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Door No 18, New Plot No 259 /109,  
AL Block, 4th Avenue, Shanthi Colony,  
Annanagar, Chennai - 600040.

[www.shankariasacademy.com](http://www.shankariasacademy.com) | [www.iasparliament.com](http://www.iasparliament.com)



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## MARCH 2019 G.S PAPER I

### 1. GEOGRAPHY

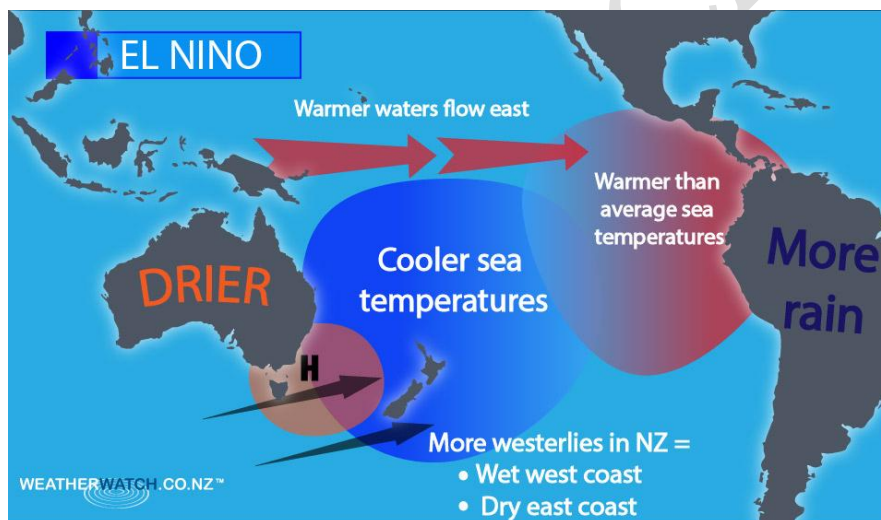
#### 1.1 Development of a Weak El Nino

##### Why in news?

The National Oceanic and Atmospheric Administration (NOAA) of the U.S. recently announced the development of a weak El Nino in the equatorial Pacific Ocean.

##### What is an El Nino?

- El Nino is a phenomenon of unusual warming of waters in the equatorial Pacific Ocean off the coast of Chile and Peru.
- It largely impacts weather events across the world, with excessive rainfall in some areas and dry spells in regions like India, Indonesia and Australia.
- In India, over the years, El Nino has been found to have strong links in suppressing the monsoon rainfall.
- On the other hand, the opposite phenomenon of La Nina (unusual cooling) has been found to be helpful in bringing good rainfall.



##### What is the NOAA outlook?

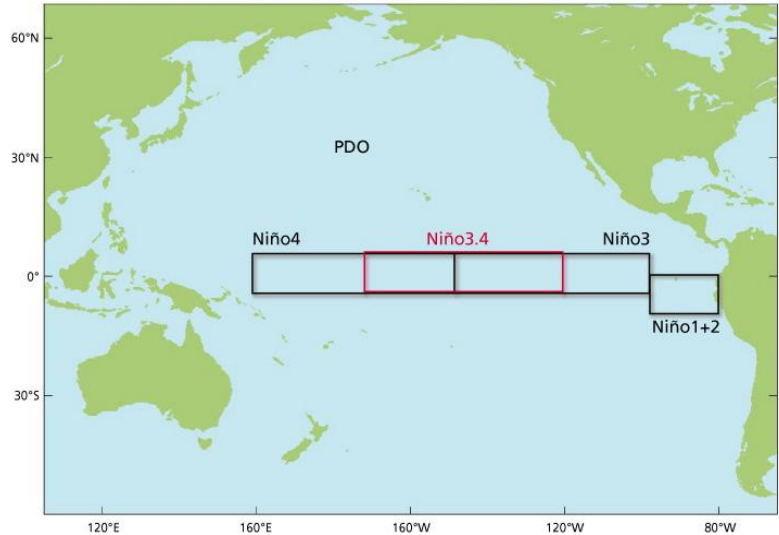
- Status of El Nino at this time of the year usually indicates the kind of rainfall to be expected during the monsoon season later in the year.
- Weak El Nino conditions had already built up in January 2019.
- It is likely to continue (with 55% probability) until the spring season in the northern hemisphere (mid-March to mid-June).
- NOAA said that the probability of El Nino persisting into the summer (beyond June) was 50% or less.
- Significantly, the warming in the Nino 3.4 region of the Pacific Ocean has been forecast to remain in excess of 0.5°C above normal.
- This is the region whose sea surface temperature (SST) has more connection to the impact on India's rainfall.

##### What is the likely impact for India?

- The data for the last 100 years shows that if the SST in Nino 3.4 is over 0.5°C above normal in the monsoon season, rainfall over India gets affected.
- However, prediction through the northern spring season (instead of summer) has higher degree of uncertainty.



- So there is a need for better prediction, for clearer understanding of the impact on Indian monsoons.
- Moreover, past records show that the impact of El Nino in the monsoon months is relatively high when it is preceded by a La Nina in the winter.
- Notably, in this winter, sea surface temperatures were above normal, almost close to El Nino; in other words, absence of La Nina.
- So, even if it occurs, the impact of an El Nino event might not be very large this monsoon.
- Nevertheless, if El Nino strengthens beyond spring and grows into the summer, India may witness a drought.
- Some weather events like winds over the western tropical Pacific will finally determine whether El Nino will grow beyond spring.



### Is El Nino frequency changing?

- El Nino events repeat themselves in a 2-to-7-year cycle, with a strong El Nino expected every 10-15 years.
- However, since 2000, 5 El Nino events have already happened, and this year could witness a sixth one.
- New scientific research is pointing to increased frequency of extreme El Ninos due to climate change.
- Such extreme events could happen twice as often as today if the average annual global temperatures reach 1.5°C above pre-industrial times.
- However, the increasing frequency could be because of other reasons as well.
- They are related with the fact that trade winds got stronger and the eastern equatorial Pacific Ocean has remained colder since 1998, which makes El Nino more active.
- The stronger trade winds are not easily explained by global warming, hinting at more complicated reasons.

## 1.2 Stalagmites of Meghalaya Cave - Predicting Northeast Monsoons

### Why in news?

A new study reveals the connection between Northeast monsoon and El Nino, with the help of rock formations in Meghalaya.

### What is the study on?

- The rock formations in a cave near Cherrapunji in Meghalaya were studied by researchers from a US university.
- New evidence was found suggesting the possible influence of the state of the ocean waters in the faraway Pacific on India's winter rainfall.
- It records the connection between winter rainfall amounts in northeast India and climatic conditions in the Pacific Ocean.

### How is summer monsoon and El Nino connected?

- India's summer monsoon (June to September) brings in about 70% of annual rainfall in the country.
- It is known to be heavily influenced by the variability in sea-surface temperatures of Pacific Ocean.
- This is a condition referred to as El Nino Southern Oscillation (ENSO).





- A warmer than usual Pacific Ocean, off the coast of South America, is known to suppress the summer monsoon rainfall in India.

**What is the case with winter monsoons?**

- ENSO is known to have an impact on the winter monsoon (October to December) i.e. the northeastern monsoon as well.
- E.g. the warming of sea-surface waters is seen to help winter rainfall rather than suppressing it
- But the relationship is not so strongly established in this case as the impact varies in time and space.
- The influence is weaker in October and stronger in November and December.
- Similarly, the rainfall over southeastern peninsular India and Sri Lanka is strengthened with warming ocean.
- But again this is diminished over Thailand, Vietnam and the Philippines.

**What is the recent revelation?**

- The findings are based on more than 3 years of research on stalagmites of the Mawmluh Cave, near Cherrapunji, in the East Khasi Hills district.
- Stalagmites are the mineral deposits, mainly limestone, in caves.
- These solid stalagmite structures, or mineral deposits, are the result of slow but steady water dripping in the caves.
- They contain several thin layers of different kinds of minerals that get picked up while the water is flowing.
- On studying the composition of these stalagmites, scientists deduced the amount of rainfall that could have happened over the caves in the past.
- They also studied if the water was a result of local rainfall, or had flown in from a different place.
- With this, the local variations in rainfall in the past were estimated and this was correlated with old ocean records of the Pacific Ocean.
- The stalagmites indicate the recurrence of intense, multi-year droughts in India over the last several thousand years.
- They reflect the changes in the amount of monsoon rainfall and changes in monsoonal circulation in the atmosphere.
- This distant link between land and ocean records could aid in predicting dry season rainfall amounts in northeast India.

**What is the significance?**

- North-eastern monsoon is vital for several regions in the Northeast and India's eastern coast.
- It gives more than 50% of the annual rains in coastal Andhra Pradesh, Rayalaseema, TN, south interior Karnataka, and Kerala.
- Winter rainfall following weak monsoon years in India can alleviate water stress for farmers.
- The study gains significance, in this context, as it could help in predicting the winter rainfall and prepare for rainfall variations.
- Stalagmite records from monsoon regions, including India, are also vital to understanding past variability in the global climate system.



## G.S PAPER II

### 2. POLITY

#### 2.1 Model Code of Conduct for Elections

##### What is the issue?

With general elections approaching, here is a look on the Model Code of Conduct (MCC) that the Election Commission of India enforces

##### What is a Model Code of Conduct?

- The Model Code of Conduct (MCC) is a document from the Election Commission of India.
- It lays down the minimum standards of behaviour for political parties and their candidates contesting elections.
- The MCC comes into effect as soon as the EC announces the election schedule.

##### When did it come about?

- The MCC was first proposed by Kerala in its 1960 assembly elections.
- It was later adopted by the Election Commission of India (EC) during mid-term elections in 1968 and 1969.
- It has since been updated many times based on cases fought in courts.
- The Code has evolved over the years to include behaviour norms for the party in power and the public servants who report to it.

##### What are the key features?

- The MCC lays down good behaviour norms covering 8 areas of electioneering including, among many, -
  - i. general conduct of candidates
  - ii. candidates' meetings/processions
  - iii. appointment of observers
  - iv. maintenance of polling booths on D-Day
  - v. contents in election manifestos
- **Under 'general conduct'**, the Code mainly regulates the candidates who -
  - i. incite communal tensions
  - ii. use caste or religion to appeal for votes
  - iii. canvass within 100 metres of polling stations and in the 48 hours preceding the polls
- For meetings and processions, parties are required to obtain advance permissions from local authorities and seek police help to contain unruly elements.
- Effigy burning is expressly prohibited.
- **On the day of election**, political parties are expected to -
  - i. identify their party workers with badges
  - ii. stay off the polling booths
  - iii. keep their camps near the booths free of propaganda material
  - iv. refrain from distributing goodies or liquor to voters
- **Election manifestos** of political parties should not contain any unreasonable and impractical promises.
- EC directs parties to stick only to those promises that are financially feasible.
- **Ruling party** - There are elaborate rules to ensure that the party in power plays fair and the Code has the longest list of don'ts for the ruling party.





- The Code ensures that the -
  - i. party in power does not gain an unfair advantage in campaigning
  - ii. ministers are barred from mixing their official visits with political rallies
  - iii. ruling party does not use government vehicles, aircraft or machinery
  - iv. ruling party does not issue public advertisements promoting the party or its leaders at the cost of the exchequer
- The party in power is also directed not to 'monopolise' public places or government rest houses and bungalows for political rallies.
- Once elections are announced, ministers cannot announce financial grants or large projects or make ad-hoc government appointments in a way that could influence voter behaviour.

### Is it legally binding?

- The Model Code of Conduct does not have any statutory backing.
- But the Code has come to acquire significance in the past decade, because of its strict enforcement by the EC.
- Some of the more serious offences listed in the Code have also found their way into the statute books.
- So for some of the offences mentioned, candidates can be tried under the Indian Penal Code or the Representation of the People Act 1951.

## 2.2 Role of EC in Party Disputes - TN 'Two Leaves' Symbol Case

### Why in news?

The Delhi High Court verdict upheld the allotment of the 'Two Leaves' symbol to the AIADMK.

### What was the tussle?

- The leadership of the AIADMK party was in dispute after the death of its leader and former Tamil Nadu Chief Minister Ms. Jayalalithaa.
- The AIADMK is now jointly led by the present Tamil Nadu Chief Minister Edappadi K. Palaniswami and Deputy CM O. Panneerselvam.
- Another rival faction was soon formed, headed by V.K. Sasikala, a confidante of the late Jayalalithaa, and her nephew, T.T.V. Dhinakaran.
- The two factions had conflicts in regards with claims to the party's name and the 'Two Leaves' symbol.

### What is the court's verdict?

- The Delhi High Court upheld the Election Commission's November, 2017 order that had ruled in AIADMK's favour.
- EC's decision was based on the group's majority in its organisational and legislative wings.
- The court has ruled that the EC was well within its powers to apply the majority test.
- It thus allotted the symbol to the faction that had more members in the general council and in its complement of MLAs and MPs.

### What is the rival faction's stance?

- Dhinakaran's party maintained that the EC should have ruled against the Panneerselvam-Palaniswami faction.
  - This is because it had changed the party's basic structure by abolishing the post of general secretary.
  - The Dhinakaran faction has now decided to appeal in the Supreme Court against the order.
  - Earlier, however, Dhinakaran formed his party named the Amma Makkal Munnetra Kazhagam (AMMK).

### What is the EC's role in this regard?

- The Election Symbols (Reservation and Allotment) Order, 1968 empowers the EC to recognise political parties and allot symbols.

- Under Paragraph 15 of the Order, the EC is the only authority to decide issues on a dispute or a merger.
- EC can decide disputes among rival groups or sections of a recognised political party staking claim to its name and symbol.
- The Supreme Court upheld its validity in Sadiq Ali and another vs. ECI in 1971.
- This applies to disputes in recognised national and state parties.
- For splits in registered but unrecognised parties, the EC usually advises the warring factions to resolve their differences internally or to approach the court.

#### How does EC decide on the dispute?

- **Support** - The Commission examines the party's constitution and its list of office-bearers submitted when the party was united.
- It identifies the apex committee(s) in the organisation and finds out how many office-bearers, members or delegates support the rival claimants.
- For the legislative wing, the EC goes by the number of MPs and MLAs in the rival camps.
- It may consider affidavits filed by these members to ascertain where they stand.
- The ECI may then decide in favour of the faction having enough support in its organisational and legislative wings to be entitled to the name and symbol.
- It may permit the other group to register itself as a separate political party.
- **Uncertainty** - If the party is either vertically divided or if there is uncertainty over a clear majority, the EC may freeze the party's symbol.
- It may then allow the groups to register themselves with new names or add prefixes or suffixes to the party's existing names.
- **Election times** - The EC may take time to gather enough material to decide on the dispute.
- But for immediate electoral purposes, it may freeze the party's symbol and advise the groups to fight the elections in different names and on temporary symbols.
- **Reunion** - If reunited in future, the claimants may approach the EC again and seek to be recognised as a unified party.
- The EC is also empowered to recognise mergers of groups into one entity, when it may restore the symbol and name of the original party.

### 2.3 Changes to Form 26 - Making Election Candidates Accountable

#### Why in news?

The Law Ministry recently amended Form 26 to make election candidates more accountable, after the Election Commission of India wrote to the Ministry.

#### What is Form 26?

- A candidate in an election is required to file an affidavit called Form 26.
- It furnishes information on candidate's assets, liabilities, educational qualifications, criminal antecedents (convictions and all pending cases) and public dues, if any.
- The affidavit has to be filed along with the nomination papers.
- It should be sworn before an Oath Commissioner or Magistrate of the First Class or before a Notary Public.

#### What are the changes made now?

- Earlier, an election candidate had to only declare the last I-T return (for self, spouse and dependents).
- The recent changes make it mandatory for candidates to reveal their income-tax returns of the last 5 years (for self, spouse and dependents).
- Also they now have to furnish details of their offshore assets, which were not sought earlier.

- This means “details of all deposits or investments in foreign banks and any other body or institution abroad and details of all assets and liabilities in foreign countries”.

### **What is the objective?**

- The objective behind introducing Form 26 was that it would help voters make an informed decision.
- The affidavit would make them aware of the criminal activities of a candidate.
- This could help prevent people with questionable backgrounds from being elected to an Assembly or Parliament.
- With the recent amendment, voters will know the extent to which a serving MP’s income grew during his/her 5 years in power.

### **How did Form 26 evolve?**

- The 170th Report of the Law Commission, submitted in 1999 suggested steps for preventing criminals from entering electoral politics.
- One of the suggestions was to disclose the criminal antecedents as well as the assets of a candidate before accepting her nomination.
- The then government did not act on the recommendation, leading to public interest litigation in Delhi High Court.
- The HC directed the EC to secure -
  - i. information on whether a candidate is accused of any offence(s) punishable by imprisonment
  - ii. information on her assets as well as those of her spouse and dependents
  - iii. any other information the EC considers necessary
- The Union government appealed in the Supreme Court which agreed with the Delhi HC.
- The SC also went a step ahead and directed the EC in its May 2002 order to -
  - i. ask candidates if they have been convicted/acquitted/discharged of any criminal offence in the past or accused in any pending cases 6 months before the filing of nomination
  - ii. seek details of assets and liabilities of a candidate, her spouse and dependents, and the educational qualifications of the candidate
- The EC soon issued an order to implement the verdict.
- But the Union government promulgated an Ordinance diluting the EC’s order - Representation of the People (Amendment) Ordinance, 2002 (subsequently replaced by an Act in December, 2002).
- Accordingly, a candidate was only expected to disclose -
  - i. whether she was accused of any offence punishable with imprisonment for 2 years or more in a pending case in which charges had been framed by a court
  - ii. whether she had been convicted of an offence and sentenced to a year’s imprisonment or more
- The government subsequently also amended the Election Conduct Rules of 1961 in September, 2002.
- It prescribed Form 26 in which a candidate had to disclose the above information.
- However, the SC declared the amendment null and void.
- The EC then issued a fresh order in March, 2003, seeking information on all 5 points mentioned in the SC order of May, 2002.

### **What happens if a candidate lies in an affidavit?**

- A candidate is expected to file a complete affidavit; leaving a few columns blank can render the affidavit invalid.
- It is the responsibility of the Returning Officer (RO) to check whether Form 26 has been completed.
- The nomination paper can be rejected if the candidate fails to fill it in full.

- If it is alleged that a candidate has suppressed information or lied in her affidavit, the complainant can seek an inquiry through an election petition.
- If the court finds the affidavit false, the candidate's election can be declared void.
- E.g. in 2016, Patna High Court annulled the Lok Sabha membership of Chhedi Paswan, a BJP member, for not declaring a criminal case pending against him
- The current penalty for lying in an affidavit is imprisonment up to 6 months, or fine, or both.
- The EC had recently asked the government to make the filing of a false affidavit a "corrupt practice" under the election law.
- This would make the candidate liable for disqualification for up to 6 years. But nothing has been done by the government on this front.

## 2.4 Balancing Rights to Privacy and Information - Electoral Bonds Case

### What is the issue?

The electoral bonds scheme in its present form fails to recognise the complementary nature of the rights to privacy and information.

### What are electoral bonds?

- Electoral bonds are issued by a notified bank for specified denominations.
- Those who want to donate to a political party can buy these bonds by making payments digitally or through cheque.
- Then they are free to gift the bond to any registered political party.

### What is the government's rationale?

- Despite massive campaign spending in India, there is barely any public scrutiny of such spending.
- The opaque nature of the transactions makes it hard for scrutiny.
- Electoral bonds were thus introduced in 2017 when the Finance Act amended four different statutes:
  1. the Reserve Bank of India Act, 1934
  2. the Representation of Peoples Act, 1951
  3. the Income Tax Act, 1961
  4. the Companies Act, 2013 (Click [here](#) to know more on the changes)
- The government argued that the use of bank routes would likely reduce under-the-table cash transactions and thus promote transparency in election funding.
- It said that transactions through banks would incentivise the use of white money.
- Moreover, the KYC requirements of banks would ensure paper trails.
- Recently, the Centre responded to the CPI(M)'s petition challenging the scheme and argued that the scheme has a two-fold purpose:
  - i. enhances transparency in political funding
  - ii. protects the right to privacy of donors

### How does it dilute the earlier regulations?

- Under the scheme, both the purchaser of the bond and the political party receiving the money have a right to not disclose the identity of the donor.
- Also, the policy dismantles several restrictions that previously checked illegal corporate sponsoring. E.g. removing a cap on corporate sponsorship
- Donations can now be made by anyone; even foreign donations are now allowed.
- The requirement that a company has to be in existence for 3 years for it to make political donations has also been removed.

- This ignores all the concerns regarding the use of shell companies to siphon black money into the system.

#### **What are the concerns?**

- These changes show that access to the paper trails will be outside the scope of public scrutiny as it will lie exclusively with the banks.
- As bonds can be issued only by public sector banks, the only entity with full knowledge of the transactions will be the Central government.
- In effect, the electoral bonds scheme amplifies the opacity by not disclosing the identity of the donor.
- The scheme thus undermines the complementary nature of the rights to privacy and information in making the state more transparent.
- Moreover, money laundering often takes place through banks.
- So the government's argument that the use of banks will reduce under-the-table transactions does not hold.

#### **Why should identity be disclosed?**

- The Centre informed the Supreme Court that protecting the privacy of electoral bond buyers is vital.
- Certainly, the right to privacy in India safeguards the individual's autonomy and dignity.
- But it is subject to restriction on the basis of "compelling public interest".
- If the information pertains to matters which affect the lives of others, or is closely linked to a public person, it must be disclosed.
- The same logic can then be extended to the funding of political parties.
- Significantly, the funder's actions are bound to have an influence on the policy decisions of the party, if the party wins.
- The policy choices and decisions of public officials have to be brought under public scrutiny.
- This is to ensure that they have not acted in a manner that unfairly benefits them or their benefactors.
- A clear conflict of interest would likely arise if important policy decisions are taken that could affect the donors to the party.
- So the policy on electoral bonds should recognise the complementary nature of the rights to privacy and information, which is essential to make the state more accountable.

## **2.5 Lokpal and Lokayuktas**

#### **What is the issue?**

- Former Supreme Court judge Justice Pinaki Chandra Ghose was finalised by a selection panel as the first head of the Lokpal.
- It is imperative, in this context, to understand the various provisions and features of the Lokpal and Lokayuktas Act, 2013.

#### **What is the composition?**

- The first head has been selected 5 years after the President had given assent to the Lokpal and Lokayuktas Act, 2013.
- Lokpal is the national anti-corruption ombudsman.
- Under the 2013 Act, the Lokpal should consist of a chairperson and such number of members, not exceeding 8.
- Of the members, 50% should be judicial members.
- Also, not less than 50% of the members should be from among persons belonging to the SCs, the STs, OBCs, minorities and women.
- The same rules apply for members of the search committee.

#### **How is the selection done?**



- The selection procedures for the members and the chairperson are the same.
- A search committee will prepare a panel of candidates, and a selection committee will recommend names from among this panel.
- The President will finally appoint these as members.
- Salaries, allowances and service conditions of the Lokpal chairperson will be the same as that for the Chief Justice of India.
- For other members, these will be the same as that for a judge of the Supreme Court.

#### **What after the selection process?**

- After the selection of members, the Lokpal will set about creating its various wings.
- It will have an Inquiry Wing, headed by the Director of Inquiry.
- This conducts preliminary inquiry into any offence allegedly committed by a public servant punishable under the Prevention of Corruption Act, 1988.
- It will also have a “Prosecution Wing, headed by the Director of Prosecution.
- This is to prosecute public servants in relation to any complaint by the Lokpal under this Act.
- So once the members are appointed, the process for more appointments will start.
- These may include that for Secretary, Director of Inquiry and Director of Prosecution and other officers and staff of the Lokpal.

#### **Who all does the Act cover?**

- The Act covers a wide range of public servants with various rules for each.
- These ranges from the Prime Minister, ministers and MPs, to groups A, B, C and D employees of the central government.
- It shall apply to public servants in and outside India.
- The Act also includes the Lokpal’s own members under the definition of “public servant”.
- The Chairperson, Members, officers and other employees of the Lokpal, while functioning under the provisions of the Act, shall be deemed to be public servants.
- A complaint under this Act shall only relate to a period during which the public servant was holding or serving in that capacity.

#### **How does an inquiry proceed?**

- The Lokpal may, after receiving a complaint against any public servant, order a preliminary inquiry which has to be completed within 90 days.
- After receiving the report of the preliminary inquiry, the Lokpal may order an investigation by any agency or departmental proceedings.
- S/he may also take any other appropriate action by the competent authority, or it can order closure of the proceedings.

#### **What are the limitations?**

- If a complaint is filed against the PM, the Lokpal shall inquire or cause an inquiry to be conducted into the allegation of corruption.
- However, the Act does not allow a Lokpal inquiry if the allegation against the Prime Minister relates to
  1. international relations
  2. external and internal security
  3. public order
  4. atomic energy
  5. space

- Also, complaints against the PM are not to be probed unless the full Lokpal bench considers the initiation of an inquiry and at least 2/3rds of the members approve it.
- Such an inquiry against the PM (if conducted) is to be held in camera.
- If the Lokpal concludes that the complaint deserves to be dismissed, the records of the inquiry are not to be published or made available to anyone.

### What are the Lokayuktas?

- The Lokayuktas are the state equivalents of the central Lokpal.
- States have to establish the Lokayukta to deal with complaints on corruption against certain public functionaries in the states.
- In some states, Lokayuktas were already functioning when the 2013 Act was passed.
- Most states, however, are without a Lokayukta even after the 2013 Act.
- The Supreme Court recently directed these states to take steps for appointment of Lokayukta.

## 2.6 Death Penalty in India

### Why in news?

The Supreme Court has recalled its own 2009 order sentencing 6 convicts to death, and acquitted them.

### What is the case on?

- The case involved the murder of five persons.
- Between 2003 and 2009, three courts - the Nashik Sessions Court, the Bombay High Court and the Supreme Court - had found them guilty and sentenced them to death.
- However, now in 2019, the SC has taken a closer look at the evidence and set them free.
- It also ordered an inquiry against the investigating officer for framing the six men.
- After having spent most of their 16 years of incarceration, the convicts were acquitted and ordered to be released.

### How has death penalty been viewed in India?

- India has the death penalty in 46 provisions under various laws.
- Worryingly, it is marked by the possibility of judicial error.
- B R Ambedkar argued for abolition of the death penalty but the Constituent Assembly left the issue to the Supreme Court and Parliament.
- Eventually, Parliament and the judiciary could not abolish the death penalty that is in existence since colonial times.
- The 35th report of the Law Commission (1967) recommended retention of the provision.
- The new Code of Criminal Procedure (1973) required “special reasons” to be given if death was preferred over a life sentence.
- Under the old CrPC (1898), reasons were to be given if the death penalty was not imposed. This requirement was removed in 1955.
- The 187th report of the Law Commission (2003) recommended use of a lethal injection in addition of hanging.

### How has the court's stance evolved?

- In 1972, the Supreme Court upheld the constitutionality of the death penalty.
- It stated that Article 14 on Right to Equality was not violated by the wide judicial discretion given to judges.
- But in another case in 1974, the court said the question of life and death cannot be left to “ad hoc mood or individual predilection”.
- In 1979, the court rejected retribution (revenge, vengeance) as the purpose of punishment.



- It said that the “special reasons” for award of death penalty should relate to the criminal, and not the crime.
- In Bachan Singh (1980), the matter was referred to a Constitution Bench that upheld the constitutionality by a 4-1 majority.
- It said "special reasons" should relate to exceptional circumstances of a case in terms of both “crime” and “criminal”.
- The court did not agree that wide discretion given to judges is arbitrary, but said that death penalty should be given only in “rarest of rare” cases when there is no alternative option.
- Justice P Bhagwati, in a minority opinion, observed that death penalty being arbitrary and discriminatory is unconstitutional.
- In 1983, the court upheld death by hanging as constitutional as it did not involve humiliation or torture.
- But in a case in 1995, the court held hanging beyond the point of death by half an hour, as per the Punjab Jail Manual, to be unconstitutional.
- Nevertheless, the court itself has also observed that the death penalty is imposed “arbitrarily or freakishly”.
- There is no uniformity of precedents in terms of awarding death penalty and also, the death sentencing has become “judge-centric”.

#### **What are the established standards?**

- In Machi Singh (1983), a three-judge Bench listed some parameters to decide whether a case falls within “rarest of rare”.
- They include the manner of commission of crime (brutality, motive, antisocial or abhorrent nature) and magnitude of crime and personality of victim (child, woman or popular leader), etc.
- These categories put much emphasis on the “crime” and ignored the “criminal” and the “mitigating factors”.
- However, in later cases the court equally emphasised the latter two aspects and said the circumstance of the crime should also be considered.
- Moreover, the ruling in Bachan Singh case (1980) denied judges the role of being spokespersons for public opinion demanding death penalty in certain cases.
- It said a “conscience of society” test undermines the judicial discretion and this is irrelevant for the “rarest of rare” doctrine.
- Now, modern jurisprudence acknowledges that prolonged delay in executing a death sentence can make the eventual punishment inhuman and demeaning.

#### **What does the recent case imply?**

- In the present case, all the 3 courts were unable to spot the illegalities perpetrated by the investigating authorities in framing six innocent men.
- So there is clearly no reasonable way to hold that India has a criminal justice system capable of having the death penalty.
- As, it is terrible if a person has been hanged for a crime which s/he has not committed.
- No criminal justice system can maintain its integrity if the rights of the accused are determined and influenced by the brutality of the crime.
- Certainly, the rights of the victims cannot be secured by sacrificing the rights of the accused.

### **2.7 Presidential Order amending Constitution (Application to Jammu and Kashmir) Order, 1954**

#### **What is the issue?**

- The Centre's executive order amending the Constitution (Application to Jammu and Kashmir) Order, 1954 is challenged in the J&K high court.
- Here is a brief look on the evolution and purpose of the 1954 Order and the disputes related to it.



### **What is the executive order for?**

- The Union Cabinet recently approved the proposal of the J&K Governor's administration to amend the Constitution (Application to Jammu and Kashmir) Order, 1954.
- Following this, President Ram Nath Kovind issued an executive order amending the 1954 Order.
- The objective was to extend the provisions of the 77th and 103rd Constitutional Amendments to the state.
- The Centre said that the amendment would give benefit of promotion in service to the Scheduled Castes, and Scheduled Tribes.
- It would also extend the 10% reservation for economically weaker sections in educational institutions and public employment.
- The Centre's move has now been challenged in the Jammu & Kashmir High Court.

### **Why is it being challenged?**

- Major J&K parties said the order violated Article 370 which regulates J&K's relationship with the Union.
- The power of the Governor to make the recommendation without the concurrence of the state government has been challenged.
- The petition pleaded the court to struck down -
  1. The Constitution (Application to Jammu & Kashmir) Amendment Order, 2019
  2. The Jammu and Kashmir Reservation (Amendment) Ordinance, 2019
- In 1986 too, an amendment to the 1954 Order was issued just with the concurrence of Governor's administration.
- It extended to J&K, Article 249 of the Indian Constitution, which describes the power of Parliament to legislate, in the national interest, even on matters in the State List.
- The petition challenging this is still pending.

### **What were the terms of J&K's entry into Indian Union?**

- Maharaja Hari Singh, who was ruling J&K, signed the Instrument of Accession (IoA) in October, 1947.
- J&K then gave up control over only 3 subjects which are Defence, Foreign Affairs, and Communications.
- A separate Constituent Assembly of J&K was planned to frame the J&K Constitution, and to work out J&K's constitutional relationship with New Delhi.
- Under Article 370 of the Indian Constitution, only two articles of the Constitution apply to J&K.
- One is Article 1 which defines India, and the other is Article 370 itself.
- Article 370 provides that other provisions of the Indian Constitution can apply to J&K "subject to such exceptions and modifications as the President may by order specify".
- Notably, this is done only with the concurrence of the state government.

### **What was the 1954 Presidential Order for?**

- The decisions to extend the provisions of the Indian Constitution other than those specified in the IoA had to be ratified by the J&K Constituent Assembly.
- The J&K Constituent Assembly was yet to be set up then.
- But the Centre wanted to extend a few provisions of the Constitution to streamline J&K's relationship with the Union.
- Thus, a Presidential Order was issued on January 26, 1950 itself, with the state government's concurrence.
- On November 5, 1951, J&K's Constituent Assembly was convened.
- Soon, the 1950 Order was replaced by The Constitution (Application to Jammu and Kashmir) Order, 1954.
- This Order applied to J&K the provisions of Part-III of the Indian Constitution that relates to fundamental rights.

- Besides, it introduced Article 35A which protected laws passed by the state legislature of J&K in respect of permanent residents.
- Any protections offered to its residents cannot be challenged on the ground that they violated any of the fundamental rights.
- This order was ratified by the Constituent Assembly that also framed the J&K Constitution, before dispersing in November, 1956.

#### **What is the contention thereafter?**

- The 1954 Order had the requisite concurrence of both the state government and the J&K Constituent Assembly.
- But subsequently, 42 Presidential orders have been issued, all of which were amendments to the 1954 mother order.
- Through these orders, successive central governments have extended 94 out of the 97 entries in the Union List, and 26 out of the 47 in the Concurrent List to J&K.
- They have also made 260 out of the 395 Articles of the Indian Constitution applicable to J&K.
- This list does not include The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, 2002, and the GST Acts.
- But notably, none of these amendments to the 1954 Order have fulfilled the requirement of ratification by the J&K Constituent Assembly.
- To this, the Centre has argued that an elected state government's consent is enough.
- In 1959, the Supreme Court too observed that the Constitution-makers were anxious that the said relationship should be finally determined by the State's Constituent Assembly itself.
- A decade later, the court ruled that Presidential orders could still be made through Article 370.
- Also, in 1972, the court said the Governor is the head of government aided by a council of ministers.

#### **Is the present order justified?**

- The latest order only has the consent of the Governor without the requisite aid and advice of the Council of Ministers.
- Understandably, the Governor acts only as a nominee of the Union government.
- S/he does not meet the definition of state government as laid down by Article 370 and the Supreme Court.
- Major J&K parties have also always opposed the amendments to the 1954 Order without ratification by the Constituent Assembly of the state.

#### **Quick Facts**

##### **Constitution (77th Amendment) Act**

- SCs and STs have been provided reservation in promotions since 1955.
- This was discontinued following the judgement in the case of Indra Sawhney wherein it was held that it is beyond the mandate of Article 16(4) of the Constitution.
- Subsequently, the Constitution was amended by the Constitution (77th Amendment) Act, 1995.
- It inserted a new clause in Article 16 to enable the government to provide reservation to SCs and STs in promotion.

##### **Constitution (103rd Amendment) Act**

- The Act aims to provide reservation of up to 10% in public employment and higher education for economically weaker sections.



### 3. GOVERNMENT ACTS & POLICIES

#### 3.1 Amendments to Punjab Land Preservation Act

##### Why in news?

The Supreme Court has ordered the Haryana government to not implement the amendments it made to the Punjab Land Preservation Act (PLPA).

##### What is the PLP Act?

- All non-forest activities in and along the Aravali hills have, for long, been prohibited, to preserve the ecology of these mountains.
- The British had enacted a special law, the Punjab Land Preservation Act (PLPA), for this purpose way back in 1900.
- PLPA has now been diluted by the Haryana government.
- The amendments took away the forest status of large chunks of these hills and threw open them for commercial activities.
- These are areas under master plans of cities such as Gurugram, Faridabad, Nuh, Mahendragarh and Rewari.
- The move would take away the protection offered to them under the PLP Act.

##### How significant are the Aravallis?

- The Aravallis is one of the world's oldest mountain chains, and its ecological worth is immense.
- The 692-km Aravali range spans parts of Delhi, Haryana, Rajasthan and Gujarat.
- The Aravallis serve as the lungs for the highly polluted National Capital Region (NCR).
- It hinders the dust-laden winds from Rajasthan to enter the NCR where the air quality is already fatally poor.
- It also plays a critical role in recharging the groundwater of the region around it.
- The mountains also act as a natural shield against the spread of the Thar Desert.
- Moreover, it is the source of origin of several rivers and rivulets, including Sabarmati, Luni, Chambal and Krishnavati.
- Besides, it is the catchment of lakes like Damdama, Dhauj, Badkhal and Surajkund.
- More importantly, it harbours rich biodiversity, hosting numerous species of plants, birds and animals.
- It is the corridor between Asola Bhatti sanctuary in Delhi and Sariska in Rajasthan for leopards, hyenas, jackals, mongoose and most other animals.



##### What are the concerns in the use?

- Large scale illegal encroachments and misuse of the Aravali forests for realty, mining and other commercial purposes are going on since the 1970s.
- The urbanisation has gradually encroached agricultural and forest lands as newer living and working spaces were developed.
- Lakhs of dwelling units, commercial buildings and industries have already come up in this fragile mountainous track.
- Around 30% of the Aravali area falling in the Faridabad and Gurugram districts which are notified as protected forests under the PLPA now stands privatised.

- The Haryana portion of the Aravali range remains the country's most degraded forest, as per a Wildlife Institute of India study.



- The rapid and unabated deforestation and development activities are further damaging this unique landscape.
- As many as 31 out of the 128 hills in the Rajasthan portion of the Aravallis have totally disappeared, flattened by the land and mining mafias.

### What lies ahead?

- The obvious motive behind the amendment of the statute is to legitimise the illegal encroachments and misuse of the Aravalli forests.
- Haryana has the lowest forest cover in the country, barely 3.59%.
- So any action that would further curtail the forested land is inadvisable.
- Haryana government should comply with the apex court's order and withdraw the amendment to the PLPA.
- It would go a long way if it takes positive action to protect and rejuvenate the forest cover of the Aravalli hills.

## 3.2 National Mineral Policy 2019

### Why in news?

The Union Cabinet has recently approved the National Mineral Policy 2019.

### How did the policy come about?

- National Mineral Policy 2019 replaces the extant National Mineral Policy 2008 ("NMP 2008").
- The Supreme Court in 2017 made a direction to the government to review NMP 2008.
- So the Ministry of Mines constituted a committee under the chairmanship of Dr. K Rajeswara Rao, Additional Secretary, Ministry of Mines to review NMP 2008.
- The Committee Report was submitted to the Ministry of Mines, based on which the National Mineral Policy 2019 was finalized.

### What is the objective?

- The New National Mineral Policy will ensure more effective regulation and will lead to sustainable mining sector development.
- It aims to bring in further transparency, better enforcement, balanced social and economic growth.
- This could significantly address the issues of project affected persons especially those residing in tribal areas.
- Besides, the Policy aims to

- i. ease merger and acquisition of mining entities
- ii. attract private sector participation in exploration
- iii. allow transfer of mining leases
- iv. create dedicated mineral corridors

### What are the key provisions?

- **Industry status** - The NMP 2019 proposes to grant industry status to mining activity.
- This is to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector.
- **Right to first refusal** - Earlier, if a firm that has a reconnaissance permit (RP) finds evidence of minerals, it has to inform the government.
- The government will then auction off the area.
- But under the new policy, such firms will get the right of first refusal i.e. the same firm would be given the area for mining.
- **Private sector** - NMP 2019 talks of rationalising reserved areas earmarked for PSUs which have not been used; these areas will now be put to auction.
- This will give more opportunity to the private sector for participation in mining activities.
- The policy also underlines the need to harmonise India's tax, levy and royalty rates to global benchmarks to draw higher private participation.
- **Transportation** - NMP 2019 focuses on use of coastal waterways and inland shipping for evacuation and transportation of minerals.
- It also encourages dedicated mineral corridors to facilitate the transportation of minerals.
- **Fund** - The policy calls for the utilization of the district mineral fund for equitable development of project affected persons and areas.
- **Export Import** - NMP 2019 proposes a long term export import policy for the mineral sector as an incentive for investing in large scale commercial mining activity.
- **Inter-Generational Equity** - NMP introduces the concept of Inter-Generational Equity that deals with the well-being of both the present generation and future generations.
- It also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.
- **Regulation** - For regulation of the Minerals sector, E-Governance, IT enabled systems, awareness and information campaigns will be incorporated.
- Online public portal with provision for generating triggers at higher level in the event of delay of clearances by the state has been put in place.

### 3.3 Court-Supervised Mediation in Ayodhya Dispute

#### Why in news?

The Supreme Court ordered a court-supervised mediation to resolve the Ram Janmabhoomi-Babri Masjid land dispute in 8 weeks.

Click [here](#) to know more on the dispute. Click [here](#) to read on Centre's recent appeal.

#### What is the core dispute?

- The dispute over the site at Ayodhya has been continuing since 1949.
- A 16th century mosque stood at Ayodhya until it was torn down by Hindutva fanatics in December 1992.
- After the demolition of the Babri Masjid, the President referred the matter to the Supreme Court.
- The court was to look into the question of whether there was a temple to Lord Ram before the mosque was built at the site.



- The court, in a landmark decision in 1994, declined to go into that question.
- However, it revived the title suits to decide on the ownership of the site and, thereby, restored due process and the rule of law.
- The Supreme Court recently took up appeals against the 2010 verdict of the Allahabad High Court which ordered a three-way division of the disputed site.

#### **What is the court's order now?**

- The Court sought the views of the parties on invoking Section 89 of the Code of Civil Procedure (CPC) which deals with mediation.
- [Under Section 89 the court can order for a settlement among the parties.
- The court may reformulate the terms of a possible settlement and refer the same for -
  - i. arbitration
  - ii. conciliation
  - iii. judicial settlement including settlement through Lok Adalat
  - iv. mediation]
  - A five-judge constitution bench finally went for mediation and appointed former Supreme Court judge justice (retd) F.M.I. Kalifulla as the chairperson of the panel of mediators.
  - The other two members are spiritual guru Sri Sri Ravi Shankar and senior advocate Sriram Panchu.
  - The mediation proceedings will be held in-camera in Faizabad which adjoins Ayodhya in Uttar Pradesh.
  - To ensure the success of the mediation process, the apex court directed that “utmost confidentiality” be maintained.
  - It also barred both print and electronic media from reporting the proceedings.
  - Hindu bodies, except the Nirmohi Akhara, have opposed mediation, while Muslim bodies have supported it.

#### **How effective will mediation be?**

- Mediation is a welcome option for those involved in prolonged civil disputes.
- However, it is questionable whether this principle can be applied to all disputes and in all situations.
- Mediation in Ram Janmabhoomi-Babri Masjid dispute is quite strange and incongruous.
- This is because a number of attempts at mediation have been made in the past and all such previous attempts have ended in failure.
- Further, the case is ripe for final hearing, and not all parties favoured mediation.
- Moreover, the inclusion of Sri Sri Ravi Shankar as one of the mediators is controversial.
- In the past, he has made remarks to the effect that Muslims ought to give up their claim and that the failure to find a negotiated settlement will result in “civil war”.

#### **Why is the order welcome still?**

- The apex court itself is not very keen on pronouncing a judgement on the issue.
- It's because it is less of a legal issue and more a matter of sentiments and faith.
- A compromise among both will indeed be preferable to a court order that may leave one side aggrieved.
- An appreciable feature of the court-mandated mediation attempt is that it will not consume much time.
- The same eight weeks are needed for preparation for the final hearing.
- Moreover, the confidentiality rule will be helpful in avoiding any unrest with premature disclosures, especially during election times.

## 4. SOCIAL JUSTICE

### 4.1 Global Multidimensional Poverty Index Report 2018

#### Why in news?

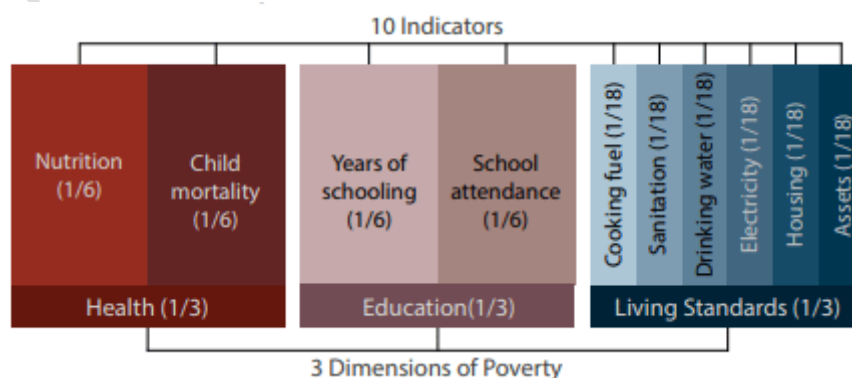
India has reduced its poverty rate from 55% to 28% in 10 years according to a new version of the global Multidimensional Poverty Index (MPI) report 2018.

#### What is the report on?

- It was developed by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI).
- MPI is a measure that takes into account the incidence of poverty and the extent of deprivation i.e. “who is poor” and “how they are poor”.
- MPI is thus the product of two measures -
  1. poverty rate as a percentage of the population
  2. poverty intensity as the average share of deprivations that poor people experience
- The index is based on a list of 10 deprivations for poor, covering health facilities, education and living standards.
- If someone is deprived in a third or more of the 10 weighted indicators, the global index identifies them as “MPI poor”.
- The present report covers 105 countries which are home to 77% of the world’s population or 5.7 billion people.
- The report dedicates a chapter to India because of its remarkable progress.

#### What is India's poverty scenario?

- Nearly 271 million people have moved out of poverty between 2005-06 and 2015-16 in India.
- India still had 364 million poor in 2015-16, the largest for any country. Nevertheless, it is down from 635 million in 2005-06.
- A total of 113 million people, or 8.6% of India’s people, live in 'severe poverty'.
- The traditional disadvantaged sub-groups such as rural dwellers, lower castes and tribes, Muslims and young children are still the poorest.
- Nevertheless, the rate of poverty reduction among children, the poorest states, Scheduled Tribes, and Muslims was the fastest.
- **Children** - Of the 364 million people who were MPI poor in 2015-16, 156 million (34.6%) were children.
- This is a 47% decrease from the 292 million poor children in India in 2005-06.



- Multidimensional poverty among children under 10 years of age has fallen the fastest.
- So the latest figures represent that 136 million fewer children are growing up in multidimensional poverty than in 2005-06.



- However, two in five children under 10 years of age are poor (41%), but less than one quarter of people aged 18 to 60 (24%) are poor.
- **STs** - Although Muslims and STs reduced poverty the most over the 10 years, these two groups still had the highest rates of poverty.
- While 80% of ST members had been poor in 2005-06, 50% of them were still poor in 2015-16.
- On the other hand, only 15% of the higher castes are poor.
- **Muslims** - While 60% of Muslims had been poor in 2005-06, 31% of them were still poor in 2015-16.
- Every third Muslim is multidimensionally poor, compared to every sixth Christian.
- **States** - The four poorest states are Bihar, Jharkhand, Uttar Pradesh, and Madhya Pradesh.
- These are still home to 196 million MPI poor people, which is over half of all the MPI poor people in India.
- Bihar was the poorest state in 2015-16, with more than half its population in poverty.
- Across the 640 districts in India, the poorest district is Alirajpur in Madhya Pradesh, where 76.5% of people are MPI poor.
- Jharkhand had the greatest improvement, followed by Arunachal Pradesh, Bihar, Chhattisgarh, and Nagaland.
- At the other end, Kerala, one of the least poor regions in 2006, reduced its MPI by around 92%.

#### How is it globally?

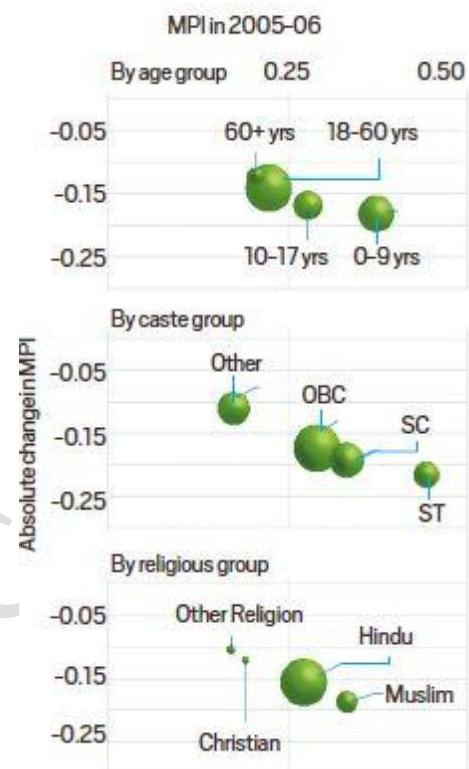
- Worldwide, 1.3 billion (23%) people live in multidimensional poverty in the 105 developing countries that the report covered.
- This represents 23%, or nearly a quarter, of the population of these countries.
- **Regions** - Multidimensional poverty was found in all developing regions of the world.
- However, it was seen to be particularly acute in Sub-Saharan Africa and South Asia.
- These two regions account together for 83% (more than 1.1 billion) of all multi-dimensionally poor people in the world.
- Additionally, two-thirds of all multi-dimensionally poor people live in middle-income countries.
- Nearly 889 million people in these countries experience deprivations in nutrition, schooling, and sanitation, just like those in low-income countries.
- **Children** - Children account for almost half (49.9%) of the world's poor.
- Worldwide, over 665 million children live in multidimensional poverty.
- In 35 countries, at least half of all children are MPI poor.
- In South Sudan and Niger, some 93% of all children are MPI poor.

#### 4.2 Dealing with Decline in Female Workforce Participation

##### What is the issue?

- The female labour force participation rate (FLFPR) has dropped from around 31% in 2011-12 to around 23% in 2017-18.

### ABSOLUTE RISE IN MPI, BY AGE & COMMUNITY



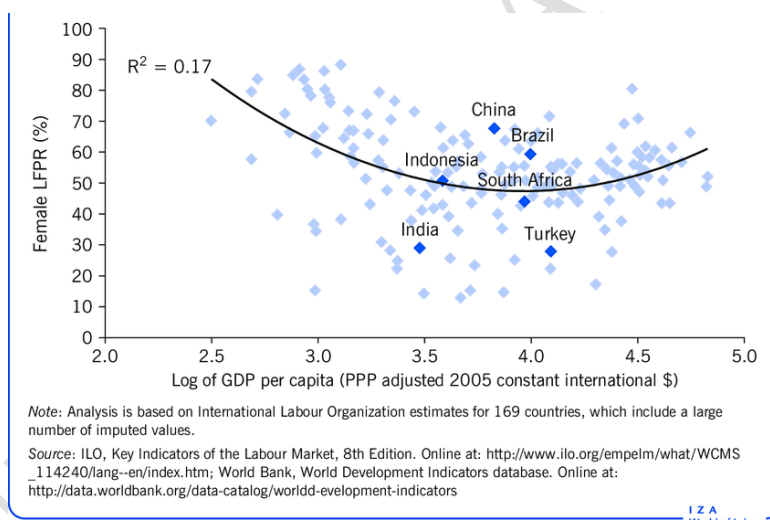
- It is imperative to understand the varied reasons behind the decline despite the numerous government measures in place.

### What is the anomaly?

- The decline is explained to be a result of a fall in overall labour force participation rates (LFPR) in India.
- This, in turn, is said to be a result of demonetisation when economic activity across the country collapsed.
- But markedly, FLFPR fell from nearly 42% in 2004-05 to around 31% in 2011-12, well before demonetisation itself.
- India's FLFPR is notably the lowest among the emerging economies.

### Are government measures paying results?

- The decline in FLFPR is despite the strong government initiatives for “specifically targeted programmes” for women’s socio-economic empowerment as provided in the “Gender Budgeting” Statements.
- These include Support to Training and Employment Programme for Women (STEP) of 1986 and “Beti Bachao, Beti Padhao” scheme of 2015.
- But the insufficiency of budgetary allocations for such crucial schemes remains a concern and the outcome is less appreciable.
- There is a notable deviation between what is budgeted for these programmes and the real spending.
- Moreover, India designed a rights-based job guarantee programme for 100 days - the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- But ensuring job cards to women have not effectively translated into rise in employment.



### What are the reasons?

- **Care Economy** - The “care economy” burden of women is one of the important determinants of FLFPR.
- It refers to women spending time on fetching of clean water, fuel collection, and other domestic chores.
- Their “time poverty” affects “income poverty”, as the time burden of women in domestic chores hinder them from entering the workforce.
- Due to this, there are specific labour supply constraints in India, over and above the known labour demand constraints (lack of jobs) for women.
- **Fem-U** - From an economic growth perspective, a more logical answer for the falling participation is what is called the “Feminisation U” (Fem-U).
- This refers to an ILO (International Labour Organization) study which found evidence of a U-shaped relationship between FLFPR and GDP per capita.
- It proposes that growth lowers female participation rates in the early stages of development and increases it at later stages.

- This may actually apply in a broad sense to India.
- However, Fem-U is an experimental question, which needs further research in India.

#### What lies ahead for India?

- India is likely to benefit from moving up the second phase of the Fem-U, depending on progress in income levels across the country.
- According to the ILO, reducing the gender gap in South Asia alone by 2025 can lead to a 7.2% increase in GDP for the region.
- So investing in comprehensive “care economy” public infrastructure is crucial for India to increase economic growth by way of increase in FLFPR.
- In all, it is high time the macroeconomic policymakers realise the significance of integrating gender perspective in job creation.

### 4.3 Realigning India's Social Protection System

#### What is the issue?

- India is no longer a largely chronically poor country but a more unequal and vulnerable country with pockets of deep poverty.
- India's prosperous future will largely depend on how its social protection system evolves and aligns with diversity and demography.

#### How does social protection system work?

- **Promotional instruments** invest in the ability of families to survive shocks on their own by enhancing productivity, access to job opportunities and incomes.
- This is done through human capital infrastructure, wage legislation, labour policies, skills training and livelihood interventions.
- **Preventive instruments** aim at reducing the impacts of shocks before they occur.
- This is done through social insurance programs that enable the households to use their savings from good times to tackle losses in tough times.
- **Protective instruments** mitigate the impacts of shocks after they have occurred.
- This is done through tax-financed redistribution from the non-poor to the poor.
- These programs would classically be called anti-poverty measures as they target social assistance to the poor, whether in kind or cash.

#### How was it at the time of independence?

- At the time of independence -
  - i. most part of India was reeling from famine, de-industrialisation and multiple deprivations
  - ii. half the population was chronically poor
  - iii. the country had an aggregate food deficit
  - iv. financial and banking networks were underdeveloped
  - v. growth rates were weak
  - vi. technology available for program administration was inadequate
- Given this, the social protection schemes focussed almost exclusively on anti-poverty, protective instruments.

#### What is the present poverty scenario?

- The poverty scenario of India has changed in the decades after independence, which is highlighted by the latest available data from 2012.
- **Chronic poverty** - Despite the dramatic fall in households below the poverty line to 22%, the challenge of chronic poverty remains.



- [Chronic poverty refers to deprivation due to poverty over many years, often entire lives, and is frequently passed on to the children.]
- So despite a decline in poverty levels, India shelters pockets of deep poverty and these households are geographically clustered.
- A significant 15% of households (37 million households) that were poor in 2005 remained poor in 2012.
- **Inequality** - Inequality in poverty across locations and demographic groups has increased.
- The poverty rate of six of the poorest states in India is twice that of other states.
- Seven low-income states - Chhattisgarh, MP, UP, Odisha, Jharkhand, Rajasthan, Bihar - account for 45% of India's population.
- But nearly 62% of the poor in these states continues to need strong safety nets programs.
- Within states, poverty and vulnerability remain highest amongst Adivasis.
- Women are largely missing from the workforce, and face serious risks to their mobility and well-being.
- **Vulnerability** - The majority of India is no longer poor. Instead, half of India is vulnerable.
- These are households that have recently escaped poverty with consumption levels that are unsteadily close to the poverty line.
- So a large section of these households remains vulnerable to slipping back to poverty.

#### What is the need now?

- Families are moving out of poverty and the middle class is continuing to grow.
- India's social protection system needs to evolve and catch up with the needs of its new demography and risk profile.
- It can no longer be singularly focused on chronically poor households.
- Programs must ensure that those who have escaped poverty are able to sustain improvements, to anticipate and manage risks and shocks better.

#### What are the possible measures?

- **Insurance** - Health insurance, social insurance (in case of death, accident and other calamities) and pensions are 3 key tools for protection from vulnerability.
- Most Indian households, both poor and non-poor, rely on personal savings to deal with health, accidents, or climate shocks.
- At present, only 4% of households in India use government social insurance programs.
- Use of private sources of insurance is higher, particularly for wealthy households, with members of nearly 27% households benefitting from it.
- The bottom 20% report very low uptake of private options for market-based insurance.
- **Implementation** - Strengthening the delivery systems of programs is highly essential.
- Rationalisation of target groups in terms of protection and prevention is needed, given the huge diversity in the economic profile of India's states.
- State governments should be allowed to choose the optimal mix of preventive and protective programs to suit their state's needs.
- In low income states, anti-poverty programs such as PDS or MGNREGS, if implemented well, can serve twin goals of protection and prevention.
- An increased emphasis on interventions that help anticipate risks should be expected, particularly in medium- and high-growth states.
- **Portability** - State governments often use residency criteria to target benefits.
- So portability with programs is crucial for migrants to receive support while they try to build new lives in new places.

## 5. HEALTH

### 5.1 Addressing H1N1 Influenza Outbreak

#### Why in news?

In a short span the number of influenza A (H1N1) cases and deaths reported from India has been increased.

#### What are the concerns of H1N1?

- Influenza (H1N1) virus is the subtype of influenza A virus that was the most common cause of human influenza (flu).
- Influenza viruses infect the cells in the nose, throat and lungs.
- The virus enter one's body when he inhale contaminated droplets or transfer live virus from a contaminated surface to your eyes, nose or mouth.
- Influenza complications include:
  1. Worsening of chronic conditions, such as heart disease and asthma.
  2. Pneumonia.
  3. Neurological signs and symptoms, ranging from confusion to seizures.
  4. Respiratory failure.
- H1N1 flu is also known as swine flu, it is called swine flu because in the past, the people who caught it had direct contact with pigs.
- That changed several years ago, when a new virus emerged that spread among people who hadn't been near pigs.
- From 2009 till 2010 World Health Organization (WHO) declared the new strain of swine-origin H1N1 as a pandemic.

#### What is the status of H1N1 in India?

- The H1N1 virus, which caused a pandemic in 2009, has since become a seasonal flu strain globally, including in India, and causes fewer deaths.
- But recently it has been found that in a short span of 55 days (till February 24) this year, the number of influenza A (H1N1) cases and deaths reported from India reached an alarming 14,803 and 448, respectively.
- While Rajasthan and Gujarat had the highest number of deaths, at 137 and 88, respectively, Delhi recorded seven deaths despite recording around the same number of cases as Gujarat.
- The number of cases reported till February 24 is nearly the same as that recorded in the whole of 2018 (14,992).
- At about 450, the number of deaths till February 24 is nearly half the total reported in 2018 (1,103).
- The actual number of cases and deaths this year is likely to be higher as West Bengal has not reported the data to the Integrated Disease Surveillance Programme.

#### What are the issue with government's action?

- Union Health Ministry had reviewed the preparedness and action taken by States to deal with influenza cases when the number of H1N1 cases and deaths stood at 6,701 and 226, respectively.
- Despite the number of cases and deaths more than doubling in a short span the Ministry has made no additional effort to contain the spread.
- It has issued a guidance "recommending" vaccines for health-care workers, and deeming them "desirable" for those above 65 years of age and children between six months and eight years.
- Surprisingly, people with pre-existing chronic diseases, who are most susceptible to H1N1 complications according to the WHO, have been ignored.



### What measures are needed?

- With H1N1 becoming a seasonal flu virus strain in India even during summer, it is advisable that health-care workers and others at risk get themselves vaccinated.
- Despite the sharp increase in cases and deaths, the vaccine uptake has been low.
- Besides vaccination, there needs to be greater awareness so that people adopt precautionary measures such as frequent handwashing, and cough etiquette.

## 5.2 Trade Margin Cap on Anti-Cancer Drugs

### Why in news?

The National Pharmaceutical Pricing Authority (NPPA) has imposed a trade margin cap on 42 non-scheduled anti-cancer drugs.

### What are scheduled and non-scheduled drugs?

- “Scheduled drugs” or “Scheduled formulations” are those medicines which are listed out in the Schedule I of Drug Price Control Order (DPCO) and on which price controls are applicable.
- Since 2013, scheduled drugs consist of the “Essential Medicines” declared so by the Government through its National List of Essential Medicines (NLEM).
- Any formulation based on combination of any one of the drugs appearing under NLEM can be subject to price fixation.
- In other words, NLEM forms the basis of deciding on the “Scheduled drugs”.
- On the other hand, non-scheduled formulations are medicines that are not under price control of NPPA.
- In this case, the Drug Prices Control Order, 2013 allows manufacturers to increase the MRP by 10% annually.
- So while essential medicines are subject to absolute price controls in the form of ceiling prices, the non-essential/non-scheduled medicines are subject to a managed price increase.

### What is NPPA's present order?

- Currently, 57 anti-cancer drugs are under price control as scheduled formulations.
- Now, 42 non-scheduled anti-cancer medicines have been selected for price regulation, with MRP reduction up to 87%.
- These would cover more than 70 formulations and around 390 brands.
- Trade margins are capped at 30% of the MRP, or conversely a 43% mark-up on the price to the stockist (price at which manufacturers supply to retailers).
- The manufacturers of these 42 drugs have been directed not to reduce production volumes of brands under regulation.

### Why is it significant?

- Being non-scheduled, these 42 life-saving drugs do not fall under the ambit of price control.
- The NPPA has thus invoked its extraordinary powers in public interest, under Para 19 of the Drugs (Prices Control) Order, 2013, for this move.
- As per this, the Government may fix the ceiling price or retail price of any drug, whether scheduled or non-scheduled or a new drug, for such period as it may deem fit.
- NPPA'S move is thus a new paradigm of regulation by the pharma industry.

### How will it benefit?

- According to the NPPA, the rationalisation of trade margins will lead to an MRP reduction of 50-75% in the case of 124 brands.
- In the case of another 121 brands, the reduction will be 25-50% and up to 87% in some cases.
- The price rationalisation move is expected to benefit 22 lakh cancer patients in the country.

- This is likely to result in annual savings of approximately Rs. 800 crores to the consumers.
- Notably, the average out of pocket expenditure for cancer patients is 2.5 times that for other diseases.
- Out of pocket expenses in India account for nearly 70% of total healthcare expenses.
- Significantly, cancer care forces even middle-class households into debt and economic distress.

### Quick Facts

#### National Pharmaceutical Pricing Authority

- National Pharmaceutical Pricing Authority (NPPA) was constituted through a Government of India Resolution in 1997.
- It is an attached office of the Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers.
- It works as an independent regulator for pricing of drugs and also ensures availability and accessibility of medicines at affordable prices.
- It implements and enforces the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.

## 6. INDIA & ITS NEIGHBOURHOOD

### 6.1 China's Block on UN Action - Masood Azhar as Global Terrorist

#### Why in news?

China for the fourth time blocked a bid to designate Jaish-e-Mohammed (JeM) chief Masood Azhar as a “global terrorist” at the UN Security Council (UNSC).

#### What was India's proposal?

- From 2016 to 2018, India's proposals to list Azhar, with evidence of JeM involvement in the Pathankot airbase attack, were foiled by China. Click [here](#) to know more.
- It placed technical holds on the listing, and then vetoed it.
- The vetoes came despite the fact that the JeM is banned, and in the UNSC listing it is noted that Azhar, as its leader and founder, accepted funds from Osama bin Laden.
- China is well aware of the evidence against him, but is not ready to withdraw its objections. Click [here](#) to know more on the reasons.
- India-China relations have improved after the [Wuhan summit](#) in April 2018.
- Despite this, China is unwilling to align itself with India on its concerns on cross-border terrorism emanating from Pakistan.

#### What were India's post-Pulwama efforts?

- After the [Pulwama attack](#), claimed by the JeM, the government had made the listing of Azhar a focus in its diplomatic efforts.
- It reached out to several governments, and shared a report on Azhar with each member of the Security Council.
- All of them are members of the 1267 ISIL and al-Qaeda sanctions committee.
- A special effort was made with Beijing too which has been blocking the Azhar listing in the past.

#### What is China's present move?

- The proposal to designate Azhar under the 1267 Al Qaeda Sanctions Committee of the UNSC was moved by France, the UK and the US.
- This came after a suicide bomber of the JeM killed 40 Central Reserve Police Force (CRPF) soldiers in Jammu and Kashmir's Pulwama.
- The Al Qaeda Sanctions Committee members had 10 working days to raise any objections to the proposal.

- Just before the no-objection period deadline, China put a “technical hold” on the proposal.
- Reportedly, China asked for “more time to examine” the proposal.
- The technical hold is valid for up to 6 months and it can be again extended by up to 3 months.

#### **What is the implication?**

- China’s stand is regrettable and condemnable, and it has been consistent on this issue.
- This is both a setback to India’s post-Pulwama diplomatic strategy and a reality check on ties with China at present.
- The Ministry of External Affairs (MEA) in New Delhi expressed disappointment over China's decision.
- India will continue to pursue all available avenues to ensure that terrorists involved in attacks on Indian citizens are brought to justice.

#### **What lies ahead for India?**

- India must now consider confronting China to persuade it to change its stand by means of incentives or coercion.
- But any kind of concerted international pressure from the Western countries in this regard has in the past only served to be counterproductive.
- It is also unlikely that cutting imports from China and other punitive actions will yield much.
- So India may be more successful if it identifies the incentives it can offer China in the next few months to review its position.
- While some of those incentives would be bilateral, “triangular” talks including Islamabad is indicative of China’s thinking.
- India should also take note of the larger issue of ensuring that Pakistan takes substantive action against Azhar, the JeM and other terror groups that are threatening India.

## **7. BILATERAL ISSUES**

### **7.1 Impacts for India on Termination of GSP**

#### **Why in news?**

USA has announced that it intends to “terminate” India’s designation as a beneficiary of its Generalized System of Preferences (GSP).

#### **What does GSP means?**

- Generalized System of Preferences (GSP), the largest and oldest US trade preference programme.
- It is designed to promote economic development by allowing duty-free entry for thousands of products from designated beneficiary countries.
- India has been the biggest beneficiary of the GSP regime and accounted for over a quarter of the goods that got duty-free access into the US in 2017.

#### **What is USA’s recent decision on GSP?**

- United States intends to terminate India’s and Turkey’s designations as beneficiary developing countries under the Generalized System of Preferences (GSP) program.
- The decision is taken as India no longer comply with the statutory eligibility criteria of the USA.
- US administration refers India as a “very-high tariff nation” and demanded for a “reciprocal tax” on goods from India, and is in line with Washington’s concerted attacks on India’s trade stance.
- The US had launched an eligibility review of India’s compliance with the GSP market access criterion in April 2018.
- But India has implemented a wide array of trade barriers that create serious negative effects on United States commerce.

- Despite intensive engagement, India has failed to take the necessary steps to meet the GSP criterion.

#### What are the reasons behind USA's action?

- India-U.S. trade tensions escalated last year when the U.S. took two consecutive decisions to increase import tariffs on steel and aluminum, and place India's eligibility for GSP benefits under review.
- Shortly after, India said it would impose retaliatory tariffs on imports from the U.S. and even notified the list of items on which these would apply.
- Meanwhile, the U.S. stood fast on not exempting India from its tariff hikes, with Mr. Trump complaining about India's high import tariffs several times.
- India, for its part, postponed the deadline for the imposition of the retaliatory tariffs six times; the latest deadline is on April 1.
- Washington's decision to review India's GSP status stemmed from complaints from American medical and dairy industries, both of which said India was not providing "equitable and reasonable access to its market".
- India has said it had tried hard to cater to most of the U.S. demands and reach an understanding, but key points of difference, especially regarding India's cultural concerns to do with dairy products, could not be accommodated.
- Given this, and the fact that the U.S. has been expressing discontent over India's policies to do with data localization and FDI rules in e-commerce, the decision to withdraw the GSP status has been made.

#### What will be the impacts for India?

- USA's announcement to "terminate" GSP could be a big blow for India's competitiveness in items groups such as garments, engineering, and intermediary goods in the American market.
- It bears emphasis that while the actual amounts at stake are relatively small, with even India's proposed tariffs on the U.S. amounting to just \$900 million, the impact on small industries in the country could nevertheless be significant.
- Export bodies have already said that such industries would lose their market share in the U.S. without fiscal support to help them maintain their edge.

#### What is response of Indian Government?

- Following the U.S. announcement, Union Commerce Ministry responded that the GSP benefits amounted to only \$190 million while India's total exports under GSP to the U.S. stood at \$5.6 billion.
- Indian officials have stressed that talks on the issue would still continue during the 60-day period after which the GSP decision would come into effect.
- The other option the government can exercise is to impose retaliatory tariffs on U.S. goods.
- The government's efforts to downplay the impact of the withdrawal of GSP status and express readiness for more talks, however, suggest it is not keen to take a decisively strong stance.

## 8. INTERNATIONAL ISSUES

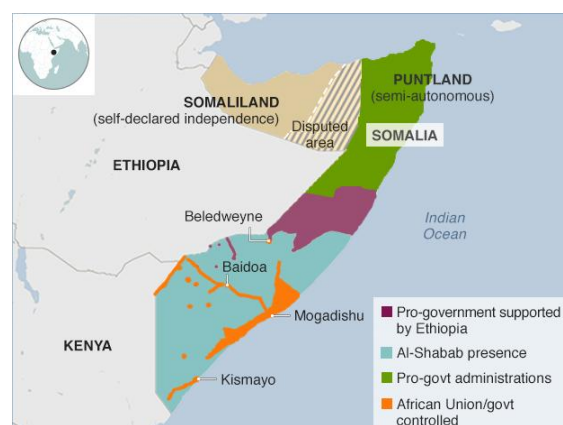
### 8.1 Al-Shabab Attack in Somalia

#### Why in news?

A fierce gunbattle began after al-Shabaab terrorists bombed a hotel in the heart of Somalia's capital, with notable death tolls.

#### Who are the al-Shabaab?

- Al-Shabaab translates as 'The Youth' in Arabic.
- It started as the extremist youth wing of the now-defunct Islamic Courts Union (ICU).
- ICU was a grouping of sharia courts that seized control of a large portion of Somalia, including the capital Mogadishu, for some months in 2006.



- The ICU retreated after intense repression by Somali and Ethiopian troops.
- But the hardline Islamists joined together in groups such as al-Shabaab and Hizbul Islam to keep fighting.
- Over the years, foreign jihadists, including those from Western countries, have travelled to East Africa to join the al-Shabaab.
- The group is estimated to have 7,000-9,000 fighters as of at the end of 2017.
- It has been banned by the United States and the United Kingdom.

#### **What is al-Shabaab's objective?**

- Al-Shabaab has imposed a strict Wahhabi version of Islam in the areas under its control.
- E.g. its fighters have stoned to death women accused of adultery, and punished alleged thieves by cutting off their limbs
- In 2012, al-Shabaab leader Ahmed Abdi Godane had “pledged obedience” to Ayman al-Zawahiri, the emir of al-Qaeda.
- The group is believed to have also established links with Boko Haram in Nigeria and al-Qaeda in the Islamic Maghreb which is active in the Sahara.
- Al-Shabaab had considered offering allegiance to the Islamic State at the height of the terrorist group’s power in 2014-15.
- But only a small splinter group ultimately did it.
- Al-Shabaab is currently led by Ahmed Umar alias Abu Ubaidah, on whom the US has put a bounty of \$6 million.

#### **What is the recent attack for?**

- Somalia descended into chaos in the early 1990s, and the cycle of violence and terrorism has been going on since then.
- Al-Shabaab is trying to take back control of the Somalia capital Mogadishu from a Western-backed government.
- In the current attack, Hotel Maka Al-Mukarama in central Mogadishu was bombed by the al-Shabaab terrorists.
- The attack was in line with the al-Shabaab tactic of assaulting high-profile targets in East African countries.
- Days earlier, the US forces in Somalia had intensified airstrikes against al-Shabaab.
- The efforts by the Americans have seen the killing of over 50 al-Shabaab fighters in at least 6 airstrikes over the past week of the attack.

### **8.2 UN Blacklisting of Hamza bin Laden**

#### **Why in news?**

United Nations Security Council’s (UNSC) Sanctions Committee blacklisted Hamza bin Laden, the son of slain Al-Qaeda chief Osama Bin Laden.

#### **Who is Hamza bin Laden?**

- Hamza bin Laden is the 30-year-old son of slain Al-Qaeda chief Osama Bin Laden.
- In 2015, Hamza was introduced by Osama Bin Laden’s successor Ayman al-Zawahiri in an audio message.
- The US-based Brookings Institution claims that Hamza was with his father (Osama) in Afghanistan, prior to 9/11 attacks.
- Hamza is also said to have spent time with his father in Pakistan after the NATO invasion of Afghanistan in the aftermath of 9/11 attacks.
- Now, in the light of the Islamic State occupying the centre stage in the terrorist world, Hamza is seen as a fresh face.
- Al Qaeda thus seems to bank on him to increasingly inspire the youth to join militancy.



### What does UNSC blacklisting mean?

- The blacklisting of Hamza would mean that he is subjected to a travel ban, freezing of his assets along with an arms embargo.
- His entry or transit in any of the countries that are UN members will not be allowed in accordance with the travel sanctions.
- Freezing of assets requires all UN member governments to immediately freeze funds, financial assets or any economic resources that come under direct or indirect ownership of the designated individual.
- The arms embargo prevents Hamza from acquiring arms and ammunition.
- All UN member countries are directed to block the channels that might directly or indirectly facilitate the sale of arms to the Al Qaeda leader.
- In addition to this, all member states are required to prevent the transfer of arms, ammunition, spare parts and other related articles, to Hamza.
- Non-material support in the form of technical advice, assistance, logistic support, or training in relation to military activities is also prohibited.

### What are the other measures?

- Hamza bin Laden's Saudi citizenship was revoked after his blacklisting by the UNSC's Sanctions Committee.
- The U.S. government, as a part of its 'Rewards for Justice' programme, had announced a bounty of \$1 million for any information that leads to the capture of Hamza.
- The Security Council also described Hamza as the "most probable successor" of Al Qaeda's present chief Ayman al-Zawahiri.

## 8.3 Trump on Golan Heights

### Why in news?

U.S. President Donald Trump recently said that the U.S. should back Israeli sovereignty over the Golan Heights, seized from Syria in 1967.

### What is the significance?

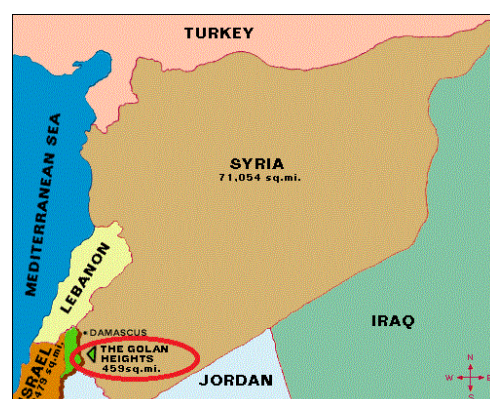
- In December 2017, Trump decided to recognise [Jerusalem as the capital of Israel](#) and to move the US Embassy to the city.
- This was welcomed by the Israel but was offensive to Palestinians and many Arab political and religious leaders.
- The Golan announcement now much reflects the Jerusalem decision.
- This is likely to further complicate Trump's long-awaited plan to resolve the Israeli-Palestinian conflict.

### What is the Golan Heights?

- The Golan Heights is a hilly 1,200 square kilometre plateau that overlooks Lebanon and borders Jordan.
- The claim over the Golan Heights is disputed between Israel and Syria.
- More than 40,000 people live on the Israeli-occupied Golan, and more than half of them are Druze residents.
- The Druze are an Arab minority who practice an offshoot of Islam.
- Many of its adherents in Syria have long been loyal to the Assad regime in Syria.

### Why is the Golan area contentious?

- The Golan Heights were part of Syria until 1967.
- In 1967, Israel captured most of the area in the Six Day War, occupying it and annexing it in 1981.



- After annexing the Golan, Israel gave the Druze the option of citizenship, but most rejected it and still identify them as Syrians.
- About another 20,000 Israeli settlers also live there, many of them working in farming and tourism.
- The unilateral annexation by Israel was not recognised internationally, and Syria demands the return of the territory.
- Syria tried to regain the Heights in the 1973 Middle East war, but the effort was thwarted.
- Israel and Syria signed a peace agreement in 1974 and the Golan had been relatively quiet since.
- In 2000, Israel and Syria held their highest-level talks over a possible return of the Golan and a peace agreement.
- But the negotiations collapsed and subsequent talks also failed.

### Why do the countries claim Golan?

- Both sides covet the Golan's water resources and naturally fertile soil.
- Also, given the civil war in Syria, Israel considers the plateau as a buffer zone between Israeli towns and the instability in Syria.
- Israel also fears that Iran is seeking to establish itself permanently on the Syrian side of the border in order to launch attacks on Israel.
- Iran is, notably, an ally of Syrian President Bashar al-Assad.
- Syria, for its part, insists that the part of the Golan held by Israel remains an occupied territory and thus demands its return.

### What is the current UN arrangement there?

- A United Nations Disengagement Observer Force (UNDOF) is stationed in camps and observation posts along the Golan.
- This is supported by military observers of the United Nations Truce Supervision Organization (UNTSO).
- Between the Israeli and Syrian armies is a 400-square-km "Area of Separation".
- This is often called a demilitarized zone in which the two countries' military forces are not permitted under the ceasefire arrangement.
- The Separation of Forces Agreement of 1974 created two lines of separation.
- Behind the Alpha Line to the west of the area of separation, Israeli military forces must remain.
- Behind the Bravo Line to the east of the area of separation, Syrian military forces must remain.
- Extending 25 km beyond the "Area of Separation" on both sides is an "Area of Limitation".
- Here, there are restrictions on the number of troops and number and kinds of weapons that both sides can have.
- There is one crossing point between the Israeli and Syrian sides.
- Until the Syrian civil war broke out in 2011, this was used mainly by UN forces, a limited number of Druze civilians and for the transportation of agricultural produce.

### Who controls the Syrian side of the Golan?

- Before the outbreak of the civil war in Syria, there was an uneasy stand-off between Israeli and Syrian forces loyal to President Bashar al-Assad.
- But in 2014 anti-government Islamist rebels overran Quneitra province on the Syrian side.
- The rebels forced Assad's forces to withdraw and also attacked the UN forces in the area, forcing them to pull back from some of their positions.



- The area remained under rebel control until the summer of 2018.
- Then, Assad's forces returned to the largely ruined city of Quneitra and the surrounding area following a Russian-backed offensive.
- A deal that allowed rebels to withdraw was made.

#### **What is the current military situation?**

- Assad's forces are now back in control of the Syrian side of the Quneitra crossing which reopened in October 2018.
- The United Nations forces are still carrying out restoration works in certain areas.
- Israel signalled that it would not impede the Syrian army's return to Quneitra.
- But it has repeatedly expressed concern that Assad may defy the U.N. armistice or let his Iranian and Lebanese Hezbollah allies deploy there.

### **G.S PAPER III**

## **9. ECONOMY**

### **9.1 Evaluation of Universal Basic Income**

#### **What is the issue?**

- The idea of a universal basic income (UBI) is gaining ground globally.
- Here is an evaluation of its necessity, target group and possible outcome in India.

#### **Should it necessarily be universal?**

- Millions of people remain unemployed and are extremely poor, despite rapid economic growth.
- A UBI thus requires the government to pay 'every citizen' a fixed amount of money on a regular basis and without any conditionalities.
- But it is to be understood that the UBI is neither a remedy to the uncertainty with the market forces nor a substitute for basic public services, especially health and education.
- Besides, there is less need for transfer money to middle- and high-income earners as well as large landowners.
- With limited fiscal space for direct income support, it will thus have to be restricted to the poorest of poor households.
- In this context, there is a strong case for groups such as the landless labourers, agricultural workers and marginal farmers who suffer from multi-dimensional poverty.

#### **Why do these groups need income support?**

- These are the groups that have not benefited from the economic growth in the past three decades.
- They were and still are the poorest Indians, and various welfare schemes have also failed to bring them out of poverty.
- One issue is that the access to institutional credit issued by banks and cooperative societies is highly imbalanced.
- Institutional credits account for less than 15% of the total borrowing by landless agricultural workers, and 30% for marginal and small farmers.
- These groups have to borrow from moneylenders at exorbitant interest rates ranging from 24 to 60%.
- As a result, they do not stand to benefit much from the interest rate subsidy for the agriculture sector.
- Likewise, the benefits of subsidised fertilizers and power are enjoyed largely by big farmers.
- In urban areas, contract workers and those in the informal sector face a similar problem.



- The rapid pace of automation of low-skill jobs and formalisation of the retail sector has made the prospects of these groups even weaker.

#### **How will it help them?**

- **Livelihood** - An income support of, say, Rs. 15,000 per annum can be a good supplement to their livelihoods.
- This additional income can reduce the incidence of indebtedness among marginal farmers and thereby help escape from moneylenders.
- Basic income can help bring a large number of households out of the poverty trap or prevent them from falling into it.
- **Health and education** - Several studies have shown that at high levels of impoverishment, even a small income supplement can improve nutrient intake.
- It is also likely to increase enrolment and school attendance for students coming from poor households.
- Notably, transfer of money into the bank accounts of women of the beneficiary households would have a better result in health and education of children.
- In other words, income transfers to the poor will lead to more productive workforce with improved health and educational outcomes.
- **Employment** - The income support suggested above is not too large to discourage people from working.
- In fact, it can actually promote employment and economic activities.
- E.g. the income can work as interest-free working capital for several categories of beneficiaries like the fruit and vegetable vendors and small artisans
- Moreover, an overall boost in spending will increase demand and promote economic activities in rural areas.
- With income support and thereby better education and health, basic income might reduce income inequalities.

#### **How are public services still significant?**

- An income transfer scheme cannot be a substitute for universal basic services.
- The income support to the poor will deliver the benefits only if it comes on top of public services such as primary health and education.
- This means that direct transfers should not be at the expense of public services for primary health and education.
- Budgetary allocation for these services should be raised significantly.
- Programmes such as the Mahatma Gandhi Rural Employment Guarantee Scheme should also stay for some time.

#### **How to meet the fiscal requirement?**

- With rough estimation of the number of eligible households to be 10 crore, the scheme will require approximately Rs. 1.5 lakh crore per annum.
- The [PM-KISAN](#) Yojana can be aligned to meet a part of the cost.
- Nonetheless, the required amount is beyond the Centre's fiscal capacity at the moment and so the cost will have to be shared by the States too.

### **9.2 Dealing with Current Account Deficit**

#### **What is the issue?**

- The key issue facing India is to sustain high growth with low inflation, and dealing with its Current Account Deficit (CAD).
- In this context, if supply-side policies successfully reduce costs and inflation, macroeconomic policy can sufficiently stimulate growth.

#### **What is the concern?**

- Indian output is below its potential as large numbers enter the labour force.



- Bottlenecks in specific sectors limit the production and exports and so there is unutilised labour capacity.
- The demand remains greater than what the country can produce domestically.
- So India is still running a current account deficit (CAD) in the balance of payments i.e. value of the goods and services of imports exceeds that of exports.

#### How did China deal with a similar situation?

- China too was a large economy with surplus labour.
- **Under-valuation** of its currency aided an expansion in production of traded goods and of exports.
- This, in turn, absorbed a large portion of the underemployed labour.
- The challenge in depreciation (to increase exports) is that it would raise the import bill and inflation.
- But in populous countries where food has a large share in the consumption basket, low relative food prices would ensure sustained low-inflation growth.
- So a big advantage for China was that it took this approach (devaluation) in growth in 1978 with reforms that raised **agricultural productivity**.
- Major intermediate commodity imports, such as oil, also contribute to inflation.
- But again China started its reforms process with a very **low share of oil imports**.
- China used to export oil but became a net oil importer in 1993.
- By 2006 it imported 47% of its consumption, and by 2013 became the largest oil importing country.
- But by then its exports had grown enough to finance imports without substantially reducing its current account surplus.

#### What are the challenges for India?

- Challenges of both, increase in import bill and rise in inflation, remain for India.
- Moreover, India is dependent on primary energy imports and is the third largest oil importer.
- In India's case, only limiting the depreciation (rather than going for it) would help contain inflation.
- This is because of India's dependence on commodity imports. In other words, devaluation is disadvantageous given the need for high imports.
- So better utilisation of resources and expansion of capacity in export sectors may eliminate CAD without having to reduce aggregate demand.

#### What are the other factors driving CAD?

- **Savings pattern** - A CAD also implies that investment exceeds domestic savings.
- Financial savings largely fund investments involving goods that are tradeable, while physical savings are invested more in non-traded goods, such as in real estate.
- In recent years, overall savings-GDP ratio has fallen to about 30 as growth slowed.
- However, it is fall in household physical savings that is driving this, as household financial savings have recovered from a low of 8% in 2011-12.
- Savings of non-financial corporations that are held in financial assets have risen.
- Estimates of physical savings in the household sector are identical to those of investment in the unorganised sector.
- So, in effect, if organised sector investment exceeds financial savings, it will have to be financed by foreign savings i.e. by running a CAD.
- Thus better financial intermediation of domestic savings also reduces the CAD and dependence on volatile foreign capital inflows.
- **Constraints in agriculture** have been a major factor limiting India's growth.
- E.g. high food inflation triggered macroeconomic tightening and reduced growth after 2011



- A large number of subsidies and price distortions were not able to adequately improve food production.

#### How does the future look?

- By 2018 India seems to have entered a period of structural agricultural surpluses.
- World political economy also seems to be working to keep oil prices in the \$60-70 range, which suits both oil importing and exporting countries.
- Moreover, with changes in oil prices, India's oil intensity (the ratio of oil consumed per unit of GDP) has been falling since 2005, which all indicate the removal of constraints.
- However, specific competitive sectors must be encouraged for the export expansion required to cover the oil import bill which remains large.

#### What lies ahead for India?

- **Supply side policies** - A constant or mildly appreciating real exchange rate has to be accompanied by focused sectoral and general supply-side measures to improve exports.
- Supply-side measures focus on building capacity to participate in higher growth and on reducing costs.
- India's support to traded goods sectors needs to be delivered in ways that do not distort prices.
- [India in 2017 crossed the WTO threshold of per capita incomes of \$1000 in 2017 that allows exemptions for industry specific subsidies. Click [here](#) to know more]
- Targeted and limited direct benefit transfers to farmers, along with measures to improve productivity and marketing are all steps in the right direction.
- The government, in consultation with exporters, should shift to supporting policies which can specially benefit textiles and other export intensive sectors.
- These include export infrastructure, logistics, skilling, technology development and ease of doing business.
- **Demand side policies** - In a populous country with underemployed labour, sectoral bottlenecks and price shocks can cause inflation even without aggregate excess demand.
- So in Indian context, as long as supply-side measures improve exports and reduce costs, macroeconomic policies have space to stimulate growth and absorb under-employed labour.

### 9.3 Evaluating the Disinvestment Programme

#### What is the issue?

- The public sector disinvestment programme has met its ambitious targets for the second year.
- But the Centre has resorted to multiple shortcuts that undermine the basic objectives of disinvestment.

#### What is the new development?

- The government, in the Union Budget for 2018-19, fixed for itself a disinvestment target of Rs 800-billion.
- Disinvestments had raised only Rs. 56,473 crore by end-February 2019.
- But the government managed to end the Financial Year 2018-19 with Rs. 85,000 crore from disinvestments.
- The government making it above the disinvestment target is certainly good news for the fiscal condition.
- Notably, the Centre has been grappling with excess expenditure.
- So an overflowing disinvestment kitty certainly helps restrain the deficit number.

#### What were the modes adopted?

- Of the total proceeds of Rs. 85,000 crore, only about two-thirds has been contributed by actual dilution of the Centre's ownership stakes in PSUs.
- This has been achieved through Exchange Traded Funds (ETFs), IPOs and offers for sale.
- This has been liberally supplemented by requiring capital-intensive PSUs such as ONGC, IOC and BHEL to announce [share buybacks](#).
- This has supported the disinvestment figure by about Rs. 10,000 crore.

- In a last-minute effort to bridge the shortfall in the disinvestment target, the Centre has also brokered the transfer of its controlling stake in REC to PFC to raise Rs. 14,500 crore.
- [REC - Rural Electrification Corporation, PFC - Power Finance Corporation]

#### What are the concerns?

- In a haste to showcase a healthy fund-raise, the government has resorted to multiple shortcuts in the disinvestment process.
- It has compromised both the long-term interests of profitable PSUs, and the basic objectives of the disinvestment programme.
- It is contentious if buybacks can even be counted as disinvestment as there has been no material change in the ownership of these PSUs.
- To deal with the ailing Air India, the government has put through a couple of strategic sales too.
- Here, it has opted for deals with pre-decided suitors, instead of open auctions to identify the best acquirers.
- Also, REC and PFC are both financiers with highly leveraged balance sheets who have been hit hard by India's power sector distress.
- There are worries that a combination of these two firms may not improve their borrowing capacity.
- Moreover, it may, in fact, prompt institutional investors to curtail their aggregate exposure.
- Such forced inter-PSU deals are justified on the grounds that they unlock better efficiencies and synergies.
- But such benefits often remain on paper due to turf wars and integration issues.

#### What does this imply?

- When it comes to the public sector disinvestment programme in India, the means are far more important than the ends.
- Of the various methods experimented by the government for disinvestment, the ETF route has proved the most successful.
- Notably, [Bharat-22](#) and [CPSE ETFs](#) raised over Rs. 45,000 crore.
- The new government must stick to this route instead of resorting to expedient shortcuts for disinvestment.
- More importantly, for disinvestment to count as a reform, it is critical to take up the long-pending privatisation of loss-making PSUs.

### 9.4 Mutual Funds and Portfolio Managers in Commodity Exchanges - SEBI's Moves

#### What is the issue?

- Securities and Exchange Board of India (SEBI) has decided to permit mutual funds and portfolio managers to transact in commodity exchanges.
- It gains significance with another recent ban order of SEBI on intermediaries involved in the NSEL scam.

#### What are Commodity Derivatives?

- **Derivatives** - Derivative is a contract between two or more parties.
- Its value is determined by the underlying asset.
- The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indexes.
- **Commodity Derivatives** - It is a derivative contract with a commodity as the underlying asset.
- Producers who want to manage the risk of future price uncertainty for their commodities enter into commodity derivatives.
- In India, as a stock market NSE provides a platform to trade in different shares, the Multi Commodity Exchange (MCX) and National commodity derivative Exchange (NCDEX) facilitate for the commodities trade.

- MCX is known for the trading of Bullions metals (Gold, Silver, etc), Base Metals (Zinc, Aluminium, etc) and Energy (Crude Oil and Natural Gas).
- The NCDEX is known for trading in Derivative contract of agricultural produces.

### What are Mutual Funds and Portfolio Managers?

- **Mutual Fund** (MF) is an investment vehicle made up of a pool of moneys collected from public investors.
- The pooled money is used to buy other securities by professional money managers.
- They give small or individual investors access to professionally managed portfolios of equities, bonds and other securities.
- **Portfolio Manager** (PM) is a professional person or a group of people, usually experienced investors responsible for making investment decisions on behalf of individuals or institutions.
- The main difference between MFs and PMs is that in Mutual Funds, the investors' money is pooled and collectively invested, which is not the case with PMs.

### What is SEBI's recent decision?

- Since taking regulatory responsibility of the commodity derivatives market in 2015, it has been SEBI's main focus area.
- As of now, only gold is a permissible commodity for institutional investors, and is allowed through exchange-traded funds (ETFs).
- SEBI had earlier attempted to increase the institutional participation in the commodity segment.
- E.g. it recently allowed category -III Alternative Investment Funds (AIFs) to participate in the commodity derivatives market
- In line with this, allowing mutual funds and portfolio managers in the commodity derivatives segment aims at broad-basing the commodity derivatives market.
- The decision is also part of SEBI's larger task to cleanse this segment of the negative fallout from the National Spot Exchange Ltd (NSEL) scam.

### What was the NSEL scam about?

- It occurred more than 5 years ago, and involved questionable acts by brokers.
- They had allegedly, among many other violations, -
  - i. made false representations of assured and risk-free returns to clients
  - ii. modified client codes
  - iii. engaged in trades without the permission of clients
  - iv. failed to report suspicious transactions to the Financial Intelligence Unit
- Recently, SEBI ordered against 4 commodity brokers who operated on the NSEL, acknowledging the wrongdoings of these intermediaries.
- They are Motilal Oswal Commodities Broker, Indian Infoline Commodities, Geofin Comtrade and Anand Rathi Commodities.
- It was held by SEBI that the reputation, fairness, honesty, integrity and character of the brokers had been seriously eroded.
- SEBI concluded that they were not fit to be allowed to operate as commodity derivatives brokers, either directly or indirectly.

### How effective are SEBI's moves?

- The latest move with MFs and PMs is yet another attempt to improve participation in this segment.
- But SEBI's actions against commodity brokers have had little impact.
- Barring the commodity broking services of the 4 intermediaries has not caused much disruption in the commodity derivatives market.



- This is because the commodity broking operations of the brokers charged in the order are being carried out through other entities.
- SEBI's ban order thus needs to be effectively enforced.
- The regulator needs to evaluate the operations of the entire group of companies to ascertain whether the order is being followed in spirit.

### Quick Facts

#### Alternative Investment Funds

- An alternative investment is an asset that is not one of the conventional investment types, such as stocks, bonds and cash.
- Alternative investments instead include private equity, hedge funds, managed futures, real estate, commodities and derivatives contracts.
- Most alternative investment assets are held by institutional investors or accredited, high-net-worth individuals because of the complex natures and limited regulations of the investments.

### 9.5 SEBI's New Rules on Liquid Funds

#### Why in news?

The Securities and Exchange Board of India (SEBI) proposed new rules related to liquid funds, in its recent Board meeting.

#### What is a liquid fund?

- **Liquid fund** is a category of mutual fund which invests primarily in money market instruments like certificate of deposits, treasury bills, commercial papers and term deposits.
- **Mutual Fund (MF)** is an investment vehicle made up of a pool of moneys collected from public investors.
- The pooled money is used to buy other securities by professional money managers.
- It gives small or individual investors access to professionally managed portfolios of equities, bonds and other securities.

#### What are the benefits of liquid funds?

- Liquid funds invest in securities with a residual maturity of up to 91 days.
- Liquid funds have the lowest interest rate risk among debt funds as they primarily invest in fixed income securities with short maturity.
- Lower maturity period of these underlying assets helps a fund manager in meeting the redemption demand from investors.
- Liquid funds do not have a lock-in period (period during which a loan cannot be paid-off earlier than scheduled without incurring penalties).
- So assets invested are not tied up for a long time.
- Withdrawals from liquid funds are processed within 24 hours on business days.

#### What are the new rules?

- The new rules come in light of the redemption risks faced by liquid schemes after the Infrastructure Leasing & Financial Services ([IL&FS crisis](#)).
- **Valuation** - SEBI tightened the valuation methodology for liquid mutual funds (MFs).
- SEBI's new rule requires debt funds to use the more transparent mark-to-market valuation rather than the amortisation method to value debt securities.
- [Amortisation is an accounting term that refers to the process of allocating the cost of an intangible asset over a period of time.
- Mark-to-market is an accounting practice that involves recording the value of an asset to reflect its current market levels.]



- **Open offer** - [An open offer can take place if any of the promoters of a company want to increase the stake or if non-promoters increase the stake to 15% or the company is going to de-list from the stock exchange.
- So open offer is nothing but the exit route given to the existing shareholders by the acquirer of shares, through a public announcement.
- The price is fixed based on the average price for the last 6 months and usually the price is higher than the prevailing market price.
- This works as a motivation to current shareholders to sell their shares.]
- Earlier, SEBI had the power to grant exemption from the obligation to make an open offer for acquiring shares.
- The target company shall file an application with the SEBI, giving details of the proposed acquisition and the grounds on which the exemption has been sought.
- SEBI has now done away with the open offer exemption given to those seeking to acquire assets of firms undergoing resolution plan under the Insolvency and Bankruptcy Code (IBC).
- It has restricted open offer exemptions to only scheduled commercial banks and financial institutions in debt restructuring cases.
- SEBI also said that only a court or a tribunal is allowed to provide any such exemptions.
- Open offer exemption already given to companies undergoing resolution plan under IBC will continue in supervision of the National Company Law Tribunal (NCLT).
- **Maturity** - All debt papers with maturity of 30 days or more (earlier 60-day maturity) has to be marked to market.
- This is to make sure that liquid schemes reflect the underlying portfolio risks.

#### **What would the impact be?**

- Liquid funds are a major source of short-term borrowings for Indian companies.
- If mutual funds now demand 30-day paper in place of 60-day or 90-day instruments, companies may be forced to roll over their debt more frequently.
- Holding shorter-maturity papers means more transactions and more portfolio turnover.
- This along with the stamp duty will significantly increase the transaction costs for liquid schemes.
- The changes are thus likely to make managing liquid schemes a costly affair for MFs.
- Besides, the returns for liquid schemes could moderate as shorter-duration papers typically have lower yields.
- The move on open offer exemption would increase the cost of acquisition for those buying listed stressed firms.

### **9.6 RBI Draft Rules on Bank CEO Compensation**

#### **Why in news?**

The RBI recently released the draft rules on compensation for CEOs and full-time directors of banks.

#### **How were violations by bank executives dealt?**

- Unlike manufacturing, there is a bigger risk of financial instability when it involves banks and the use of public funds.
- But while addressing this, the governments have failed to address the asymmetry between India's state-owned banks and private banks on compensation practices.
- In India's state-owned banks, executives have been punished by the government and the CBI for offences or violations, even less grave.
- But getting away with informal deals had been possible for private bank executives for quite some time.
- E.g. over a decade ago, a senior executive in one of India's top private banks was identified as being responsible for the bank taking a hit of Rs 200 crore in a quarter



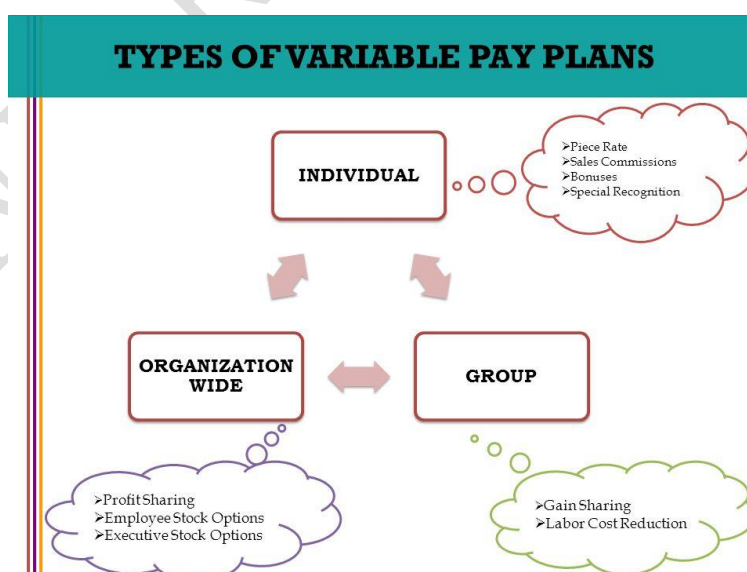
- This was a result of a wrong bet on a complex financial product, prompting the board to seek action.
- Although the executive was moved out a little later, his compensation was not impacted.
- Besides, India's top private bank chiefs have the freedom to hire their own teams.
- Unlike this, in state-owned banks, the CEO has to settle for deputies chosen by the government.

### What are the recent developments?

- Increasingly, the field is being levelled between private and public sector banks, at least in terms of being punished for lapses.
- This started during the tenure of former RBI Governor Urjit Patel.
- Under his watch, top private bank chiefs had to exit after major violations.
- E.g. the case involving ICICI CEO Chanda Kochhar who had to quit after allegations of conflict of interest
- There were a couple of other bankers too who had to leave after the RBI found divergence in financial information or accounts from what their banks published.
- The fact of huge compensations being paid to CEOs despite these over the past several years drives the changes that are now under way.

### What are the draft rules for?

- In the Western countries, the regulators and governments decided to discourage excessive risk-taking by banks after the 2008 global financial crisis.
- In the US, the Dodd Frank Wall Street reforms and Consumer Protection Act addresses this issue.
- Likewise, the Indian central bank too is set to tighten the executive compensation.
- The rules aim at making CEOs more accountable for their bank's performance.
- It ensures that rewards for senior executives in private and foreign banks are aligned with the risks undertaken by the banks.
- The first set of such rules has been in force since 2012, but much has changed since then.
- The *Financial Stability Board* (FSB) came out in 2009 with a set of principles and implementation standards on compensation practices.
- India too is a member of the FSB.



### What are the key proposals in the draft?

- The mix of cash, equity and other forms of compensation will be consistent with risk alignment.
- RBI proposed that at least 50% of the compensation packages of private bank chief executive officers (CEO) should be variable.



- [While base salary is a fixed one and paid out regardless of employees meeting their goals, the variable pay is paid on certain conditions.]
- Earlier, there was no such threshold, and senior private bankers could take home a substantial amount irrespective of lapses or violations.
- Now, it will be paid on the basis of individual, business-unit and firm-wide measures that adequately measure performance.
- The rules now would allow for a penalty if the concerned bank under-reports bad debt or provision beyond the central bank's tolerance.
- Also, earlier, the variable pay was capped at 70% of fixed pay but did not include stock options as it was outside the scope of the official compensation package.
- [Stock option refers to the benefit in the form of an option where an employee can buy shares in the firm at a discount or at a stated fixed price]
- Now, variable pay, with stock options included, can be capped at 200% of the fixed pay.
- The central bank also said there should be no concept of "guaranteed bonuses" in the compensation plan.
- This will henceforth be consistent with sound risk management and on the basis of the "pay for performance" principles.

#### Quick Fact

#### Financial Stability Board (FSB)

- The FSB is an international body that monitors and makes recommendations about the global financial system.
- It promotes international financial stability by coordinating national financial authorities and international standard-setting bodies.
- The FSB's decisions are not legally binding on its members.
- It, instead, operates by moral suasion and peer pressure, in order to set internationally agreed policies and minimum standards that its members commit to implementing at national level.

### 9.7 RBI's Foreign Exchange Swap Auction

#### Why in news?

The RBI is set to inject long-term liquidity worth \$5 billion into the system through foreign exchange swap auction with banks for 3 years.

#### What is a swap auction?

- Under the swap, a bank would sell US dollars to the RBI.
- It will simultaneously agree to buy the same amount of US dollars at the end of the swap period.
- The swap transaction is materially different from OMOs (open market operations).
- OMOs refer to a central bank's buying and selling of government securities in the 'open market'.
- On the other hand, in swap transaction, only authorised dealers, mainly banks, will be allowed to deposit US dollars in exchange for rupees.
- This comes with an agreement to reverse the transaction at a fixed exchange rate at the end of 3 years.
- The final exchange rate will be decided by an auction where banks will bid on the forward premium they are willing to pay.
- Under the swap auction, minimum bid size would be \$25 million and in multiples of \$1 million thereafter.

#### What is the objective?

- The objective is to meet the durable liquidity needs of the system.
- This will inject rupee liquidity for longer duration through long-term foreign exchange Buy/Sell swap.

- The forex swap essentially puts more money in the hands of banks.
- They will, in turn, have discretion to decide whether to step up credit to lower-rated borrowers.
- The US Dollar amount mobilised through the auction would also reflect in RBI's foreign exchange reserves and in its forward liabilities.

#### How will it benefit?

- RBI has been regularly infusing cash into the markets through Open Market Operations (OMOs) since the IL&FS default last year.
- However, the liquidity situation is expected to worsen in the coming period due to advance tax and GST payments, as well as election spending.
- So RBI's pre-emptive move may help partly bridge this liquidity deficit.
- If successful, the auction is expected to immediately release \$5 billion worth of rupee liquidity into the banking system.
- Also, banks which are currently short on SLR (Statutory liquidity ratio) securities and cannot participate in OMOs, will receive liquidity infusions too.
- Nevertheless, RBI needs to come up with a structural solution to address the liquidity issue that is endemic to India's corporate bond market.

## 10. AGRICULTURE

### 10.1 Deceleration of GVA in Agri-Sector

#### Why in news?

Central Statistics Office (CSO) has released the advance estimates of national income for the current financial year.

#### How national income is estimated?

- Since 1955 the national income estimates are being prepared by Central Statistical Organization.
- The Central Statistical Organization has divided Indian economy into three basic sector for the purpose of evaluation of various data.
- They are
  1. **Primary sector** - Comprising agriculture, forestry, fishing, mining and quarrying.
  2. **Secondary sector** - Comprising manufacturing, power generation, gas and water supply.
  3. **Tertiary sector**- Comprising transport, communication and trade, banking insurance, computer software, public administration, defense and external trade.
- The CSO uses different methods like the Product Method, Income Method and Expenditure method for various sectors in the process of estimating the National Income.
- National Income may be calculated on current prices or at constant prices.
- Currently, the base year for measuring national income and per capita income at constant prices is 2004 - 05, introduced in Jan 2010.
- National Income does not include data from the following activities
  1. Income from illegal activities like smuggling, gambling etc.
  2. Income from work done without remuneration like domestic work by housewives.
  3. Black Money

#### What are the issues spotlighted by the recent estimates?

- For 2018-19, the overall growth of gross domestic product (GDP) has been pegged at 7 per cent compared to 7.2 per cent in the first advance estimates.



- But one of the most worrying aspects was the data on agriculture growth.
- Growth in gross value added (GVA) in the agriculture, forestry and fishing sector has decelerated from 5.1 per cent in the first quarter of the fiscal to 4.2 per cent in the second, and to just 2.7 per cent in the third.
- Even a year-on-year comparison looks poor, as agri-GVA grew by 5 per cent in Q3 of FY18.
- This is in tune with a largely middling performance by the agriculture sector in the past five years.

#### **What are the issues prevailing in agriculture sector?**

- Despite economic diversification, the fact is that almost half of India is still involved in the farm sector.
- Several state governments have declared massive farm loan waivers to reduce the discontent, but that is hardly a long-term solution.
- As the farm sector continues to struggle each passing quarter, there is considerable worry that the farm unrest could likely sustain.
- The other implication of this is the expected run rate for agriculture growth will keep climbing to achieve the government's goal of doubling farm incomes by 2022-23.
- The Expert Committee on Doubling Farmers' Incomes has stated that to achieve this target, agriculture growth rate would have to be 10.4 per cent per annum from a base period of 2015-16.
- Given the modest growth rates in agri-GDP so far, the actual growth rate required now is estimated to be closer to 15 per cent over the remaining four years.
- This is almost impossible, as the best five-year growth rate in the past 25 years has been 4.3 per cent in 2009-10 and 2013-14.
- The growth rate in the past five years has been significantly lower at 2.9 per cent.

#### **What are the pitfalls with government measures?**

- The experience of the recent past shows that even though farm output is increasing, farmers' income growth is nowhere near the level required to improve their living standards.
- Governments, both past and present, have resorted to knee-jerk reactions such as announcing farm loan waivers and higher minimum support prices, both are unsustainable and distort the market.
- The current government has in the interim Budget presented earlier this year unveiled a scheme of direct income transfers as well.
- In this, it has followed several state governments such as Telangana and Odisha. But there are question marks over its implications on the fisc at a time when none of the other subsidies has been touched.
- Union government must realize that traditional policies have failed to make farming remunerative.
- Distortions created due to interventionist and restrictive policies that depress producer prices below international market levels needs to be addressed.

#### **Quick Fact**

##### **Gross Value Added (GVA)**

- Gross value added (GVA) is an economic productivity metric that measures the contribution of a corporate subsidiary, company or municipality to an economy, producer, sector or region.
- Gross value added provides a dollar value for the amount of goods and services that have been produced in a country, minus the cost of all inputs and raw materials that are directly attributable to that production.
- GVA thus adjusts gross domestic product (GDP) by the impact of subsidies and taxes (tariffs) on products.
- $GVA = GDP + \text{Subsidies on products} - \text{Taxes on Products}$ .

## **10.2 Promoting Farmers' Producer Organisations**

### **What is the issue?**

There is a need to promote Farmers' producer organisations (FPOs) to raise farmers' income and alleviate economic distress in rural areas.

### What is an FPO?

- Farmers' Producer Organisation (FPO), also known as farmers' producer company (FPC), is an entity formed by primary producers.
- These include farmers, milk producers, fishermen, weavers, rural artisans, and craftsmen.
- An FPO can be a Producer Company, a Cooperative Society or any other legal form.
- FPOs are basically the hybrids of cooperatives and private companies.
- The participation, organisation and membership pattern of these companies are more or less similar to the cooperatives.
- But their day-to-day functioning and business models resemble those of the professionally-run private companies.
- The Companies Act was amended by incorporating Section-IX A in it to allow creation and registration of FPOs under it.

### Why are FPOs significant?

- FPOs play a significant role in enhancing the earnings of their member-farmers.
- Small producers do not have the large marketable surplus individually to get the benefit of economies of scale.
- So the main aim of an FPO is to ensure better income for the producers through an organization of their own.
- It provides for sharing of profits/benefits among the members.
- FPOs count has increased from less than 200 in 2010 to over 4,000 at present, speaking for the success of this agri-business model.
- As professionally-managed enterprises, working on behalf of the farmers, FPOs enjoy better bargaining power.
- They hence procure inputs and services and sell the farmers' output at best prices possible.
- They are also better equipped to facilitate value-addition of the farm produce.
- So they ensure higher returns in almost all fields of agriculture and its allied activities - horticulture, plantations, dairy, poultry, fisheries, etc.
- Even the landless, tribals and those subsisting on collections from the wilds have gained by forming such organisations.
- Union Budget 2018-19 made announcements on a five-year tax holiday and setting up of a small credit guarantee fund of Rs 100 crore as pro-FPO measures.

### What are the concerns?

- Many of the critical woes of this sector still remain unaddressed, including -
  - i. difficulties in securing institutional finance
  - ii. inability to operate in the regular agricultural markets
  - iii. lack of legal recognition under the contract farming regulations
- The banks are usually wary of granting loans to the FPOs as they do not have assets of their own to serve as collaterals.
- Consequently, the FPOs have to rely on loans from non-banking financial companies or micro-finance companies.
- They are forced to raise their working capital at very high interest rates.
- Even the facility of cheap bank loans with liberal interest subvention by the government that is available to individual farmers is denied to the FPOs.
- Moreover, many other concessions, tax exemptions, subsidies and benefits provided to cooperatives, startups and the like have not been extended to the FPOs.
- They also usually face difficulties in operating at the regulated mandis because of the resistance offered by the licensed traders.





- It's because these traders have significant hold over the markets.
- All these issues need to be addressed expeditiously to enable the FPOs to perform to their full potential for the benefit of the farmers.

## **11. SCIENCE & TECHNOLOGY**

### **11.1 Mission Shakti - Anti-Satellite Missile Test**

#### **Why in news?**

Indian PM announced that India had carried out a successful anti-satellite missile test (ASAT), Mission Shakti.

#### **What is an anti-satellite missile test?**

- ASAT is the technological capability to hit and destroy satellites in space through missiles launched from the ground.
- The first anti-satellite test (ASAT) was carried out by the US military way back in 1959. The then Soviet Union followed a year later.
- Thereafter, the two countries carried out a series of such tests up till early 1980s.
- After that there was a lull, broken only by the Chinese test in 2007.
- India became only the fourth country to carry out an anti-satellite missile test.
- Other countries which could have the capability, like Israel, have not shown an intention to test.

#### **What is the objective of ASATs?**

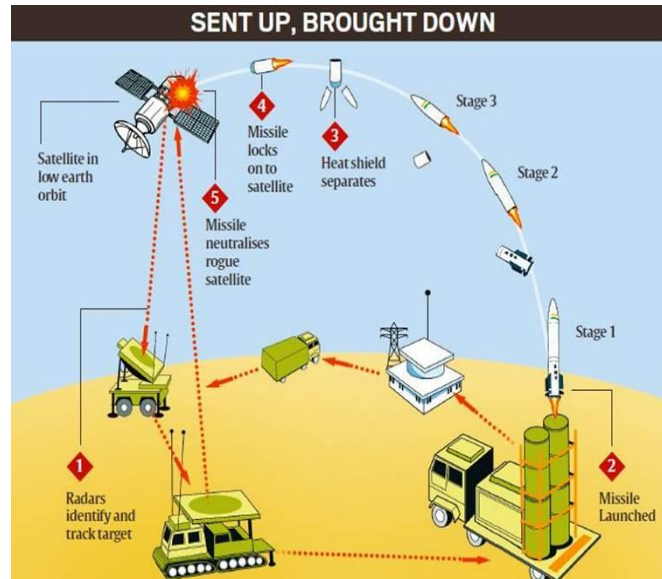
- The technology is aimed at destroying, if necessary, satellites owned by enemy countries.
- With large number of crucial applications being satellite-based, satellites are extremely critical infrastructure of any country these days.
- Some of them include navigation systems, communication networks, banking systems, weather forecasting, disaster management, and military applications.
- Destroying a satellite would render these applications useless.
- It can thus cripple enemy infrastructure without causing any threat to human lives.
- As per the norms, the test, however, can be carried out only on one's own satellite.

#### **What is Mission Shakti?**

- There are a large number of satellites currently in space, many of which have outlived their utility and orbiting aimlessly.
- One such satellite was chosen for India's present test.
- A missile was launched from the Dr A P J Abdul Kalam Island launch complex near Balasore in Odisha.
- It struck a predetermined target which was a redundant Indian satellite that was orbiting at a distance of 300 km from the Earth's surface.
- As per official sources, the satellite that had been knocked out was Microsat R, a micro-satellite launched by ISRO in January, 2019.

#### **What is the significance?**

- The mission has given India a unique and critical strategic capability that only three other countries in the world currently possess.
- India has shown that it is capable of bringing down a satellite, and disrupting communication.
- Much like in the case of nuclear weapons, the effectiveness of anti-satellite missiles depends on the deterrence it brings.
- But unlike the 1998 nuclear test of India, the anti-satellite missile test is not prohibited by any international law or treaty.



### What are the other ways of destroying satellites?

- In the last few years, countries have explored alternative options of making enemy satellites dysfunctional.
- These do not involve direct destruction of the target or creation of the debris.
- E.g. technologies have been developed to jam the communication from the satellites by interfering with its radio signals
- Another option is sending satellites that just approach a target close enough to deviate it from its selected orbit, without destroying it.
- China, Japan, Russia and the European Space Agency are learnt to be working on developing these 'close proximity' anti-satellite technologies.
- There is also a possibility of using of ground-based lasers to 'dazzle' the sensors of the satellites.
- This could make them at least "partially blind" so that they are unable to work efficiently.
- But none of these technologies is mature enough to be deployed or tested.

### Why is ASAT not widely used?

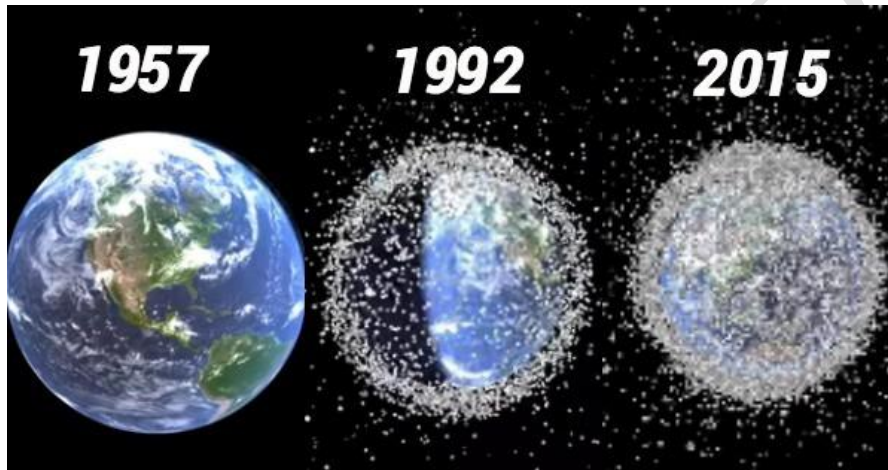
- ASAT requires very advanced capabilities in both space and missile technologies that not many countries possess.
- But more than that, destroying space infrastructure like satellites is also taboo in the international community, at least till now.
- Almost every country agrees that space must not be used for wars and has spoken against weaponisation of space.
- There are also international treaties governing the use of space, mandating that, it must only be exploited for peaceful purposes.

### What are the international agreements in place?

- The Outer Space Treaty of 1967 prohibits countries from placing into orbit around the Earth any objects carrying nuclear weapons or other weapons of mass destruction.
- India is a signatory to the Outer Space Treaty.
- The treaty also prohibits the stationing of such weapons on celestial bodies, like the moon, or in outer space.
- It mandates that outer space, and celestial bodies like the Moon, must only be used for peaceful purposes.
- There are at least four more multilateral treaties that deal with specific concepts agreed to in the Outer Space Treaty.
- But besides these, the problem of space debris is a key reason why countries resist from destroying each other's satellites.

### What is space debris?

- Anything launched into the space remains in space, almost forever, unless it is specifically brought down or it slowly disintegrates over decades or centuries.
- Satellites that are past their life and are no longer required also remain in space, orbiting aimlessly in some orbit.
- As per the recent Orbital Debris Quarterly News, published by NASA, there were 19,137 man-made objects in space that were large enough to be tracked.
- These included active and inactive satellites, rockets and their parts, and other small fragments.
- Besides these, there are millions of other smaller objects that have disintegrated from these and keep floating around in space.
- According to the European Space Agency, there were an estimated 7,50,000 objects of size one cm or above in space.
- In this context, a satellite that is destroyed by a missile disintegrates into small pieces, and adds to the space debris.



### How is space debris a threat?

- Space debris is one of the principal threats to satellites as they could collide with the operational satellites and render them dysfunctional.
- E.g. China carried out its first anti-satellite missile test in 2007, destroying its Fengyun-1C weather satellite.
- This created more than 2,300 large pieces of space debris, and an estimated 1.5 lakh pieces of objects that were larger than 1 cm in size.
- Each of them could render a satellite useless on collision, and the debris damaged a functional Russian satellite.
- Debris also came close to hitting the International Space Station.
- Countries are launching more and more satellites, with each of them being a strategic or commercial asset.
- So avoiding collisions could become a challenge in the future for all.

### Why is Mission Shakti safe?

- None of the international treaty or agreements technically prohibits the kind of test that India presently carried.
- By government statement, the Indian test was done in the lower atmosphere to ensure that there was no space debris.
- So whatever debris that is generated will decay and fall back on to the earth within weeks.



## 12. ENVIRONMENT

### 12.1 Decline in Diesel Vehicles - Assessment of Challenges and Options

#### What is the issue?

- Across the world, the popularity of diesel as a powertrain for passenger vehicles is on the decline.
- The government and auto makers in India should work together to ensure a smooth transition to other options.

#### What are the recent developments?

- Europe, diesel vehicles' biggest market (53% of all cars sold is powered by diesel), is fast giving up on diesel.
- France, where diesel cars account for 70% of its overall fleet, saw more petrol cars being sold in 2017.
- In Germany, the share of diesel cars fell from 48% in 2012 to 33% in 2018.

#### How is diesel use in India?

- India's love for diesel powertrains peaked in 2012-13.
- That was a time when diesel cars accounted for 47% of all passenger vehicles sold in the country.
- The trend was driven more by cheaper diesel prices than other reasons, as it was lower than petrol by as much as Rs. 25 per litre.
- However, government de-controlled diesel prices in 2014.
- As the price differential between diesel and petrol narrowed, the preferences changed.
- Today, only 23% of the cars sold have diesel powertrains.

#### How have the emission norms evolved?

- Globally, the initial stages of emission norms focussed on carbon-di-oxide emission. E.g. Euro-I to Euro-IV emission norms
- So diesel engines performed well on this account as they emitted lower CO<sub>2</sub>.
- Diesel cars were increasingly promoted in most European countries with incentives.
- As emission norms evolved, it became clear that particulate matter (PM) and Oxides of Nitrogen (NO<sub>x</sub>) were equally dangerous.
- Notably, diesel engines emit higher levels of PM and Nox than petrol engines.
- So Euro-V norms were introduced in 2010 focussing on reducing PM, and Euro-VI norms came into force in 2015 targeting NO<sub>x</sub>.

#### What is the challenge now?

- Indian government too has decided to shift from BS-IV to BS-VI emission norms from April 2020. Click [here](#) to know more.
- This will directly impact diesel engines the hardest.
- The manufacturers have to tackle both PM and NO<sub>x</sub> in one go, with a complex exhaust system.
- This will lead to cost escalation of up to Rs. 1.50 lakh depending on the size of the engine.
- Resultantly, only costly SUVs will be able to absorb this cost and less-expensive, small, compact and entry level diesel versions will be out of the market.
- Manufacturers who have set up large diesel engine capacity will have to compensate for fall in domestic demand by pushing exports.

#### Is shifting to petrol feasible?

- Shifting to petrol powertrains will have another challenge for the manufacturers, which is the CAFE norms.
- The CAFE (Corporate Average Fuel Efficiency) norms came into force from April 2017.

- It requires cars to be 10% or more fuel efficient between 2017 and 2021, and 30% or more fuel efficient from 2022, in terms of CO<sub>2</sub> emission.
- The move is targeted at reducing the carbon footprint of the automobile industry.
- Diesel cars had been helping manufacturers meet these norms.
- But the shift to petrol would increase the CO<sub>2</sub> emission and the manufacturers would have to produce more fuel efficient petrol cars or electric/hybrid vehicles.

### What lies before India?

- India will have to promote electrification and hybridisation more seriously.
- Its vision of 100% electrification of passenger vehicle sales by 2030 may be aspirational but achieving even a third of that target necessitates a massive change.
- As, in India where bulk of the cars sold is small cars, the cost of electrification may just not work out.
- Though battery costs have come down substantially over the years, it is still not low enough by Indian standards.
- Government should move forward with the Faster Adoption and Manufacturing of Electric Vehicles (FAME)-2 norms.
- This should incentivise the manufacturer rather than the buyer.
- For goods movement, the only option is to reduce the share of road transportation and to focus on coastal shipping and inland waterways.

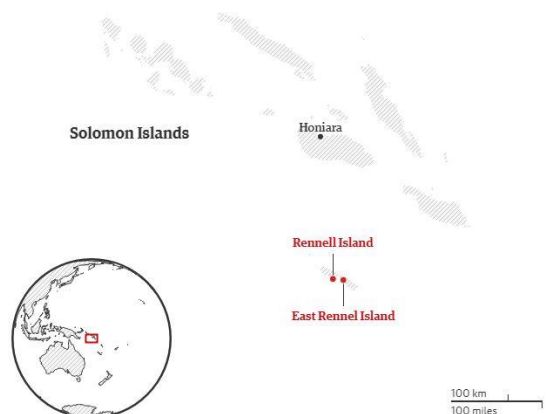
## 12.2 Oil Spill Disaster in Solomon Islands

### Why in news?

Major oil spill from a 700 ton cargo ship in Solomon Islands is threatening the environment and biodiversity of the region.

### What is the significance of Solomon Islands?

- Solomon Islands is a sovereign state consisting of six major islands and over 900 smaller islands in Oceania lying to the east of Papua New Guinea.
- The country takes its name from the Solomon Islands archipelago, which is a collection of Melanesian islands that also includes the North Solomon Islands (part of Papua New Guinea), but excludes outlying islands, such as Rennell and Bellona, and the Santa Cruz Islands.
- The Island is environmentally sensitive and culturally important geography which is home to a protected UNESCO World Heritage Site.
- The East Rennell Island which is the largest raised coral atoll in the world, according to UNESCO.



### How the recent accident impacts the region?

- A bulk carrier with 700 tons of oil met with in Cyclone Oma, and spilled the oil in a part of Solomon Island.
- The ship was carrying bauxite meant for producing aluminum when it met with the accident on Solomon Islands' Rennell Island, gradually coughing out oil into the waters.
- Environmentalists fear whether the spill would endanger the coral atoll, the calamity has also affected human activity in the region.
- The spill from the ship is now threatening life, work and environment of the island.

### What are the concerns in addressing oil spills?

- In regard to the recent accident the oil carrier has a Hong Kong registration and is owned by an Indonesian mining company.



- Bintan Solomon Islands, the mining company that owned the oil, says it is not supposed to bear any responsibility for the spill.
- It is just a charter and has no liability for the shipping running aground, thus no one is ready to take the blame for a disaster
- In this case, international agencies and even governments that volunteered to help clean up the mess said they were disappointed by the response from those directly responsible for the spill.
- Earlier experiences with the world's worst oil spills, also shows that those who were directly responsible have managed to dilute their responsibilities.

#### **What is the way forward?**

- Environmentalists and legal experts want a global watchdog to deal with spills.
- There are also demands for a contingency fund to compensate the victims and help in clean-up missions.
- Strict guidelines to shipping companies to share (with their clients) the blame and swift international legal processes irrespective of the geography of the accidents needs to be formulated.
- Oil companies and their logistics partners must understand the world cannot afford oils leaks whose impacts on precious marine life and other organisms are very difficult to be ascertained.

### **12.3 Enhancing Accessibility of Rooftop Solar Program**

#### **Why in news?**

Cabinet Committee on Economic Affairs approved phase 2 of the grid-connected rooftop solar programme.

#### **What is Grid-Connected Rooftop solar programme about?**

- The Grid connected rooftop solar programme is implemented by the Ministry of New and Renewable Energy, with a focus on the residential sector.
- The development objective of the Grid-Connected Rooftop Solar Program Project for India is to increase installed capacity of grid-connected rooftop solar photovoltaic (GRPV) and to strengthen the capacity of relevant institutions for GRPV.
- The program environmental objective (PEO) is to achieve reductions in greenhouse gas (GHG) emissions through the displacement of thermal energy with solar energy.
- The operation supports the government's rooftop solar PV program.

#### **What are the challenges in rooftop solar programme?**

- India has set an ambitious target of achieving 40 GW of rooftop solar capacity by 2022.
- However, while there has been progress on rooftop solar installations among industries and commercial consumers, the uptake among residential consumers has been slow.
- Enthusiasm for rooftop solar energy largely comes from those with higher disposable incomes and who live in their own houses.
- In India electricity utilities are not very supportive of consumers generating their own power, as this would impact their revenues.
- Urban residential electricity consumers are still hesitant to consider rooftop solar power for their homes, due to lack of information.
- For residential urban consumers, one of the key barriers to installing rooftop solar systems is that they do not know who to contact to understand the processes to be followed and permissions required.
- There is no single source to access information, evaluate benefits and disadvantages, and examine if any government support (such as a financial subsidy) is available.
- Most of the technical information provided by various sources, including the government, tends to be Internet-based.
- Instead of internet sources a significant majority of consumers seek face-to-face discussions and recommendations from friends and family.

### What measures needs to be taken?

- **Awareness** -Objective information must be put out through various avenues, so that it is accessible to all segments of the population and in local languages.
- Information must be made easily available to the consumers on the amount of shadow-free roof area needed for generating a unit of electricity and pricing; operating the system, after-sales maintenance and support; and reliable rooftop solar vendors.
- **Skill Development** -The local electricity linesmen, electricity inspectors, and other nodal officials in the electricity department also have key roles to play.
- Building their capacities to disseminate such information and handle consumer queries and concerns, and providing basic training in billing and metering for solar power can go a long way in improving consumers' experience.
- **Capacity Building** - Information kiosks can be set up in public institutions like banks to offer information on the technology, as well as on practical issues such as guidance on selecting vendors.
- Consumer rights groups, rooftop solar system vendors, and resident welfare associations (RWAs) in larger cities are beginning to organize campaigns and workshops to generate awareness and create a dialogue with consumers.
- However, awareness building sessions need to be socially inclusive and should take place during periods when consumers are likely to be at home.
- The uptake of rooftop solar across economic categories is also contingent on policies that make it more accessible and affordable.











### 12.4 World Air Quality Report 2018

#### Why in news?

'IQAir AirVisual 2018 World Air Quality Report' was recently published by NGO Greenpeace and IQ Air Visual.

#### What are the highlights?

- The report was a compilation of air quality data from public and private monitoring sources.
- It asserted that 7 of the world's top 10 cities with the worst air quality in 2018 are in India.
- 15 of the 20 cities worldwide ranked the worst on air pollution metrics are in India.
- Gurugram, which borders Delhi, was identified as the city with the worst air quality in the world in 2018.
- It has an annual average concentration of pollutant PM 2.5 at 135.8 micrograms per cubic meter (ug/m3).
- It is however an improvement as compared to 145.6 ug/m3 in 2017 in Gurugram.
- Gurugram was followed by Ghaziabad at the second position with an annual average concentration of 135.2 ug/m3 in 2018.
- The position for number four was held by Faridabad, followed by Bhiwadi and Noida.
- Noida at position six on the list was succeeded by Patna followed by Lucknow with an annual average concentration of 115.7 ug/m3.
- Delhi continues to be extremely hazardous city to live in, with annual average fine particulate matter (PM2.5) of 113.5 ug/m3.
- **Permissible limits** - The National Ambient Air Quality Standards define the permissible limit for the concentration of PM 2.5 at 40 ug/m3.
- On the other hand, the World Health Organisation (WHO) defines the same at 10 ug/m3.

Rank	City	2017 AVG	2018 AVG
1	 Gurugram, India	145.6	135.8
2	 Ghaziabad, India	144.6	135.2
3	 Faisalabad, Pakistan	-	130.4
4	 Faridabad, India	123	129.1
5	 Bhiwadi, India	-	125.4
6	 Noida, India	134	123.6
7	 Patna, India	118.5	119.7
8	 Hotan, China	91.9	116
9	 Lucknow, India	119.2	115.7
10	 Lahore, Pakistan	133.2	114.9

### What do other insights show?

- The Ministry of Heavy Industries and Public Enterprises commissioned a study recently on the factors of pollution in Delhi.
- In Delhi, dusty sources such as roads, construction sites and bare soil add about 42% of the coarse particulate matter (PM10) in summer, and 31% in winter.
- Similarly, PM10 from transport varied between 15% and 18% across seasons.
- Vehicles contribute 18-23% of PM2.5 which is a more unhealthy particulate that penetrates the lungs.
- Biomass burning was estimated to make up 15-22% and dusty sources 34% of PM2.5 during summer.
- These insights provide a road map for action; the Delhi government has done well to decide on inducting 1,000 electric buses.

### What are the shortfalls?

- Despite multiple reports putting air quality standards across India at 'hazardous' levels, little or nothing is being done either by the centre or the states.
- The monitoring of air quality in real time across cities and towns in India is far from adequate or uniform.
- The National Clean Air Programme was recently launched for 102 cities and towns, including the capital.
- It talks only of long-term benefits of air pollution mitigation programmes beyond 2024, and not a dramatic reduction in near-term pollution.

### What should be done?

- An annual target for reduction has to be set to make governments accountable.
- Achieving this requires the political will to reform key sectors such as the transport, biomass and construction.
- A transition to electric vehicles for all commercial applications, with funding from the Centre's programme for adoption of EVs should be a priority in cities.
- Cutting nitrogen and sulphur emissions from industrial processes needs a time-bound programme supervised by the Environment Ministry.
- It is crucial at this point to ensure that India's future generations are not confined to cities which double up as gas chambers.

## 12.5 Global Environment Outlook Report - UNEP

### Why in news?

The sixth edition of the Global Environment Outlook (GEO-6) from the UN Environment Programme (UNEP) on the theme "Healthy Planet, Healthy People" was released recently.

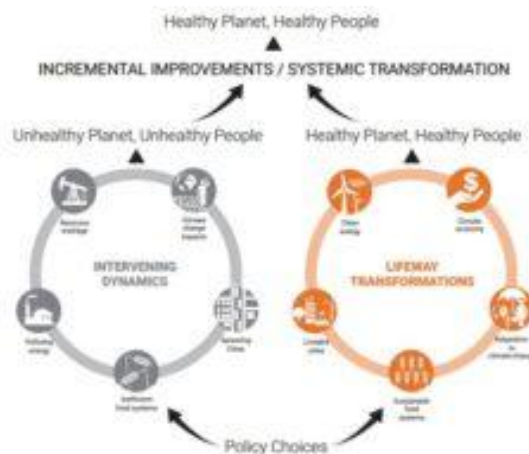
### What is the report for?

- World leaders came up with the Paris climate deal in 2015, with promised actions to cut emissions, to limit global temperature rises to 1.5 °C.
- But the health impacts of pollution, deforestation and the mechanised food-chain are less well understood.
- There is also no international agreement for the environment, similar to what the Paris accord does for the climate.
- The GEO thus partly addresses this gap by bringing the attention of world nations to the impact of environmental problems on humans.

### What are the report highlights?

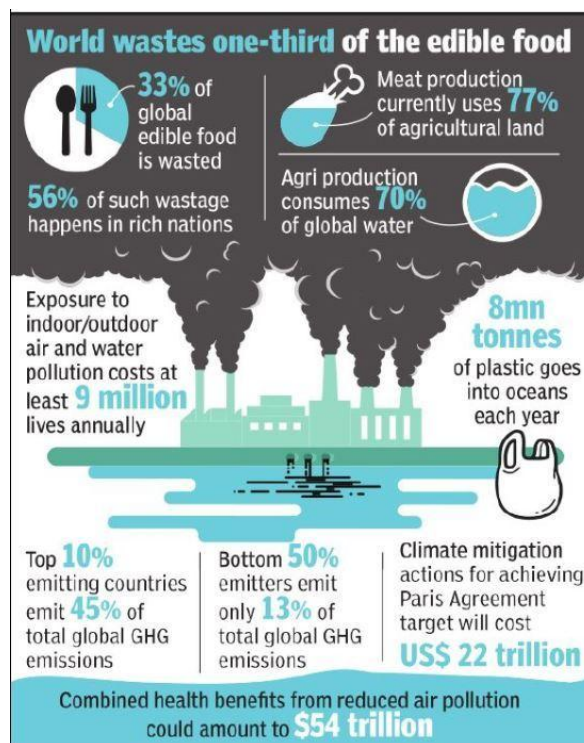
- **Premature deaths** - A quarter of all premature deaths and diseases worldwide are due to manmade pollution and environmental damage.
- The report notes on deadly smog-including emissions, chemicals polluting drinking water, and the destruction of ecosystems crucial to the livelihoods of many.
- These are driving a worldwide epidemic that hampers the global economy.

- **Inequality** - The GEO depicts a widening gap between rich and poor countries.
- The top 10% of populations globally, in terms of wealth, are responsible for 45% of GHG emissions, and the bottom 50% for only 13%.
- Pollution impacts are, however, borne more by the poorer citizens.
- Rampant overconsumption, pollution and food waste in the developed world leads to hunger, poverty and diseases elsewhere.
- **Health** - Poor environmental conditions cause approximately 25% of global disease and mortality, with around 9 million deaths in 2015 alone.
- Nearly 1.4 million people die each year from preventable diseases with lack of access to clean drinking supplies.
- E.g. diarrhoea and parasites linked to pathogen-riddled water and poor sanitation
- Air pollution alone causes 6-7 million early deaths annually.
- Chemicals pumped into the seas cause "potentially multi-generational" adverse health effects.
- Land degradation through mega-farming and deforestation occurs in areas of Earth which are home to 3.2 billion people.
- Unchecked use of antibiotics in food production will result in drug-resistant superbugs becoming the world's number one cause of premature death by mid-century.



### What does it call for?

- **Economy** - Urgent action at an unprecedented scale is necessary to arrest and reverse the present environment situation.
- There is an urgent need for retooling of the global economy to more sustainable production lines.
- Without this, GDP growth may become meaningless against the cost of lost lives, work hours and associated treatment expenses.
- **Human behaviour** - The world is unsustainably extracting resources and producing unmanageable quantities of waste.
- The report thus called for a root-and-branch detoxifying of human behaviour.
- E.g. By 2050, the world will likely have to feed 10 billion people, but that does not mean that the production has to be doubled.
- The world currently throws away a third of all food produced; this is driven by 56% of food in richer nations going to waste.
- So food waste, which also accounts for 9% of global greenhouse gas emissions, could be slashed.
- The report also advises adopting less-meat intensive diets.
- The report also called for a rapid drawdown in greenhouse gas emissions and pesticide use to improve air and water quality.







### What lies ahead?

- The GEO was unveiled at the UN Environment Assembly in Nairobi, Kenya.
- It is likely to add to the debate over who bears the greatest responsibility for the damage already borne by Earth.
- Some developed nations, led by the United States, had threatened not to "welcome" the GEO report.
- This is a procedural but nonetheless significant hurdle, for the nations to agree on the necessary cuts in waste, overconsumption and pollution.

### 12.6 NGT Order on Noise Pollution

#### Why in news?

The National Green Tribunal (NGT) has directed the Central Pollution Control Board (CPCB) to prepare a noise pollution map and remedial action plan.

#### What are the provisions in place?

- Legal provisions to prosecute the noisemakers already exist.
- Section 2 (a) of the Air (Prevention and Control of Pollution) Act, 1981, includes noise in the definition of pollutants.
- Also, noise pollution control rules were framed in 2000 under the amended and updated Environment Protection Act, 1996.
- It specifies the ambient standards for different places in respect of permissible noise.
- But unfortunately, these have remained only on paper.
- Though noise monitoring mechanisms were established in a few cities, these were hardly ever put to any gainful use.

#### What has the NGT directed?

- The NGT has asked the CPCB to categorise cities on the basis of their noise profile and identify the noisy hotspots.
- The CPCB has also been asked to propose remedial plans for the noise pollution, within 3 months.
- NGT has also called upon police departments in all states to procure sound monitoring devices.
- They are also directed to assist the pollution control authorities in their efforts to mitigate noise pollution.
- Manufacturers of public address systems and sound amplification equipment should provide inbuilt noise meters and data loggers in their products.
- This would help regulators to establish violation and fix responsibility.

#### What are the risks with noise pollution?

- Prolonged exposure to any sound louder than 80 decibels, even if it is music, can impair hearing, breathing and thinking processes.
- Besides this, it also affects overall human health and productivity.
- Noise beyond 120 decibels can cause biochemical changes in human bodies.
- It would raise cholesterol and blood pressure, with the associated health risks.
- According to the WHO, hearing loss due to excessive noise cost \$750 million to the global economy every year.

#### What are the sources?

- Like environmental pollution, noise pollution, too, is the outcome of human activities.
- Industrialisation, urbanisation and modern lifestyle, all contribute to noise pollution.
- Factories, airports, railway stations and busy roads usually have noise levels much above the safe standards.





- Indiscriminate honking with pressure horns, excessively loud music systems in cars, homes, dance bars and other public joints are also the causes.
- Use of loudspeakers at full volume at religious, social and political gatherings worsens this menace.

#### **What lies ahead?**

- Unlike air and water pollution that receive attention and even have some corrective action, noise pollution largely remains unaddressed.
- Given the diversity of noise pollution, only multifaceted, yet situation-specific approach can work.
- The strategies have to include measures ranging from awareness creation to punitive action.
- Religious bodies should be sensitised about the ill-effects of the loud sound to get them to change the noise-generating customs.
- [Thiruvananthapuram, Kerala makes prior permission obligatory for setting up public sound systems.
- It also bars placement of loudspeakers beyond 300 metres from the venues of religious, social or political events.]
- The youth, who face the greatest risk of irretrievable hearing damage from personal music systems, also need to be targeted specifically.
- Most importantly, pollution control bodies need to treat noise pollution on par with other kinds of pollution.

### **12.7 Climate Change and India's Nutritional Security**

#### **What is the issue?**

- Climate change and global warming are increasingly posing risks to India's food and nutritional security.
- This requires urgent prioritisation, strong political will and dedicated resources for sustainable and public health friendly measures.

#### **What is the looming threat?**

- The Intergovernmental Panel on Climate Change shared that human activities have led to a 1°C (0.8°C to 1.2°C) rise in temperatures above pre-industrial levels.
- This will reach 1.5°C between 2030 and 2052, if it continues to increase at the current rate.
- The atmospheric concentrations of carbon dioxide (the primary greenhouse gas) have risen to 410 parts per million (ppm) from about 280 ppm in pre-industrial times.
- The World Health Organisation estimated that approximately 250,000 deaths annually between 2030 and 2050 could be due to climate change.
- Several reports confirm that the poorest people, already suffering from the highest rates of under-nutrition, will be the most vulnerable to climate change.

#### **How vulnerable is India?**

- **Agriculture** - Indian agriculture, and thereby India's food production, is highly vulnerable to climate change.
- This is largely because the sector continues to be highly sensitive to monsoon variability.
- About 65% of India's cropped area is rain-fed.
- **Nutrition** - India already is one of the top rankers in multiple forms of malnutrition globally.
- There are multiple reasons contributing to poor nutritional status of India's population.
- They range from food scarcity to food excess (unhealthy), increased consumption of refined cereals, simple sugars and salt, etc.
- However, adverse variables like climate change, pollution, etc, added to this scenario can further worsen the public health nutrition (PHN) indices.
- With only about one in 10 children getting adequate nutrition, India at least ought to keep other potentially influential variables favourable.



### How serious is nutrition and climate change link?

- India already depends a lot on imports for fulfilling nutritional needs of the population.
- With the ensuing climate change, the access to safe and nutritious food, and affordability, is bound to be impacted severely.
- Under-nutrition (increased nutrient demands and reduced nutrient absorption) can be exacerbated by the effects of climate change.
- Suboptimal diet (micronutrient deficiencies and overall poor nutritional status) during vulnerable stages (e.g. pregnancy lactation) may have adverse repercussions for several generations.
- The onset of risk factors for non-communicable diseases (hypertension, diabetes, cardiovascular problems, etc) is faster and earlier in people with nutrient deficiencies.
- The EAT-Lancet Commission's food advisory recommends consumption of fruits and vegetables rather than meat for preserving own health and nature.
- But evidently, environmental changes reduce yields of starchy staple crops and alter nutrient composition of fruits, vegetables and legumes.
- This is a serious issue in a country like India with micronutrient and protein deficiency in more than half of its population.
- Furthermore, various other factors negatively affect vegetable and legume yields, which are -
  - i. absence of adaptation strategies
  - ii. increasing ambient temperature in (sub)tropical areas
  - iii. tropospheric ozone
  - iv. water salinity and decreasing water availability
- Also, the increasing level of carbon dioxide is implicated in "dilution effect" resulting in lesser vitamins and minerals per unit of yield.

### What should be done?

- Funding needs to be earmarked for designing, rolling out modern climate change-resistant infrastructure and technology.
- Early warning systems are needed for farmers to produce sufficient food and traders to adequately store food in the face of extreme weather events.
- More sustainable, resilient and efficient ways of producing, trading, distributing and consuming diversified agricultural food products should be adopted.
- Involving food technologists to devise food storage and processing practices to reduce climate-related food safety concerns can help.
- These strategies can also support reducing food waste.
- Building and strengthening the capacity of public health professionals and allied forces, increasing the number of healthcare facilities/staff could help.
- Academic and research capacity need to be augmented.
- Integrated curricula drawing upon best practices from agriculture, public health, nutrition, transport and environment is essential to prepare qualified interdisciplinary workforce.
- Investment in social protection schemes and livelihood security mechanisms can significantly tackle malnutrition and build resilience.
- The cross-sectoral nature of nutrition, adverse impact of climate change, and the interaction between these two calls for increased policy coherence.
- India's recently launched National Nutrition Mission or the POSHAN Abhiyaan is an ideal way to start advocating for PHN in an environment-friendly manner.



## 12.8 Towards Water Security

### What is the issue?

- The World Water Day is being observed on March 22.
- In this backdrop, here is an assessment of water situation in the world and in India, and necessary measures to deal with it.

### How is the share of water bodies declining?

- Most of the world's water systems that keep the ecosystems thriving and feed a growing human population are under severe stress.
- Ramsar Convention on Wetlands brought out the Global Wetland Outlook: State of World's Wetlands and their Services to People (2018) report.
- It makes an alarming observation that up to 87% of the global wetland resource has been lost since 1700.
- The analysis of satellite data of NASA underlines that half of the earth's 37 largest aquifers are declining too fast to be replenished.

### How does it compare with water demand?

- The UN in its World Water Development Report 2018 notes that the global water use has increased by a factor of 6 over the past 100 years.
- It continues to grow at a rate of 1% per year.
- Competitive demand for water from various sectors has resulted in water scarcity that is affecting almost every part of the world.
- A latest report of World Bank has underlined that the Ganga River Basin could see drinking water shortage go up by as much as 39% in some States by 2040.
- Another WB report highlights that countries that lack a sufficient amount of water could see their GDPs decline by as much as 6% by 2050.
- Over two-third of the global population lives with severe water scarcity for at least one month every year, nearly half of whom live in India and China.

### What is the case with India?

- In India, the annual per capita availability of water continues to decline sharply from about 5000 cubic metres in 1951 to about 1,700 cubic metres in 2019.
- The NITI Aayog in its report on Composite Water Management Index (2018) notes that -
  - i. currently 600 million people face high to extreme water stress
  - ii. about 2 lakh die every year due to inadequate access to safe water
  - iii. about three-fourths of the household do not get drinking water at their premise
  - iv. about 70% of water is contaminated
- Moreover, the rate of groundwater extraction is so severe in India.
- NASA's findings suggest that India's water table is declining alarmingly at a rate of about 0.3 metres per year.
- At this rate of depletion, India will have only 22% of the present daily per capita water available in 2050.
- This could possibly force the country to import water for meeting the demands.

### Why are large irrigation structures unfeasible any more?

- Dams do serve the purpose of supplying water for irrigation and drinking.
- However, the potential available for construction of new big dams is fast declining.
- The total irrigation potential has increased from 22.6 million hectares during the pre-Plan period to about 113 million hectares now.
- About 81% of India's ultimate irrigation potential, estimated at 140 million hectares, has already been created.



- So the scope for further expansion of irrigation infrastructure on a large scale is limited.
- Besides, dams in India have the capacity to store only about 30 days of rainfall, compared with 900 days in major river basins in arid areas of developed countries.
- Also, constructing major irrigation projects will require huge cost in future than in the past.

#### **How significant are small water bodies?**

- Small water bodies (mainly tanks) are less capital-intensive, user-friendly with fewer environmental problems.
- They significantly augment groundwater resources through sub-surface recharge.
- Most small water bodies have been encroached and subject to centuries of neglect and mismanagement.
- The Standing Committee on Water Resources highlighted that out of 5.56 lakh tanks in the country, only 4.71 lakh tanks are in use.
- The state of Tamil Nadu alone has a total of about 41,127 tanks, most of which are in bad shape today because of poor maintenance.

#### **What is the way forward?**

- **Small water bodies** - Predictably, there will be fewer rainy days in the future but it would rain heavily in those days.
- Therefore, it is essential to renovate and restore the capacity of small water bodies to have decentralised water distribution system.
- Corrective measures are crucial not only in the areas of storage, but also in efficiency in managing supply, demand and use.
- **Agriculture** - The agricultural sector consumes over 85% of the available water today in India, and improved efficiency can save much water.
- Shifting cropping pattern from water-intensive to less water consuming crops can save significant amount of water.
- Micro-irrigation method (drip and sprinkler) of rice cultivation will enhance water use efficiency with increased crop productivity.
- **Rainwater harvesting** is one of the cheapest and easiest ways of augmenting water stock.
- Investing and promoting water-recycling technologies and storm water capturing schemes should also be given utmost emphasis.
- The proposed water conservation fee on groundwater extraction is a right step in the direction of regulating water use.

## **13. INTERNAL SECURITY**

### **13.1 Official Secrets Act - Rafale Deal Case**

#### **What is the issue?**

With debate over 'stolen documents' in Rafale case, it is imperative to understand the Official Secrets Act (OSA).

#### **What are the key features of OSA?**

- The secrecy law broadly deals with two aspects:
  1. spying or espionage, which is dealt with in Section 3 of the Act
  2. disclosure of other secret information of the government, which is dealt with in Section 5
- The secret information can be any official code, password, sketch, plan, model, article, note, document or information.
- Under Section 5, both the person communicating the information, and the person receiving the information, can be punished by the prosecuting agency.

### How did the Act evolve?

- The Official Secrets Act (OSA) has its roots in the British colonial era.
- Its predecessor law, The Indian Official Secrets Act, 1904 was enacted during the time of Lord Curzon, Viceroy of India from 1899 to 1905.
- It was an amended and more stringent version of The Indian Official Secrets Act (Act XIV) of 1889.
- The latter was brought in at a time when a large number of powerful newspapers had emerged in several languages across India, and editors -
  - i. opposed the British Raj's policies on a daily basis
  - ii. built political consciousness among the people
  - iii. faced police crackdowns and prison terms to uphold their mission and convictions
- So one of the main purposes of the Act was to suppress the voice of nationalist publications.
- In 1923, the Indian Official Secrets Act (Act No XIX of 1923) replaced the earlier Act.
- This was extended to all matters of secrecy and confidentiality in governance in the country.

### What are the notable convictions so far?

- The most recent conviction under the Official Secrets Act came in 2018.
- The Delhi court held former diplomat Madhuri Gupta, who had served at the Indian High Commission in Islamabad, guilty under the OSA.
- She was sentenced to 3 years in jail for passing on sensitive information to Pakistan's ISI.
- In 2002, the then Kashmir Times journalist Iftikhar Gilani was arrested and charged under the OSA.
- The case was in relation with allegedly possessing secret documents relating to the deployment of troops in the Valley. The state later withdrew the case.
- In 2017, journalist Poonam Agrawal was charged under OSA for conducting a sting operation on an Army official who criticised the sahayak system in the Army.

### What had the contention been?

- As the classification of secret information is so broad, it is largely in direct conflict with the Right to Information Act.
- Moreover, examining the process of decision-making in a government involves looking for information, and documents.
- Records which are meant to be confidential are sometimes significant in bringing illegalities to public attention.
- This was true in the 1980s of irregularities in Bofors defence deal.
- More recently, in 2016, the Panama Papers involved the painstaking unveiling of offshore transactions in tax havens.
- This, significantly, resulted in hundreds of crores of undeclared assets being traced by the government.
- But in every other instance, the Official Secrets Act hampers the process.

### What is the recent case?

- The recent case is in relation to the alleged irregularities in the Rafale aircraft deal between India and France, which was published in 'The Hindu' Newspaper.
- The Attorney General raised an objection in court seeking dismissal of the review petitions.
- This was on the ground that the reports cited documents "stolen" from the defence ministry.
- In other words, the Official Secrets Act was used as a shield against allegations of wrongdoing in the Rafale deal.



### What is the Court's observation?

- The court questioned that if there was a corruption complaint, was it to be protected under national security.
- Certainly, the Court held that the Act did not offer the liberty to commit corruption.
- The Court dismissed targeting the messenger and criminalising the whistleblower under the cover of “national security” or “stability” of government or “official secrecy”.
- It called it an attack on the freedom of expression and the people’s right to know.
- Undoubtedly, the OSA in a democracy needs constant contest, and the need for official secrecy has to be weighed against the citizen’s right to know.
- The right to freedom of speech and expression, and information should be prioritised over the archaic Official Secrets Act.
- Notably, the apex Court has increasingly expanded the protections to whistleblowers, to ensure that those who expose corruption and wrongdoing are not vulnerable to any intimidation.

## PRELIM BITS

### HISTORY AND ART & CULTURE

#### Massive Harappan Burial Site

- A massive burial site of Harappan civilization has been found near Dholavira, Kutch district in Gujarat.
- It is for the first time rectangular graves are found in Gujarat, so far only semi-circular and circular graves have been unearthed in Gujarat.
- The rectangular graves each of varying dimensions contained skeletons that were oriented east-west with the heads positioned on the eastern side.
- The presence of animal skeletons along with those of humans were also recorded in a few graves.
- Instances of primary burial and secondary burial (when the remains of the primary burial are exhumed and moved to another grave) were found.
- The remains of those who were possibly cremated were also found in a few graves.

#### Conservation of Manuscripts

- A Bengaluru-based not-for-profit organization has procured a highly advanced multispectral imaging technology to preserve the vulnerable manuscripts in India.
- The technology is used to preserve the manuscripts by capturing their images.
- Multispectral imaging can capture texts in manuscripts that are affected by pests, fungus, over written, scribbled, blackened or scraped and cannot be seen with bare eyes.
- It uses infrared rays and ultraviolet rays to retrieve texts.
- The time span of the texts captured in images are enhanced by a patented technology called the wafer fiche.
- Using photo lithography technology, the images are imprinted on silicon wafers.
- These imprinted copies can last for thousands of years.

#### CYCLONE VERSUS TORNADO

CYCLONE	TORNADO
Cyclone is a large-scale air mass that circulates around a center of low atmospheric pressure	Tornado is a rotating column of air accompanied by a funnel-shaped cloud that progresses in a narrow path over the land
Purely oceanic phenomena	Primarily over-land phenomena
Measured by Beaufort scale and Saffir-Simpson scale	Measured by Fujita, Enhanced Fujita and TORRO scale
Can stretch over several hundred miles	Relatively small when compared to cyclones, but the damage may be extensive

#### Neolithic Humans

- The Neolithic era from 6,000 B.C. to 2,100 B.C. was when wheat and barley-based farming took root and animals such as goats, sheep and cows were domesticated.

- Man, before the Neolithic era, used his teeth quickly to chew the products of his hunting and gathering.
- Starting in the Neolithic era, hunter-gatherers learned techniques to process food which lead to a softer diet and lesser action of jaws.
- Recent study on neo-lithic humans indicates that language is not merely a random product of history but was also linked to biological changes at the time.

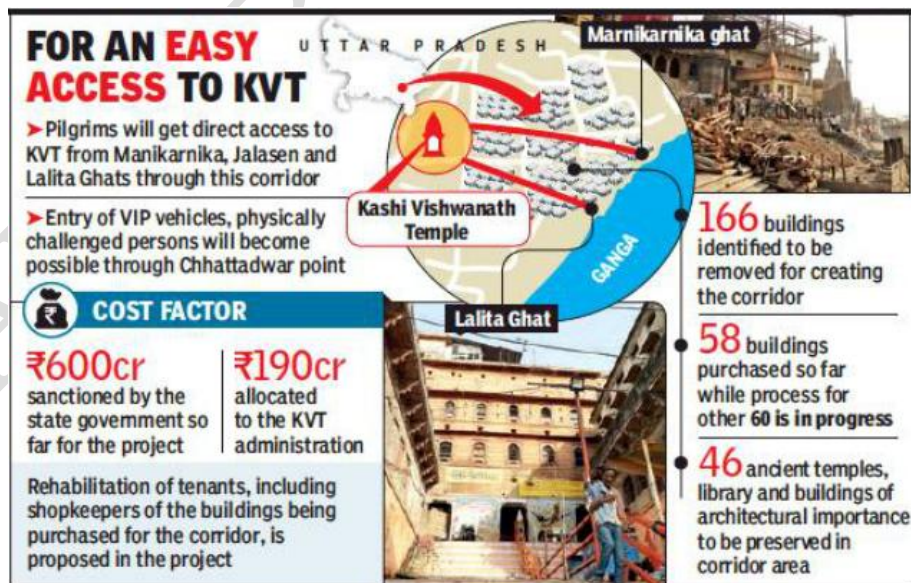
### ShardaPeeth Corridor

- Recently Pakistan has given its green signal for ShardaPeeth corridor.
- When opened it will be the second religious tract after Kartarpur corridor in Pakistan-controlled territory that will connect the two neighbouring nations.
- SharadaPeeth temple is revered by Kashmiri Pandits among other Hindus across the globe as it is believed to be one of the 18 Maha Shakti Peethas, or a “Grand Shakti Peethas”.
- It is considered to be the abode of Hindu Goddess Saraswati and it was built during the rule of Kushans (early 1st century).



### Kashi Vishwanath Corridor

- Kashi Vishwanath Temple is one of the most famous Hindu temples dedicated to Lord Shiva, It is located in Varanasi.
- The temple stands on the western bank of the holy river Ganga, and is one of the twelve Jyotirlingas.
- Recently Kashi Vishwanath corridor project has been inaugurated by union government which envisions a massive makeover of the holy shrine and its surrounding areas.
- The proposed 50-foot corridor will directly connect Ganga’s Manikarnika and LalitaGhat to the Kashi Vishwanath Jyotirlinga Temple.
- This massive makeover is the first after the 1780 AD when the Maratha queen Ahilyabai Holkar of Indore renovated the temple and the area surrounding it.



**FOR AN EASY ACCESS TO KVT**

UTTAR PRADESH

Marnikarnika ghat

Kashi Vishwanath Temple

GANGA

Lalita Ghat

► Pilgrims will get direct access to KVT from Manikarnika, Jalasen and Lalita Ghats through this corridor

► Entry of VIP vehicles, physically challenged persons will become possible through Chhattadwar point

**COST FACTOR**

₹600cr sanctioned by the state government so far for the project

₹190cr allocated to the KVT administration

Rehabilitation of tenants, including shopkeepers of the buildings being purchased for the corridor, is proposed in the project

166 buildings identified to be removed for creating the corridor

58 buildings purchased so far while process for other 60 is in progress

46 ancient temples, library and buildings of architectural importance to be preserved in corridor area

### Royal Gurkha Rifles of Britain

- Recently British Army announced that it would create a new Specialized Infantry Battalion by recruiting Nepalese Gurkha servicepersons.



- British were impressed by the discipline and ferocity of Gurkha soldiers during the Anglo-Nepalese War of (1814-16) and started recruiting these soldiers from 1815.
- Since then, the Gurkhas have fought on the side of the British Empire in almost every war, including both World Wars.
- During Indian independence (1947) Britain-India-Nepal Tripartite Agreement was signed for the allotment of Gurkha regiments, which assigned the 1st, 3rd, 4th, 5th, 8th, and 10th Gurkha Rifles regiments to India, and the 2nd, 6th, 7th, and 10th regiments to Britain.
- In 1948, India created an 11th Gurkha Rifles regiment to accommodate the Gurkhas who refused to depart with the now-British regiments.
- Later, the British Army amalgamated their four regiments into a combined Royal Gurkha Rifles (RGR) regiment consisting of three battalions.

### Anglo-Nepalese War (1814–16)

- The Anglo-Nepalese War is also known as the Gurkha War.
- It was fought between the Kingdom of Gorkha (present-day Nepal) and the East India Company as a result of border disputes and ambitious expansionism of both the belligerent parties.
- The war ended with the signing of the Treaty of Sugauli in 1816, which ceded some Nepalese controlled territory to the British.

### Shaheed Diwas

- Shaheed Diwas is observed on March 23 to commemorate the sacrifice made by three freedom fighters.
- On March 23, 1931, the three young revolutionaries namely Bhagat Singh, ShivaramRajguru and SukhdevThapar were hanged by the British for allegedly killing the then Assistant Superintendent of Police John Saunders in Lahore in 1928.
- Bhagat Singh stood out for his bravery and exceptional patriotism and for his contribution to India's independence from the British colonial rule.

## GEOGRAPHY

### Tornadoes

- Tornadoes are vertical funnels of rapidly spinning air.
- It may speed of up to around 300 kmph.
- Twister is the colloquial term for tornado in the United States.

### Marine Heat-waves

- The number of marine heat-wave days has increased by more than 50% since the mid-20th century.
- Marine heat-waves have damaged ecosystems across the globe and are poised to become even more destructive.
- It is becoming more frequent and prolonged.
- For instance a 10-week marine heat-wave near Western Australia in 2011 shattered an entire ecosystem and permanently pushed commercial fish species into colder waters.

### Rationale behind fog formation

- Fog is a cloud of small water droplets that is near ground level.
- It is also sufficiently dense to reduce horizontal visibility to less than 1,000 meters.
- During daytime, the earth gets heated due to exposure to sunlight.
- At night, if the skies are clear, all this heat is radiated into space causing the ground and the air above it to cool down.
- When this happens, the water vapour in the air condenses on tiny, suspended particles like dust, aerosol, etc. creating a fog.



- Fog does not form during summer because the ground gets very hot but summer nights being shorter, there is not enough time for the ground to cool completely.
- Winter nights are long and cool and more suitable for fog formation.
- This fog stays until the heat of the sun evaporates the condensed water droplets in the fog.

### Spring Equinox

- Spring equinox is the first official day of spring in the Northern Hemisphere, the length of day and night are close to equal during this equinox.
- The Vernal Equinox is a solar term with great balance, at the equinox, earth's two hemispheres are receiving the sun's rays equally.
- The equinox is the moment in Earth's orbit when the sun appears to cross the celestial equator.
- It means longer and warmer days as the northern hemisphere begins to tilt towards the sun.
- The Spring/Vernal Equinox is celebrated as the Persian New year, known as Nowruz.

### RekoDiq Mine

- RekoDiq Mine is one of the world's biggest untapped copper and gold deposits located in Baluchistan, Pakistan.
- RekoDiq area is buried at the foot of an extinct volcano near the frontier with Iran and Afghanistan.
- It has estimated reserves of 5.9 billion tons of low grade copper and gold reserves amounting to 41.5 million oz.



### Mt Makalu

- Makalu is the fifth highest mountain in the world at 8,485 meters (27,838 ft), whose shape is a four-sided pyramid.
- It is located in the Mahalangur Himalayas 19 km (12 mi) southeast of Mount Everest, on the border between Nepal and Tibet, China.
- Mt Makalu is considered amongst the most dangerous peaks and summiting the peak is considered extremely challenging due to inclement weather conditions and freezing temperatures.
- Recently Indian Army took an expedition to Mt. Makalu

### Blue Hole

- Blue holes are roughly circular marine cavern or sinkhole, which is open to the surface.
- It has developed in a bank or island composed of a carbonate bedrock (limestone or coral reef).
- The deep blue color is caused by the high transparency of water and bright white carbonate sand.
- Their water circulation is poor and they are commonly anoxic below a certain depth, this environment is unfavorable for most sea life, but nonetheless can support large numbers of bacteria.
- Some of the significant blue holes are
  1. Dragon Hole - South China Sea
  2. Great Blue Hole - Belize
  3. Dean's Blue Hole - Bahamas
- Blue holes are distinguished from cenotes in that the latter are inland voids usually containing fresh groundwater rather than seawater.



### Ice Stupa

- Ice Stupa project is a survival technique conceptualized to reduce problems of Ladakhi farmers in spring.



- Ice stupas freeze the stream water vertically in the form of huge ice towers or cones of 30 to 50m height that look very similar to the local sacred mud structures called Stupa or Chorten.
- Each stupa has the capacity to store at least 30-50 lakh litres of water, this is apart from the naturally saved water in the slopes of mountains.

## **POLITY**

### **EWS in J&K**

- President issued an order extending the benefits of reservation to economically backward sections in Jammu and Kashmir.
- This would pave the way for reserving State government jobs to the youth of Jammu and Kashmir who are from economically weaker sections belonging to any religion or caste.
- The Central government's move came as Jammu and Kashmir is currently under the President's Rule
- It will extend benefits for the EWS in higher educational institutions and government jobs in addition to the reservation for the other categories.
- 10% reservation to economically weaker sections was introduced in the rest of the country through the 103rd Constitutional Amendment in 2019.

### **Voting Options in India**

- In India a voter can exercise his/her franchise only by personally visiting the polling booth.
- Apart from this there are two more options
- **Postal ballots** - In which a voter exercises his/her franchise through post is available only for people on election duty, armed forces personnel, and electors subject to preventive detention.
- **Proxy voting** - The option of proxy voting is available only for armed forces, police, and government officials posted outside India.
- The person can authorize another residing in the same polling booth area to cast a vote on his/her behalf.
- This option is currently available for wives of the above-mentioned personnel, but not for the husbands.
- **Overseas voter** -A non-resident Indian, who holds an Indian passport, can vote in his/her hometown after registering as an Overseas Voter.
- The NRI must fill the Form 6A, which can be downloaded online or taken from the nearest Indian Mission.
- Once the person returns to India, they will have to re-register themselves as a general voter and obtain an EPIC card.
- **Note** -The Representation of the People (Amendment) Bill 2017 that extends the proxy voting to NRIs was passed in the Lok Sabha during 2018, but didn't see the light in Rajya Sabha and hence got lapsed.

### **Lokpal**

- A Lokpal is an anti-corruption authority or body of ombudsmen who represents the public interest in India.
- The concept of an ombudsman is borrowed from Sweden.
- The Lokpal has jurisdiction over central government to inquire into allegations of corruption against its public functionaries and for matters connected to corruption.
- The Lokpal is responsible for enquiring into corruption charges at the national level while the Lokayukta performs the same function at the state level.
- Recently Retired Supreme Court judge Pinaki Chandra Ghose is appointed as the first Lokpal of India by the Lokpalcommittee.

### **Appointment of Lokpal Chairman and Committee**

- **Eligibility** -A person "Who is or has been a Chief Justice of India, is or has been a Judge of the Supreme Court (or)





- An eminent person of impeccable integrity and outstanding ability having special knowledge and expertise of not less than 25 years in the matters relating to anti-corruption policy, public administration, vigilance, finance including insurance and banking, law and management”.
- **Composition**-Under the 2013 Act, the Lokpal should consist of a chairperson and such number of members, not exceeding eight, of whom 50% should be judicial members.
- The selection procedure for these posts is the same as that for the chairperson.
- The Act states that not less than 50% of the members of the Lokpal should be from among persons belonging to the SCs, the STs, OBCs, minorities and women.(The same rules apply members of the search committee)
- **Appointment** -A search committee will prepare a panel of candidates, a selection committee will recommend names from among this panel, and the President will appoint these as members.
- Salaries, allowances and service conditions of the Lokpal chairperson will be the same as those for the Chief Justice of India and those for other members will be the same as those for a judge of the Supreme Court.

### Lokayuktas

- Every State shall establish a body to be known as the Lokayukta for the State, if not so established, constituted, by a law made by the State Legislature.
- If not established, they have to be established within one year from the date of the commencement of the Act.
- This is as per Section 63 of the Lokpal and Lokayuktas Act.
- The establishment of Lokayukta and any appointment falls within the domain of the States.

### GOVERNMENT SCHEMES

#### Pradhan Mantri JI-VAN yojana

- The Cabinet Committee on Economic Affairs has approved the "Pradhan Mantri JI-VAN (Jaiv Indhan-Vatavaran Anukool fasal awashesh Nivaran) Yojana"
- It is for providing financial support to Integrated Bio-ethanol Projects using lignocellulosic biomass and other renewable feedstock.
- It focuses to incentivize 2G Ethanol sector and support it by creating a suitable ecosystem for setting up commercial projects and increasing Research & Development in this area.
- The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs).
- This is to further enhance the blending percentage under the ethanol blending program.
- Centre for High Technology (CHT), a technical body under the aegis of Ministry of Petroleum & Natural Gas, will be the implementation Agency for the scheme.

#### National Mineral Policy, 2019

- The Union Cabinet has approved National Mineral Policy 2019.
- It replaces the extant National Mineral Policy 2008 ("NMP 2008").
- It will lead to sustainable mining sector development in future.
- It will address the issues of project affected persons especially those residing in tribal areas.
- The new changes include the focus on make in India initiative and Gender sensitivity in terms of the vision.
- It also focuses on use coastal waterways and inland shipping for evacuation and transportation of minerals.
- It encourages dedicated mineral corridors to facilitate the transportation of minerals.
- It introduces the concept of **Inter-Generational Equity** that deals with the well-being not only of the present generation but also of the generations to come.
- It also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.

### New Delhi International Arbitration Centre

- New Delhi International Arbitration Centre Ordinance 2019 was promulgated recently.
- It proposes to establish an international arbitration centre at New Delhi.
- It will replace the International Centre for Alternative Dispute Resolution set-up in the year 1995, which is a society registered under the Societies Registration Act.
- One of the objectives of the Centre is to bring targeted reforms to develop itself as a flagship institution for conducting international and domestic arbitration;
- The proposed Centre will be a statutory body.
- It will consist
  1. a Chairperson
  2. 2 eminent persons having substantial knowledge in international and domestic arbitration
  3. 1 representative of a recognized body of commerce
  4. Secretary to the Ministry of Law & Justice
  5. Finance Advisor
  6. a Chief Executive Officer.
- The Chairperson should have been a judge of the Supreme Court or High Court, or an eminent person having special knowledge and experience in the conduct or administration of arbitration.
- The chairman will be appointed by the Central Government in consultation with the Chief Justice of India.

### Minor Forest Produce

- Indian Forest Act 1927 defines "forest-produce" which connotes to those products whether found in, or brought from a forest.
- Minor Forest Produce (MFP) is a subset of forest produce.
- It got a definition in 2007 when the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, was enacted.
- It is defined as all non-timber forest produce of plant origin.
- It includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.
- It provides both subsistence and cash income for people who live in or near forests.
- They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sale.

### Sovereign Patent Fund

- The National Electronics Policy (NEP) 2019 aims to create a Sovereign Patent Fund (SPF).
- It is a State-led investment fund that will acquire Intellectual Property (IP) assets important to national economic objectives.
- It can develop a domestic innovation ecosystem, acquire critical IP and reduce the knowledge gap.
- It will help in generating new businesses based on the IP assets owned by Indian corporate.
- It will support the MSME players largely by making cutting edge technologies available at a low cost.
- In the global scenario, SPFs were first launched in South Korea, followed by France and Japan.
- Click [here](#) to know about National Electronics Policy 2019.

### National Common Mobility Card

- It was launched by the Prime Minister in Ahmadabad, Gujarat.
- The first **Indigenously Developed Payment Eco-system** for transport consists of



1. NCMC Card
2. SWEEKAR (Swachalit Kiraya: Automatic Fare Collection System (AFC))
3. SWAGAT (Swachalit Gate).

- Ministry of Housing & Urban Affairs brought to the fore the National Common Mobility Card (NCMC) to enable seamless travel by different metros and other transport systems.
- NCMC enables people to pay multiple kinds of transport charges, including metro services and toll tax, across the country.
- It is also known as 'One Nation One Card'.
- The inter-operable transport card would allow the holders to pay for their bus travel, toll taxes, parking charges, retail shopping and even withdraw money.
- It is a bank-issued card on debit or credit or pre-paid card product platform.
- AFC System (gates, readers/validators, backend infrastructure etc.) is the core of any transit operator to automate the fare collection process.

### **Yuva Vigyani Karyakram**

- Indian Space Research Organization (ISRO) has launched a special program for School Children called “Young Scientist Program” or “YUva Vigyani KARYakram”.
- It is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger in order to develop their interest in the emerging areas of Space activities.
- The students who have finished 8<sup>th</sup> standard and currently studying in 9<sup>th</sup> standard will be eligible for the program.

### **Transport and Marketing Assistance Scheme**

- It was notified by Department of Commerce of the Ministry of Commerce & Industry.
- The scheme is for Specified Agriculture Products.
- It aims to provide assistance for the international component of freight and marketing of agricultural produce.
- It is likely to mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment.
- It would be suitably included in the Foreign Trade Policy (2015-20).

### **Janaushadhi Diwas**

- Ministry of Chemicals and fertilizers has decided to celebrate 7th March 2019 as ‘Janaushadhi Diwas’ across India.
- It is to provide further impetus & create awareness about the use of generic medicines.
- Under Pradhan Mantri Bhartiya Janaushadhi Pariyojana around 5050 Janaushadhi stores were opened.
- It has provided the awareness about the availability of the high quality affordable generic medicines in the country.
- About 10-15 lakh people benefit from Janaushadhi medicines per day.
- The market share of generic medicines has grown over 3 fold from 2% to 7% in last 3 years.

### **Uttarakhand Disaster Recovery Project**

- India signed a loan agreement with the World Bank for 96 Million US dollars for additional financing of Uttarakhand Disaster Recovery Project.
- The world bank, through the Uttarakhand Disaster Recovery project has been supporting the state government since 2014.
- The project helps to restore housing and rural connectivity, and to build resilience of communities.
- The funding will help in further reconstruction of bridges, road and river banks protection works.
- It will also help to increase the technical capacity of the state entities to respond promptly.



## UNNATI

- UNISpace Nano-satellite Assembly and Training by ISRO (UNNATI) programme is a capacity building programme on nanosatellite development.
- The UNNATI Programme is to commemorate the 50th anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50).
- The programme will be conducted for 3 years in 3 batches and will target to benefit 90 officials from 45 countries.
- The primary objectives of the programme are:
  1. To offer a simplified and increased exposure to satellite fabrication technologies, as part of the UNISPACE initiative.
  2. To provide theoretical course on satellite technology.
  3. To provide hands-on training to assemble, integrate and test a low cost, modular Nano satellite.

## PM-KUSUM Scheme

- KisanUrja Suraksha evam Utthaan Mahabhiyan (KUSUM) scheme promotes decentralization of solar power production of up to 28,250 MW to help farmers.
- The scheme would provide extra income to farmers, by giving them an option to sell additional power to the grid through solar power projects set up on their barren lands.
- It would help in de-dieselizing the sector as also the DISCOMS.
- The scheme would also promote energy efficiency and water conservation and provide water security to farmers.

## NATIONAL INSTITUTES IN NEWS

### National Anti-Doping Agency

- It was set up as a registered society under the Societies Registration Act of 1890 on 2005.
- It was set up with a mandate for Dope free sports in India.
- The primary objectives are
  1. to implement anti-doping rules as per WADA code
  2. regulate dope control program
  3. to promote education and research and creating awareness about doping and its ill effects

### Central Industrial Security Force

- The 50th Raising Day of Central Industrial Security Forces (CISF) was celebrated recently.
- It is one of the Central Armed Police Forces of the country.
- It was raised under an Act of Parliament namely Central Industrial Security Force Act, 1968.
- It provides security to various Public Sector Undertakings (PSUs) and other critical infrastructure installations both in public and private sectors across the country.
- For instance it provides security to nuclear installations, airports, seaports, power plants, government buildings, Delhi Metro Rail Corporation etc.,
- It is under the Ministry of Home Affairs.

### Stockholm International Peace Research Institute

- Stockholm International Peace Research Institute (SIPRI) based in Stockholm is an independent international institute established in 1966.
- It is dedicated to research into conflict, armaments, arms control and disarmament.
- It releases the National Reports on Arms Exports to highlight the oversight of government implementation of arms export control policies.



- According to recent SIPRI report India was the world's second-largest arms importer from 2014-18, in the year 2009-2013 India was the largest arms importer.

### **IWDRI**

- An International Workshop on Disaster Resilient Infrastructure (IWDRI) is being organized by the National Disaster Management Authority (NDMA).
- The work is conducted in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR).
- The workshop aims to
  1. Identify good practices of disaster risk management in key infrastructure sectors,
  2. Identify specific areas and pathways for collaborative research on DRI (Transport, Energy, Telecom and Water),
  3. Discuss and co-create the broad contours of the Coalition for Disaster Resilient Infrastructure (CDRI) as well as a notional roll-out plan for the next three years.
  4. Build a forum for members to work on areas of common interest and make specific commitments.
- It will bring together countries from different parts of the world, and multilateral development organizations to achieve disaster resilience of large infrastructure systems (transport, telecom, energy, water).

### **NDMA**

- In 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA).
- NDMA, as the apex body, is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.
- NDMA is headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers.

### **NCLT**

- National Company Law Tribunal (NCLT) is a quasi-judicial body in India that adjudicates issues relating to Indian companies.
- The NCLT was established under the Companies Act 2013 and constituted in 2016, based on the recommendation of the Justice Eradi committee on law relating to insolvency and winding up of companies.
- All proceedings under the Companies Act, including proceedings relating to Arbitration, Compromise, arrangements and reconstruction and winding up of companies shall be disposed of by the National Company Law Tribunal.

### **NCLAT**

- National Company Law Appellate Tribunal (NCLAT) was constituted under Companies Act, 2013 for hearing appeals against the orders of National Company Law Tribunal(s) (NCLT), with effect from 2016.
- NCLAT is also the Appellate Tribunal for hearing appeals against the orders passed by Insolvency and Bankruptcy Board of India and by Competition Commission of India (CCI)
- The NCLAT has three members 1 Technical and 2 judiciary, recently union cabinet has approved for the creation of additional posts of three Judicial Members and three Technical Members in the National Company Law Appellate Tribunal (NCLAT).

## **BILATERAL ISSUES**

### **BOLD-QIT**

- Border Electronically Dominated QRT Interception Technique (BOLD-QIT) under CIBMS (Comprehensive Integrated Border Management system) on India-Bangladesh border in Assam will be launched soon.
- It is the project to install technical systems under the CIBMS.
- It enables Border Security Force to equip Indo-Bangladesh borders with different kind of sensors in unfenced riverine area of Brahmaputra and its tributaries.



- The area has been covered with data network generated by Microwave communication, day and night surveillance Cameras and intrusion detection system etc.,

### Generalized System of Preferences

- USA has decided to withdraw India's name from Generalized System of Preferences or GSP list.
- It is a U.S. trade program designed to promote economic growth in the developing world.
- It provides preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories.
- India exported an estimated \$5.6 billion worth of goods to the US under this program in 2017.
- The reason behind this move is that India has not assured the United States that it will provide equitable and reasonable access to its markets.

## INTERNATIONAL ORGANISATIONS

### Organization of Islamic Cooperation

- India will participate in the OIC meet for the first time following its invitation to the same.
- It is a major development in boosting India's relations with the West Asian and Muslim majority countries.
- It is a gathering of 57 Muslim majority countries.
- It is second largest intergovernmental organization in the world next to United Nations.
- It was established in Rabat, Kingdom of Morocco on 1969 .
- It endeavors to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world.
- India is neither a member nor observer of the group.

### WHO Reforms

- The World Health Organization (WHO) announced sweeping reforms to modernize and strengthen the organization.
- It would align its processes and structures with the triple-billion targets:
  1. One billion more people benefitting from universal health coverage
  2. One billion more people better protected from health emergencies
  3. One billion more people enjoying better health and well-being
- Its new structure and operating model would also align with the UN Sustainable Development Goals (SDG).
- Among 17 SDGs set by the UN in 2015, at No.3 was 'Good Health and Well-being'.
- WHO announced a slew of new structures:
  1. A division of the chief scientist
  2. A department of digital health
  3. A division of data
  4. A division of emergency preparedness
- Soumya Swaminathan will be the first to hold the Chief Scientist position.
- She was moved from the position of Deputy Director-General of WHO

### UN Environment Assembly

- The United Nations Environment Assembly is the world's highest-level decision-making body on the environment.
- The Environment Assembly meets biennially to set priorities for global environmental policies and develop international environmental law.
- It addresses the critical environmental challenges facing the world today.

- The United Nations Environment Assembly was created during the United Nations Conference on Sustainable Development, also referred to as RIO+20, in 2012.
- Recent UN Environment Assembly is being held at Nairobi, Kenya.

### **EXIM Bank**

- Export-Import Bank of India (EXIM Bank) is a specialized financial institution, set up in 1982, for financing, facilitating and promoting foreign trade of India.
- The Bank provides assistance in helping Indian firms in their globalization efforts by locating overseas distributor(s)/ buyer (s)/ partner (s) for their products and services.
- Exim Bank also lays special emphasis on enhancing export capabilities and international competitiveness of Indian companies through its various Advisory Services.

### **WFP**

- The World Food Programme (WFP) is the food assistance branch of the United Nations established in 1961.
- It is world's largest humanitarian organization addressing hunger and promoting food security.
- The WFP strives to eradicate hunger and malnutrition, with the ultimate goal in mind of eliminating the need for food aid itself.
- It is a member of the United Nations Development Group and part of its Executive Committee.
- The WFP operations are funded by voluntary donations from world governments, corporations and private donors.
- WFP food aid is also directed to fight micronutrient deficiencies, reduce child mortality, improve maternal health, and combat disease, including HIV and AIDS and derive Zero Hunger by 2030.

### **Outer Space Treaty**

- Outer Space Treaty is a legal entity and came in 1966 as a legal document towards the General Assembly.
- The Treaty was opened for signature by the three depository Governments (the Russian Federation, the United Kingdom and the United States of America) in January 1967, and it entered into force in October 1967.
- The Outer Space Treaty bars states party to the treaty from placing weapons of mass destruction in orbit of Earth, installing them on the Moon or any other celestial body, or otherwise stationing them in outer space.
- It exclusively limits the use of the Moon and other celestial bodies to peaceful purposes and expressly prohibits their use for testing weapons of any kind, conducting military man oeuvres, or establishing military bases, installations, and fortifications (Article IV).
- However, the Treaty does not prohibit the placement of conventional weapons in orbit.
- India is party to Outer Space Treaty.

### **UNDP**

- The United Nations Development Programme (UNDP) is the United Nations' global development network it advocates for change and connects countries to knowledge, experience and resources to help people build a better life for themselves.
- It provides expert advice, training and grants support to developing countries, with increasing emphasis on assistance to the least developed countries.
- The Sustainable Development Goals (SDGs) of UNDP is a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

### **International Telecommunication Union**

- The International Telecommunication Union is a specialized agency of the United Nations (UN) based in Geneva, Switzerland.
- It is the oldest among all the 15 specialized agencies of UN.
- ITU is responsible for issues that concern information and communication technologies.
- The role of ITU are as follows

1. It coordinates the shared global use of the radio spectrum.
  2. It promotes international cooperation in assigning satellite orbits.
  3. It works to improve telecommunication infrastructure in the developing world.
  4. It assists in the development and coordination of worldwide technical standards.
- Its membership includes 193 Member States and around 800 public and private sector companies, and academic institutions as well as international and regional telecommunication entities.
  - ITU releases ICT Development Index (IDI) based on internationally agreed information and communication technologies (ICT) indicators

## **ECONOMY**

### **FAME India Phase II**

- Faster Adoption and Manufacturing of Electric Vehicles (FAME) in India Phase II for promotion of Electric Mobility in the country was approved by the cabinet.
- It is the expanded version of the present scheme titled 'FAME India 1 which was launched on 2015.
- It is to encourage Faster adoption of Electric and hybrid vehicle by way of offering upfront Incentive on purchase of Electric vehicles
- It also motivates to establish the necessary charging Infrastructure for electric vehicles.
- It will help in addressing the issue of environmental pollution and fuel security.

### **National Rural Economic Transformation Project**

- An agreement was signed between World Bank and Government of India to provide a \$250-million loan for the National Rural Economic Transformation Project (NRETP).
- The key focus of the project is to promote women-owned and women-led farm and non-farm enterprises across value chains.
- It will also enable them to build businesses, access finance, markets and networks and generate employment.
- It would support enterprise development programs for rural poor women and youth.
- It creates a platform to access finance including start-up financing options to build their individual and/or collectively owned and managed enterprises.
- It is an additional financing to the \$500-million National Rural Livelihoods Project (NRLP) approved by the World Bank.

### **National Accreditation Board for Testing and Calibration Laboratories**

- NABL has launched a scheme called Quality Assurance Scheme (QAS) for Basic Composite (BC) Medical Laboratories.
- It is a Constituent Board of Quality Council of India.
- It has been established with the objective of third-party assessment of the technical competence of testing including medical and calibration laboratories, proficiency testing providers and reference material producers.
- It provides accreditation in all major fields of Science and Engineering.
- It also offers accreditation for Proficiency testing providers.

### **Women's Workforce Participation**

- A report notes that women's participation in the country's workforce has had a massive fall from 36.7 % in 2005 to a low 26 % in 2018.
- There are about 19.5 crore women employed in the unorganized sector or in unpaid work in the country.
- The lack of access to quality education and the widening digital divide limits women from gaining employable skill-sets and entering the workforce.
- The employment ratio of women remains low despite the increasing focus on re-skilling and up-skilling of workforce in general and women in particular, in line with the evolving industry needs.

- The empowerment of women can be facilitated by
  1. better access to quality education
  2. gaining managerial, leadership and soft skills
  3. attaining financial and digital literacy
  4. influencing social settings and building support systems
  5. access to resources like finance, technology, raw materials, talent and joining the right networks

### White Label ATM

- The Reserve Bank of India has allowed white-label ATM operators (WLAOs) to display advertisements pertaining to non-financial products/services within the WLA premises, among others.
- White label ATMs are set up by non-banking entities.
- Broadly, ATMs differ from WLAs in two ways:
  1. In case of a White Label ATM, the logo displayed on the ATM machine and in the ATM premises pertain to the WLA operator instead of a bank.
  2. Cash deposits are not accepted at WLAs as it is not permitted by the RBI at present
- The country's first WLA was set up by the Tatas' Indicash in 2013.
- Non-bank entities were allowed by the RBI to set up White Label ATMs as banks won't be able to provide their ATM facilities in each and every place.
- At present, cash crunch following demonetization and transaction fees that do not cover costs are affecting these services hardly.

### Flood Management and Border Areas Program

- The Union Cabinet has approved the Flood Management and Border Areas Program (FMBAP) recently.
- It will be implemented throughout the country for effective flood management, erosion control and anti-sea erosion.
- The catchment area treatment works will help in reduction of sediment load into rivers.
- It is framed by merging the components of two continuing XII Plan schemes titled "Flood Management Program (FMP)" and "River Management Activities and Works related to Border Areas (RMBA)"

### Bolo App

- It is an app launched by Google
- It aims to help children in primary school learn to read in Hindi and English.
- It uses Google's speech recognition and text-to-speech technology.
- It features an animated character Diya, who encourages children to read stories aloud and helps if the child is unable to pronounce a word.
- It was piloted in about 200 villages in Uttar Pradesh.
- The early results are very encouraging with 64 per cent of children showing an improvement in reading proficiency in just 3 months.

### Marayoor Jaggery

- Recently Marayoor Jaggery has received the Geographical Indication (GI) tag from the Union Government.
- Marayoor Jaggery is the traditional and handmade product from Idukki district of Kerala.
- It is made in the sugarcane farms and no chemicals are added during the manufacturing process.
- This Jaggery is manufactured by the farmers, who mostly belong to the Muthuva tribe.
- The peculiar geographical location of Marayoor, which nestles amid the forests of the Western Ghats gives the sugar cane a distinct geographical identity.



### Sirsi Supari

- Recently registrar of Geographical Indications accorded a GI tag, 'Sirsi Supari'.
- Sirsi Supari is an arecanut grown in Sirsi, Siddpaur and Yellapur taluks of Uttara Kannada district in Karnataka.
- The Totagars' Cooperative Sale Society (TSS) Ltd, a Sirsi-based agri cooperative, is the registered proprietor of the GI 'Sirsi Supari'.
- 'Sirsi Supari' is medium sized and round in shape, it has a somewhat ash colored hard seed.
- 'Sirsi Supari' is unique in taste from arecanuts grown in other parts of the country due to the differences in the chemical composition of different arecanuts.

### Global Trade Mark System Agreements

- Union government approves proposal for accession to Nice, Vienna and Locarno Agreements.
  1. **Nice Agreement** - Based on international classification of goods and services for the purposes of registration of marks.
  2. **Vienna Agreement** - Leads to setting up an International classification of the figurative elements of marks.
  3. **Locarno Agreement** - It for establishing an International classification for industrial designs.
- Accession to the above agreements would give an opportunity to include Indian designs, figurative elements and goods in the international classification systems.
- The accession is expected to instill confidence in foreign investors in relation to protection of Intellectual Property in India.

### GI Tags for Indian Coffee

- The Department for Promotion of Industry and Internal Trade, under Ministry of Commerce and Industry has recently awarded Geographical Indication (GI) to five varieties of Indian coffee.
- They are as follow
  1. **Coorg Arabica coffee** - It is grown specifically in the region of Kodagu district in Karnataka.
  2. **Wayanaad Robusta coffee** - It is grown specifically in the region of Wayanad district which is situated on the eastern portion of Kerala.
  3. **Chikmagalur Arabica coffee** - It is grown specifically in the region of Chikmagalur district and it is situated in the Deccan plateau, belongs to the Malnad region of Karnataka.
  4. **Araku Valley Arabica coffee** - It is coffee from the hilly tracks of Visakhapatnam district of Andhra Pradesh and Odisha region.
- The coffee produce of Araku, by the tribals, follows an organic approach in which they emphasise management practices involving substantial use of organic manures, green manuring and organic pest management practices.

## ENVIRONMENT

### GOVERNMENT INTERVENTIONS

#### IEA Bio-energy Technology Collaboration Program

- Ministry of Petroleum & Natural Gas, Government of India joined IEA (International Energy Agency) Bio-energy TCP as its 25th member recently.
- It is an international platform for co-operation among countries.
- It aims to improve cooperation and information exchange between countries that have national programs in bio-energy research, development and deployment.
- It works under the framework of International Energy Agency (IEA)
- The primary goal of joining is to facilitate the market introduction of advanced bio-fuels with an aim to bring down emissions and reduce crude imports.





- India is an **Associate** member of IEA.
- Click [here](#) to know more about IEA.

### Centre for Wildlife Rehabilitation and Conservation

- It was established in 2002 with a primary aim to stabilize displaced animals and release them back into the wild.
- It is situated in Kaziranga National Park, Assam.
- It was founded by the Assam Forest Department and Wildlife Trust of India (WTI) with support from WTI's partner, the International Fund for Animal Welfare (IFAW).
- It is recognised by the Centre Zoo Authority (CZA).
- It is a systematic and scientific initiative to deal with wild animals in distress where immediate human intervention is required for their survival.
- The CWRC has five different types of animal enclosures for primates, carnivores, ungulates, birds and turtles & tortoises.

### Kole Wetlands

- It is spread over 13,632 hectares in Thrissur and Malappuram districts of Kerala.
- It is a Ramsar site and IBA (Important Bird and Biodiversity Area)
- The Kole fields account for more than 40% of the rice production in the State.
- It is situated in the Central Asian Flyway of migratory birds.
- The area contains subterranean habitats that are important habitats for some fresh water fish species which are endemic to southern Western Ghats.
- Mining & quarrying of sand and clay mining, granite quarry and Fishing & harvesting aquatic resources are some of the threats to the Kole wetlands.

### World Wildlife Day

- The day of signature of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is celebrated as UN World Wildlife Day.
- It aims to celebrate and raise awareness of the world's wild animals and plants.
- The theme for 2019 is "Life below water: for people and planet".
- The theme aligns with goal 14 of UN Sustainable Development Goals.
- This is the first World Wildlife Day to focus on life below water.
- The oceans have an estimated market value of \$3 trillion, which makes up nearly 5% of world's gross domestic product.
- Nearly 40% of global livelihoods depend on the oceans for sustenance and craftwork as well as for their cultural and spiritual value.

### Global Electric Vehicle Outlook

- It is published annually by International Energy Agency.
- It provides a comprehensive look at the state of Electric Vehicles, charging infrastructure and policies around the globe.
- China remains the engine of growth for passenger EVs.
- It includes policy recommendations, learning from frontrunner markets to inform policymakers and stakeholders who aim to encourage electric vehicle adoption.

### International Coral Reef Initiative

- It is an informal partnership between Nations and organizations which strives to preserve coral reefs and related ecosystems around the world.

- It's actions highlight globally the importance of coral reefs and related ecosystems to environmental sustainability, food security and social and cultural wellbeing
- It was founded in 1994 by eight governments: Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America.
- It was announced
  1. at the First Conference of the Parties of the Convention on Biological Diversity in December 1994
  2. at the high level segment of the Inter-sessional Meeting of the U.N. Commission on Sustainable Development in April 1995.
- India is a member of ICRI.

### Protecting the Biodiversity Zones

- Goa State Biodiversity Board (GSBB) recently introduced a tagging system to ensure communities residing within the biodiversity zone get Access Benefit Share (ABS) from their profits.
- The tag will show the ingredients used are sourced from the nature.
- The sellers are supposed to pay 0.01 % of their annual profit to the GSBB.
- GSBB will then use this amount to protect the habitat from where the ingredients are procured.
- This initiative is also expected to boost the products' sale.
- However very few industries has joined the scheme.

### India Cooling Action Plan

- It was launched by the Ministry of Environment, Forest and Climate Change.
- The thrust of the Plan (ICAP) is to look for synergies in actions for securing both environmental and socio-economic benefits.
- It seeks to
  - (i) reduce cooling demand across sectors by 20% to 25% by 2037-38,
  - (ii) reduce refrigerant demand by 25% to 30% by 2037-38
  - (iii) reduce cooling energy requirements by 25% to 40% by 2037-38,
  - (iv) recognize "cooling and related areas" as a thrust area of research under national S&T Program
  - (v) training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission
- Cooling is linked to human health and productivity.
- Linkages of cooling with Sustainable Development Goals (SDGs) are well acknowledged.

### Global Environment Outlook

- The Global Environment Outlook (GEO) report is often referred as UN Environment's flagship environmental assessment.
- The first publication was in 1997 and was originally requested by Member States.
- The Global Environment Outlook (GEO) is a consultative and participatory process to prepare an independent assessment of the state of the environment, the effectiveness of the policy response to address these environmental challenges and the possible pathways to be achieve various internationally agreed environmental goals.
- The Global Environment Outlook (GEO) informs environmental decision-making for governments and various stakeholders.

### Forest Certification

- Forest certification is a global movement initiated in 1990s after Rio Earth Summit.

- It is a market-based non-regulatory conservation tool designed to promote sustainable management of forests and trees outside forests by an independent third party.
- Forest certification has been accepted as an efficient tool for forest management world over.
- As several developed countries have put trade restrictions on import of non-certified timber, non-timber forest products and wood-based goods into their countries, getting sustainable forest management certificates has become mandatory for exports.

## SPECIES IN NEWS

### Purple frog

- It is endemic to the Western Ghats of India.
- It has been evolving independently for around 100 million years.
- It is listed as Endangered by the IUCN Red List.
- It is threatened by deforestation from expanding cultivation, in addition to consumption and harvesting by local communities.
- The tadpoles of this species are rheophilic, which means they thrive in running water.
- It was found that the speed with which water flows down the streams is one of the main factors that determine the presence and aggregation of these tadpoles.
- The damming effect is also slowing down the streams feeding water to the river.

### Clownfish Hatchery

- Clownfish or anemonefish are most widely used in aquariums, these fishes form symbiotic mutualisms with sea anemones.
- Depending on species, anemonefish are overall yellow, orange, or a reddish or blackish color, and many show white bars or patches.
- National Bureau of Fish Genetic Resources (NBFGR) has launched a new project in coastal Maharashtra which aims to train villagers in the clownfish trade.
- For this purpose a clownfish hatchery will be established in Mumbai.



### Bumphead Parrotfish

- Bumphead parrotfish (*Bolbometopon muricatum*), is an important component of coral reef ecosystem.
- It is categorized as 'vulnerable' in the Red List of the International Union for Conservation of Nature (IUCN).
- The fish is threatened due to limited knowledge about its distribution and abundance in Indian waters.
- According recent studies fishing and coral reef degradation threaten parrotfish in Andaman.

### Hump backed Mahseer

- The Humpback (or) (or) Tor remadeviis the largest known species of Mahseer and, across the world, is only found in the Kaveri river basin.
- The effects of construction of dams, regulated flows, deforestation, drought, pollution and sediment transport has a great toll on this river water species.
- Recently the fish has been added to the IUCN Red List as Critically Endangered
- This fish is also called as tiger of the water found in Pambar, Kabini and Bhavani rivers of the Karveri basin in the states Karnataka, Kerala and Tamil Nadu.

### Wood Snake

- A species of wood snake that wasn't seen for 140 years has resurfaced in a survey conducted at the Meghamalai Wildlife Sanctuary.
- The wood snake is point endemic, which can be only found in Meghamalai forests and the Periyar Tiger Reserve landscape.



- The scientific name of the species is *Xylophisindicus*, and it is uniformly dark brown in color.

### **Starry Dwarf Frog**

- Astarry dwarf frog, a nocturnal amphibian which sports pale blue spots and brilliant orange thighs has been found in Wayanad district, Kerala.
- The frog has distinct physical characteristics such as its triangular finger- and toe tips, which closely resembled frogs in South America and Africa.
- The frog species is named as *Astrobatrachuskurichiyana* in the honor of Kurichiya tribal community of Kerala.
- The frog is not only a new species but different enough to be assigned to a new 'subfamily'.

### **Great Indian Horn Bill**

- A study has found that Great Indian hornbills can adapt to modified habitat.
- It is also known as Great piped Hornbill.
- It is found mostly in India and also in southwestern China, Bangladesh, western Thailand, mainland Southeast Asia.
- The great Indian hornbill lives primarily in evergreen and moist deciduous forests.
- It is on Appendix II of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- It is listed as vulnerable because of decreasing populations.

### **Seaweed**

- Seaweeds or Marine macro algae are plant-like organisms that generally live attached to rock or other hard substrata in coastal areas.
- Seaweeds are nutritious and will play a major role in food security.
- Seaweeds are rich sources of vitamins A and C, and minerals such as Ca, Mg, Zn, Se and Fe.
- They also have a high level of vegetable proteins and omega 3 and 6 fatty acids.
- About 844 seaweed species are reported from India, a country with a coast line of 7,500 km.

### **Symbiotic Mutualism**

- Mutualism describes the ecological interaction between two or more species from which individuals of both species gain fitness benefit.
- Example - Flowering plants being pollinated by animals.
- Mutualism is often conflated with two other types of ecological phenomena, namely
  1. Cooperation - Cooperation refers to increases in fitness through within-species (intraspecific) interactions.
  2. Symbiosis - Symbiosis involves two species living in close proximity and may be mutualistic, parasitic, or commensal, so symbiotic relationships are not always mutualistic.

## **SCIENCE AND TECHNOLOGY**

### **SPACE**

#### **EMISAT**

- The Indian Space Research Organization (ISRO) is about to launch an electronic intelligence satellite EMISAT for Defense Research and Development Organization (DRDO).
- Polar Satellite Launch Vehicle will be used to put the 436 kg EMISAT into a 749-km orbit.
- The satellite will identify the exact topography of enemy areas and find out how many communication devices are active in the area and also helps India to keep an eagle eye on hostile nations.
- This is not the first time ISRO is launching satellite for DRDO earlier ISRO has launched Microsat-R which was developed by DRDO.



### HL-2M Tokamak

- China plans to complete the construction of the artificial sun device (HL-2M Tokamak).
- It is designed to replicate the nuclear fusion process that occurs naturally in the sun and stars.
- The device provides almost infinite clean energy through controlled nuclear fusion.
- Its plasma is mainly composed of electrons and ions.
- The country's existing Tokamak devices have achieved an electron temperature of over 100 million degrees Celsius in its core plasma, and an ion temperature of 50 million degrees Celsius.
- The new HL-2M device shall provide main technical support for China's participation in the experiment and operation of the International Thermonuclear Experimental Reactor (ITER).
- The ITER is a large international scientific project that is a global collaboration of 35 countries, including China, Russia and the US.

### YUVIKA

- ISRO has launched a special programme residential training program for School Children called “Young Scientist Programme” “YUvaVIgyaniKaryakram.
- The Program is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger ones with the intent of arousing their interest in the emerging areas of Space activities.
- The programme will be of around two weeks duration during summer holidays and it is proposed to select 3 students each from each State/ Union Territory to participate in this programme covering state, CBSE, and ICSE syllabus.
- Those who have just finished 9th standard (in the academic year 2018-19) and waiting to join or in 10th standard will be eligible for the programme.
- The selection will be based on the 8th std marks (academic performance and extracurricular activities).

### Lunar Reconnaissance Orbiter

- It has observed water molecules moving around the dayside of the moon.
- It was launched by the NASA.
- It helps to identify
  1. sites close to potential resources with high scientific value,
  2. favorable terrain
  3. environment necessary for safe future robotic and human lunar missions.
- It was the first deep space precision orbit determination by laser ranging from Earth.

### Lunar Water

- NASA's Lunar Reconnaissance Orbiter (LRO) has observed water molecules moving around the dayside of the moon.
- Up until the last decade, scientists thought the Moon was arid, with any water existing mainly as pockets of ice in permanently shaded craters near the poles.
- Recently scientists have identified surface water in sparse populations of molecules bound to the lunar soil, the amount varies based on the time of day.
- This water is more common at higher latitudes and tends to hop around as the surface heats up.
- These results aid in understanding the lunar water cycle and will ultimately help us learn about accessibility of water that can be used by humans in future missions to the Moon.
- Lunar water can potentially be used by humans to make fuel or to use for radiation shielding or thermal management.





## Sunspots

- Sunspots are temporary phenomena on the Sun's photosphere that appear as spots darker than the surrounding areas.
- They are regions of reduced surface temperature caused by concentrations of magnetic field flux that inhibit convection.
- Sunspots usually appear in pairs of opposite magnetic polarity, their number varies according to the approximately 11-year solar cycle.
- Individual sunspots or groups of sunspots may last anywhere from a few days to a few months, but eventually decay.
- The larger variety are visible from Earth without the aid of a telescope.
- Similar phenomena indirectly observed on stars other than the Sun are commonly called star spots.

## Solar Tsunami

- Recently a group of solar physicists suggests that a “solar tsunami” is at work that triggers the new sunspot cycle, after the old one ends.
- Sun has toroidal magnetic field, from which sunspots get generated.
- Holding these fields in their place requires extra mass (plasma mass) from higher latitudes for storing a big mass of plasma a magnetic dam is formed.
- At the end of a solar cycle, this magnetic dam can break, releasing huge amounts of plasma cascading like a tsunami towards the poles.
- These tsunami waves travel at high speeds of about 1,000 km per hour carrying excess plasma to the mid-latitudes.
- There they give rise to magnetic flux eruptions and these are seen as the bright patches that signal the start of the next cycle of sunspots.

## Pulsars

- Pulsars are super dense, rapidly spinning neutron stars left behind when a massive star explodes.
- Pulsar emits regular pulses of radio waves like X-rays, Gamma rays and have highly intense magnetic and electric fields.
- Recently NASA has discovered a pulsar PSR J0002 hurtling through space at nearly four million kilometers an hour.

## OTHERS

### Param Shivay

- It is a supercomputer of 833 teraflop capacity.
- It was built at the cost of Rs 32.5 crore under the National Super Computing Mission at the Indian Institute of Technology (IIT), Banaras Hindu University (BHU).
- It will include 1 peta byte secondary storage and appropriate open source system.
- This supercomputer centre will help deal with social issues faced by common people.
- India's first supercomputer called PARAM 8000 was launched in 1991.
- The other super computers in the country are as follows,
  1. Indian Institute of Tropical Meteorology – Pratyush
  2. National Centre for Medium-Range Weather Forecasting- Mihir
  3. IISc - SERC-Cray

## Muons

- Mound elementary subatomic particle similar to the electron but 207 times heavier, they can either have Positive or Negative charge.

- A muon is relatively unstable, with a lifetime of only 2.2 microseconds, since muons are charged they lose energy by displacing electrons from atoms (ionization) before decaying.
- In nature, high energy cosmic rays (usually protons) hit nuclei in the upper atmosphere and produce “showers” of particles, including muons and muon neutrinos.
- The Gamma Ray Astronomy PeV EnergieS phase-3 or GRAPES-3 muon telescope is located at Ooty, Tamil Nadu.
- It is designed to study cosmic rays with an array of air shower detectors and a large area muon detector.

### Forward Search Experiment

- It is a new experiment announced by European Organization for Nuclear Research (CERN).
- It will complement CERN’s ongoing physics program, extending its discovery potential to several new particles.
- It will look for light and weakly interacting particles at the Large Hadron Collider (LHC).
- It will search for a suite of hypothesized particles including dark photons, particles which are associated with dark matter, neutralinos and others.
- Dark matter is a hypothesized kind of matter that does not interact with the electromagnetic force and consequently cannot be directly detected using emitted light.
- The mysterious dark matter makes up about 27% of the universe.

### Fall Army worm (*Spodoptera frugiperda*)

- Fall Army worm attack poses a threat to food security and livelihoods of millions as it ravages crops in Africa and Asia.
- Also the Union government sent an alert to the Odisha agriculture department warning of the Fall Armyworm (FAW) infestation on maize cultivation in some states during Kharif 2018.
- It is an insect that is native to tropical and subtropical regions of the Americas.
- It mostly affects maize but it also feeds on more than 80 additional species of crops, including rice, sorghum, millet, sugarcane, vegetable crops and cotton.
- It was first detected in Central and Western Africa in early 2016 and has quickly spread across virtually all of Sub-Saharan Africa.
- In 2018 it was confirmed in India and Yemen.
- The trade and the moth's strong flying ability are the reasons for their wide extent.

## HEALTH

### Lactic Acid

- It is an organic acid produced in the muscles during the strenuous exercises.
- It is a by-product produced during the conversion of glycogen into glucose even in the absence of oxygen.
- Muscles keep energy stored in the form of a substance called glycogen.
- When energy is required by our body, muscles convert this glycogen into glucose, with the help of oxygen.
- The body prefers to generate most of its energy using aerobic methods, meaning with oxygen.
- The breaking down of glycogen in the absence of oxygen results in accumulation of lactic acid in muscles.
- The release of lactic acid acts like a signal for the body to rest.
- While resting, oxygen is restored and lactic acid is converted back into glycogen by the liver.

### Rare Diseases and Orphan Drugs

- India accounts for about 1/4<sup>th</sup> of all patients suffering rare diseases worldwide.
- A rare disease occurs infrequently in a population, but there is no universal definition.
- There are 3 parameters based on which a disease is said to be rare disease



1. The total number of people having the disease
  2. Its prevalence
  3. Non-availability of treatment for the disorder
- The World Health Organization (WHO) has suggested that a rare disease should be defined as one with frequency less than 6.5 – 10 per 10,000 people.
  - Hereditary sensory and autonomic neuropathy type II (HSAN2) and thalassemia are two such diseases.
  - Orphan drugs are those that are used to treat rare diseases.
  - These are the drugs that are underdeveloped, since they are required by fewer people.
  - USA became the first country to enact Orphan Drug Act in 1983.

### Combat Causality Drugs

- DRDO develops 'combat causality drugs' to reduce casualties in Pulwama type attacks and during warfare.
- The combat causality drugs can extend the golden hour till the trooper is shifted to hospital.
- These medicines will ensure soldiers do not suffer from unwanted blood loss while being taken to a better healthcare from war zones.
- The drugs includes bleeding wound sealants, super absorptive dressings and glycerinated saline, all of which can save lives in the event of warfare in the jungle and high altitude areas as well as in terror attacks.

### West Nile Virus

- West Nile Virus (WNV) is a member of Japanese encephalitis antigenic complex, which can cause neurological disease and death in people.
- WNV is commonly found in Africa, Europe, the Middle East, North America and West Asia.
- WNV is maintained in nature in a cycle involving transmission between birds and mosquitoes, Humans, horses and other mammals can be infected.
- Mosquitoes become infected when they feed on infected birds, which circulate the virus in their blood for a few days.
- Human infection is most often the result of bites from infected mosquitoes.
- Horses, just like humans, are “dead-end” hosts, meaning that while they become infected, they do not spread the infection.
- Infection with WNV is either asymptomatic (no symptoms) in around 80% of infected people, or can lead to West Nile fever or severe West Nile disease.
- People who become infected with WNV will develop West Nile fever.
- Symptoms include fever, headache, tiredness, and body aches, nausea, vomiting, occasionally with a skin rash (on the trunk of the body) and swollen lymph glands.
- For West Nile Virus no vaccine is available for humans.

### Dry Eye Disease

- According to a recent study India is on the verge of a dry eye disease epidemic, the prevalence of dry eye disease will be 40% of the urban population by 2030.
- Dry eye is a condition in which a person doesn't have enough quality tears to lubricate and nourish the eye.
- Tears are necessary for maintaining the health of the front surface of the eye and for providing clear vision.
- Age, urban residence, occupation and socio-economic affluence were found to be high risk-factors for developing the chronic disease.
- Since the disease tends to be progressive with age, once corneal damage becomes irreversible it can lead to visual impairment and even blindness.
- The onset of dry eye disease is early in men than in women. In men, the age of disease onset is early 20s and 30s compared with 50s and 60s in women.



## DEFENCE

### Exercise Al Nagah III

- It is the bilateral joint exercise between India and Oman.
- It is scheduled at Jabel Al Akhdar Mountains in Oman
- It aims to enhance interoperability in counterterrorist operations in semi urban mountainous terrain.
- It is the third in the series, while the first 2 joint exercises were held in Oman in January 2015 and India in March 2017 respectively.

### Pinaka Extended Range Rocket

- Pinaka are guided extended range rockets which can immobilize enemies from 90Km distance, developed indigenously by DRDO.
- Pinaka rocket launcher can fire a salvo of 12 rockets in 44 seconds.
- Pinaka Mark I was extensively used by Indian Army in 1999 Kargil war to neutralize enemies on mountain tops.
- The initial version of the Pinaka rocket had a range of 40km before it was developed into Pinaka Mark II, which had an enhanced range of 70-80 km.
- Each Pinaka launcher has its own computer, allowing it to work independently and able to fire rockets in different directions, fire all rockets in one go or select few.

### MPATG Missile

- Man Portable Anti-tank Guided Missile (MPATGM) incorporates advanced features, including Imaging Infrared Radar (IIR) seeker with integrated avionics.
- MPATG has been indigenously developed by DRDO, which will enhance the hit and destruction capacity of the armed forces in short distance battle situations considerably.

### Exercise Sampriti

- Sampriti series is a joint Indo-Bangladesh military exercise which started in 2009.
- Exercise Sampriti strengthens and broadens interoperability and cooperation between the Indian and Bangladesh Armies.

### AFINDEX

- AFINDEX It is a Joint Field Training Exercise between the Indian Army and 16 African nations.
- AFINDEX aims to train the participating contingents in Humanitarian Mine Assistance (HMA) and Peace Keeping Operations (PKO) under the United Nations Charter through practical and comprehensive discussions and tactical exercises.
- The joint exercise focus on achieving interoperability, learning each other's methodologies and tactics through synchronized operational level planning and tactical level training.

### Aero India 2019

- Aero India is biennial air show and aviation exhibition held in Bengaluru, India at the Yelahanka Air Force Station.
- It is organized by the Ministry of Defense and the Ministry of Civil Aviation.
- Aero India 2019 presents a unique opportunity to highlight and showcase the enormous potential of the Aerospace & Defence industry.
- It provides a platform to explore and forge strategic business alliances.
- As a prelude to Aero India 2019, Defense Research and Development Organization (DRDO) in association with the Aeronautical Society of India (AeSI) organizes the 12th Aero India International Seminar.
- This year the theme of the seminar is "Emerging Frontiers in Aerospace Technologies".



## TROPEX

- Theatre Level Readiness and Operational Exercise (TROPEX) is an annual activity to review the conduct of exercise and to assess operational readiness of the Indian Defense forces.
- The inter-service military exercise involves the participation of the Indian Army, Air Force, Navy and the Coast Guard.
- It is touted to be the largest maritime exercise of the Indian Navy in terms of geographical extent covering the IOR, and also with regard to number of units participating.

## Operation Sunrise

- India's Kaladan project which connects Sittwe Port in Myanmar to the India-Myanmar border was threatened by the Insurgent groups of Myanmar.
- Recently Indian and Myanmar's armies in a coordinated operation, destroyed camps belonging to an insurgent group in Myanmar.
- The military action carried out was codenamed Operation Sunrise.

## Tejas LCA

- Tejas is a supersonic single-engine, multirole light fighter designed by Hindustan Aeronautics Limited (HAL) for the Indian Air Force and Indian Navy.
- It came from the Light Combat Aircraft (LCA) programme, which began in the 1980s to replace India's ageing MiG-21 fighters.
- Recently India has showcased the Tejas Light Combat Aircraft (LCA) in Langkawi International Maritime Aero Expo (LIMA-2019) held in Malaysia.

## Chinook Helicopters

- Chinook is a heavy lift helicopter manufactured in US, recently inducted into the Indian Air Force.
- The heavy-lift transport helicopter will enhance India's heli-lift capability across all types of terrain to full effect.

## INDEX AND REPORT

### Social Institutions and Gender Index (SIGI) 2019 Global Report

- It is prepared by the Organization for economic cooperation and development (OECD).
- Sweden tops the chart by having low gender discrimination.
- According to it, gender-based discrimination, including female genital mutilation, reproductive rights, pay gaps, and gender violence, were estimated to cost \$6 trillion, or 7.5 percent of the global economy.
- Women also occupy less than a third of senior positions in the civil service on average.
- But they make up 75% of part time workers in the public sector.

### Multi-Dimensional Poverty Index

- Global MPI 2018 Report is prepared by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative
- MPI is the product of the following factors
  1. Poverty rate as a percentage of the population.
  2. Intensity as the average share of deprivations that poor people experience.
- If someone is deprived in a third or more of 10 weighted indicators, the global index identifies them as "MPI poor".
- According to the report Bihar was the poorest state in 2015-16, with more than half its population in poverty.
- The four poorest states of India according to the report are Bihar, Jharkhand, Uttar Pradesh, and Madhya Pradesh.





### **Corporate Equality Index**

- Human Rights Campaign Foundation releases Corporate Equality Index (CEI) annually.
- It is the national benchmarking tool on corporate policies and practices pertinent to lesbian, gay, bisexual, transgender and queer employees.
- CEI rating criteria have three key pillars:
  1. Non-discrimination policies across business entities;
  2. Equitable benefits for LGBTQ workers and their families;
  3. Supporting an inclusive culture and corporate social responsibility.

SHANKAR IAS ACADEMY