police have arrested one person in connection with the brutal crime. The accused has been identified as 38-year-old Mahendra alias Dholiya.

Why the problem persists at grassroots levels?

- Local political power
- Economic and social inequality
- Caste and community equations
- Habitual misogyny
- Demoralisation and societal shaming
- Patriarchal society

How does Indian laws define rape?

- A "rape" charge under Section 375 of IPC has two parts:
- Non-consensual penetration of any orifice in women by a man, or,
- Non-consensual touching of any orifice with the mouth. This is not restricted to having sex. Forcing a woman to this herself, or with someone else, is also rape.
- The court will decide that these acts are rape if:
- It happens without her consent, or
- She agrees, but only because she or someone she knows is in danger, or
- She agrees, but because she thinks the accused person is her husband, or
- She agrees, but she is drugged, or drunk, or mentally ill, or
- She is under 18 – then it does not matter if she agreed or not, or
- She is in no position to indicate whether she agreed or not – for example if she is unconscious.

What is NCRB findings on rapes in India?

- The National Crime Records Bureau (NCRB) has released the annual Crime in India Report 2017 in October this year, after a delay of two years.
- A total of 32,559 rapes were reported in 2017.
- Madhya Pradesh has recorded the highest number of rape cases at 5,562 cases being reported in 2017.
- Uttar Pradesh is the second-highest after MP with the number of cases of rape reported during the same year.
- Delhi, on the other hand, saw a decline in reporting of rape cases. In 2017, 13,076 cases were reported, the lowest in the last three years.
- Rape by known persons still holds a large percentage of all the cases reported.

- Out of the 32,559 reported cases, 93.1% of the accused were known to the victims.
- The report highlights that 16,581 rape cases were reported against family friends, employers, neighbours or other known persons and in 10,553 cases, the accused were friends, online friends, live-in partners or separated husbands of the victims.
- Out of the 5,562 cases reported in Madhya Pradesh, 97.5% were committed by known persons.
- In Rajasthan, of the 3,305 cases, 87.9% were also committed by the known persons.
- In Maharashtra, 98.1% of the rape cases were reported against friends, associates or relatives.
- Arunachal Pradesh, Goa, Himachal Pradesh, Manipur, Mizoram, Nagaland, Sikkim and Tripura is seen to be moderately safer than other states as they have the lowest recorded number cases.

- **National Crime Records Bureau (NCRB)**
- NCRB was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators, based on the recommendations of the National Police Commission (1977-1981) and the MHA's Task force (1985).
- NCRB is headquartered in [New Delhi](#) and is part of the [Ministry of Home Affairs](#) (MHA), [Government of India](#).

What are the legal provisions available against rape?

- **For rape and Murder:**
- During a rape, if the accused injured the women so badly that she either dies or goes a vegetative state, he can be given death sentence or imprisonment for up to 20 years.
- This provision, however, does not define what "persistent vegetative state" means.
- The SC clarified that a person who is alive but does not show any evidence of being aware of one's environment is in a permanent vegetative state.
- **For Gang rape:**
- If a woman is raped by a group of people at the same time, each of them will be punished under Section 376D of IPC.

- The punishment is imprisonment of between 20 years and life imprisonment.
- **For repeat offenders:**
- The Section 376E of IPC allows for the death sentence to the person convicted for the second time for rape, rape causing death or result in a permanent vegetative state, or gang rape.

What are the drawbacks of the anti-rape laws in India?

- There is a growing concern over the potential abuse of the anti-rape laws.
- Indian anti-rape laws only protect women from rape and sexual assault. They don't provide security to men and transgender people.
- These laws are limited and don't have violence or coercion at their core.
- Marital rape is still legal – unless the married couple is separated.
- The politicians accused of the crime may remain in office and benefit from the slow justice system until convicted.

What is the way forward?

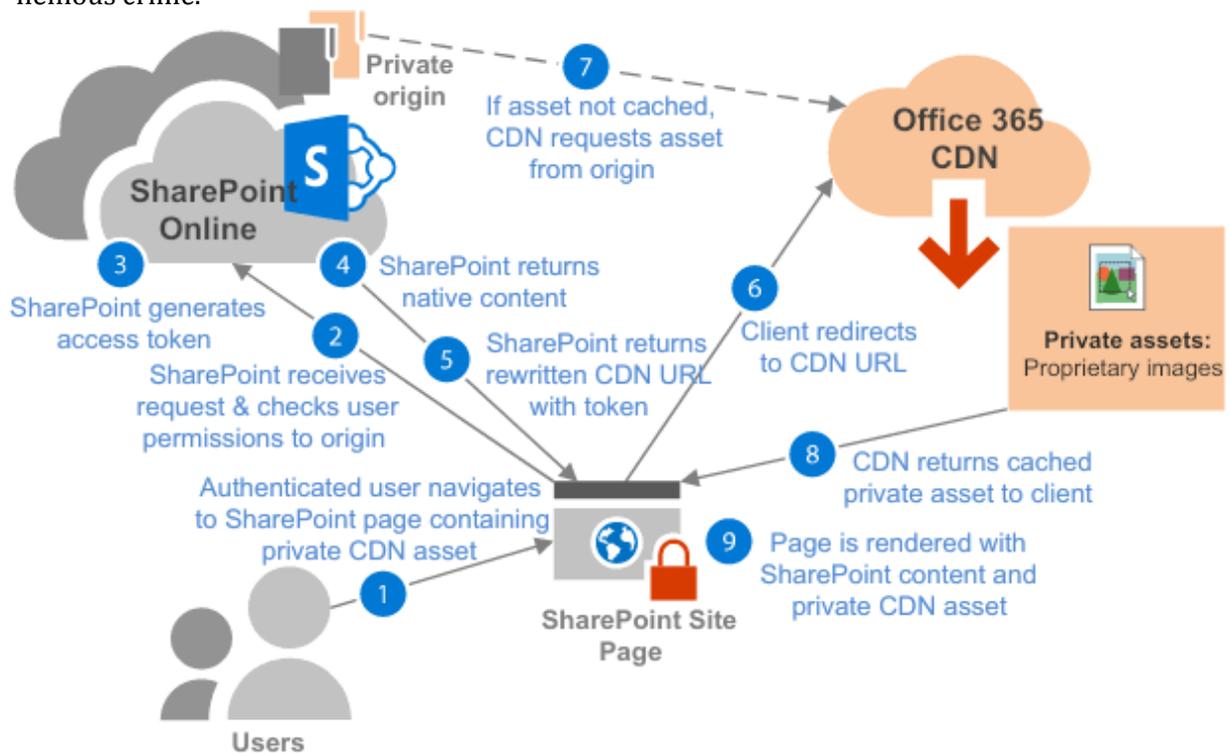
- Everyone is equal before the law. Therefore, all women and girls must be given access to education, healthcare, and choice of career, choice of a marriage partner or the right to stay single.
- Awareness must be made at the grass-root level to both men and women about women's rights.
- The men in Indian society must be educated so that they understand and respect, boundaries and consent in a way that will prevent them from violating women's rights.
- The government must ensure that the laws are strictly enforced.
- The police must play a pro-active role in making the police stations welcoming places for women so that they can file complaints with ease.
- Steps must be taken so that it is not tabooed in society.
- Private companies can play a role in protecting their women employees from such heinous crimes.

Conclusion

- Nothing will change in India if things continue in the direction they are going right now. The anger, outrage and indignation are not enough. We need schools, colleges, social organizations and

even political parties to educate and sensitize civil society. A rape is a brutal and heinous crime.

2) Online content - tracing origins



Why in news?

- The government is finalizing **new IT rules for social media** companies that would **mandate traceability of the originator of information on social media platforms and removal of malicious content within 24 hours of notice.**
- The proposed new norms include the **deployment of technology-based automated tools or appropriate mechanisms** for proactively identifying and removing or disabling public access to unlawful information or content.

What is the background?

- Messaging giant Whatsapp has in the past drawn flak from the government on the issue of message traceability and the government has been asking the Facebook owned company to find ways to identify originators of rogue messages but the firm has resisted the demand citing privacy concerns.

What is the present status?

- Closed platforms like Whatsapp make use of end to end encryption for their content which ensures that the application doesn't store or monitor the content being shared.

- The government has suggested that a unique ID be created for photos and videos to allow traceability to the origin, instead of sharing information regarding the content, as most of the riots happening are initiated by a photo or a video hurting the sentiments of a particular set of people.
- **PhotoDNA of Microsoft (a technology that aids in finding and removing known images of child exploitation)** can also be used for the purpose of tracking the origin of messages as the software utilizes hash values of the pictures and videos to identify similar images.

What are the available ways of technology?

- There are multiple ways that the origin of an encrypted message could be tracked.
- **Encryption is present in layers when a message is being forwarded and there can be technical possibilities to isolate the origin of a message.**
- **Whatsapp admits to the availability of technologies that could help track the encrypted messages,** however, they refuse to use such technologies stating that it would be a violation of their own privacy policies and business models.

What are the legal provisions available?

- Apart from the Right to Privacy which was upheld by the Supreme Court, there are **no pre-existing privacy laws in India**.
- The Supreme Court has ruled that there is a fundamental right to privacy under the Indian constitution, establishing that **“The right to privacy is protected as an intrinsic part of the right to life and personal liberty”**.
- There have to be changes made to the existing laws wherein metadata is admissible as direct evidence for a deduction, because metadata by itself can have a lot of discrepancies.
- The government has to focus on the modification of certain laws and the strict implementation of the existing laws for a solution, such as:
 - The **Information and Technology Act of 2000** has been there for so many years now, and yet has not been enforced in a stringent manner.
 - **Section 65B of the Evidence Act defines how to produce electronic evidence which can be used to file a complaint, but the companies will have to comply.**

What are the challenges involved?

- Outdated laws like the IT Act of 2000 needs to be updated according to current scenario.
- Lack of cybersecurity infrastructure and cyber warfare which needs to be worked upon.
- Lack of stringent laws to regulate open ended as well as closed end platforms.
- Right to privacy.
- Awareness and educate the people.

What is the way forward?

- The problem of privacy and state interests needs to be looked at in a three dimensional manner i.e, law, technology and human privacy.
- The government while talking about social media monitoring should refer to the personal chats in social media and also about the monitoring of the open content available.
- The privacy of an individual cannot be an absolute right when national security requires it to be breached.
- The open platform companies will have to accept that there are technical possibilities of recovering the origins of an encrypted message under certain circumstances and take necessary actions to accommodate the same.
- Encryption is one of the best methods to ensure the protection of the privacy of an individual, however, there has to be sufficient awareness created amongst the public regarding it.

Conclusion

- Rules with respect to the traceability of the originator of information on social media platforms must help the law enforcement agencies and enable them to conduct investigation in a better manner. With privacy laws being strengthened, there would be several provisions that social media platforms would have to comply with. The whole idea is to trace the origin of the messages similar to call records being tracked. India’s model is what the world is looking for.

3) Climate Change & India

Climate Action Plan

- ▶ **The two climate** change agreements are key to Obama administration’s legacy as he exits White House. Also marks a shift in India’s climate diplomacy negotiating agreements but making its presence felt at global fora
- ▶ **Over 60 countries** have ratified the Paris agreement. India had struck a defiant note at the G20 meet linking ratification with NSG entry
- ▶ **Paris agreement** aims at cutting down greenhouse gas emissions by 55%
- ▶ **Montreal Protocol** seeks to phase out use of ozone depleting HFC gases. Key meeting in October in Rwanda to amend Montreal Protocol. India has been negotiating hard for a suitable baseline year

We welcome the news India will join the #ParisAgreement Oct 2. Congrats Prime Minister @narendramodi for your leadership to #ActOnClimate
US envoy to India Richard Verma

Why in news?

- The 25th Conference of Parties to the **United Nations Framework Convention on Climate Change** will be held in Spain from 2nd December this year. CoP 25 holds a lot of significance as countries prepare to move from pre 2020 period under the Kyoto protocol to post 2020 period under the Paris Agreement.
- India is all set to stress upon the need for fulfilling pre 2020 commitments by developed countries and that pre 2020 implementation gaps should not present an additional burden to developing countries in the post 2020 period.

How global carbon is interlocked?

- Global Carbon system is an interlocked system as the global transition to low carbon systems and the resultant spillover effects, from changes in one economy to changes in another economy, changes in politics in one place to changes in politics in another place, etc.
- This makes important how we bring about the transition to a low carbon economy in India as India is a large economy, market, second largest population and it can play an important role in being part of these positive spillover effects.

Is India a major contributor ?

- India is not responsible for the stock of CO2 in the atmosphere as it contributes to only 6 or 7% of global emissions but we are one of the most vulnerable countries.

What are the adaptation and mitigation methods?

- In adaptation, our focus should therefore be on understanding what our development deficits are.
- **For example, to say that we need to improve, find a way for cleaner transportation, shouldn't actually lead to a conclusion that it should lead to more electric vehicles** – the first priority has to be improved and more accessible public transport.
- **We need to understand these development deficits from a multi objective point of view**, in terms of economics and access, in terms of local pollutants like air pollutants, climate change and mitigation, and liveability of cities, we need this more multi-faceted and analytical framework.

- On the mitigation side, we have to be careful as we may not be fully exploring the scope of intersections between 'a low carbon agenda' and 'a development agenda'.
- **For example, the way we design our cities:** we want more sustainable cities, we want cities with less congestion, with more public transport because we want cities that are more liveable. Those kinds of cities will also automatically be low carbon cities.

What are the challenges?

- **The problem for India is hedging its future**, not simply what we consume now or what we expect to gain in immediate terms.
- **The strategy is an ongoing game and it is not a static number - it changes over time - we need to continually monitor and study it.**
- **Even though India's performance in NDC is good, we cannot respond with more commitments in our NDC until we see serious commitments at the international level.**

What is the way forward?

- **Recognising climate change as a global collective action problem:**
- If one country is honourable in the extreme, and cuts its emissions to the bone, that is going to be of little use if the others do not follow suit.
- They will suffer the consequences of climate change despite the extent of their sacrifice or effort.
- **Making climate change and global warming the top agenda in our Foreign policy:**
- This is a critical move we need to make and the sooner we do it, the greater is the benefit that we will draw from our own climate actions.
- **India will probably exceed the NDC pledges**, because for reasons like urban congestion and air pollution, we will want to move in the direction of low carbon anyway, quite apart from climate change.
- **Making energy consumption benchmark:**
- **This is because our per capita energy consumption levels are extremely low** and not something compatible with the development and lifestyle that we wish for in India.

- **The real dilemma is if we want to increase energy use at a time when globally we are trying to shift to a low carbon system.**
- At the same time, there is another big challenge - providing jobs when automation and artificial intelligence are growing in power and capacity.

Conclusion

- **If India has to decarbonise while meeting its development goals, what is**

important is that the new investments go in the direction of decarbonising, but only after taking into account possible synergies and trade-offs with other development objectives. **Therefore, India should not be thinking about climate change adaptation as a single technology transition.** Instead, we should think about jobs, energy and pollution questions together.

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