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AUGUST 2019

G.S PAPER II

1. POLITY

1.1 Article 370 Scrapped Off

Why in news?

The Indian government scrapped off the Article 370 of Indian Constitution recently.

What did happen?

- The Government of India **ended the Jammu & Kashmir's special status** in the Indian Union.
- It was done by **scrapping off Article 370** of our Constitution.
- This extended all provisions of the Constitution to the State in one go and allowed all citizens to buy property and vote in the State.
- It divided the region into two Union Territories are — **Jammu and Kashmir** with legislature and **Ladakh** without legislature.
- The government has adopted a highly militarist approach to separatism.

How was Article 370 scrapped off?

- In the present scenario, J&K has been represented by an unelected Governor appointed by the Centre.
- The Parliament has ventured to ratify the conversion of a State into 2 Union Territories without any recommendation from the State.
- In sum, the process to change the constitutional status of a sensitive border State has been achieved without any legislative input or representative contribution from its people.
- It will not only strain the social fabric in Jammu and Kashmir but also affects the principles of federalism, parliamentary democracy and diversity.

What will be the impacts?

- The **founding fathers recognised** that Article 370 was a transitional or temporary provision.
- There was a clear subtext in it that says its revocation would only happen once the **consent of the people** of the State was obtained.
- The move will be **legally challenged** on grounds of procedural infirmities and, that it undermines the basic feature of the compact between Delhi and Srinagar that was agreed upon in 1947.
- The challenge would centre around the question whether such step could be achieved in the absence of a representative government.
- The **real test will be on the streets** of Srinagar, Jammu and Delhi once the security cordon is lifted from the State.
- The unwillingness to enter into consultation with the mainstream political leaders was inappropriate.

What was the government's rationale?

- The move is clearly embedded in the larger geopolitics of the region.

- The mutual trust and friendship among U.S. and Pakistan is growing.
- There is repeated 'offer' by the U.S. President to mediate in Kashmir may have precipitated the decision.
- Regional alliances were also marginalising Indian interests in the heartland of the region. e.g Belt Road Initiative.
- These suggested that Kashmir could become even more vulnerable to external elements than it was in the past.
- So the government believed that a settlement in Jammu and Kashmir and its 'pacification' was vital for India's national security.

What could be done in the interim?

- The new doctrine will have to persuade the Jammu and Kashmir people that greater integration with India will,
 1. Provide them with more opportunities,
 2. Provide more freedom and space, and
 3. Strengthen their rights much more than the alternatives proposed by other mainstream parties or separatists.
- If this plan to bring harmony between New Delhi and Srinagar works, it will have performed an extraordinary national service.

1.2 Art 370 and Line of Control

What is the issue?

- Article 370 of the Indian Constitution was recently scrapped.
- In this context, here is a discussion on the status of the Line of Control (LoC) between India and Pakistan.

What is the LoC?

- Legally, the LoC is a ceasefire line between India and Pakistan, and is not an international boundary.
- Under international law, it is defined and protected by a bilateral treaty, the 1972 Simla Agreement.
- The Agreement was executed in writing between India and Pakistan following the 1971 war.
- It was subsequently ratified by both parliaments.

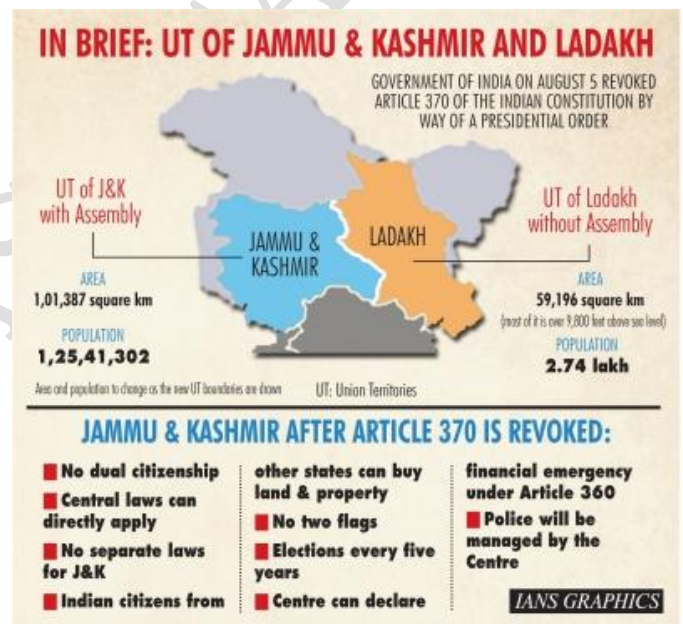


Will scrapping Art 370 affect the LoC status?

- As with any bilateral treaty, the status or definition of the LoC can be legally altered only with the agreement of both India and Pakistan.
- The constitutional changes to Article 370 do not automatically make an impact on the status of the LoC.
- On a question over the impact of this constitutional change on the Pakistani side territory, the Indian home minister reiterated India's claim to the whole of Kashmir.
- However, a diplomatic response from the Ministry of External Affairs clarified that the changes do not affect either the LoC or the Line of Actual Control (the disputed border with China running through Ladakh).
- Given these, many see the LoC as merely continuing with an indefinite and harmful status quo, thus preventing a substantive resolution of the conflict.

What is the legal contention now?

- A domestic law of one country simply cannot amend a bilateral treaty without the consent of the other party.
- E.g. Previous amendments and additions to Article 370, too, have not changed the LoC.
- Also, in 2018, Pakistan introduced the Gilgit Baltistan Order 2018 to begin the integration of Gilgit Baltistan into the federal structure of Pakistan.
- It was a step towards making it the country's fifth province, akin to Punjab or Sindh.
- While India and Kashmiris on both sides of the LoC opposed the move, there was no suggestion that the LoC should be sacrificed.
- Given these, the unilateral constitutional changes, as with scrapping Art 370, fundamentally violate the letter and spirit of the Simla Agreement.
- Notably, Article 4 (2) of the Simla Agreement states as below:
 1. Neither side shall seek to alter it (the LoC) unilaterally, irrespective of mutual differences and legal interpretations
 2. Both sides further undertake to refrain from the threat or the use of force in violation of this Line
- This would clearly justify internationalising the conflict over Art 370, violating the ceasefire and in the extreme, direct military action.
- Indeed, Pakistan briefly threatened to reconsider its adherence to bilateral treaties, including the Simla Agreement, in response to India's latest move.



How significant is the LoC?

- Preserving the sanctity of the LoC will prevent the border crisis from further worsening.
- The existence of LoC also sustains the hopes of finding common ground in an increasingly polarised environment.
- Pakistan realises that the Line of Control would be the only remaining way for it to retain its claim on Kashmir.
- India has adopted an identical position for exactly the same reasons.
- The governments should thus preserve the gains made on the LoC.

1.3 Reserving Jobs for Locals - Implications

What is the issue?

- Many states in India are bringing in laws similar to the Andhra Pradesh [Employment of Local Candidates](#) in the Industries/Factories Act 2019.

- This signals a threat of parochialism (narrow outlook), affecting the larger economic interests of the country.

Why is diversity in recruitment essential?

- If the workforce from a particular region is identified with a particular set of skills, it is because of social, economic and geographical factors specific to that region.
- Labour contractors in infrastructure projects are aware of these aspects as they seek to maximise efficiency and quality.
- Organisations that pursue social diversity as a matter of policy ('equal opportunity' employers) too have experienced commercial success.
- This is because they are able to be responsive to the needs of an equally diverse marketplace.
- This is particularly true for sectors with a direct customer interface (such as Fast-Moving Consumer Goods, aviation and media).
- Nevertheless, it extends to other areas as well.

What is the threat in local employment?

- For the Indian economy, its diverse labour pool is a key strength.
- Given this, a few states seeking to disregard this advantage is an unhealthy sign.
- The states are likely to lose their productive edge in the process.
- The trend might -
 - i. increase the risks of labour shortages
 - ii. trigger a rise in unemployment
 - iii. aggravate wage inflation
 - iv. render labour markets rigid and incompetent
 - v. exacerbate regional inequalities
- It is also odd that States should erect labour market barriers at a time when the country is moving the other way.
- India is increasingly removing barriers to inter-State trade and to the movement of capital across entities, by implementing the bankruptcy law.

What should be done?

- Cosmopolitanism has been one of the driving forces in India's early industrial success.
- Be it Mumbai, Kolkata, Ahmedabad or other industrial townships created in the hinterland, the above has been true.
- When 'outstation' workers merge into the host populations, they initiate a social process that make societies more egalitarian, secular and tolerant.
- India's Constitution too guarantees labour mobility under Article 19 which says that every individual could freely move in and around the country and work anywhere s/he wishes to.
- In all, the free movement of labour and capital must move hand in hand for the evolution of capitalism under a democratic framework.



1.4 Fast Tack Courts in India

Why in news?

The government has proposed to set up 1,023 fast-track courts (FTCs) to clear the cases under the Protection of Children from Sexual Offences (POCSO) Act.

What is the FTCs' state in India?

- Fast-track courts (FTCs) are created primarily to deal with the judicial backlog.
- [A '[special court](#)' is one which is to deal with special types of cases under a shortened and simplified procedure.]
- Fast-track courts (FTCs) have been around for a long time, with the first ones being established in the year 2000.
- At the end of March, 2019 there were 581 FTCs operational in the country, with approximately 5.9 lakh pending cases.
- Uttar Pradesh has the most number of cases.
- However, 56% of the States and Union Territories, including Karnataka, Madhya Pradesh and Gujarat, had no FTCs.
- In terms of money, Rs. 870 crore was released by the Centre between 2000-2001 and 2010-2011 towards these FTCs.
- **Variations** - With all these years of experience and money spent, there is a decline of FTCs across the country.
- Besides, systemic issues prevail in the States that have the courts.
- There is a huge variation in the kinds of cases handled by these courts across States.
- Certain States primarily allocate rape and sexual offence cases to FTCs and other States allocate various other matters.
- Further, several FTCs lacked technological resources to conduct audio and video recordings of the victims and many of them did not have regular staff.

What is the recent SC order?

- Recently, the Supreme Court in a suo motu petition had issued directions in this regard.
- It stated that districts with more than 100 cases pending under the POCSO Act need to set up special courts that can deal specifically with these cases.

How effective will increasing FTCs be?

- A mere increase in the number of judges may not necessarily lead to a direct reduction in pendency of cases.
- Increasing the number of courts as a recourse to deal with the mounting backlog has been a common practice.
- In this line, large sums of money and attention are being devoted to creating additional posts.
- However, little is being done to identify and address the prevalent systemic issues.
- Without fully optimising the current mechanisms and resolving the problems, sanctioning more judges may not provide the intended results.



What is to be done?

- Identifying systemic issues and addressing the concerns is as important for timely disposal of cases as increasing the number of judges.
- The factors that have an impact on disposal of cases in judiciary include -
 - i. inadequate staff and IT infrastructure
 - ii. delay in getting reports from the understaffed forensic science laboratories
 - iii. frivolous adjournments
 - iv. over-listing of cases in the cause list
- Also, given the vacancies in subordinate courts, it is to be seen if States would hire additional judges or appoint FTCs from the current pool of judges.
- The latter could prove to be problematic as it would increase substantially the workload of the remaining judges.
- For the FTCs to become successful, States will need to take stock of the issues at the ground level.
- States should engage with the principal and senior district judges to get a sense of issues the courts are facing in various districts.
- Equal attention must be paid to both the metropolitan and far-flung non-metropolitan areas.
- For the overall system to work productively, it is important to ensure that its various components work efficiently and without any hindrance.

1.5 Increasing the number of SC judges

What is the issue?

- The Union Cabinet approved a proposal to increase the number of Supreme Court (SC) judges.
- This decision was taken against the backdrop of rising cases in SC.

What is the proposal?

- Presently, there are 30 judges in SC excluding the chief justice of India (CJI).
- **The Supreme Court (Number of Judges) Act, 1956** was last amended in 2009 to increase the judges' strength from 25 to 30, excluding the CJI.
- Once the bill to increase the number of judges gets parliamentary nod, the number of judges would go up to 33, excluding the CJI.

Why this proposal is welcomed?

- Given the perennial complaint that availability of judges is not increasing in proportion to the institution of cases, a move to increase the strength of the judiciary ought to be welcomed.
- CJI also highlighted the problem of paucity of judges, due to which he was unable to constitute enough Constitution Benches to decide important questions of law.

Appointment of SC Judges

- The **judges** of the Supreme Court are appointed by the President.
- The **CJI** is appointed by the President after consultation with such judges of the Supreme Court and high courts as he deems necessary.
- The **other judges** are appointed by President after consultation with the CJI and such other judges of the Supreme Court and the high courts as he deems necessary.
- The **consultation** with the chief justice is **obligatory** in the case of appointment of a judge other than CJI.

But, why increase in the court's strength may not be enough?

- However, a moot question is whether SC, the highest, should go into the correctness of every decision of every high court.
- The judicial resources available being used optimally is to be looked into.
- There is another question whether its valuable time is being taken up by matters that do not impinge on larger questions that involve interpretation of laws and constitutional provisions.
- Every major crime or disaster seems to invite a litigant, ostensibly in public interest, who mentions the matter before the CJI for urgent hearing.
- The court is being invited to even oversee flood relief work.

What are some other measures to be taken?

- A reasonable restraint on the duration of oral arguments and a disciplined adherence to a schedule of hearings may be needed.
- One of the principal objectives should be to **preserve the apex court's primary role** as the ultimate arbiter of constitutional questions and statutory interpretation.
- It may be worthwhile considering the **229th Report of the Law Commission's** suggestion, a new system under which there will be
 1. One Constitution Bench in Delhi, and
 2. Four 'Cassation Benches' for different regions of the country.
- These will be final appellate courts for routine litigation.
- This arrangement may also increase access to justice to those living in far-flung areas of the country and who spend more time and money in pursuing appeals.
- It may also cut down on the time taken for disposal of cases.

1.6 Security, Law and Order - Judiciary's Role

What is the issue?

- A judgment of the Supreme Court of India on April 28, 1976 allowed the suspension of the writ of habeas corpus during Emergency. (Habeas Corpus Case)
- The implications of the judgement now find relevance with the Kashmir issue.

What are the key rulings?

- The protective law which gives citizens security and confidence in times of tranquility has to give way to interest of the State in period of public danger of apprehension.
- Enforceability, as an attribute of a legal right, and the power of the judicial organs of the State to enforce the right, are exclusively for the State to confer or take away in the legally authorised manner.
- Personal liberty is but one of the Fundamental Rights. Therefore, the suspension of the right to enforce the right conferred by Article 21 means the suspension of the right to file a habeas corpus petition.
- It also means the suspension of any other proceeding to enforce the right to personal liberty conferred by Article 21.
- Even if a person is detained otherwise than in accordance with the law, he shall not be entitled to enforce the right of personal liberty, if Presidential order under Article 359, clause (1) specifying Article 21 is in operation.

Why is this contentious?

- Article 21 cannot be considered to be the sole repository of the right to life and personal liberty.
- The right to life and personal liberty is the most precious right of human beings in civilised societies.
- In this light, the judgement was perceived by many as an anti-constitutional and anti-people decision.
- It made deep impact on the Constitution, constitutional morality and constitutionalism.

What does this mean now for Kashmir?

- Today, there is no Emergency, yet the constitutional and basic rights of many have been suspended in Jammu and Kashmir (J&K).
- Worryingly, the Supreme Court has virtually taken away their constitutional remedy to enforce those rights.
- A writ petition challenged the imposition of restrictions in Jammu and Kashmir, following the abrogation of Article 370.
- The court merely accepted the pleas of the Attorney General on behalf of Centre.
- [It was argued that there was a need to ensure that law and order situation in Jammu and Kashmir is maintained and that it would take a few days to return to normalcy.]
- This means that the top court, the custodian of the right to life and liberty, had handed over its duty to the Central government.

What are the concerns?

- The court has treated habeas corpus petitions in a most casual manner by justifying negation of the rule of law.
- In the first instance, the state failed “to ensure normalcy” from the day it abrogated Article 370.
- It has now tried to buy more time from the top court to do so.
- The situation is such that nobody knows what exactly is happening there.
- Precisely, it is important here that the court does its duty to ascertain the true facts.
- It cannot shy away from doing justice in the name of “security” and “law and order”.
- Preservation of ‘security’ and ‘law and order’ should not be at the expense of the fundamental and basic human rights.
- In the former Union Minister P. [Chidambaram’s case](#) too, the petitioner seems to have been made impossible to get relief from Supreme Court.
- The top court should have actually intervened here, but failed to do so; a case when individual right had been compromised.
- Simultaneously, it failed to extend the interim protection which was operating for that period.

2. GOVERNMENT ACTS & POLICIES

2.1 Inter-State River Water Disputes (Amendment) Bill, 2019

Why in news?

- The Inter-State River Water Disputes (Amendment) Bill, 2019 was recently introduced in the Lok Sabha.



- The Bill amends the Inter-State River Water Disputes Act, 1956.

What did the Act provide for?

- The Act provides for the adjudication of disputes relating to waters of inter-state rivers and river valleys.
- Under the Act, a state government may request the central government to refer an inter-state river dispute to a Tribunal for adjudication.
- If the central government is of the opinion that it cannot be settled through negotiations, it sets up a Water Disputes Tribunal within a year of receiving such a complaint.

How effective were the tribunals?

- Under the 1956 Act, 9 tribunals have so far been set up. Only 4 of them have given their awards.
- One of these disputes, over Cauvery waters between Karnataka and Tamil Nadu, took 28 years to settle.
- The Ravi and Beas Waters Tribunal was set up in 1986 and it is still to give the final award.
- The minimum a tribunal has taken to settle a dispute is 7 years (by the first Krishna Water Disputes Tribunal in 1976).
- The multiplicity of tribunals has led to an increase in bureaucracy, delays, and possible duplication of work.

What does the Bill aim for?

- The Bill seeks to replace the above mechanism.
- The main purpose of the Bill is to make the process of dispute settlement more efficient and effective.
- The Bill proposes to set up a permanent tribunal to adjudicate on all inter-state disputes over sharing of river waters.
- The replacement of five existing tribunals with a permanent tribunal is likely to result in a 25% reduction in staff strength and a saving of Rs 4.27 crore per year.

What is the proposed dispute resolution committee?

- Under the Bill, a state will put in a request regarding any water dispute to the central government.
- The central government will then set up a Disputes Resolution Committee (DRC) to resolve the dispute amicably.
- **Composition** - The DRC will comprise of a Chairperson, and experts with at least 15 years of experience in relevant sectors.
- These will be nominated by the central government.
- It will also comprise one member from each state (at Joint Secretary level), which is a party to the dispute.
- These members will be nominated by the concerned state government.
- **Resolution** - The DRC will seek to resolve the dispute through negotiations, within one year (extendable by 6 months).
- It will then submit its report to the central government.
- If a dispute cannot be settled by the DRC, the central government will refer it to the Inter-State River Water Disputes Tribunal.
- Such referral must be made within 3 months from the receipt of the report from the DRC.



- So, now, the current system of dispute resolution would give way to a new two-tier approach with DRC and the tribunal.

What are the key provisions on Tribunal?

- The central government will set up an Inter-State River Water Disputes Tribunal, for the adjudication of all water disputes.
- This Tribunal can have multiple benches.
- All five existing tribunals under the 1956 Act would be dissolved.
- Also, the water disputes pending adjudication before such existing Tribunals will be transferred to the new Tribunal.
- **Composition** - The Tribunal will consist of a Chairperson, Vice-Chairperson, 3 judicial members, and 3 expert members.
- They will be appointed by the central government on the recommendation of a Selection Committee.
- Each Tribunal Bench will consist of a Chairperson or Vice-Chairperson, a judicial member, and an expert member.
- The central government may also appoint two experts serving in the Central Water Engineering Service as assessors to advise the Bench in its proceedings.
- The assessor should not be from the state which is a party to the dispute.
- **Time-frames** - Under the Act, the Tribunal must give its decision within 3 years, which may be extended by 2 years.
- Under the Bill, the proposed Tribunal must give its decision on the dispute within 2 years, which may be extended by another year.
- Under the Act, the matter may again be referred to the Tribunal by a state for further consideration.
- In such case, the Tribunal was to submit its report to the central government within a period of one year.
- This period can be extended by the central government.
- Under the Bill, this provision is amended, specifying that such extension may be up to a maximum of 6 months.
- So now, all disputes would have to be resolved within a maximum of four-and-a-half years.
- **Decision of the Tribunal** - Under the Act, the decision of the Tribunal must be published by the central government in the official gazette.
- This decision has the same force as that of an order of the Supreme Court. There is no provision for appeal.
- [However, the Supreme Court, on Cauvery dispute, had said the decision of the tribunal could be challenged before it through a Special Leave Petition under Article 136 of the Constitution.]
- The Bill removes the requirement of such publication.
- It adds that the decision of the Bench of the Tribunal will be final and binding on the parties involved in the dispute.
- The Act provided that the central government 'may' make a scheme to give effect to the decision of the Tribunal.
- The Bill is making it mandatory for the central government to make such scheme.

- **Data bank** - Under the Act, the central government maintains a data bank and information system at the national level for each river basin.
- The Bill provides that the central government will appoint or authorise an agency to maintain such data bank.

2.2 Unlawful Activities Prevention Amendment Bill, 2019

Why in news?

The Unlawful Activities Prevention Amendment Bill was recently passed in the Parliament.

What is the Bill on?

- The Bill amends the Unlawful Activities (Prevention) Act, 1967 (UAPA).
- The original Act dealt with “unlawful” acts related to secession; anti-terror provisions were introduced in 2004.
- It provides special procedures to deal with terrorist activities, among other things.
- **Concern** - There is widespread opposition to the amendments on the ground that it could be used to target dissent against the government.
- The provisions could potentially affect citizens’ civil rights.

What are the key provisions in the Bill?

- **Definition** - Under the Act, the central government may designate an organisation as a terrorist organisation if it:
 - i. commits or participates in acts of terrorism
 - ii. prepares for terrorism
 - iii. promotes terrorism
 - iv. is otherwise involved in terrorism
- The Bill additionally empowers the government to designate individuals as terrorists on the same grounds.
- The word “terror” or “terrorist” is not defined.
- However, a “terrorist act” is defined as any act committed with the intent -
 - i. to threaten or likely to threaten the unity, integrity, security, economic security, or sovereignty of India
 - ii. to strike terror or likely to strike terror in the people or any section of the people in India or in any foreign country
- **Investigation by NIA** - Under the Act, investigation of cases may be conducted by officers of the rank of Deputy Superintendent or Assistant Commissioner of Police or above.
- The Bill additionally empowers the officers of the National Investigation Agency (NIA), of the rank of Inspector or above, to investigate cases.
- **Seizure of property by NIA** - Under the Act, an investigating officer can seize properties that may be connected with terrorism with prior approval of the Director General of Police.
- The amendment Bill, however, removes this requirement if the investigation is conducted by an officer of the NIA.
- The investigating officer, in that case, only requires sanction from the Director General of NIA.



- [Central agencies such as the CBI are required to obtain prior permission from the state government since law and order is a state subject under the Constitution.]
- **Insertion to schedule of treaties** - The Act defines terrorist acts to include acts committed within the scope of any of the treaties listed in a schedule to the Act.
- The Schedule lists 9 treaties, including -
 - i. the Convention for the Suppression of Terrorist Bombings (1997)
 - ii. the Convention against Taking of Hostages (1979)
- The Bill adds another treaty to the list, which is the International Convention for Suppression of Acts of Nuclear Terrorism (2005).
- **Designation** - The central government may designate an individual as a terrorist through a notification in the official gazette.
- His/her name is added to the schedule supplemented to the UAPA Bill.
- The government is not required to give an individual an opportunity to be heard before such a designation.
- At present, legally, a person is presumed to be innocent until proven guilty.
- In this line, an individual who is convicted in a terror case is legally referred to as a 'terrorist'.
- And those suspected of being involved in terrorist activities are referred to as 'terror accused'.
- The Bill does not clarify the standard of proof required to establish that an individual is involved or is likely to be involved in terrorist activities.
- **On designation** - The designation of an individual as a 'global terrorist' by the United Nations is associated with sanctions.
- The UAPA Bill, however, does not provide any such detail.
- The Bill also does not require the filing of cases or arresting individuals while designating them as terrorists.
- The consequences of the designation will be prescribed in the Rules supplemented to the law once the amendment Bill is passed.

How can the names be removed?

- **Application** - The Bill seeks to give the central government the power to remove a name from the schedule when an individual makes an application.
- The procedure for such an application and the process of decision-making will also be decided by the central government.
- If an application filed is rejected by the government, the Bill gives the person the right to seek a review within one month of rejection.
- **Review committee** - Under the amendment Bill, the central government will set up a review committee.
- It will consist of a chairperson (a retired or sitting judge of a High Court) and 3 other members.
- It will be empowered to order the government to delete the name of an individual from the schedule that lists "terrorists", if it considers the order to be flawed.
- Apart from these two avenues, the individual can also move the courts challenging the government's order.

2.3 Amendments to POCSO Act

Why in news?

Union government has amended the POCSO Act.

What is POCSO Act?

- POCSO Act came into force on November 14, 2012, and was specifically formulated to deal with offences including child sexual abuse and child pornography.
- It is first comprehensive law in the country dealing specifically with sexual abuse of children.
- The Act through its 46 provisions increased the scope of reporting offences against children, which were not earlier covered under the Indian Penal Code.
- This included aggravated penetrative sexual assault to include punishment for abuse by a person in position of trust or authority including public servants, police, armed forces, management or staff of an educational or religious institution.
- It also defined the procedure for reporting of cases, including a provision for punishment for failure to report a case or false complaint.
- It provided procedures for recording of the statement of a child by the police and court, laying down that it should be done in a child-friendly manner, and by the setting up of special courts.

What are the amendments made to the Act?

- The Act has enhanced punishment under various sections of the Act including punishment for aggravated penetrative sexual assault to be increased to include death penalty.
- Other sections under which the punishment has increased includes the minimum punishment for penetrative sexual assault, which has been increased from seven years to 10 years – and, if the child is below 16 years of age, the minimum punishment has been increased to 20 years.
- The Act has also tightened the provisions to counter child pornography.
- While the earlier Act had punishment for storing child pornography for commercial purposes, the amendment includes punishment for possessing pornographic material in any form involving a child, even if the accused persons have failed to delete or destroy or report the same with an intention to share it.
- The Act has also removed the words “communal or sectarian violence”, which had punishment for a person who sexually abused a child during the course of such violence.
- The words have been replaced with “violence during any natural calamity or in similar situations”.

What is the status of convictions under the Act?

- National Crime Records Bureau from 2016 indicates an increase in the number of cases registered under the said Act “from 44.7 per cent in 2013 over 2012, and 178.6 per cent in 2014 over 2013, and no decline in the number of cases thereafter.
- Reports by NGOs working with children, as well as the latest National Crime Records Bureau’s Crime in India Report, 2016, state that over 94 per cent of the accused in cases registered under The POCSO Act, are known to the victims, including close family members.
- This may deter victims, or put pressure on them to not file a complaint, given the possibility of death now.
- Further, while the Act states that the cases should be heard expeditiously, the pendency rate as per the NCRB is over 89 per cent.
- The delays also affect the probability of conviction of offenders, the conviction is being below 30%, despite the stringent sections.

2.4 Haryana Administrative Tribunal

Why in news?

The Punjab and Haryana High Court Bar Association has suspended work indefinitely, following the recent notification for setting-up the Haryana Administrative Tribunal.

What is the notification?

- The Union Ministry of Personnel, Public Grievances and Pensions recently issued a notification for establishing the Haryana Administrative Tribunal.
- It came following a recommendation from the Haryana government.
- The government's decision to establish the Tribunal had been pending since 2015.
- Official data reveals that nearly 11,000 cases will be transferred from the Haryana High Court to Tribunal once it starts functioning.

What is the Haryana Administrative Tribunal?

- The tribunal is a quasi-judicial body on the lines of Central Administrative Tribunal.
- It is meant to adjudicate over the service matters of the state employees that earlier would be directly heard by the High Court.
- In the absence of the Tribunal, the employees have no other option but to directly approach the High Court.
- It is primarily aimed at reducing a large number of pending cases before the High Court and quick disposal of the grievances of employees.
- Tribunal orders can be challenged before the High Court.

What was the response?

- Following the notification, the judges at the High Court stopped hearing the service matters from Haryana.
- They reasoned that the court no more had the power in view of the notification.
- A full bench of the High Court has deferred the implementation of the Tribunal in view of the stalemate.
- For "the time being" and till further orders, it has been ordered that the High Court will continue to hear the service matters.
- However, the lawyers have turned the struggle into a battle against the idea of the Tribunal system.
- They vowed to stop the suspension of work only at the revocation of the state decision.
- Lawyers have abstained from attending the courts which has resulted in adjournments in most of the cases including civil and criminal litigations.

Why is the opposition?

- **Independence** - The Bar Association says that the decision encroaches upon the jurisdiction and judicial independence of the High Court.
- They argue that Tribunal members do not enjoy powers like judges who hold constitutional posts.
- **Appointment** - The Centre has already notified the appointment of Justice (ret'd.) Sneh Prashar as the Chairperson of the Tribunal for the period of 5 years and she has been given a temporary office.
- The Bar has also raised questions over the decision to appoint her on the post.

- **Location** - The government's original decision is to establish the Tribunal at Karnal but is willing to consider establishing the Principal Bench at Panchkula.

2.5 Linking Social Media Accounts with Aadhaar - TN Demand

Why in news?

The Tamil Nadu government told the Supreme Court that social media profiles should be linked to users' Aadhaar number to check terrorist messages, pornography, and fake news.

What is the case about?

- Tamil Nadu made the submissions when a two-judge bench of Justices was hearing a petition by Facebook.
- The petition was to transfer all such cases pending in different high courts to the Supreme Court.
- The High Courts of Madras, Bombay, and Madhya Pradesh are hearing nearly similar petitions to link Aadhaar number with social media profiles.
- All such pending petitions nearly raise the same question of law and the same issue of whether private entities could use Aadhaar numbers of individuals.
- Facebook said before the Supreme Court that it was difficult for it to defend itself before high courts across the country.
- The high courts had given conflicting observations in the case.
- Transferring them all to the apex court would serve the interests of justice by avoiding the possibility of conflicting decisions.

What is the petition before Madras HC?

- Following the Supreme Court's decision in the Aadhaar case, the unique 12-digit-number can be used only for subsidies and welfare benefits.
- Also, Section 57 of the Aadhaar Act relating to use of Aadhaar by private entities has been struck down by the SC.
- The petitioners had approached the High Court, noting that many people got away with controversial posts on social media because of the lack of traceability.
- There have been several Public Interest Litigations (PILs) filed in the case, with the earliest being moved before the Madras high court in July 2018.
- The petitioner had asked for making it mandatory to link Aadhaar or any other government-authorized identity proof for authentication of social media profiles.
- Other similar PIL sought that Facebook should seek some sort of government-authorized identity before allowing any person to open an account on its platform.

What is the Madras HC's observation?

- The Madras high court had observed that the application to link Aadhaar with social media profile was dangerous.
- The court said that this would affect the right to privacy of every individual.
- It had however agreed to hear the case.
- It looks at examining the adequacy of the legal framework on cybercrimes and the responsibilities of intermediaries who provide telecommunication and online services.



What is the TN government's stance?

- The Tamil Nadu government opposed the transfer of the Facebook-related cases to the Supreme Court.
- The Madras high court has already had 18 hearings on the case.
- So, the TN government has argued that the apex court should wait for a comprehensive judgment before deciding on the issue.
- The State government is trying for better assistance from intermediaries and social media companies to trace offending messages.
- It is also in support of linking social media profiles of registered users with their Aadhaar numbers.

What is the regulation in this regard?

- The Union Ministry of Electronics and Information Technology notified new [draft rules for intermediaries](#) recently and called for public comments.
- The proposed rules envisage new obligations for service providers.
- One of the changes proposed is that intermediaries should help identify originators of offensive content.
- However, technology companies that use end-to-end encryption have said they were unable to open a back door for identifying originators.
- The issue concerns the global policy of these companies as well as the wider public interest of millions of registered users.

3. HEALTH

3.1 New anti-tuberculosis drug

What is the issue?

- The anti-tuberculosis drug **Pretomanid** was recently approved by the U.S. Food and Drug Administration (FDA).
- This will be a **game changer for treating people** with extensively drug-resistant TB (XDR-TB) and multidrug-resistant TB (MDR-TB) drugs.

Why pretomanid was approved?

- Pretomanid is only the third drug in the last 4 decades to get FDA approval.
- This highlights the scarcity of new drugs to treat TB bacteria that are rapidly developing resistance against most available drugs.
- The all-oral, three-drug regimen of bedaquiline, pretomanid, and linezolid (**BPaL**) **had a 90% cure rate** in a phase III trial in South Africa involving 109 participants.
- In contrast, the current treatment success rate for XDR-TB and MDR-TB is about 34% and 55%, respectively.

What is the significance of Pretomanid?

- Importantly, the regimen was found to be safe and effective in curing TB in people living with HIV.
- Unlike 18-24 months needed to treat highly-resistant TB using nearly 20 drugs, the BPaL regimen took just six months, was better tolerated and more potent in clearing the bacteria.
- The shorter duration is more likely to increase adherence to therapy and improve treatment outcomes.



What do the facts say?

- According to the World Health Organisation, in 2017, there were an estimated 4.5 lakh people across the world with MDR-TB, of which India accounted for 24%, and about 37,500 with XDR-TB.
- With only a low percentage of MDR-TB cases being treated, the actual number of people who do not tolerate or respond to available MDR-TB drugs and so will be eligible to receive the BPaL regimen is unknown.
- Though the total number of people who will require the new drug may not be high, these are people who have very little alternative treatment options that are safe and efficacious.

How is affordability of the drug a factor?

- While the availability of a potent drug is welcome news, it remains to be seen if it would be made affordable, particularly in the developing countries where the burden of XDR-TB and MDR-TB is the highest.
- TB Alliance, an international NGO, which developed and tested the drug, has already signed an exclusive licensing agreement with a generic-drug manufacturer for high-income markets.
- Making the drug affordable to those with extreme form of drug resistance will be highly commendable and needed model to be followed.
- There is a compulsion to keep the prices low and increase treatment uptake to stop the spread of highly drug-resistant TB bacteria.

4. GOVERNANCE

4.1 SC Verdict on Amrapali Homes Case

Why in news?

The Supreme Court cancelled the [RERA](#) licence of the Amrapali group in a petition on house construction projects.

What is the case about?

- The Amrapali Group of companies is a Noida-based real estate developer.
- More than 40,000 homebuyers have booked flats and paid up 40-100% of their dues 5-10 years ago to the group.
- But still, they were stuck due to under-construction of houses, leading them to file writ petitions.
- Bankers to the project had meanwhile petitioned the NCLT (National Company Law Tribunal) questioning the rights of home-buyers as unsecured creditors, to file claims.

What were the irregularities?

- A forensic audit into Amrapali's books has revealed alleged funds diversion on a grand scale.
- Over Rs. 5,000 crore of buyers' funds are believed to have been diverted, via related-party deals and bogus bills, into unrelated ventures.
- These, notably, included family weddings and cars for promoters.
- Statutory auditors too were silent when the company skipped preparing accounts for 3 years.
- The Noida and Greater Noida Authorities, who leased vast tracts of land to the group on token payments, did not cancel them on default.
- Bankers extended loans against doubtful security, not checking end-use.



- Clearly, there had been gross negligence and possible involvement by bankers and civic authorities with the developer.

What is the SC's verdict?

- The Supreme Court upheld the claims of home-buyers over those of financial creditors and government authorities.
- It cancelled the registration of the Amrapali Group of companies under the Real Estate (Regulation and Development) Act, 2016 (RERA).
- The court also appointed the public sector NBCC (India) Ltd to complete the various under-construction projects.
- [NBCC, formerly known as National Buildings Construction Corp. Ltd, is a government of India Navratna enterprise.]
- The apex court has asked the developer to hand over the possession of apartments after completing the project at a profit margin of 8% that it can charge from the homebuyers.
- The court has also ordered probes into FEMA (Foreign Exchange Management Act), FDI and anti-money laundering violations by the group.

What is the significance?

- Revelations in this case brings to light the deep nexus between India's real estate leaders and lenders, and civic authorities who are supposed to regulate them.
- The SC's verdict in favour of Amrapali home-buyers offers hope to thousands of similarly stuck investors across India.
- However, a concern remains if similar rescuers like the NBCC could be found for dozens of other stalled projects.
- RERA may be a well-intentioned law that puts buyers' interests first.
- However, its effective enforcement depends heavily on the State government, local authority, bankers and statutory auditors performing their fiduciary roles.

4.2 INX Media Scam - P Chidambaram

Why in news?

- The Delhi High Court rejected Congress leader P Chidambaram's anticipatory bail application in two cases of alleged corruption and money laundering linked to INX Media scam.
- Meanwhile officers from the CBI and ED, which are investigating the cases, are looking for him to arrest.

What is the INX media case all about?

- The Foreign Investment Promotion Board (FIPB) had cleared the inflow of Rs. 4.62 crores to INX Media in 2007.
- However, the company made a downstream investment in another company, INX News, which received Rs. 300 crores through premium shares.
- Such downstream investment required separate clearance from the FIPB; as this was not obtained, there seems to be a clear case of violation.
- Mr. Chidambaram was the Union Finance Minister at this time.
- **Case** - In 2008, the Financial Intelligence Unit (FIU-IND) of the Finance Ministry flagged FDI of over Rs 305 crore by three Mauritius-based companies in INX Media Pvt Ltd.

- It was then owned by Peter and Indrani Mukerjea.
- The Income-Tax (I-T) Department in Mumbai forwarded the case to the Enforcement Directorate (ED).
- In 2010, ED registered a case against INX Media for alleged Foreign Exchange Management Act (FEMA) violations.
- In 2018, the Enforcement Directorate (ED) registered a case of money laundering, and the CBI called Chidambaram for questioning.
- Meanwhile, the CBI (Central Bureau of Investigation) had registered an FIR in 2017.
- It alleged irregularities in the Foreign Investment Promotion Board (FIPB) clearance given to the INX group for receiving overseas funds of Rs 305 crore in 2007.
- Earlier in 2019, Chidambaram moved Delhi High Court to seek anticipatory bail in both the cases.
- **Karti Chidambaram** - Later, while investigating a company associated with Chidambaram's son Karti Chidambaram, ED found documents linked to INX Media in the computer of Karti's CA Bhaskarraman.
- The documents indicated payments made to Karti's alleged company by INX Media at the time the Finance Ministry granted it FIPB approval.
- Mr. Karti is alleged to have taken \$1 million to influence the probe against the media house by using his connections in the finance ministry.
- On ED's reference in this regard, CBI registered a case of corruption in 2017, and searched the premises connected with both Karti and P Chidambaram.
- Following this, ED lodged a case of money laundering against Karti.
- Karti was arrested by the CBI in 2018 and was later granted bail by the Delhi High Court, and is now the Congress Lok Sabha MP from Sivaganga constituency of Tamil Nadu.

4.3 Lynching Investigation - Pehlu Khan Case

Why in news?

All six adults accused of lynching Mr. Pehlu Khan, a farmer, have been acquitted by an Alwar court, Rajasthan that gave them the "benefit of doubt".

What is the case about?

- In April 2017, the dairy-farmer from Nuh, Haryana, Pehlu Khan, was assaulted by cow-vigilantes while he was making his way from a cattle fair.
- The video footage of this incident went viral.
- The court did not admit the footage because it had not been forensically authenticated.
- Two years after the lynching, neither the Rajasthan police nor the prosecution that presented the video for inclusion as evidence had sought forensic verification.
- Notably, the Rajasthan police separately investigated the lynching twice.

What are the disparities in the case?

- The court order is an outcome of careless investigation in the case.
- **Accusation** - Khan, in his dying declaration, named six persons.
- The court said that these were not named in the complainants' (Khan's sons) statement to the police, as required under Section 161 of the CrPC.

- The accused were identified and charged on the basis of the video that went viral.
- However, the state police had failed to seize the device on which the viral footage was made.
- Another witness, who had shot a separate video of the lynching, turned hostile.
- In September 2017, the state police gave a clean chit to the 6 persons named by Khan in his statement before his death.
- This was on the basis of call records and statements from the employees of a cow shelter 4 kilometres from the crime spot.
- One of the six named by Khan is alleged to be the manager of the shelter.
- **Doctor certificate** - The police recorded Khan's statement at the hospital to which he was taken for treatment.
- But no certificate was obtained from the doctors in charge to show that Khan was in a condition to give the statement.
- **Record** - The investigating officer presented the recorded statement at the police station 16 hours later, which is a serious lapse.
- **Cause of death** - The Behror Community Health Centre's post-mortem report suggests that the assault was the cause of death.
- However, the doctors at Kailash Hospital, where Khan was taken for treatment, told the police that the cause of death was heart attack.
- The Rajasthan police also registered charges of homicide against the accused only after public outcry over the lynching.
- **Charges** - Meanwhile, of the seven FIRs registered in the case, six are under the Rajasthan cow-protection law.
- And Khan's sons and others have been named for transporting cows illegally, despite submission of documents showing that the transport was legal.
- One of those named by Khan was caught in a sting, admitting to have seriously assaulted Khan over a period of one-and-a-half hours.
- In all, the case brings to light many inconsistencies in the investigation process.

5. BILATERAL RELATIONS

5.1 India-France Relationship - Rising Significance

What is the issue?

- PM Modi makes an official state visit to France on French President Emmanuel Macron's invitation for a bilateral summit and to participate in the G7 Summit.
- In this backdrop, here is an overview of India-France ties and its rising significance in the current global scenario.

How has India-France ties been?

- For nearly four decades, successive French presidents have made repeated efforts to elevate the engagement with India to a higher level.
- On the other hand, India was preoccupied with other major powers as the US, Russia and China.



- Delhi could hardly appreciate the pivotal value of France, and more broadly that of Europe, in transforming India's international position.
- However, this trend has begun to change as Prime Minister Narendra Modi paid greater strategic attention to France and Europe in the first term.

How is India-France relationship currently?

- Many pending issues relating to Europe were sorted out during 2014-19.
- The boosting of ties with France was an important feature of Modi's foreign policy in the first term.
- The PM's summit and participation in the G-7 outreach now is a significant mark in bilateral strategic partnership.
- [The bilateral strategic partnership was unveiled more than two decades ago in 1998.]

Why is it more significant now?

- The relative harmony between the major powers witnessed after the Cold War is now becoming a distant memory.
- The growing tensions between the US on the one hand, and China and Russia on the other seems to make wider ramifications.
- Meanwhile, due to Trump administration's disruptive moves, the cracks in the political West are widening.
- In this wider context of the slow breakdown of the post-War order, India and France could make coalitions that can provide a measure of stability.

What are the emerging challenges for India in this regard?

- **China** - The rapid rise of China has altered the balance of power in India's neighbourhood, causing much concern.
- **Russia** - In the last few years, Russia has been drawing steadily closer to China.
- This is not defined by any problem between Russia and India, but Russia's larger global calculus.
- However, Russia's deeper economic and political relationship with China would only make it harder for India to rely on the former to balance the latter.
- **U.S.** - The 1990s were turbulent years for India and the U.S., with differences over non-proliferation and Kashmir issues.
- However, the two sides settled into a period of stable and expanding partnership under the presidencies of George Bush and Barack Obama lasting from 2001-2017.
- Now, with Trump's Presidency, there are unexpected turns in American domestic politics.
- Clearly, this has begun to produce complications for India on a range of issues from bilateral trade to regional and global affairs.
- These challenges are much the common challenges for many nations other than India.

How could these be dealt with?

- India and France see that strengthening bilateral cooperation and building coalitions with like-minded countries is critical for the protection of their long-term interests.
- The new imperatives driving India and France have manifested themselves in a five-fold agenda for Modi and Macron.

- **Advanced technologies** - France has always been an important partner in the development of advanced technologies.
- This is set to advance further with the consolidation of civil nuclear cooperation and enhancing space cooperation.
- Artificial intelligence and digital revolution are other potential areas.
- Enhancing bilateral cooperation in these strategic sectors is of significance now.
- **Defence** – Next is the new commitment to go beyond the buyer-seller relationship in the field of weapons procurement.
- India comes up with clear policies for making arms in India.
- With this, the synergies between India's large defence market and the French strengths in armament production can offer much.
- **Political cooperation** - Political cooperation between India and France is relatively new.
- It began with French support for India in limiting international sanctions on Delhi after its 1998 nuclear tests.
- Today, France has emerged as India's most reliable partner on issues relating to terrorism and Kashmir; taking this forward would be crucial now.
- **Regional cooperation** - The relationship between India and France has gone beyond the bilateral to focus on the regional.
- It has been agreed to intensify maritime and naval cooperation in the Indian Ocean and more broadly the Indo-Pacific.
- This offers much for maritime governance, oceanographic research, interoperability between their armed forces, capacity building in the littoral, etc.
- **Global agenda-setting** - After their joint efforts to limit climate change and develop the Solar Alliance, India and France have turned to more ambitious ideas.
- The road map on cybersecurity and digital technology issued by Modi and Macron provides the framework for long-term cooperation on a set of issues.

5.2 Indian PM's Visit to Russia - Eastern Economic Forum

Why in news?

Indian PM is to visit the Russian city of Vladivostok as the guest of honour at Eastern Economic Forum (EEF), 2019.

Why is Vladivostok significant to India?

- During the India-Pakistan war in 1971, the U.S. and British Navies tried to threaten the Indian security.
- At that time, the Soviet Union dispatched nuclear-armed fleet from its Pacific Fleet based at Vladivostok in support of India.
- Ever since then, the city of Vladivostok, located in Russia's Far East, has had a special relevance for Indians.
- There are, now, plans to invest in Russia's Far East, thus, paying back the long-held Indian debt to Vladivostok.

What are Russia's priorities now?

- The Far East lies in the Asian part of Russia and is less developed than the country's European areas.



- As part of his 'Pivot to Asia' strategy, Russian President Vladimir Putin is inviting foreign countries to invest in this region.
- Russia's outreach to Asian nations has especially gained momentum after the 2014 Crimea crisis spoiled its relations with the West.
- Russia also wants to make sure that China does not become a hegemon in the Eurasian region.
- It is thus deepening cooperation with countries like India, Vietnam and Indonesia.
- Here, the Far East has the potential to become an anchor in deepening India-Russia cooperation.
- Moreover, New Delhi has expanded the scope of its 'Act East policy' to also include Moscow.

What are the concerns with Indo-Pacific strategy?

- The idea of an 'Indo-Pacific region' signals India's willingness to work with the U.S. mainly to counter China's assertive maritime rise.
- But this has left Russia concerned.
- It is apprehensive that the U.S. would exert pressure on India's foreign policy choices.
- Russia is thus worried that it could lose a friendly country and one of the biggest buyers of Russian military hardware.

How is the Indo-Pacific engagement now?

- India has maintained that Indo-Pacific is not targeted against any country and stands for inclusiveness and stability.
- For India, Indo-Pacific is not a club of limited members; it wants to have inclusive engagement with all the relevant stakeholders.
- India has also been able to convince Russia that its engagement with the U.S. is not going to come against Russian interests.
- With these constant assertions, India and Russia are now working for a multipolar Indo-Pacific.

What are the future prospects?

- At least 17 countries have already invested in the Far East.
- The region has its investment-friendly approach and vast reserves of natural resources.
- With this, it has the potential to strengthen India-Russia economic partnership in areas like energy, tourism, agriculture, diamond mining and alternative energy.
- Lack of manpower is one of the main problems faced by the Far East.
- Given this, Indian professionals like doctors, engineers and teachers can help in the region's development.
- Presence of Indian manpower will also help in balancing Russian concerns over Chinese migration into the region.
- Further, India, one of the largest importers of timber, can find ample resources in the region.

Eastern Economic Forum

- The Eastern Economic Forum was established by Decree of the President of the Russian Federation Vladimir Putin in 2015.
- In accordance with the Decree, the Eastern Economic Forum takes place each year in Vladivostok.
- Every year, the Eastern Economic Forum serves as a platform for the discussion of key issues in the world economy, regional integration, and the development of new industrial and technological sectors.
- Global challenges facing Russia and other nations are discussed too.



- Japan and South Korea have also been investing and New Delhi may explore areas of joint collaboration.
- **Paradiplomacy** - India has also given due importance to 'paradiplomacy' where Indian States are being encouraged to develop relations with foreign countries.
- In other words, Indian states would be collaborating with Russian Provinces to increase trade and investments (State-to-province ties).
- For India, there is immense potential for mid-sized and small businesses.
- These should be assisted to overcome language and cultural barriers so that they successfully adopt local business practices.
- **Sea-route** - The two countries are also looking at the feasibility of Chennai-Vladivostok sea route.
- This would allow India access to Russia's Far East in 24 days, compared to the 40 days taken by the current route via Suez Canal and Europe.
- This route would potentially add to the required balance to peace and prosperity in South China Sea.
- This would also open new opportunities for India, like the India-Russia-Vietnam trilateral cooperation.
- **Trade** - The U.S. President Trump is interested in 'deglobalisation' and China is promoting 'globalisation 2.0 with Chinese characteristics'.
- Given these, it is wise that India and Russia increase their areas of cooperation and trade.

6. INTERNATIONAL ISSUES

6.1 US-Taliban Peace Talks

Why in news?

The eighth round of talks between the U.S. and the Taliban takes place in Qatar's capital Doha. Click [here](#) to know more on the earlier talks.

What are the conflicting demands?

- The U.S. maintained that the Doha talks would cover four issues -
 1. a cessation of hostilities
 2. an intra-Afghan peace dialogue
 3. assurance from the Taliban that Afghan territory would not be used for attacking U.S. interests
 4. U.S. troop withdrawal
- However, the Taliban made it clear that its priority was the last issue i.e. the US troop withdrawal.
- The Taliban rejected a ceasefire, instead launching its spring offensive, Operation Fath.
- It also rejected talks with the Afghan government, describing it as a "puppet regime".
- The Taliban provided some assurances on the third issue, but it kept demanding a firm date for U.S. troop withdrawal.
- It changed its mind and agreed on the second issue, an intra-Afghan peace dialogue, when pushed by Pakistan.
- Now, the US wants Taliban guarantees that Afghanistan will not become a safe haven for "terrorists".
- On the other hand, the Taliban is focused on ensuring the withdrawal of all US-led foreign forces from the country.

What are the challenges?

- The Afghan government has lost its credibility and there is little support for its term being extended.
- A deteriorating security environment makes it difficult for a credible election to be held.
- Afghan security forces are losing 25 to 30 men daily, a toll that is depleting ranks and affecting morale.
- There is a rise in ethnic polarisation in Afghanistan. With the emergence of the Islamic State, there is growing evidence of sectarian polarisation.
- Any dilution of the stature of the Afghan security forces would dramatically increase the risks of fragmentation of Afghanistan.
- The Taliban is not going to take part in the election, and once a deal is concluded, its demand will be for an interim government.
- Even if elections take place, an elected government would soon find itself at cross purposes with the interim government.
- Further, a number of promised electoral reforms are yet to be implemented.
- The U.S.'s exit will end its long war in Afghanistan but growing political uncertainties will only exacerbate Afghanistan's ongoing conflict.

What lies ahead?

- U.S. Secretary of State Mike Pompeo has already indicated September 1, 2019 as a deadline for concluding the Doha process.
- So, instead of a contentious election, an interim government would provide a better environment for the U.S. to manage its exit.
- The reality is that there can be no peace unless the Taliban and Afghan security forces de-escalate.
- However, this will require talks between the Taliban and the government.

Related News: [Making Peace in Afghanistan](#), [Afghanistan now and Vietnam then](#), [U.S.'s Withdrawal from Afghanistan](#)

6.2 Mass Shootings in the U.S

Why in news?

Two American cities, El Paso, Texas, and Dayton, Ohio recently witnessed lethal shootings resulting in mass fatalities.

What happened?

- El Paso and Dayton, more than 2,500 kilometres apart, witnessed lethal shootings resulting in mass fatalities.
- At least 31 people were dead, and many were injured.
- The El Paso attack was the deadliest mass shooting in the United States since November 2017.
- The attack bear tell-tale signs of a hate crime.

Was this a racist attack?

- In his reaction to the shootings, the U.S. President Donald Trump appeared to denounce the racist intention behind the shooting.
- He said, "In one voice our nation must condemn racism, bigotry and white supremacy," and that these "sinister ideologies must be defeated."
- Police investigating the El Paso shooting said they found an anti-immigrant document supporting white nationalist and racist views.
- They believe it was written by the suspect, Patrick Crusius - his focus on violent video games, mental illness and online bigotry leaves a glaring gap in policy: common-sense gun control reforms to curb the proliferation of deadly, military grade weapons and high-capacity magazines.



How successful were gun control measures?

- The battle to pass broad, effective gun control legislation has interrupted the past few decades of America's unrelenting, 228-year-old love for guns.
- The regulations include tougher background checks for gun buyers and the banning of certain gun technologies and accessories.
- Despite
- There is sustained lobbying to push forward basic gun control laws through the U.S. Congress.
- However, despite this, the constitutional right to bear arms has never been more fiercely defended.
- E.g., former President Obama saw no fewer than 17 of his attempts to bring gun control to the floor of Congress defeated by conservative lawmakers
- The National Rifle Association quietly hands around \$6 million annually to lawmakers in Washington to retain its pro-gun agenda as a top priority.
- Pro-gun lobbies consistently mobilise voters around the Second Amendment.
- The result of combining this ingrained "gun culture" with patchy gun regulations is ever more incidents of mass shootings.

What all possibly contribute to mass shootings?

- **Precedent** - As is seen in many cases, one mass shooting inspires another.
- Police find abundant evidence that shooters have studied previous crimes, often mimicking gestures or killing tactics.
- E.g. the man who shot to death 50 people at the Pulse nightclub in Orlando, Florida, had studied a previous attack, in San Bernardino, California
- Forensic psychologists say that many 'would-be mass killers' see themselves as part of a brotherhood of like-minded, isolated and resentful boys and men.
- To them, previous mass murderers may be perceived as idols and pioneers.
- This is true both of younger shooters who attack unarmed people in schools, or at random; and of older men who execute innocents in the name of an ideology.
- The ideology could be an opposition to immigration, white supremacy, radical Islam or another extreme belief.
- **Video games** - The results of studies attempting to clarify the relationship between violent video games and aggression have been mixed.
- Nevertheless, in the vast majority of settings, violent video games do increase aggressive behavior.
- But, these effects are almost always quite small and the "aggression" in question falls well short of assault with a weapon.
- So, logically, though one of the contributory factors, video games are not a decisive factor when a spree killer decides to act.
- Evidently, a huge proportion of males in the United States have played or are playing video games; only a handful commit mass murders.
- On the other hand, video games are even more popular in Asian countries, where mass killings are far rarer.
- **Mental illness** - The link between mental illness and mass shootings is weak.
- Scientists find that only a small fraction of people with persistent mental distress is more likely than average to commit violent acts.
- These include patients with paranoid schizophrenia, which is characterized by delusional thinking and often hallucinations.
- People living in this kind of misery are far more likely to be the victims of violence than perpetrators.
- But, they can act violently themselves, especially when using drugs or alcohol.
- About 1 in 5 (20%) mass murderers shows evidence of psychosis.

- The other 80% have many of the problems that nearly everyone has to manage at some point in life: anger, isolation, depressive moods, resentments, jealousy.

How to deal with it?

- Trump mentioned the teenager who in 2018 killed 17 people at a high school in Parkland, Florida.
- Before his murder spree, the shooter talked of his intentions to such an extent that classmates joked that he was the student most likely to shoot up the school.
- This shows that there can be a simple set of warning signs, a phone app or a checklist which can be used to identify a mass shooter.
- Would-be shooters often reveal their intentions in dark asides or platforms online.
- Preventive measures such as identifying such slight indications and getting such students into therapy, and alerting parents and teachers help significantly.
- They do not require forced drugging and confinement before any crime has been committed.
- Implementing that kind of policy would require a thoughtful reconsideration of individual rights in this country.

6.3 US's Decision on Huawei - India's Approach

Why in news?

U.S. President Donald Trump recently said that America would not do any business with Chinese tech giant Huawei. Click [here](#) to know more on the Huawei issue.

What is the U.S.'s stance?

- U.S. considers securing the nation's telecommunications and critical infrastructure from foreign adversaries as a critical priority.
- So, Trump administration believes that giving access to the state-controlled Huawei (China's) on 5G would risk America's national security.
- The U.S., besides denying Huawei access inside the country, is also asking other countries to follow the suit.
- The new interim rule bans the U.S. government agencies from purchasing equipment from Huawei and other specified Chinese companies.
- The interim rule is pursuant to the Fiscal Year 2019 National Defense Authorization Act.
- It provides for prohibition against the federal government's procurement of telecommunications equipment, video surveillance equipment and services of 5 Chinese companies, including Huawei.

How does it affect India?

- China has warned that any move to block Huawei from upcoming 5G operations will have consequences for Indian firms doing business in China.
- Notably, Huawei is among the world's biggest telecom equipment manufacturers, in the 5G segment.
- India is yet to formalise its decision on whether or not to allow Huawei.

How are other countries responding?

- Many countries around the world, including those in Europe, are going ahead with Huawei in their 5G operations.
- Australia and Japan have blocked it.
- South Korea and Thailand have implemented Huawei technology for 5G networks in a limited way.
- In fact, the US itself has begun relaxing the limitations, allowing American technology companies to sell their products to Huawei on a case-to-case basis.
- Significantly, a British Parliament committee recently rejected a proposed ban on British telecom carriers using Huawei gear.

- It said there were no technical grounds for excluding Huawei entirely from the UK's 5G or other telecommunications networks.
- However, UK telcos exclude Huawei's gear from "core" parts of wireless networks, as recommended by the committee.
- While the European Union refused to ban Huawei, it left the decision to member countries.

What should India's approach be?

- India should not get swayed by the US stand of blacklisting Huawei.
- This is because Huawei is caught in a geo-political battle, without evidence of security risk that the Trump administration has cited.
- Apart from overseas influences, India's decision should be free from internal politics too.
- In the backdrop of multiple levels of pressure, the government must take a well-informed decision.
- The ministries of home affairs and external affairs, along with the Department of Telecom (DoT) should play a key role here.
- Indeed, national security is the most important consideration, weighing much more than business and geopolitical factors.
- Huawei has repeatedly told the government that the security concerns raised against it have no foundation.
- In this context, Huawei has also reportedly offered to sign a "no backdoor" agreement with the Indian government.
- This is to allay the concerns that Huawei might use its telecom gear for surveillance.
- A high-level committee, headed by the government's principal scientific advisor, K Vijay Raghavan, is looking at security aspects in the Huawei issue.
- The committee should look into the feasibility of such an agreement.

Why is Huawei significant now?

- Huawei is believed to price its products lower than its competitors, but this should obviously not be the sole reason to allow the Chinese firm.
- The 5G trial guidelines are out and non-commercial pilots will begin soon.
- Six technology firms including Huawei, Ericsson, and Nokia have submitted their proposals for trials.
- As the guidelines state, Indian entities involved in this process will be given licences for up to 2 years.
- In the meantime, telcos have forged partnerships with equipment manufacturers, including Huawei, for the trials.
- As 5G spectrum auction terms are being finalised for bidding and commercial rollout, an objective and non-discriminatory decision on Huawei by India is highly significant.

6.4 Returning of Gulf War Era Kuwaiti Nationals' Remains

Why in news?

Iraq handed over the remains of 48 Kuwaiti nationals exhumed from a mass grave, more than 28 years after the Gulf War ended.

What was Gulf War all about?

- Kuwait is Iran's south-eastern neighbour 25 times smaller in size.
- Iraq annexed Kuwait on August 2, 1990 as Iran's dictator Saddam Hussain claimed Kuwait to be a part of Iraq, as its "19th province".
- But besides this reason, he invaded the region so that -
 - i. Baghdad (Iraq) could cancel a massive debt that it owed Kuwait
 - ii. Iraq could acquire Kuwait's large oil reserves

- Hussain also sought to link the annexation with the Palestinian conflict.
- The Gulf War, which lasted between August 1990 and February 1991, thus became an international conflict.
- The UN Security Council strongly condemned Iraq and warned of military action if its forces did not retreat by January 15, 1991.
- But Hussain refused to pay heed to the UN's many warnings.
- So, a US-led coalition, consisting of 7 lakh troops from 35 countries assembled in Saudi Arabia.
- Saudi, Iraq's neighbour, was also threatened by Hussain's adventures in the region.
- After the January 15 deadline was breached by Baghdad, coalition forces first launched Operation Desert Storm.
- It destroyed Iraq's air defences, oil refineries, and key infrastructure.
- This was followed by Operation Desert Sabre, a ground offensive that went on to free Kuwait.
- The war finally ended on February 28, 1991, when the US declared a ceasefire.

Baathist regime

- The word Baath means renaissance in Arabic.
- The Arab Socialist Baath Party was founded in Syria in the 1940s.
- It was founded by a small group of French-educated Syrian intellectuals - Michel Aflaq, a Greek Orthodox, and Salah al-Din al-Bitar, a Sunni Muslim.
- A committed Baathist should see individual Arab states as regions or provinces of the larger Arab nation.

What was the impact?

- During the war, the Iraqi military is known to have lost between 8,000-50,000 people.
- In comparison, only around 300 casualties occurred on the coalition forces.
- According to the Kuwaiti government, around 605 people went missing during the Iraqi occupation of their country.

What was India's stance then?

- The Iraqi Baath party was one of the tools by which Saddam Hussein maintained a tight grip on his country.
- New Delhi had been one of the first powers to recognise the *Baathist regime* when it came to power.
- Baghdad, in turn, had consistently maintained a pro-India stance.
- This was especially active during the era when the rest of the region was seen to have gravitated towards Pakistan.
- When the Gulf War started, India maintained its signature non-aligned stance.
- However, it rejected Baghdad's demand for linking the hostilities that were unfolding then with the Palestinian conflict.
- Between August and October 1990, India evacuated over 1,75,000 of its nationals from war-torn Kuwait, the biggest such operation by the Indian government.
- This has been mentioned in the Guinness Book of World Records as the largest number of people being evacuated by a civilian airliner.





G.S PAPER III

7. ECONOMY

7.1 Economic Slowdown and Investment

What is the issue?

- The current economic slowdown is much due to the slump in investment in the country.
- Here is an overview of this factor, and an analysis of the ways to boost investment.

Why is investment a unique factor?

- Investment, unlike consumption, satisfies no immediate want.
- So, business groups investing today are basically taking a bet on the future, when it would start yielding returns.
- Such bets are a function of the “state of confidence” at the time of investment.
- In that case, the investor has to be reasonably certain about the prospective yields, based on present knowledge of the future.
- The longer the time horizon the more uncertain would be this knowledge.

What is its relevance to the current economic slowdown?

- India’s economic slowdown is evident now because of consumption spending clearly falling, be it on cars or 'Rs 5 biscuit' packs.
- However, the crisis goes back longer, from the time companies stopped investing.
- It is investment that takes form as expenditures of others and in turn, fuel further consumption and income generation.
- Clearly, investment is what creates jobs and incomes.
- As this flow of incomes from hand to hand expands the market, the “state of confidence” for businessmen to invest also goes up.
- This positive business sentiment thus reinforces the virtuous cycle.
- Thus, a good indicator of “state of confidence” is new investment proposals.

How is the recent “state of confidence”?

- The “state of confidence”, according to the Centre for Monitoring Indian Economy, was Rs 20 lakh crore in 2015-16.
- It fell to Rs 16.2 lakh crore, Rs 11.4 lakh crore and Rs 10 lakh crore in the following three fiscals.
- During April-June this year, new projects announced amounted to a mere Rs 74,000 crore, against Rs 3,45,000 crore in the same quarter of 2018-19.

What does this indicate?

- The stalling of the growth engine started from around 2015-16.
- Business confidence did revive in the initial 2 years of the Narendra Modi-led government.
- [The new project proposals may, however, not have scaled the high spirits of 2006-07 to 2010-11 period.]
- However, subsequently, there has been a steep drop with the new investment announcements in 2018-19.
- This was even below those during the last 2 years of the previous regime (2012-13 and 2013-14).

What is the implication of this?

- The low investor confidence has spilled over now to consumers as well.



- When investments dry up and there is no jobs creation, with existing employees also being laid off, people's confidence to spend takes a hit.
- The slowdown, thus, becomes visible and the earlier virtuous cycle is affected.
- It is instead replaced with a vicious downward spiral of contraction in consumer spending, incomes, jobs and investment.

How could this be addressed?

- Consumers will not spend unless they feel confident about jobs and incomes.
- Clearly, addressing the above problem cannot happen through consumption.
- So, asking banks to reduce interest rates is unlikely to make people take loans to buy homes or vehicles.
- What is desperately needed now is reviving the investment cycle.

How can investment be boosted?

- Investment, as already noted, is a function of confidence about prospective yields from capital expenditures incurred today.
- Any investment is limited by the size of the market it caters to.
- In the current situation, the private sector is unlikely to commit to any significant investment for a considerable period.
- So, it would require some other player, with a truly long-term investment time horizon, for boosting investments.
- The government/public sector can be the only possible option here.
- E.g. China; in 1990, China's annual per capita GDP, at \$318, was lower than India's \$368, as per World Bank data
- But in 2018, China's per capita of \$9,771 was nearly five times India's \$ 2,016.
- This happened on the back of an investment-driven growth model; the state-owned enterprises invested heavily.
- By this time, China's GDP had soared from \$361 billion to \$13.6 trillion.
- [India's has gone up from \$321 billion to \$2.7 trillion between 1990 and 2018].

7.2 Addressing the Economic Slowdown

What is the issue?

- India is currently witnessing a notable economic slowdown as reflected in the automobile slump and employment problems.
- In this context, boosting growth requires that attention be paid to both cyclical and structural dimensions of the problem.

What are the key factors behind?

- India's current economic slowdown is due to a combination of two underlying trends.
- First, there is the short-run cyclical slowdown exhibited by a number of high-frequency indicators.
- There is a significant fall in demand, especially for sectors such as automobiles, consumer durables and housing.
- Second, there is the more serious long-term fall in investment and savings rates.
- Raising growth requires that attention be paid to both cyclical and structural dimensions of the problem.

How is the fixed capital formation scenario?

- The *Gross Fixed Capital Formation* (GFCF) relative to GDP at current prices has had a steady fall since 2011-12, when it was 34.3%.
- By 2017-18, it had fallen by 5.7% points, to a level of 28.6%.

- Assuming an *Incremental Capital Output Ratio* (ICOR) of 4, this meant a fall of nearly 1.4% points in the potential growth rate.
- [ICOR is the ratio of investment to growth; higher the ICOR, the lower the productivity of capital or the marginal efficiency of capital.]
- The fall consisted of sectoral decreases in the household, private corporate and public sectors.

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|-------------------|---------|---------|---------|---------|---------|---------|---------|
| Total | 34.3 | 33.4 | 31.3 | 30.1 | 28.7 | 28.2 | 28.6 |
| Public | 7.3 | 7 | 7.1 | 7 | 7.5 | 6.8 | 7.2 |
| Private corporate | 11.2 | 11.8 | 11.7 | 11 | 11.9 | 11 | 11.2 |
| Households | 15.7 | 14.6 | 12.5 | 12.1 | 9.4 | 10.4 | 10.3 |

- **Sectoral trend** - The fall in the household sector's investment rate got arrested by 2015-16.
- However, by then, the rate had already fallen by 6.3% points.
- From 2016-17, the sector's investment rate even showed some recovery.
- In contrast to the household sector rate, the private corporate sector investment rate did not show any fall up to 2015-16.
- At 11.9% then, it was in fact higher than the corresponding rate for 2011-12 (11.2%).
- It fell in the subsequent years, but only by 0.7% points.
- In the case of the public sector, the rate fell by 0.3% points between 2015-16 and 2017-18.
- Thus, the period from 2011-12 to 2017-18 can be seen as consisting of two parts:
 1. 2011-12 to 2015-16, when the household sector investment rate fell sharply
 2. 2015-16 to 2017-18 when the investment rates of the private corporate and public sectors fell marginally

What is the case with the savings rate?

- The Gross Domestic Savings Rate fell between 2011-12 and 2017-18 by 4.1% points, from 34.6% of GDP to 30.5%.
- However, this fall was entirely due to the household sector.
- The private corporate and public sectors show increases in their savings rates by margins of 2.2% points and 0.2% points, respectively.

What is the overall implication?

- This differentiated sectoral pattern of investment and savings rates had significant implications for the financing of investment.
- Private corporate and public sectors were the deficit sectors.
- They usually financed their deficits from the surplus savings of the household sector.
- In addition, net inflow of foreign capital added to the flow of investible resources.
- But throughout the period from 2011-12, the savings rate of the private corporate sector increased.
- This reduced its dependence on the surplus savings of the household sector.
- The excess of private corporate sector's investment over its own savings rate was 3.8% points of GDP in 2011-12.
- [However, this gap fell to 0.5% points by 2017-18.]
- Given this pattern, private corporate sector's investment demand can be largely met by its own savings.



- So, at present, all the surplus savings of the household sector is available for the public sector.
- Public sector's borrowing requirements can be fully financed using the surplus from the household sector.
- This can safely be supplemented by net inflow of foreign capital without any fear of crowding out.

What is the key priority now?

- In 2018-19, the real GDP growth rate was 6.8%.
- Two critical policy challenges need to be addressed.
- First, a countercyclical policy should increase growth rate to its current potential of 7%-7.5%.
- After this, structural reforms should raise the potential growth itself to above 8.5%.
- These are essential for India to attain a size of \$5 trillion by 2024-25.

How then should expenditure be managed?

- From the monetary side, reducing the repo rate by a cumulated margin of 110 basis points in 2019 has not as yet induced a noticeable growth response.
- Given this, complementary fiscal stimulus, in the form of additional public sector investment, may prove to be more effective.
- However, given the fiscal deficit constraint, there is limited flexibility for increasing centre's capital expenditure directly.
- There may be some expansion, if additional dividends from the Reserve Bank of India (RBI) flow to the government.
- Further, there may be some possible additional disinvestment.
- However, care should be taken to deploy all of these additional funds for capital expenditure.
- **Caution** - Normally, the prescription to meet slowing demand is to increase government expenditure.
- In the current situation, increase in government expenditure has to be directed towards an increase in investment expenditure.
- A similar effort may be made by State governments and non-government public sector enterprises to increase capital expenditures.
- All these measures may also crowd in private investment.
- Thus, this fiscal push, together with the already-initiated monetary stimulus, may help raise the growth rate.
- Another area that needs immediate attention is the financial system, which must be activated to lend more.

What are the much-needed structural reforms?

- Structural reforms are now a key priority to push the economy onto a sustained high growth path.
- On the fiscal account, there has to be a re-look at the Fiscal Responsibility and Budget Management (FRBM) Act.
- The government should actually move towards reducing the revenue deficit to zero.
- This can happen if the Centre focuses more on items on the Union list.
- Once this is achieved, the Central Government will have the freedom over fiscal deficit, as the entire deficit will be directed towards meeting capital expenditures.

7.3 CAG Report on GST

What is the issue?

- The Comptroller and Auditor General of India's (CAG) report on GST for 2017-18 was tabled in Parliament.
- The shortfalls pointed out by the CAG in the goods and services tax (GST) regime needs attention.



What are CAG's observations?

- **Revenue** - The CAG highlighted that tax collections under the GST slowed down in the first year of its roll out.
- Growth in indirect taxes of the Union government slowed down to 5.8% in 2017-18 from 21.33% in 2016-17.
- Post-implementation, the Centre's revenue from GST registered a decline of 10% in 2017-18 compared to the revenue of subsumed taxes in 2016-17.
- [This is excluding central excise on petroleum and tobacco.]
- **Invoice-matching** - Invoice-matching is a concept wherein all the taxable supplies procured by a buyer and supplied by a seller are matched.
- The CAG noted that the system-validated input tax credit through invoice matching was not in place.
- It said the complexity of the returns mechanism and the technical glitches resulted in roll back of invoice-matching.
- This has rendered the system prone to input tax credit frauds.
- **E-tax system** - A non-intrusive e-tax system remains hard and unclear even after 2 years of its roll out.
- The CAG pulled up the revenue department, the Central Board of Indirect Taxes and Customs, and GST Network for their failure to try out the GST system adequately before rolling it out on July 1, 2017.
- **Compliance** - It was expected that compliance would improve as the system would stabilise.
- However, all returns being filed showed a declining trend from April 2018 to December 2018.
- The filing percentage of GSTR-1 returns was less throughout in comparison to the corresponding filing of GSTR-3B returns.
- [GSTR-1 returns - monthly returns on outward supplies; GSTR-3B returns - summary of self-assessed return]
- The introduction of GSTR-3B resulted in filing of returns with input tax credit claims which could not be verified.
- This appears to have disincentivised the filing of even GSTR-1.
- **Short-filing** - While Return should be allowed to be filed only on payment of due tax, e-Return should be allowed to be uploaded even in case of short payment.
- This is for the limited purpose of having the information about self-assessed tax liability even though not paid.
- As GSTR-3B is only a summary return, short-filing of GSTR-1 implies that the tax department did not have complete invoice level details as filed by the suppliers.
- Since the filing of GSTR-1 is mandatory, short-filing is an area of concern and needs to be addressed.
- **Payment and settlement** - The payment and settlement system for GST was based on one 100% invoice-matching and availment of input tax credit, as well as settlement of IGST on the basis of invoice-matching.
- The CAG noted that neither was possible as of now, as an invoice-matching system had not kicked-in yet.

What does the report call for?

- The CAG noted that without invoice-matching and auto generation of refunds, the envisaged GST tax compliance system is non-functional.
- Invoice-matching is a critical requirement that would yield the full benefits of this major tax reform.
- It would protect the tax revenues of both the Centre and states and lead to proper settlement of IGST.
- It would minimise, if not eliminate, the tax official-assessee interface.
- In fact, even "assessment" as is understood in the manual system may no longer be necessary.
- This is because returns themselves can be generated by a system that matches invoices.
- Also, applying analytical tools and artificial intelligence to the massive data that crores of invoices generate could help trace cases of evasion, among others.

7.4 GDP Calculation

What is the issue?

- In January 2015, India's Central Statistics Office (CSO) introduced a new series of National Account Statistics.
- The resultant changes in the calculation of GDP have led to a series of controversies. Here is a look at them.

What were the changes made?

- The new series made several changes; in particular, it revised the base year from 2004-05 to 2011-12.
- It also employed a new methodology to estimate India's gross domestic product (GDP) and used new data sets to arrive at the GDP.

What was the resultant contention?

- The CSO's changes were in line with international norms of national income accounting.
- However, doubts were raised about the new GDP estimates.
- Revising base years, improving methodologies and opting for better databases are part of normal practice in national income accounting.
- But the debate intensified when, in 2018, the statistical establishment released two [back-series GDP data](#) that contradicted each other.
- Back series GDP data recalibrated the GDP 'data for past years' based on the 'new methodology'.

How different were the two back series GDP data?

- The first back-series was presented by the National Statistical Commission (NSC) in July 2018.
- It found that the average economic growth between 2005-06 and 2011-12 was 8.6% instead of the 8.3% according to the old series.
- The second back-series was calculated by CSO and published in November 2018.
- It found the average economic growth between 2005-06 and 2011-12 to be just 7%.
- The statistical debate quickly acquired a political colour because of the years concerned.

What was Arvind Subramanian's observation?

- Arvind Subramanian was India's Chief Economic Adviser between 2014 and 2018.
- Earlier in 2019, he argued that the new series overestimated GDP growth by as much as 2.5 percentage points. (Click [here](#) to know more)
- In other words, if last year's GDP growth was 7%, then according to Subramanian, the actual GDP growth would be only about 4.5%.
- It was argued that India's GDP growth rate between 2011 and 2016 appears out of sync with the trend of key macroeconomic indicators including investment, exports and credit, etc.
- This is starkly in contrast to how things were for a decade before the new series with 2011-12 as the base year.
- The disconnect between the indicators post-2011 becomes even clearer when India's data are compared to the average of six emerging economies.
- India's GDP declined far less than the 6-country average despite its macro-indicators being worse hit.
- Subramanian argued that higher GDP growth between 2011 and 2016 was not backed by -
 - i. movement in key macro-indicators
 - ii. a surge in productivity (otherwise corporate profits would not have declined in this period)
 - iii. a surge in consumption (otherwise consumer confidence and industrial capacity utilisation would not have dipped sharply)
- He finally argued that the GDP Deflator (level of inflation) was considerably less than the retail inflation (as measured by Consumer Price Index) in the 2011-16 period.

- [GDP Deflator is used to subtract from nominal GDP growth in order to arrive at the “real” GDP growth rate.]
- This essentially resulted in an overestimation of “real” GDP growth rate.

What are the counter claims to this?

- Arvind Subramanian has shown that the nominal GDP growth rate, which is the only observable variable, has not changed under the old and new series.
- Secondly, there was no consolidated Consumer Price Index (CPI) before 2011.
- So, arguing that the gap between CPI and GDP deflator was low between 2002 and 2011, and wide between 2011 and 2016, is unfounded.

7.5 FDI Policy Reform

Why in news?

The Union Cabinet recently decided to further liberalize foreign direct investment (FDI) rules in four sectors.

What are the key changes?

- The government approved foreign investment in digital media up to stakes of 26%.
- 100% foreign direct investment (FDI) under automatic route in coal mining and associated infrastructure has been approved.
- This is to include those companies seeking to commercially sell the commodity.
- To boost domestic manufacturing, 100% FDI in contract manufacturing under automatic route has been allowed.
- On FDI in single brand retail trade (SBRT), the Cabinet has expanded the definition of mandatory 30% domestic sourcing norm.
- [Currently, the FDI policy provides that 30% of the value of goods has to be procured from India if the SBRT entity has FDI of more than 51%
- Under the changes, all procurement made from India by the SBRT entity for that single-brand shall be counted towards local sourcing, irrespective of whether the goods procured are sold in India or exported.]
- It also allowed single brand retailers to start online sales, waiving the previous condition of setting up a mandatory brick-and-mortar store.

What is the rationale?

- The government is clearly concerned by the economic slowdown and persistently weak investment activity.
- Also, there is a little slowing down of FDI worldwide.
- The RBI too recently pointed out that net FDI flows had moderated to \$6.8 billion over the first 2 months of the current fiscal year (2019-20) from \$7.9 billion in April-May 2018.
- Also, the government has set a goal of ensuring India becomes a \$5 trillion economy within the next 5 years.
- So, the overall consumptive capacity needs to be raised manifold to support demand growth.
- Given these, the move comes as an effort to get economic growth back on track.
- The measures are expected to make India a more attractive destination to overseas investors and boost investment in private sector.
- It would provide a policy fillip to attract more foreign capital into sectors that are seen as having a multiplier effect particularly in terms of job creation.

What are the shortfalls?

- A closer examination of the reforms raises several concerns about the ultimate attractiveness of these changes.
- **Coal mining** - The changes to investment norms on coal appear to be a win-win for both the economy at large and the coal industry.

- [This is keeping aside the environmental costs of focusing on one of the most polluting fossil fuels.]
- This is based on the prospect of seeing an influx of both capital and modern technology into mining and processing.
- Another factors is raising domestic supply of the key raw material for power, steel and cement production thereby cutting costly and increasing imports.
- However, for foreign mining companies to proceed, several related regulatory and market challenges will have to be addressed.
- Large miners will need economies of scale and so require access to large contiguous fields with minimal bureaucratic constraints on operations.
- Given these, how much additional investments may actually accrue is not clear.
- Addressing these shortfalls is essential to make the latest FDI rule changes to be enough to draw a rush of investments.

7.6 Relaxation of SEBI's FPI Norms

Why in news?

- The Securities and Exchange Board of India (SEBI) has relaxed the regulatory and compliance framework for foreign portfolio investors (FPIs).
- FPI regulations have been redrafted based on the recommendation of a committee headed by former RBI deputy governor H R Khan.

What is FPI?

- Foreign portfolio investment (FPI) consists of securities and other financial assets held by investors in another country.
- It does not provide the investor with direct ownership of a company's assets and is relatively liquid depending on the volatility of the market.
- Along with foreign direct investment (FDI), FPI is one of the common ways to invest in an overseas economy.
- In a developing economy, foreign portfolio investors (FPIs) are perceived to be more uncertain than domestic institutional investors.
- Thus, foreign investment flows tend to be less stable as these are influenced by global liquidity drivers.

What are the key changes?

- The changes come as part of efforts to simplify and expedite the registration process for foreign portfolio investors (FPIs).
- SEBI simplified the documentation requirements for KYC, for foreign portfolio investors.
- It also permitted them to carry out off-market transfer of securities.
- The changes did away with the broad-based eligibility criteria for institutional FPIs.
- Under the new framework, FPIs would be classified into two categories instead of three.
- The requirements for issuance and subscription of offshore derivative instruments (ODIs) have also been rationalised.
- Mutual funds with offshore funds too can invest in India after registration as FPIs to avail certain tax benefits now.
- Central banks that are not members of the Bank of International Settlements are also allowed to register as FPIs and invest in the country under the new norms.
- This is to attract more overseas funds into the market.
- SEBI has allowed entities registered at an international financial services centre (IFSC) to be automatically classified as FPIs.
- This might help foreign investors bypass some of the restrictions.

- FPIs shall be permitted for off-market transfer of securities, which are unlisted, suspended or illiquid, to a domestic or foreign investor.
- Besides, registration for multiple investment manager (MIM) structures has been simplified.

What is the possible rationale?

- SEBI's move could have possibly been motivated by the recent flow of funds out of India's capital markets.
- Capital in excess of Rs. 20,000 crore has left Indian shores in the recent period.
- This was an after effect of the decision in Union budget 2019 to increase taxes on FPIs.
- Policymakers were clearly under pressure to do something to allay the fears of foreign investors.
- The SEBI's move is much in line with addressing this.

What is the significance?

- The easing of regulatory restrictions are likely to make life easier for foreign portfolio investors (FPIs).
- Smart cities, along with other urban development agencies, will now be allowed to issue municipal bonds to raise funds for development.
- These measures to cut red tape will help lower the regulatory burden on investors.
- It will also help globalise India's financial markets, and aid the growth of the broader economy by increasing access to growth capital.

What are the shortfalls?

- There remains a broader trend of capital flowing out of emerging markets across the world.
- Given this, it remains to be seen whether SEBI's present move will yield immediate benefits.
- Even if it fails to do so, the move will still help Indian markets become more attractive to foreign investors in the long-run.

7.7 E-Commerce Guidelines for Consumer Protection 2019

Why in news?

The Consumer Affairs Ministry recently released the E-Commerce Guidelines for Consumer Protection 2019.

What necessitated this?

- India's e-commerce sector is poised to grow four times to \$150 billion by 2022.
- However, it is still a work in progress when it comes to safeguarding customer interest.
- Consumers are still compelled to take wild chances in online transactions.
- There is little they can do if their calls go wrong, as returns and reimbursements are risky and cumbersome.
- There are no authentic ways to figure out if product reviews, ratings or even discounts are genuine.
- Given these, a set of guidelines to protect the interests of consumers was a much called-for one.

What are the key guidelines?

- An e-commerce entity shall not influence the price of the goods or services.
- It should not adopt any unfair or deceptive methods to influence transactional decisions of consumers.
- Entities are also not to falsely represent themselves as consumers and post reviews about goods and services.
- The guidelines on returns and refunds are designed to favour consumers.
- Marketplace entities (e-commerce platforms) will not be able to buy more than 25% from a single vendor.
- They can also not give discounts on products or sell the goods of the companies in which there is equity participation by the marketplace entity.



What are the challenges?

- Clearly, the Ministry's thinking seems to be in line with the Centre's approach to regulating the fast-growing e-commerce sector.
- However, it is challenging to balance between regulating consumer interests and encouraging innovation and investment, without discriminating against a particular class of investors.
- The DPIIT (Department of Promotion of Industry and Internal Trade) is also framing an e-commerce policy and has put up the draft for comments.
- The draft talks about -
 - i. retaining ownership and control of data generated within the country (data localisation)
 - ii. rigorous monitoring of cross-border imports
 - iii. placing the responsibility of consumer protection on the intermediary
 - iv. addressing the issue of piracy
- In this context, the element of indecision over data localisation requirement is still a worry.
- Both the DPIIT and MeitY (Ministry of Electronics and Information Technology) are attempting to make a case for data localisation in the e-commerce policy and the data protection policy, respectively.
- The RBI is also pursuing this in the case of payment systems.
- These attempts have predictably resulted in a lot of protests from the EU and US entities.
- Besides, the new guidelines had raised concerns among foreign e-tailers.
- They feel that the rules would jeopardise their business models and could cost them time and money.
- Given all these, the Centre should take a call soon on the e-commerce policy, balancing the priorities of the stakeholders.

8. INFRASTRUCTURE

8.1 Revamping Buses for Better Transport

What is the issue?

With increased congestion on roads in India's major cities, there has to be a relook at India's policy on promoting buses as a key public transport means.

Why are mobility plans significant for cities?

- When cities fail at mobility, it results in congestion, lost productivity, worsening pollution and a terrible quality of life.
- India's big cities have all these attributes, and 14 of them were in the list of the 15 most polluted cities worldwide last year.
- Congestion in the four biggest metros causes annual economic losses of over \$22 billion.
- This was highlighted by the NITI Aayog in its Transforming Mobility report.
- In big cities, new roads are not possible, and no new land is available.
- But they must prepare to serve more and more people who arrive each year.
- In such case, successful plans build better mobility.

What are the limitations?

- **Number of buses** - Indian cities need to add several thousand buses more, and not just spend heavily on Metro rail.
- There are over 1.7 million buses in India, about 10% of them operated by governments.



- Individual cities do not have enough of them to provide a good service, and the gap is filled mostly by unregulated intermediates, such as vans.
- **Comfort** - The buses operated by governments are not properly designed, are uncomfortable and badly maintained.
- Government corporations do a less appreciable job when it comes to using technology.
- **Use** - Buses have an image problem in the society.
- There lies an aspiration among people to progress from a bicycle to a scooter, then to a four-wheeler.
- **Information** - One of the key barriers to taking a bus is not getting information about the service.
- Bus corporations deprive themselves too, of revenue, by failing to act on this.
- Cities such as London and Singapore have systems to tell passengers where the next bus is on a route and predict its arrival at a stop in real time.
- Such a system is not available for even the biggest metro cities in India, something the Smart City mission could have addressed.

What could be done?

- London, for instance, is a city with an iconic bus system that integrates famously with its equally popular 'tube' system (as the Metro is known there).
- In India, buses need an image makeover and cities need several thousand more buses, of good design and build quality.
- They need to use contact-less fare payments using suitable cards, since buying tickets is also a barrier.
- Buses also need support to move faster through city traffic, using policy tools such as congestion pricing for cars.
- E.g., London discourages the use of cars through a congestion charge within a defined area.
- The London congestion charge immediately cut traffic in the demarcated area by 20%, helped speed up buses and improved revenues.
- The biggest reform that the U.K. experience teaches is integration.
- Bringing traffic authorities, road engineers and transport operators under the same umbrella helped eliminate planning and operational problems.
- Indian cities have unified Metropolitan Transport Authorities to do that; they must be brought to life and given mandatory targets.
- The goal should be a stipulated higher share of travel by public transport, walking and cycling.
- Importantly, this should be evaluated through periodic surveys of customer satisfaction.

8.2 Power Subsidies and Groundwater Use

What is the issue?

- The attempt to use power subsidy to control groundwater extraction, as in Punjab, ignores certain ground truths.
- Here is an overview of the concerns with groundwater use and the shortfalls with the Punjab model.

How is electricity a factor?

- Groundwater overdraft is also linked to subsidised power supply to agriculture.
- So, the mode of electricity pricing supplied to agriculture could be changed to control groundwater abstraction.
- This can in turn help achieve the goals of efficiency, equity and sustainability.
- The most frequently suggested instrument for controlling groundwater abstraction was the metering and pro-rata (proportional) pricing of electricity.

What is the Punjab model?

- An idea which came from a prominent research group recently is direct delivery of power subsidy to agriculture.
- It involves metering of agricultural power connections, but no metered tariff.
- The idea is to make sure that farmers get free power.
- But, the power utility reduces its subsidy burden gradually by incentivising the farmers to use less electricity.
- It thereby saves both groundwater and electricity.
- This model was adapted by the power utility of Punjab.
- It involves offering cash incentives to well-irrigating farmers who use less than a designated quota of electricity each season.
- The individual's quota is decided on the basis of the connected load and the season.
- E.g. for one HP of connected load, a farmer is entitled to 200 units a month during the kharif season and 50 units per month during the winter
- The farmer gets a cash incentive of Rs. 4 for every unit of electricity saved.

What is the downside of this?

- This pilot project implemented in 135 farms across Punjab has shown reduced electricity consumption by around 60% of the farmers.
- However, nearly a third of the farmers had increased electricity consumption even after accepting the scheme.
- **Reason** - In a given year, season and locality, the power demand will be a function of the cropped area and cropping pattern.
- Fixing the quota is on the basis of connected load.
- This can be said to be rational only if the farmers have correctly chosen the pump capacity.
- They should have taken into consideration the actual quantum of energy required for irrigating farm and the number of hours that the power supply is available.
- But this may not be the case in reality.
- Possibly, many resource-rich farmers have chosen over-sized pumps.
- In such cases, their energy quota will be much higher than what is required to irrigate the plot even at the current excessive levels of dosage.
- The reason for maintaining the high-level of irrigation dosage is that it could be rewarding from an economic perspective, yield improvement.
- The value of this is logically more than the economic incentive they get by saving water.
- In effect, resource-rich farmers might keep their power consumption much below the 'quota' and claim cash incentive, but continue with inefficient irrigation.
- On the other hand, a resource-poor farmer, who has a low-capacity pump might end up using the full quota of energy or even more.

9. AGRICULTURE

9.1 Assessment of Urea Industry

Why in news?

A detailed assessment of the urea fertiliser industry was made recently under the CSE's (Centre for Science and Environment's) flagship Green Rating Project (GRP).



What is the Green Rating Project?

- GRP was started in 1997 to act as an independent watchdog on the environmental performance of large Indian companies.
- It is one of the few public-disclosure projects in the world in which an NGO ranks the environmental performance of industries and makes the results public.
- The rating process is robust and transparent and the outcomes help companies and policymakers to improve policies and practices.
- The rating results are used by the financial sector in their investment decisions.

How significant is the urea industry?

- The urea fertiliser industry is one of the most important industrial sectors for the country.
- About 70% of all the fertilisers used in the country is urea.
- Also, the urea industry has a significant role to play in addressing three major environmental issues of nitrogen pollution, ozone layer depletion, and climate change.

What are the key findings?

- The urea sector was rated on more than 50 parameters.
- **Sector rating** - The urea sector was rated 'average', with a respectable 42% score and was awarded the Three Leaves Award.
- The highest a sector or a company can achieve under GRP is the Five Leaves Award.
- Urea is only the second sector to get the Three Leaves Award, the other being the cement sector.
- The other sectors have received the Two Leaves Award or below.
- **Rankings** - Grasim Industries Ltd's Indo Gulf Fertilisers, Jagdishpur, Uttar Pradesh, was rated as the greenest urea plant in the country.
- This plant, with a 61% score, received the coveted Four Leaves Award.
- It is only the second company out of 250+ companies rated by GRP so far to receive the Four Leaves Award.
- The next three winners have all received the Three Leaves Award, which are:
 1. KRIBHCO, Hazira, Gujarat
 2. Mangalore Chemicals & Fertilizers Ltd, Mangalore, Karnataka
 3. Yara Fertilisers India Pvt. Ltd., Babrala, Uttar Pradesh
- The worst rated plant was Madras Fertilizers Ltd, Chennai.
- **Emission** - The urea sector has performed very well in curtailing its energy use and CO₂ emissions.
- The sector as a whole emits far lower CO₂ per tonne of urea than the urea sector in the US or China.
- In fact, some plants, like Indo Gulf Fertilisers and Yara Fertilisers, match the global best levels in energy efficiency and CO₂ emissions.
- **Water** - The urea sector has slipped on its water consumption and water-pollution parameters.
- Its water consumption is high and can be reduced by at least one-third by using recycling/reusing technologies.
- The sample of groundwater and effluents had high levels of contaminants.
- E.g. the ammoniacal nitrogen concentration in the groundwater in and around many plants was way above permissible limits
- **Health and safety** - A major concern was health and safety practices in older plants.
- The urea sector handles dangerous chemicals, like ammonia.
- However, most old plants had less encouraging safety practices as well as on-site and off-site disaster-management plans.

What are the key observations?

- The overall assessment is that incentives largely determine the environmental performance of the sector.
- As the urea sector is strictly controlled, the government has incentivised energy efficiency.
- Plants who do better than the energy consumption targets set by the government make more money.
- This is the reason why plants have done really well in energy consumption.
- However, no incentives are offered for controlling water consumption and environmental pollution.
- So, there is no much investments by companies in pollution-control measures or in technologies to reduce water use.
- In fact, the government's urea pricing policy effectuates a disincentive to invest in environmental protection.

Why should urea use be reduced?

- Urea production is completely dependent on fossil fuels and, hence it contributes to greenhouse gas (GHG) emissions.
- Nitrous oxide (N₂O) emitted from agricultural fields due to the use of urea is also a potent GHG and an ozone-depleting substance (ODS).
- Its GHG potential is 300 times that of CO₂ and its ozone-depleting potential is similar to that of many hydrochlorofluorocarbon refrigerants.
- N₂O is now the largest ODS emitted through human activities.
- In addition, the world has breached the planetary limit for nitrogen, and the use of nitrogenous fertilisers is a significant contributor in this.
- **India** - Nitrogen pollution of surface water and groundwater has reached alarming levels in many states of India.
- There is also widespread soil sickness due to imbalanced application of nitrogen fertilisers.
- It is estimated that the cost of nitrogen pollution on health and ecosystems in India is Rs 5 lakh crore - four times the turnover of the urea industry.

10. SCIENCE & TECHNOLOGY

10.1 Transition to 5G Technology

What is the issue?

The transition to fifth-generation cellular networks (known as 5G for short) is soon to happen.

What is the change in the making?

- The transition to 5G is an upgrade to wireless systems that will start reaching mobile phone users in a matter of months from now (Aug, 2019).
- But this is not just about faster smartphones.
- This will affect many other kinds of devices, including industrial robots, security cameras, drones and cars that send traffic data to one another.
- This new era will leap ahead of current wireless technology, known as 4G.
- This would offer mobile internet speeds that will let people download movies within seconds and bring big changes to video games, sports and shopping.

Where 5G technology can be applied

Healthcare

- Reduce pharmaceutical R&D costs
- Video/3D video appointments for non-life-threatening ailments
- Development of robotics in surgery
- More efficient health and fitness monitors

Smart cities and homes

- 3D video calls and holograms
- Innovative augmented and virtual reality applications
- Improved public safety with more efficient trackers
- Remote device control

Transport

Connected vehicles which allow data collection from traffic signals and road-side sensors will lead to

- Reduced congestion
- Intelligent fleet and logistics management

Autonomous cars with little or no help from humans can

- Improve road safety
- Increase mobility

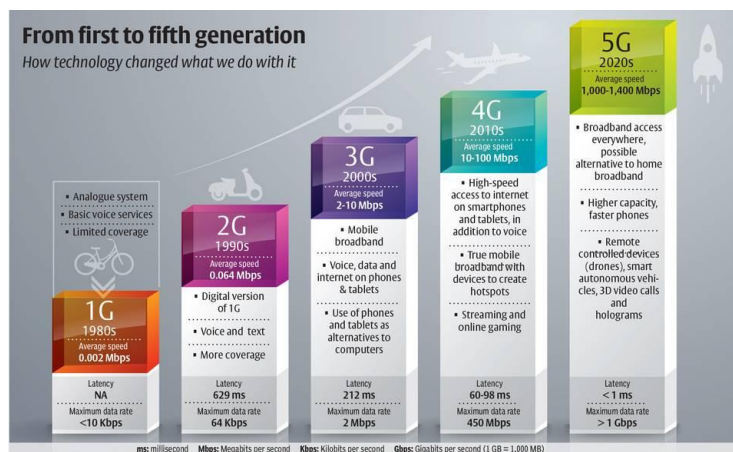




- To get the benefits of 5G, users will have to buy new phones, while carriers will need to install new transmission equipment to offer the faster service.

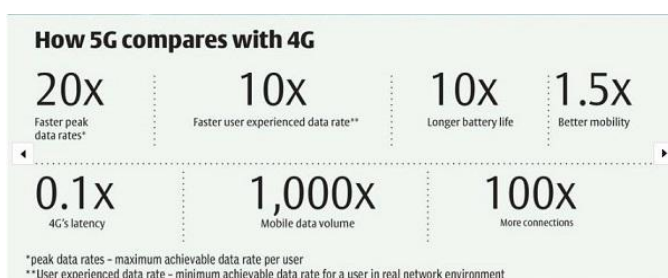
What exactly is 5G?

- Essentially, 5G is a set of technical ground rules.
- They define the workings of a cellular network, including the radio frequencies used and how various components like computer chips and antennas handle radio signals and exchange data.



What are the key benefits?

- Speed** - The speed depends on where one is, and which wireless services is used.
- Qualcomm, the wireless chipmaker, said it had demonstrated peak 5G download speeds of 4.5 gigabits a second.
- However, it predicts initial median speeds of about 1.4 gigabits.
- In other words, it would be roughly 20 times faster than the current 4G experience.
- E.g. downloading a typical movie at the median speeds cited by Qualcomm would take 17 seconds with 5G, compared with 6 minutes for 4G
- The speeds will be particularly noticeable in higher-quality streaming video.
- Latency** - There is another kind of speed, a lag known as latency, that may become even more important with 5G.
- The response is not exactly immediate when issuing a command now on a smartphone, such as starting a web search.
- A lag of 50 to several hundred milliseconds is common, partly because signals often must pass between different carrier switching centers.
- 5G, which uses newer networking technology, was designed to reduce this latency down to a few milliseconds.
- Reliability** - 5G is also designed to deliver signals more reliably than earlier cellular networks.
- [Networks now frequently drop bits of data that are not essential for tasks like watching movies on a phone.]
- This change could bring many benefits, notably in fields such as virtual reality.
- The highest-quality VR applications now typically require bulky headsets that are connected by wire to nearby personal computers that generate 3-D images.
- With 5G, that would be off-loaded wirelessly to other machines, freeing users to move and making it easier to develop goggles the size of eyeglasses.



- In the related field of augmented reality, a smartphone camera could be pointed at a football game to see both live video on the display and superimposed player statistics or other data.
- **Besides** these, 5G's impact extends to medicine and other fields that increasingly rely on high-speed connections.
- Officials in the United States and China see 5G networks as a competitive edge.
- The faster networks could help spread the use of artificial intelligence and other cutting-edge technologies too.

10.2 Israel's Achievements on Innovation - Lessons for India

What is the issue?

- The Global Innovation Index-2019 (GII 2019) was released recently, with India being ranked 52.
- In this context, here is how Israel converted its challenges into competitive advantages, exhibiting its intellectual prowess.

What are the highlights of GII 2019?

- The GII rankings are published every year by Cornell University, INSEAD and the UN World Intellectual Property Organization (WIPO) and GII Knowledge Partners.
- This is the 12th edition of the GII rankings of 129 economies based on 80 indicators.
- These range from intellectual property filing rates to mobile-application creation, education spending, and scientific and technical publications.
- Switzerland remains number one in the GII index followed by Sweden, USA, Netherlands, UK, Finland, Denmark, Singapore, Germany and Israel.

| INDIA'S RANK | | MOST INNOVATIVE NATIONS IN 2019 | |
|--------------|-----------|---------------------------------|-------------|
| 2015 | 81 | 1 Switzerland | 6 Finland |
| 2016 | 66 | 2 Sweden | 7 Denmark |
| 2017 | 60 | 3 USA | 8 Singapore |
| 2018 | 57 | 4 The Netherlands | 9 Germany |
| 2019 | 52 | 5 United Kingdom | 10 Israel |

How is India's performance?

- India, many believed, would break into the top 50 league for the first time. It came close, and ranked 52.
- Nevertheless, India's performance was commended as it topped the Central and South Asian region for the 9th consecutive year.
- Also, India's improvement from 81st rank in 2015 to 52nd in 2019 is the fastest by any major economy.
- Significantly, India also continues to outperform on innovation relative to its gross domestic product (GDP).

Why is Israel's performance significant?

- The biggest news from the 2019 rankings was Israel breaking into the top 10 list.
- This is the first by any country from the Northern Africa and West Asia region.

What are the challenges before Israel?

- With a population of just 8.5 million, Israel has a very small domestic market.
- Israel's enterprises cannot look at broadening its market by exporting to neighboring countries as Israel is surrounded by enemies.

- It is also endowed with very little natural resources including water.
- Its 22,000 square kilometre area is predominantly arid, fit to grow almost nothing.

How were these dealt with?

- Any other country with such adversity would have given up and become dependent on allies for survival, but Israel did not.
- **Economy** - Israel's policy-makers decided early to invest in human intellectual capital and create a knowledge-based economy.
- By doing so, they hoped that Israel could become home to technology-focused industries that do not depend on natural resources.
- At the same time, the country could offer products that could be easily exported to meet the demand anywhere in the world.
- **Education** - Israel believed that its intellectual prowess would solve many of the pressing challenges - water scarcity, agricultural development, national security.
- Israel began by investing in a strong education system.
- Currently, it spends 7% of its GDP on education. Over 45% of its adults complete tertiary education.
- Its investment in R&D is the highest in the world (4.2% of its GDP) with a third of that going into universities.

How have these transformed into?

- Israeli universities, today, top in patent applications in the US.
- Over 250 global companies including the likes of Facebook, Google, Apple, HP and Microsoft have set up their R&D labs in Israel.
- Israel also has one of the highest concentrations of Nobel laureates.
- That apart, Israel has the largest number of hi-tech startups per capita than any other country in the world.
- Tel Aviv houses the second largest startup eco-system after Silicon Valley.
- Hi-tech exports accounts for 45% of the country's overall exports.
- The startups have indeed solved the country's pressing problems.
- E.g. due to their work in membrane technology, Israel has efficiently used desalination to transform itself from world's driest country to one with surplus water
- It has become a leader in desert agriculture due to drip irrigation and precision farming.

How were the security issues dealt with?

- Israel faces security issues that come from being surrounded by enemies and constantly fighting terrorism.
- To tackle this, it invested heavily in cutting-edge technologies.
- Today, the Israeli military is a national incubator and a significant catalyst for innovation.
- With compulsory recruitment, every youth, based on talent and aptitude, gets exposed to the latest technology that the military uses.
- That apart, they are taught to work as a team and to solve problems in a structured and disciplined manner.
- These qualities help them come out and build successful enterprises.
- Check Point, the world's largest cyber security company, is one such organisation. In fact, Israel controls as much as 10% of the global cyber security market.

How has culture contributed to this success?

- Forced to run, hide and fight in the past, Jews are natural risk-takers, an essential quality to become an entrepreneur.
- Faced with adversities, Israelis are never happy with status quo and constantly try to improve things.



- This has given birth to a trait they call ‘chutzpah’. Failure is accepted in the society and a person is encouraged to try again.

What do these hold for India?

- India too has its share of challenges when it comes to food, energy, water and national security.
- India needs to enhance sustainability and take healthcare to every nook and corner of the country; all these at a low cost.
- Like Israel, India needs to invest heavily in education and R&D.
- India’s investment in R&D now is a meager 0.7% of GDP.
- Also, very little of this goes to universities considering that a bulk of public R&D goes into space, energy and defence sectors.
- The size of the economy and population is not the constraint here, but rather the intent.
- Notably, China, another large economy, has managed to up its R&D investment from 1.3% in 2006 to 2.18% in 2018.
- India’s innovation should be focused not just on getting products and services to people at an affordable cost.
- Rather, it should be aimed for global leadership.
- Solving India’s challenges will eventually open opportunities for Indian enterprises globally, as had happened with Israel.

11. ENVIRONMENT

11.1 Deforestation in Amazon Forests

What is the issue?

- Deforestation in the Amazon rainforest in Brazil is increasing rapidly since January, 2019.
- It is a matter of global concern, and Brazil must recognise that the Amazon rainforest is a universal treasure.

How significant are the Amazon forests?

- The Amazon basin, spread across millions of hectares in multiple countries, hosts massive sinks of sequestered carbon.
- Significantly, the Amazon forests are a key factor in regulating monsoon systems.
- The rainforests harbour rich biodiversity.
- Moreover, about 400 known indigenous groups present there have prevented commercial interests from overrunning the lands.
- Much of the Amazon has survived, despite relentless pressure to convert forests into farmlands, pastures and gold mines, and to build roads.
- The legacy of the ecosystem and the indigenous groups are now under great threat.

Amazon Fund

- The Amazon Fund was created in 2008 to receive donations for non-reimbursable investments.
- The objective was to prevent, monitor, and combat deforestation, as well as to promote the preservation and sustainable use in the Brazilian Amazon.
- It consists of money donated by Norway, the main donor, and Germany.
- The fund holds US\$850 million, and is managed by the National Bank for Economic and Social Development (BNDES) of Brazil.

What are the recent changes?

- **Deforestation** - The new Brazilian President Mr. Bolsonaro has spoken in favour of “reasonable” exploitation of Amazon forestlands.
- Although the forest code has not been changed, his comments have emboldened illegal expansion into forests.
- Armed gold-hunting gangs have reached tribal areas and the leader of a tribe has been murdered in an incursion.

- Satellite images show that about 4,200 sq km of forests have been destroyed up to July 24, 2019 under the new government (since January).
- **Brazil's stance** - Brazil is the custodian of forests in about 5 million sq km of Amazon land.
- Given this, it has everything to gain by engaging with the international community on meeting the opportunity cost of leaving the Amazon undisturbed.
- But Mr. Bolsonaro refused to host the annual convention of the UN Framework Convention on Climate Change in 2019 (but did not exit the Paris Agreement).
- By doing so, he lost a valuable opportunity to seek higher funding for forest protection.

What should be done?

- Most nations tend to view their land and forests through the narrow prism of short-term economic gain.
- However, climate science data show that they play a larger environmental role.
- Globally, there is tremendous momentum to save the Amazon forests.
- So, Brazil must welcome initiatives such as the billion-dollar *Amazon Fund* backed by Norway and Germany, instead of trying to shut them down.
- Remedial funding, accounting for the value of environmental services, is the most productive approach.
- This is because forest removal has not helped agriculture everywhere due to soil and other factors.
- In all, Brazil's President must recognise that rainforests are universal treasures, and the rights of indigenous communities to their lands are inalienable.
- The international community must use diplomacy in convincing Mr. Bolsonaro at this front.

11.2 Dealing with Rains and Floods

What is the issue?

- India is witnessing widespread monsoon rains across the country, with threats of floods in some states.
- There has to be concerted measures by states to deal with the crippling cycles of drought and flood.

What is the current monsoon status?

- The pre-monsoon phase between March and May was worrying as rainfall was scarce.
- However, the current robust monsoon season in most parts of coastal, western and central India augurs well for the entire economy.
- The beneficial conditions in the Indian Ocean have aided the very heavy rainfall recorded so far.
- This is, especially, in Maharashtra, Gujarat, Rajasthan, the north-eastern States, Karnataka, the Konkan coast, hilly districts of Kerala and TN.
- This pattern may extend into Chhattisgarh, Odisha, Bengal and other eastern regions as well.

What is the need for caution?

- The recent floods in Kerala and the Chennai catastrophe of 2015 remind of the negative side to rains.
- The long-term trends for flood impact in India have been one of declining loss of lives and cattle since the decadal high of 1971-80.
- However, there is rising absolute economic losses, though not as a share of GDP.
- There can be a terrible cost in terms of lives and property lost, and people displaced in events of flood.
- Distressing scenes of death and destruction are again being witnessed.
- Even in a rain-shadow region such as Coimbatore in TN, the collapse of a railway parcel office after a downpour has led to avoidable deaths.
- All these call for taking preparatory measures for the rainy season.



What are the concerns in this regard?

- The response of State governments to this imperative is delayed.
- States are hesitant to act against encroachment of lake catchments, river courses and floodplains.
- E.g., even the extreme distress in Chennai has not persuaded the State government against allowing structures being constructed on a lake bed, after reclassification of land
- Granting such permissions is a clear abdication of responsibility and violation of National Disaster Management Authority Guidelines to prevent urban flooding.

What are the measures needed?

- It is important to increase resilience through planning, especially in cities and towns which are expanding steadily.
- Orderly urban development is critical for sustainability, as the mega flood disasters in Mumbai and Chennai indicate.
- Water-harvesting measures, as advocated by the Centre's Jal Shakti Abhiyan, and a safety audit of structures should be taken up.
- In drafting their management plans, States must be aware of the scientific consensus - on future rain spells influenced by a changing climate.
- They need to invest in reliable infrastructure to mitigate the impact of flooding and avert disasters that could have global consequences in an integrated economy.
- Scientific hydrology, coupled with the traditional wisdom of saving water through large innovative structures, will mitigate floods and help communities prosper.

11.3 Intergovernmental Panel on Climate Change (IPCC) report

Why in News?

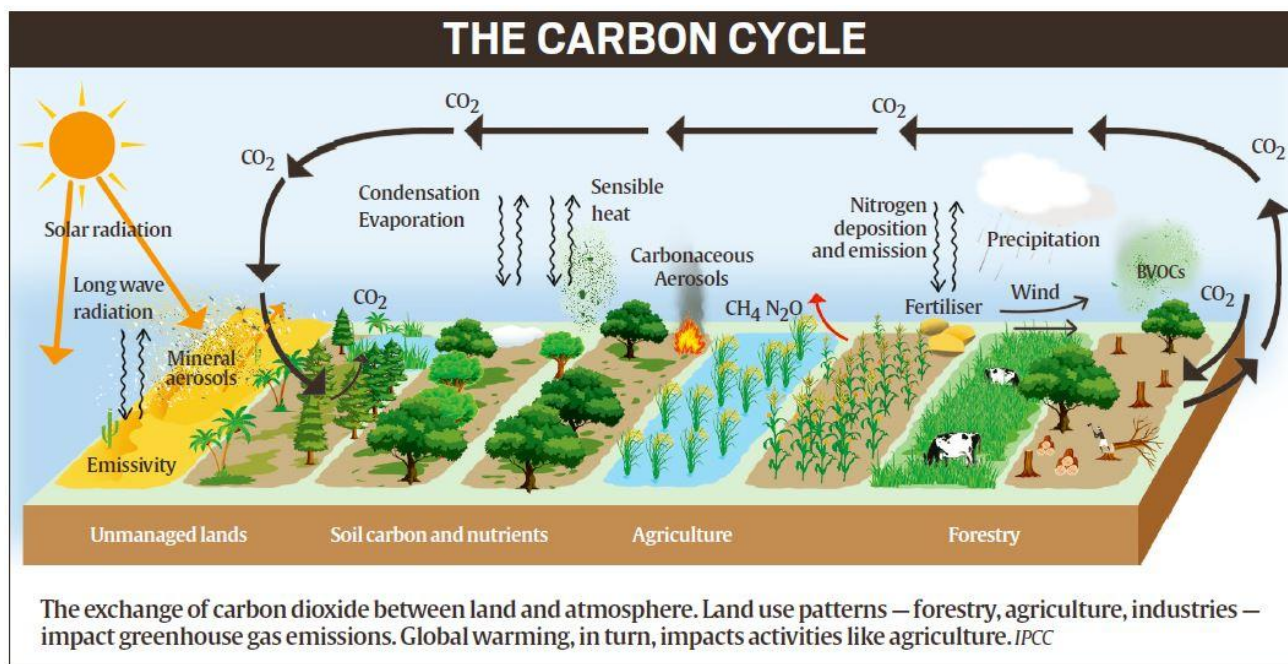
A new report by the Intergovernmental Panel on Climate Change (IPCC) was released recently.

What the report is about?

- It presents the most recent evidence on **how the different uses of land** like forests, agriculture, and urbanization **are affecting and getting affected by climate change**.
- The Geneva-based IPCC is the United Nations body for assessing the science related to climate change.
- It provides policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options.

What is the land-climate link?

- **Land use, and changes in land use**, has always been an integral part of the **conversation on climate change**.
- That is because land acts as both the source as well as a sink of carbon.
- Activities like agriculture, cattle rearing, etc are a major source of methane and nitrous oxide, which are more dangerous than CO₂.
- Soil, trees, plantations and forests absorb CO₂ for photosynthesis, thus reducing the overall CO₂ content in the atmosphere.
- This is the reason why large-scale land use changes like deforestation, urbanisation or change in cropping pattern, have a direct impact on the overall emissions of greenhouse gases.



What does the report say?

- It talks about the **contribution of land-related activities to global warming**.
- It also talks about the manner in which even existential activities like food production contributes to global warming and is also affected by it.
- If **pre-production** and **post-production activities** are taken into account, food production could contribute as much as 37% of all greenhouse gas emissions (GHG) every year.
- It points out that nearly 25% of all food produced is either lost or wasted. And even the decomposition of the waste releases emissions.

What are the other facts in the report?

- Land and ocean together absorb nearly 50% of GHGs emitted every year through natural processes in the carbon cycle.
- The importance of land or ocean, as a carbon sink cannot be overstated in the global fight against climate change.
- That is why afforestation and reduction in deforestation are vital approaches in a global strategy to combat climate change.
- India's action plan on climate change too, has a very important component on forests.
- India has promised that it would create an additional carbon sink of about 2.5 to 3 billion tonnes by the year 2032 by increasing its forest cover, and planting more trees.

11.4 PM-KUSUM Scheme

What is the issue?

- The Ministry of New and Renewable Energy (MNRE) recently rolled out a massive solar-pump programme called the PM-KUSUM scheme.
- Here is an overview of the implications of the scheme and the necessary changes to be made.

What is the scheme about?

- The Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) scheme has a target to set up 25,750 megawatts (MW) solar capacity by 2022 to power irrigation pumps.
- The approved scheme comprises of three components:

- i. setting up of 10,000 MW of decentralised ground / stilt-mounted grid-connected solar or other renewable energy based power plants
 - ii. installation of 17.5 lakh standalone solar agriculture pumps
 - iii. solarisation of 10 lakh grid-connected solar agriculture pumps
- It comes with central financial support of close to Rs 34,000 crore.

What will be the incremental change?

- 25,750 MW solar capacity can power about 11.5 million 3 HP (horsepower) pumps or 7 million 5 HP pumps.
- [At present, nearly 30 million irrigation pumps are estimated to be operating in India.
- Of this, 21 million are electric and 9 million are diesel-based.]
- The KUSUM scheme can potentially convert one-third to one-fourth of all irrigation pumps into solar-powered pumps in a short period of 3 years.
- This rapid transition is possible as the scheme makes buying pumps extremely affordable for medium-sized and large farmers.
- It comes with 30% subsidy from the central and state government each, and there is a provision to take bank loans for 30% of the cost.
- So, farmers have to shell out only 10% of the cost to buy solar pumps.

What are the benefits?

- The scheme is good to increase farmers' income in the short term.
- As solar power is cheaper than diesel off-grid, solar pumps will reduce the cost of irrigation significantly.
- The effect is substantial in states like Bihar where farmers largely use diesel pumps.
- This will allow farmers to grow more crops (even the water-intensive ones), at a lower cost of cultivation, thereby increasing income.
- In Punjab, electric pumps dominate and the power subsidy to the agricultural sector is about Rs. 7000 crore annually.
- So, solarisation of agriculture feeders will reduce the subsidy burden significantly.
- Farmers' income will also be augmented by selling electricity from solar plants on to the discoms.
- The most important part of the solar pump is that the solar cycle matches the irrigation cycle.
- So, farmers will get assured irrigation for at least 6 hours during day time, and they do not have to remain awake at night to irrigate their farms.
- [As grid supply is more assured at night in most states.]

What is the need for caution?

- Agriculture in India has become increasingly dependent on groundwater for irrigation.
- Nearly 90% of India's total groundwater draft is used to irrigate 70% of the country's total irrigated land.
- This has helped increase productivity and farmer income.
- However, it has also led to massive overexploitation of aquifers.
- Both the quality and quantity of groundwater are depleting at an alarming rate, and the condition of aquifers has reached a crisis point.
- The problem of overexploitation of groundwater is driven by the availability of subsidised (often, free power for irrigation).
- This creates little incentives to use power or water efficiently.
- States like Punjab, Haryana, TN, etc, with very low tariffs for agriculture, have the highest share of semi-critical, critical and overexploited aquifers.



- This is unsustainable in every aspect, including the long-term future of farmers and food security of the country.
- In this context, there is an inbuilt cost factor in diesel pumps, due to the cost of diesel, that restricts wasteful use of water.
- Replacing these with the far cheaper off-grid solar pumps, with no running expenses, has a high possibility of overuse, leading to groundwater depletion.

What are the shortfalls in KUSUM scheme?

- In the above context, the KUSUM scheme has also not provided any provision to utilise surplus power from off-grid pumps to light rural homes and businesses.
- In the case of solarisation of agriculture feeders, the subsidy burden for states is also likely to reduce significantly.
- So state governments have even less incentive to increase agriculture tariff to conserve water and hence, gross overexploitation of groundwater is likely to continue.
- Overall, the KUSUM scheme fails to promote efficient irrigation and incorporate explicit and strict measures against groundwater exploitation.
- The scheme only explores the possibility of its convergence with state-level schemes for promoting the micro-irrigation systems and energy-efficient pumps.
- It does not mandate the same.

What does this call for?

- The current practice of overexploitation of groundwater for irrigation has to be changed, with high priority.
- If this is not done, the World Bank predicts that around 60% of the aquifers in India will be in a critical state by 2032.
- Large-scale deployment of solar pumps, without a comprehensive plan to monitor and control water usage, is likely to make this prediction a reality.
- The KUSUM scheme will thus have to be redesigned and positioned as a water and agricultural scheme, and not merely as a renewable-energy scheme.

11.5 Kerala Landslides - Gadgil Panel Recommendations

What is the issue?

- The repeat of landslides and consequent tragedies in Kerala this year too, after the rainfall, has caused much concern.
- The need for implementing the Gadgil panel's suggestions is felt more important now than ever before.

What is the realisation with the recent floods?

- The 2018 floods and landslides in Kerala caused huge financial losses and manifold human tragedies. Click [here](#) to know more
- It was believed by many that the 2018 tragedy in Kerala marked a once-in-a-century calamity.
- The probability of two such back-to-back events was only 1 in 10,000.
- So, it was hoped that normalcy would return soon and people could return to business as usual.
- Hence, a repeat of intense floods, landslides, financial losses and manifold human tragedies in 2019 too was something people were unprepared for.
- The 2019 events have thus made people realise that it is unwise to continue business as usual.
- This has made them seriously consider the alternatives to deal with the calamities of nature.

What does the Gadgil panel report offer?

- One set of possibilities is provided by the recommendations of the Western Ghats Ecology Expert Panel (WGEEP) chaired by Madhav Gadgil.



- The policy prescriptions in the report were well within the framework of the constitutional mandates, and only suggested following the existing laws.
- This relates to environmental protection and devolution of powers, right down to the gram sabha and ward sabha level.
- In all, the WGEEP called for a model of conservation and development compatible with each other.
- The report sought a replacement of the prevailing 'Develop Recklessly, Conserve Thoughtlessly' pattern with one of 'Develop Sustainably, Conserve Thoughtfully.'
- This fine-tuning of development practices to the local context would have required the full involvement of local communities.
- It would have therefore been inappropriate to depend exclusively on government agencies for deciding on and managing Ecologically Sensitive Zones (ESZs).

What was the recommendation on ESZs then?

- The WGEEP's mandate asked the state to demarcate areas within the Western Ghats Region that need to be notified as ecologically sensitive.
- It was also asked to recommend for notification of such areas as ecologically sensitive zones under the Environment (Protection) Act, 1986.
- In line with the National Forest Policy, the panel decided to assign 60% of the total area of Western Ghats in Kerala as a zone of highest ecological sensitivity, 'ESZ1'.
- These included the region housing wildlife sanctuaries and national parks.
- The panel proposed 'elevation' and 'slope' as two key indicators of sensitivity.
- In Kerala, rainfall increases rapidly with elevation, and high rainfall and steep slopes render localities vulnerable to landslides.
- Hence, areas prone to landslides would come under ESZ1.
- The extent and quality of natural vegetation was the third indicator for classifying an area as ESZ1.
- Landslides are under control in areas with intact natural vegetation because the roots bind the soil.
- Any disturbance to such vegetation would render any locality that has steep slopes and experiences high rainfall susceptible to landslides.
- Such disturbances may include -
 - i. quarrying or mining
 - ii. replacement of natural vegetation by new plantations
 - iii. leveling of the land using heavy machinery
 - iv. construction of houses and roads
- Therefore, it was recommended that such activities be avoided in ESZ1 areas.

How successful is Kerala in devolution of powers?

- The Plachimada Panchayat of Kerala cancelled Coca-Cola company's licence.
- This was because the company polluted and depleted groundwater reserves, drying up wells and adversely impacting agriculture and livelihoods.
- While doing so, the panchayat invoked its constitutional rights, arguing that it had the duty to protect the well-being of its citizens.
- It thus claimed that it had the right to cancel or refuse permission for anything that affected its citizens adversely.
- The company's counterargument was that the panchayat was subordinate to the State government, which had granted it the licence.
- The Kerala High Court rejected this contention, affirming that grass-roots institutions have the authority to decide on the development course in their own locality.



- Furthermore, the Kerala legislature unanimously passed a law asking Coca-Cola to pay Plachimada Panchayat due compensation for losses inflicted on them.

What is the way forward?

- Democracy is not merely voting once in 5 years; it is the active involvement of citizens in governing the country at all levels, especially at the local level.
- The powers and responsibilities conferred under provisions such as the 73rd and 74th Constitutional Amendments, and the Biological Diversity Act, 2002 should be fully utilised.
- The ruling that local bodies have the authority to decide on the development course in their own localities be made operational across the country.
- Implementation of the Gadgil panel recommendations would have definitely helped manage better the heavy rainfall, and reduce the extent and intensity of landslides.
- It is only wise to apply the panel's recommendations at least now.

11.6 Concerns with India's Tiger Surveys

What is the issue?

- The latest tiger census has revealed that India's tiger numbers have gone up by 6%, to roughly 3,000 animals. Click [here](#) to know more.
- However, all the four tiger surveys conducted so far failed to give details necessary to assess the reliability of the tiger numbers.

What was the traditional survey method?

- The tradition of reporting tiger numbers dates back to the 1970s.
- These numbers were based on the 'pugmark census method', which assumed that the pugmarks of every tiger could be found, recognised and tallied.
- Over time, these assumptions failed, rendering the numbers meaningless.
- However, the forest bureaucracy (the Ministry of Environment and allied institutions) ignored the problem for decades.

What are the new methods?

- In the 1990s, many tiger scientists and statistical ecologists working in collaboration developed robust new methods for tiger monitoring.
- These methods could estimate numbers using 'distance sampling' and the extent of tiger habitat employing 'occupancy sampling of tiger spoor'.
- [Spoor, here, refers to the track or scent of an animal.]
- Critically, they could even directly estimate numbers, survival rates and recruitment in each population employing 'photographic capture-recapture sampling'.
- These methods were independently worked upon in tiger reserves across India and over 25,000 sq km in the Western Ghats (with 20% of India's tigers).
- By 2004, the new methods had rapidly been adopted worldwide for assessing populations of threatened cat species - leopards and jaguars.

What was the case in India?

- The officials involved in India's Project Tiger ruled out the above arguments and relied on India's indigenous pugmark census.
- Then in 2005, it came to a revelation that all tigers in Sariska Reserve had been poached, even as the pugmark censuses claimed all was well.
- A Tiger Task Force (TTF) appointed by the Prime Minister discarded the pugmark census.
- The dire situation demanded technically rigorous tiger population surveys conducted by independent, qualified scientists.



What happened thereafter?

- Instead of calling for better monitoring methods, TTF ended up further strengthening bureaucratic monopoly over tiger monitoring.
- Inevitably, the new National Tiger Estimation method, also created by the forest bureaucracy, ignored or distorted critical elements underpinning the new tiger survey methods.
- These flaws were masked by misleading technical jargon, hype about advanced technologies and cursory reviews by 'foreign experts'.
- Consequently, in spite of all the effort and expenditure, four tiger surveys have not generated ecologically credible results.
- Despite huge expenditures on official tiger research and monitoring, the government has failed to estimate annual rates of changes in tiger numbers, survival or recruitment in tiger populations at key sites.

12. INTERNAL SECURITY

12.1 Suspension of 'Machail Mata Yatra' in J&K

Why in news?

The 'Machail Mata Yatra' in Kishtwar district of Jammu and Kashmir was suspended recently due to security reasons.

What is the Machail Mata Yatra?

- The 'Machail Mata Yatra' is a 43-day-long journey in Kishtwar district of Jammu and Kashmir.
- Thousands of devotees from across the country visit the scenic Paddar valley, also famous for its sapphire mines, during the yatra.
- They also worship at the holy shrine of goddess Durga in Machail village of Kishtwar after trekking a 30-km hard route.

What is the order?

- The yatra commenced on July 25, and was scheduled to end on September 5.
- It has now been suspended with immediate effect due to security reasons.
- Authorities have asked people not to start the yatra and those on the way to leave and get back.
- The move comes a day after the J&K government asked Amarnath Yatis and tourists to cut short their stay in the Valley and return as soon as possible.

What are the security concerns?

- Kishtwar was declared terrorism-free over a decade ago.
- However, it was disturbed by the killing of state secretary of BJP Anil Parihar and his brother Ajeet Parihar in November 2018.
- This was followed by assassination of senior RSS leader Chanderkant Sharma and his security guard inside a health centre in April 2019.
- The recent announcement came close on the heels of an unexplained troop surge in the State, already one of the most militarised regions of the world.
- The decision was taken keeping in view the latest intelligence inputs of terror threats, with specific targeting of the Amarnath Yatra.

What are the other concerns?

- The present government has been particular about annulling the special status that J&K is accorded in the Constitution through [Articles 370 and 35A](#).
- There is no any encouraging negotiation with people in the Valley on resolving the disputes over this.

- The Centre also seems to be pursuing a policy of undermining the mainstream political parties in the State through administrative measures and political rhetoric.

What lies ahead?

- In recent years, the situation in the Valley has worsened, and tensions between India and Pakistan have become aggravated.
- It is high time that the Centre engage with all stakeholders in resolving the conflict in the Kashmir Valley.

12.2 Defence Minister's Statement on India's Nuclear Policy

Why in news?

Defence minister Rajnath Singh ascertained that while India had strictly followed its 'no first use' (NFU) nuclear doctrine, "circumstances" would determine what happens to this policy in the future.

What is India's nuclear doctrine?

- India's official nuclear doctrine is codified in a 2003 document, which takes cues from the 1999 draft doctrine.
- Since then, there has been no official communique about India's nuclear policy from the government.
- Since 2003, India's nuclear doctrine has had three primary components as below.
- **No First Use** - India will only use nuclear weapons in response to a nuclear attack on Indian territory or Indian forces.
- A caveat (warning) is made about their possible use in response to a chemical or biological attack.
- **Massive Retaliation** - India's response to a first strike will be massive, to cause 'unacceptable damage'.
- While the doctrine does not explicitly espouse a counter-value strategy (civilian targets), the wording implies the same.
- **Credible Minimum Deterrence** - The number and capabilities of India's nuclear weapons and delivery systems should merely be sufficient to ensure intolerable retaliation.
- This should also keep in mind first-strike survival of its relatively meager arsenal.

How has India's nuclear stance been?

- The adoption of the nuclear doctrine came soon after Operation Parakram (2001-02).
- At that time, the threat of a nuclear exchange on the subcontinent had figured prominently in international capitals, if not in New Delhi and Islamabad.
- The public adoption of the doctrine was in part an attempt by New Delhi to restate its commitment to restraint and to being a responsible nuclear power.
- India is one of the two countries (China being the other) that adheres to a doctrine of No First Use (NFU).

How has India's nuclear restraint helped?

- India's self-proclaimed restraint has formed the basis for its claims to belong to the nuclear mainstream.
- These include -
 - i. the initial application for the waiver in 2008 from the Nuclear Suppliers Group in order to carry out nuclear commerce with the grouping
 - ii. India's membership of the Missile Technology Control Regime, the Wassenaar Arrangement and the Australia Group
 - iii. India's ongoing attempts to join the Nuclear Suppliers Group

Why is the current statement contentious?

- Nuclear doctrine, like any directive guiding national security, needs to be a dynamic concept that responds to changing circumstances.
- However, there is a danger that the minister's remark could spark off a nuclear arms race.

- Revoking NFU does not necessarily mean giving up restraint, but it leaves India's nuclear doctrine more ambiguous.
- Ambiguity, in turn, can lead to miscalculations from the potential adversaries of India.
- In this context, there is a possibility that nuclear weapons could fall into the hands of non-state actors in Pakistan.
- But, even in such scenarios that warrant pre-emptive action, a nuclear strike cannot be a viable option.
- For the Minister to state the future of 'no first use' is open is to say nothing and at once imply everything.
- In a nuclear circumstance it is much better to convey the nature of the nuclear deterrence than to give ambiguous statements to the potential adversaries.

What should have been done?

- Nuclear weapons are seen not as war-fighting armaments but as weapons of last resort, meant to deter the threat and use of nuclear weapons.
- In this understanding and in the above respect, it is a good idea for the government to make public any periodic review in its strategic posture.
- The no-first-use policy comes with being a confident nuclear power.
- In matters of nuclear doctrine, it is important to be clear above all else, and nothing must be left to interpretation.

12.3 Tackling Maoists in Chhattisgarh

Why in news?

Seven Maoists were killed recently in an encounter with the Chhattisgarh Police in the Bagnadi area of Rajnandgaon district bordering.

What are the recent happenings?

- A week previously (on July 27, 2019), another 7 had been killed in Machkot in Bastar, Chhattisgarh.
- With these operations, over a week, 16 Maoists have been killed.
- The security forces have made continuous inroads into the disturbed areas.
- On the other hand, the CPI (Maoist) has repeatedly admitted that their base area has shrunk, fresh recruitment almost dried up, and desertions increased.

What contributed to police's success?

- The anti-Maoist operations do get restricted by various seasonal factors.
- However, operations continue to be launched if there is actionable intelligence of Maoist movement.
- Further, security forces have learnt to overcome many impediments.
- Use of satellite technology helps in keeping track of jawans' movement from any location, and the target can be identified with more clarity.
- Staff trained in 'battlefield nursing' courses (conducted by the Army) can treat wounded jawans on the field itself.
- Night helicopter landing facilities keep the jawans motivated even at odd hours.
- Therefore, despite peak monsoon, the police were able to launch operational teams and emerge successful.
- In both instances, security forces were successful to a great extent in recovering weapons and the bodies of the deceased Maoists.
- Of late, local police in the form of DRG (District Reserve Guard) have been more and more successful in countering Left Wing Extremism (LWE).

What are the other supporting factors?

- Chhattisgarh's state police, with the support of specialised training institutes, have built up capacity and raised specialised forces.
- The institutes include the Counter Terrorism and Jungle Warfare (CTJW) College, Kanker and four CIAT (Counter Insurgency & Anti Terrorism) Schools.
- The Centre, besides helping the state strengthen training capacity and capabilities, is also providing financial support.
- This helps strengthening the specialised wings of STF (Special Task Force) and SIB (State Intelligence Bureau).
- DRGs have been constituted in many districts consisting of local policemen of affected areas.
- They have the best knowledge of the terrain as well as are well-versed in the local dialect.
- Their natural instincts have been supplemented with professional ethos from the Counter-Insurgency and Jungle Warfare School of Vairengte, Mizoram.

What was the Maoists' plan?

- The CPI (Maoist), following a decision taken in the 2014 Central Regional Bureau (CRB) meeting, is trying to develop the new MMC Zone.
- The recent encounter was in the Maoist-proposed 'MMC Zone' (Maharashtra, Madhya Pradesh and Chhattisgarh Confluence zone.).
- Maoists intend to create an entity like the Dandakaranya (DK) Special Zonal Committee in Bastar.
- It broadly incorporates the districts of Gondia in Maharashtra, Balaghat in Madhya Pradesh, and parts of Rajnandgaon, Kabirdham, and Mungeli in Chhattisgarh.
- This area is predominately tribal, forested and hilly, and suitable for guerrilla warfare.
- It is also contiguous to the North Gadchiroli Maoist Division of the DK.
- Except for a few, most of the cadres in the MMC Zone were transferred there from Bastar.

What are the governments' measures?

- The governments of the states involved took proactive steps by deploying additional resources, and are trying their best to check Maoists' expansion.
- In Chhattisgarh, many new police stations and security camps have been established.
- A number of awareness campaigns were organised in remote areas which are most vulnerable to Maoist influence.
- Arrangements for villagers' training were made and government employment for hundreds was facilitated.
- The administration has also taken steps to expedite developmental work.
- Madhya Pradesh and Maharashtra too have intensified anti-Maoist operations in these areas.
- Though the Maoists are yet to find their roots here, the efforts need to be continued.
- The Darrekasa Area Committee of the Gadchiroli-Rajnandgaon-Balaghat (GRB) Division of MMC was almost wiped out in the recent attack.



12.4 Post of Chief of Defence Staff (CDS)

Why in News?

Prime Minister announced the creation of the post of Chief of Defence Staff to provide effective leadership at the top level to the 3 wings of the armed forces.

What is the office of the Chief of Defence Staff (CDS)?

- The CDS is a high military office that oversees and coordinates the working of the three Services.
- It offers seamless tri-service views and single-point advice to the Prime Minister on long-term defence planning and management, including manpower, equipment and strategy, and jointmanship in operations.
- The role of the CDS becomes critical in times of conflict.

Is there any similar post in other countries?

- Most countries with advanced militaries have such a post, albeit with varying degrees of power and authority.
- The United States Chairman Joint Chiefs of Staff Committee (CJCS), for example, is extremely powerful, with a legislated mandate and sharply delineated powers.
- He is the most senior military officer and military adviser to the President.
- The Chiefs of the United States Army, Navy, Air Force, Marine Corps, and National Guard too, are members of the JCSC.
- All, including the CJCS, are four-star officers, but by statute only the CJCS is designated as the “principal military adviser”.

Why had India not appointed a CDS until now?

- India has had a feeble equivalent known as the Chairman, Chiefs of Staff Committee (CoSC); but a toothless office in the manner of its structure.
- The **senior-most** among the three Service Chiefs is appointed to head the CoSC, an office that lapses with the incumbent’s retirement.
- The post did not further tri-service integration, resulting in inefficiency and an expensive duplication of assets.

When was CDS proposed?

- The first proposal for a CDS came from the 2000 Kargil Review Committee (KRC).
- The Group of Ministers Task Force that studied the KRC report proposed to the Cabinet Committee on Security that a CDS, a 5-star officer be created.
- In preparation for the post, the government created the Integrated Defence Staff (IDS) in late 2002
- It eventually served as the CDS’s Secretariat but remained as a yet another nebulous department within the military establishment.

What happened to the proposal?

- No consensus emerged among the tri-Services.
- The Congress, then opposition, was against the idea of concentrating too much military power in the CDS’s post.
- The Ministry of Defence (MoD) opposed it subtly for the same reasons, and because it could disrupt civil-military ties in the latter’s favour.
- Unlike the US and other western militaries, the Indian Services are not an expeditionary force, and for which a CDS is a necessity.

What is the case for having a CDS?

- CDS was needed to bring more coordination among the three Services.
- The KRC report said that India is the only major democracy where the Armed Forces Headquarters is outside the apex governmental structure.
- Long-term defence planning suffers as day-to-day priorities dominate.

- The Prime Minister and Defence Minister do not have the benefit of the expertise of military commanders, in order to ensure that higher level defence management decisions are more consensual and broad-based.
- The CDS is seen as being vital to the creation of “theatre commands”, integrating tri-service assets and personnel like in the US military.

What are the arguments against?

- There’s no clear blueprint for the office to ensure its effectiveness.
- India’s political establishment is seen as being largely indifferent towards security matters, so they’re incapable of ensuring that CDS works.
- Militaries by nature tend to resist transformation.
- In the Indian context, critics fear, the absence of foresight and understanding might end up making the CDS just another case of “jobs for the boys”.

Who at present advises India’s Prime Minister on military matters?

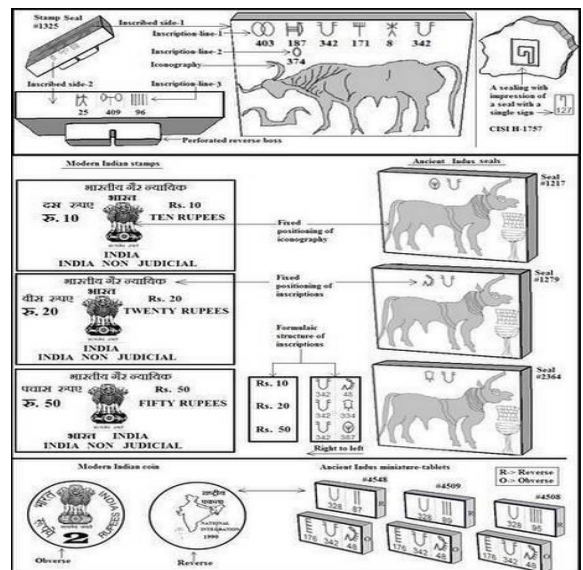
- In effect it is the National Security Adviser.
- This has been especially so after the Defence Planning Committee was created in 2018, with NSA as its chairman, and the foreign, defence, and expenditure secretaries, and the three Service Chiefs as members.

PRELIM BITS

13. HISTORY AND ART & CULTURE

Indus Script

- It is the earliest form of writing known in the Indian subcontinent, developed by the ‘Indus Valley Civilization’.
- It is also known as the Harappan script.
- The origin of this script is poorly understood and it remains undeciphered.
- The languages that the script represents is still unknown and its connection with proper Indian writing systems is uncertain.
- There is no known bilingual inscription to help to decipher the script.
- The earliest known examples of the Indus Script signs, attested on ‘Ravi’ and ‘Kot Diji pottery’ was excavated at Harappa.
- It dates back to early Harappan phase (3500-2700 BCE).
- Examples of Indus writing has been found on seals pottery, bronze tools, stoneware bangles, bones, ivory.
- Square stamp seals are the dominant form of Indus writing media.
- The Indus Script was generally written from right to left but there are some exceptions where the writing is bidirectional.
- It combined both word signs and symbols with phonetic value.
- This type of writing system is known as "logo-syllabic", where some symbols express ideas or words while others represent sounds.
- A majority of the Indus Valley inscriptions were written ‘logographically’ (by using word signs).





- Indus Script sometimes used '**rebus principle**', where a word-symbol used only for its sound value.
- E.g The combination of the pictures of a honey bee and a leaf to signify the word "belief" (bee+leaf).
- The Indus script has been assigned the **ISO 15924** code "**Inds**".

Thudumbattam

- It is one of the folk art form belongs to the Kongu region (Coimbatore, Erode, Salem) of Tamil Nadu.
- It is the 'Rhythm of celebration' and are played at temple festivals.
- The instrument 'thudumbu', locally known as jamab, kidumutti, thidumam, uruti and chera thudumbu.
- The origin of the name thudumbu has been attributed to the 'Thudumbars', a tribal community.
- They are living in Pollachi, Mettupalayam, Karamadai, Nilgris and Kovai areas.
- This community used to serve and entertain the Chola, Chera and the Pandya kings, who went for 'vana bhojana' in the forests.
- The thudumbu was also played to chase away the wild animals.
- It was also said tha 'thudumbu' was introduced by the Vijayanagar empire.
- The bowl-shaped thudumbu that resembles the bayan of the tabla is made of mud.
- Its single face is covered with skin and connected with chords to the bottom of the instrument.
- It is either hung over the waist of the performer and played or held between the legs and played with two sticks.
- It is mostly performed by a group of men.
- This instrument has found its way to Kerala, where it is known as the 'thambolam melam'.
- This is performed during festivals in and around Palakkad, Koyyamarakkadu and Attapadi and Kizhakkumpattukara.

14. GEOGRAPHY

Diurnal Cycle

- A diurnal cycle is any pattern that recurs every 24 hours as a result of one full rotation of the Earth, around its own axis.
- In climatology, the diurnal cycle is one of the most basic forms of climate patterns.
- The most familiar such pattern is the diurnal temperature variation. Such a cycle may be approximately sinusoidal, due to the Sun's rising and setting and thermal relaxation at night.
- Diurnal cycles of environmental conditions (light or temperature) can result in similar cycles in dependent biological processes, such as photosynthesis in plants, or clinical depression in humans.
- Plant responses to environmental cycles may even induce indirect cycles in rhizosphere microbial activities, including nitrogen fixation.
- A semi-diurnal cycle refers to a pattern that occurs about every twelve hours or about twice a day.
- Often these can be related to lunar tides, in which case the interval is closer to 12 hours and 25 minutes.

15. POLITY

Controller General of Accounts

- Recently Mr. Girraj Prasad Gupta took over as the CGA.

- CGA works under Department of Expenditure, 'Ministry of Finance'.
- The office of CGA is the apex Accounting Authority.
- It is the principal advisor on Accounting matters to the Union Government.
- It is not a constitutional body, but it derives its mandate and exercises the powers of the President from Article 150 of the constitution.
- Article 150 states that, the accounts of the Union and of the States shall be kept in such form as the President may, on the advice of the Comptroller and Auditor-General of India.
- It is responsible for establishing and maintaining a technically sound Management Accounting System.
- Other functions are,
 1. It formulates policies relating to general principles, form and procedure of accounting for the government.
 2. It administers the process of payments, receipts and accounting in Central Ministries.
 3. Prepares, consolidates and submits the monthly and annual accounts of the Central Government.
 4. It is responsible for maintaining the requisite technical standards of Accounting.
 5. It administers banking arrangements of Government expenditures and collection of government receipts.
 6. It is responsible for coordination and monitoring the progress of submission of corrective action taken on the recommendations contained in Public Accounts Committee's (PAC) and the CAG reports.
- It brings out an annual booklet titled "Accounts at a Glance" that brings out broad features of Government Receipts and Expenditure.
- CGA does the Cadre management of Group 'A' (Indian Civil Accounts Service) and Group 'B' Officers of the Central Civil Accounts Offices.

Section 144 & Curfew

- Recently Jammu and Kashmir government imposed restrictions in Srinagar under Section 144 (Unlawful assembly) of CrPC.
- It is issued in urgent cases of security threat or riot.
- When there are apprehensions of breach of public peace and order by some people, it is put into effect.
- It will be issued by the District Magistrate of the area.
- It bars the assembly of 5 or more people in that particular imposed area.
- It also bans holding any kind of public meeting or rally until the order is withdrawn.
- The section also empowers the authorities to block internet access.
- It also bans all civilians from carrying of weapons including lathis, sharp-edged weapons or firearms in public places. (Exception for police or paramilitary or security forces).
- It can remain in force for not more than 2 months.
- However, if the state government considers it necessary for preventing danger, it can extend for not more than 6 months from the date of issuance of the initial order.
- It can be withdrawn at any point of time.
- If someone violates Section 144, the person can be booked for "engaging in rioting".
- The maximum punishment for such act is three years.
- Difference between prohibitory orders under 'Section 144' and 'curfew', are
 - Curfew orders are issued in more severe situations where people are instructed to stay indoors for a specific period.
 - Establishments such as markets, schools, colleges, etc. are ordered to remain shut.
 - Only essential services are allowed to run on prior notice. There is a complete restriction on traffic as well.

- The orders of curfew can be for a specific group or for the general public.

Article 370

- Article 370 was the basis of Jammu and Kashmir's accession to the Indian union.
- The original draft Article 306A (now 370) was passed in the Constituent Assembly on May 27, 1949.
- It allows the Indian-administered region jurisdiction to make its own laws in all matters except, finance, defence, foreign affairs and communications.
- It exempts J&K from the Indian Constitution (except Article 1 and Article 370 itself) and permits the state to draft its own Constitution.
- The other provisions of the Indian Constitution can apply to J&K, “subject to such exceptions and modifications as the President may by order specify”.
- Such a Presidential order should be with the concurrence of the state government and the endorsement of the J&K Constituent Assembly.
- It enable the state to have a separate flag and denied property rights in the region to the outsiders.
- The residents of the state live under different laws from the rest of the country in matters such as property ownership and citizenship.
- It is the first article of Part XXI of the Constitution. The heading of this part is ‘Temporary, Transitional and Special Provisions’.
- So, Article 370 could be interpreted as temporary in the sense that the J&K Constituent Assembly had a right to modify/delete/retain it; it decided to retain it.
- Article 370(3) permits deletion by a Presidential Order.
- Such an order, however, is to be preceded by the concurrence of J&K’s Constituent Assembly.
- Since the Constituent Assembly was dissolved on January 26, 1957, it can be done only with the concurrence of the State Assembly.
- By the 1954 order, almost the entire Constitution was extended to J&K including most Constitutional amendments.

Article 35A

- It stems from Article 370, introduced through a Presidential Order in 1954.
- It is unique in the sense that it does not appear in the main body of the Constitution.
- It forbids outsiders from permanently settling, buying land, holding local government jobs or education scholarships in the region.
- It empowers the J&K legislature to define the state’s permanent residents and their special rights and privileges.
- It bars female residents of J&K from property rights in the event that they marry a person from outside the state.

Article 371

- Article 371 of the Constitution, contains “special provisions” for 11 states, including 6 states of the Northeast.
- Articles 370 and 371 were part of the Constitution at the time of its commencement on January 26, 1950.
- Articles 371A through 371J were incorporated subsequently.
- **Article 371, Maharashtra and Gujarat –**
 - Governor has “special responsibility” to establish “separate development boards” for,
 1. Vidarbha, Marathwada, and the rest of Maharashtra, and
 2. Saurashtra and Kutch in Gujarat.



- It ensure equitable allocation of funds for developmental expenditure in those areas and
- Equitable arrangement providing adequate facilities for technical education, vocational training and for employment.

Article 371A (13th Amendment Act, 1962), Nagaland

- This provision was inserted after a 16-point agreement between the Centre and the Naga People's Convention in 1960
- It led to the creation of Nagaland in 1963.
- Parliament cannot legislate in matters of,
 1. Naga religion or social practices,
 2. Naga customary law and procedure,
 3. administration of civil and criminal justice involving decisions according to Naga customary law, and
 4. ownership and transfer of land without concurrence of the state Assembly.

Article 371B (22nd Amendment Act, 1969), Assam

- The President may provide for the constitution and functions of a committee of the Assembly.
- It consists of members elected from the state's tribal areas.

Article 371C (27th Amendment Act, 1971), Manipur

- The President may provide for the constitution of a committee of elected members from the Hill areas in the Assembly and
- It entrust "special responsibility" to the Governor to ensure its proper functioning.
- Article 371D (32nd Amendment Act, 1973); substituted by The Andhra Pradesh Reorganisation Act, 2014), Andhra Pradesh and Telangana
- President must ensure "equitable opportunities and facilities" in "public employment and education to people from different parts of the state".
- President may require the state government to organise "any classes of posts in a civil service, or any classes of civil posts under, the State into different local cadres for different parts of the State".

Article 371E

- Allows for the establishment of a university in Andhra Pradesh by a law of Parliament.
- But this is not a "special provision" in the sense of the others in this part.

Article 371F (36th Amendment Act, 1975), Sikkim

- The members of the Legislative Assembly of Sikkim shall elect the representative of Sikkim in the House of the People.
- To protect the rights and interests of various sections of the population of Sikkim, Parliament may provide for the number of seats in the Assembly,
- These seats may be filled only by candidates from those sections.

Article 371G (53rd Amendment Act, 1986), Mizoram

- Parliament cannot make laws unless the Assembly decides on,
 1. religious or social practices of the Mizos,
 2. Mizo customary law and procedure,
 3. administration of civil and criminal justice involving decisions according to Mizo customary law,



- ownership and transfer of land.

Article 371H (55th Amendment Act, 1986), Arunachal Pradesh

- The Governor has a special responsibility with regard to law and order, and
- The Governor shall, after consulting the Council of Ministers, exercise his individual judgment as to the action to be taken.

Article 371J (98th Amendment Act, 2012), Karnataka

- There is a provision for a separate development board for the Hyderabad-Karnataka region.
- There shall be “equitable allocation of funds for developmental expenditure over the said region”, and
- Equitable opportunities and facilities for people of this region in government jobs and education.
- A proportion of seats in educational institutions and state government jobs in Hyderabad-Karnataka can be reserved for individuals from that region.
- Article 371-I deals with Goa, but it does not include any provision that can be deemed ‘special’.

16. GOVERNMENT INITIATIVES

PRAGATI

- The PM chaired his 30th interaction through PRAGATI recently.
- It is a multi-purpose, multi-modal platform for “Pro-Active Governance And Timely Implementation” (PRAGATI).
- It is a unique integrating and interactive platform aimed at addressing common man’s grievances.
- It also monitors and reviews important programmes and projects of both central and state governments.
- It is incorporated with three latest technologies-
 - Digital data management,
 - Video-conferencing and
 - Geo-spatial technology.
- It is a three-tier system - PMO, Union Government Secretaries, and Chief Secretaries of the States
- PM will hold a monthly interaction with the Government Secretaries and Chief Secretaries through Video-conferencing.
- The system has been designed in-house by the PMO with the help of National Informatics Center (NIC).
- It is also a robust system for bringing e-transparency and e-accountability among the key stakeholders.
- In the recent interaction, PM reviews progress of flagship schemes like Ayushman Bharat and Sugamya Bharat Abhiyan, PM AwasYojana (Urban) etc.

SANKALP Scheme

- Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) project focuses on skill development.
- It is programme of ‘Ministry of Skill Development & Entrepreneurship’.
- It is an outcome oriented project supported by ‘World Bank’.
- It aims to implement the mandate of the National Skill Development Mission (NSDM).
- It focuses on district level skilling ecosystem through seamless convergence and coordination.
- It has a special focus on decentralised planning and quality improvement.



- It covers the overall skilling ecosystem of both Central & State agencies.
- Four key areas identified under the scheme are,
 1. Institutional Strengthening (National, State & District level)
 2. Quality Assurance of skill development programs
 3. Inclusion of marginalised population in skill development and
 4. Expanding Skills through Public Private Partnerships (PPPs).
- An award has also been launched to promote skill planning at the district level, namely “District Skill Development Plan (DSDP) Awards”.
- The key components of this scheme are,
 1. **National Skill Certification Body** - An independent body for regulating skill assessment.
 2. **Unified National Accreditation board** – A standard registration and accreditation criteria for trainers & training centres.
 3. **National Skill Research Division** – It is an independent think tank with an objective to analyse labour markets to help make policies that suit the current trends.
 4. **Kaushal Mart** – This is a consolidated Skilling Resource Marketplace which offers a credible platform for an exchange of skilling resources.
 5. **Takshila: National Portal for trainers** – This functions as the central archive of information regarding the skill development of Trainers.

PM Kisan Maan Dhan Yojana

- It is a set to launch pension scheme for small farmers by ‘Ministry of Agriculture & Farmers Welfare’.
- It covers only small and marginal farmers who own less than 2 hectares of land. (while PM-KISAN is for all farmers)
- It aims to improve the life of small and marginal farmers of the country.
- The farmers will have to contribute Rs 100/p.m that seeks to provide minimum fixed monthly pension of Rs. 3000/- on attainment of 60 years.
- It is a voluntary and contributory for farmers in the entry age group of 18 to 40 years..
- The Centre will also contribute an equal amount to the pension fund to be managed by Life Insurance Corporation (LIC).
- Farmers can also allow contribution to be made directly from the benefits drawn from the PM-KISAN scheme.
- The spouse is also eligible to get a separate pension of Rs.3000/- upon making separate contributions to the Fund.
- In case of death of the farmer before retirement date, the spouse may continue the scheme by paying the remaining contributions.
- If the spouse does not wish to continue, the total contribution made by the farmer along with interest will be paid to spouse.
- If there is no spouse, then total contribution along with interest will be paid to the nominee.
- If the farmer dies after the retirement date, the spouse will receive 50% of the pension as Family Pension.
- After the death of both the farmer and the spouse, the accumulated corpus shall be credited back to the Pension Fund.
- The beneficiaries may opt voluntarily to exit the Scheme after a minimum period of 5 years of regular contributions.
- On exit, their entire contribution shall be returned by LIC with an interest equivalent to prevailing saving bank rates.
- The initial enrollment to the Scheme is being done through the Common Service Centres in various states.

Auction of Coal Mines

- Ministry of Coal has started the process of auction of coal mines and its allotment to Central PSU & State PSU's.
- This process is being re-initiated after previous attempts elicited poor response from bidders in view of market conditions.
- Private players can also participate in the auctions.
- Of the mines being auctioned, 21 are for the 'End Use Non-Regulated Sector',
 - It allows the bidders to utilise the coal for any industry or project they wish to tie up with before bidding.
 - Coal from six mines being auctioned will be used for the iron and steel sector.
- In case of allotment, five coal mines are for power sector, nine for sale of coal to the open market.

Sex Ratio at Birth

- Recently a state-wise data of **SRB** was tabled by the Ministry of Health and Family Welfare in Parliament.
- The **SRB** in the country, defined as the number of female births per 1,000 male births.
- It has improved from 914 to 919 between 2005-06 and 2015-16, National Family Health Surveys (NFHS).
- The highest improvement was in Punjab at 126 points, but its SRB remained lowest among the states at 860 in NFHS-4.
- The sharpest decline was in Sikkim, where the SRB dropped to 809, the lowest among all states in 2015-16.
- The 2nd highest improvement in SRB was in Kerala, by 122 points from 925 in 2005-06.
- Its 1,047 in 2015-16 was the highest SRB among all states.
- SRB has been falling in states like Uttar Pradesh, Uttarakhand and Madhya Pradesh.
- In North Eastern states such as Sikkim, Assam the sex ratio at birth has fallen dramatically over 10 years.

HIGHEST IMPROVEMENT

| State | NFHS-3 (2005-06) | NFHS 4 (2015-16) | Change |
|-------------|------------------|------------------|--------|
| Punjab | 734 | 860 | +126 |
| Kerala | 925 | 1,047 | +122 |
| Meghalaya | 907 | 1,009 | +102 |
| Haryana | 762 | 836 | +74 |
| Tamil Nadu | 897 | 954 | +58 |
| Maharashtra | 867 | 924 | +57 |

SHARPEST DECLINE

| State | NFHS-3 (2005-16) | NFHS 4 (2015-16) | Change |
|-----------|------------------|------------------|--------|
| Sikkim | 984 | 809 | -175 |
| Jharkhand | 1,091 | 919 | -172 |
| Arunachal | 1,071 | 920 | -151 |
| Assam | 1,033 | 929 | -104 |
| Mizoram | 1,025 | 946 | -79 |
| Manipur | 1,014 | 962 | -51 |

Source: Ministry of Health & Family Welfare

SARAL

- Ministry of Power and New and Renewable Energy, launched the 'State Rooftop Solar Attractiveness Index' (SARAL).
- SARAL has been designed collaboratively by,
 1. The Ministry of New and Renewable Energy (MNRE),
 2. Shakti Sustainable Energy Foundation (SSEF),
 3. Associated Chambers of Commerce and Industry of India (ASSOCHAM) and
 4. Ernst & Young (EY).
- It has been developed to evaluate Indian states based on their attractiveness for rooftop development.
- It is the first of its kind index to provide a comprehensive overview of state-level measures adopted to facilitate rooftop solar deployment.
- It currently captures 5 key aspects,
 1. Robustness of policy framework
 2. Implementation environment
 3. Investment climate
 4. Consumer experience
 5. Business ecosystem

- It encourages each state to assess the initiatives taken so far, and what it can do to improve its solar rooftop ecosystem.
- This will help states to channelize investments that can eventually help the sector grow.
- In is also to create more conducive environment for solar rooftop installations and lead to accelerated growth of the sector.
- The Ministry has set a target of 175 GW of renewable energy capacity by 2022,
 1. In that 100 GW solar power is to be operational by 2022, of which 40 GW is expected to come from grid connected solar rooftops.
- Karnataka has been placed at the first rank in the Index followed by Telangana, Gujarat and Andhra Pradesh.

17. INTERNATIONAL ORGANISATIONS

IPBES

- The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body.
- The objective is to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity.
- Currently has over 130 member States.
- A large number of NGOs, civil society groupings, individual stakeholders, also participate in the meet.
- It found that many of the world's pollinator species are on the decline.

United Nations Industrial Development Organization

- **UNIDO** is an UN coordinating body central to the promotion of industrial development, poverty reduction and environmental sustainability.
- Its mission is to promote Inclusive and sustainable industrial development (ISID) in was described in the '[Lima Declaration](#)'.
- The main objectives of UNIDO are,
 1. The promotion of industrial growth and technological progress,
 2. Most effective use of human resources,
 3. Equitable development through industrialization, industrial development and environmental protection,
 4. International cooperation in industrial investment and technology.
- At present there are 170 Member States in UNIDO.
- It has a Regional Office in New Delhi
- It acts as a focal point to promote UNIDO's mandate.
- The UNIDO Country Programme (2013-2017) serves as the portfolio of development interventions by UNIDO.
- The Programme is aligned with the 12th Five Year Plan and the United Nations Development Action Framework (2013-2017).

EXTREMELY HIGH WATER STRESS

| Rank | Country | Score |
|------|--------------|-------|
| 1 | Qatar | 4.97 |
| 2 | Israel | 4.82 |
| 3 | Lebanon | 4.82 |
| 4 | Iran | 4.57 |
| 5 | Jordan | 4.56 |
| 6 | Libya | 4.55 |
| 7 | Kuwait | 4.43 |
| 8 | Saudi Arabia | 4.35 |
| 9 | Eritrea | 4.33 |
| 10 | UAE | 4.26 |
| 11 | San Marino | 4.14 |
| 12 | Bahrain | 4.13 |
| 13 | India | 4.12 |
| 14 | Pakistan | 4.05 |
| 15 | Turkmenistan | 4.04 |
| 16 | Oman | 4.04 |
| 17 | Botswana | 4.02 |

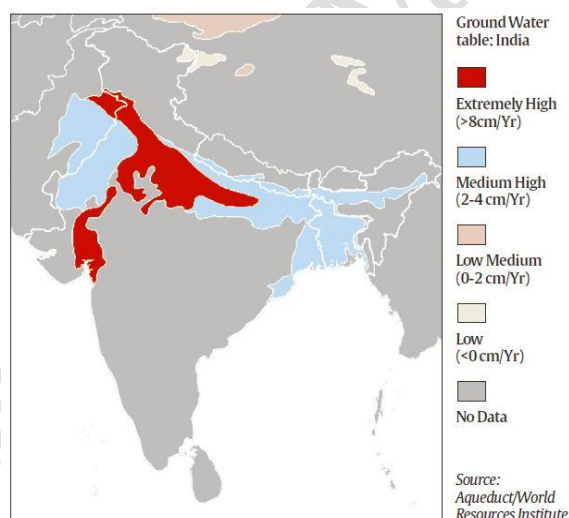
Source: Aqueduct/WRI

18. ENVIRONMENT

CONVENTIONS/INITIATIVES

Water Stress

- A new data about ‘water stress’ was released by the **World Resources Institute (WRI)**.
- One-quarter of the world’s population faces “extremely high” levels of baseline water stress.
- India is 13th among 17 countries which faces huge water stress.
- India has more than three times the population of the other 16 extremely highly stressed countries.
- It implies that more than three-quarters of these populations facing extremely high water stress live in India.
- The report noted that last year, NITI Aayog declared that the country is “suffering from the worst water crisis in its history.
- India’s groundwater resources are severely overdrawn, largely to provide water for irrigation.
- Groundwater tables in some northern aquifers declined at a rate of more than 8 cm per year between 1990 and 2014.
- Steps taken by India to mitigate water stress including,
 - Setting up the Jal Shakti Ministry.
 - Other solutions which the WRI suggested, includes more efficient irrigation,
 - conserving and restoring lakes, floodplains,
 - groundwater recharge areas; and
 - collecting and storing rainwater.
- Globally, water withdrawals have more than doubled since the 1960s due to growing demand.
- 17 countries faces withdrawals of 80% or more from available supply, 12 of them are in the Middle East and North Africa.
- Another 44 countries (home to one-third of the world) face “high” levels of stress, where on average more than 40% of available supply is withdrawn every year.
- The World Bank found that this region has the greatest expected economic losses from climate-related water scarcity,
- The economic losses is estimated at 6%-14% of GDP by 2050.
- Even in countries with low overall water stress, communities may still be experiencing extremely stressed conditions.
- For example, South Africa and the United States, which rank 48 and 71 on the list, respectively, yet the Western Cape (SA) and New Mexico (US) experience extremely high stress levels.



World Resources Institute (WRI)

- It is a global research non-profit organization which focuses on 7 areas: food, forests, water, energy, cities, climate and ocean.
- Its mission is to move human society to live in ways that protect Earth’s environment.
- It partners with local and national governments, private companies, publicly held corporations, and other non-profits organisations.

Nutrient Based Subsidy

- Cabinet Committee on Economic Affairs (CCEA) approves NBS rates for Phosphatic and Potassic (P&K) fertilizers.
- NBS for Fertilizers is a policy under ‘Ministry of Chemicals and Fertilizers’.



- This will ensure the availability of P&K fertilizers to the farmers on affordable price.
- Under the scheme, a fixed amount of subsidy decided on an annual basis is provided on each grade of subsidized P&K fertilizers, except for Urea.
- The scheme allows the manufacturers, marketers, and importers to fix the MRP of the Phosphatic and Potassic fertilizers at reasonable levels.
- The MRP will be decided considering the domestic and international prices of P&K fertilizers, inventory level in the country and the exchange rates.
- In India, 'Urea' is the only controlled fertilizer and is sold at a statutory notified uniform sale price.
- So, NBS aims at ensuring balanced use of fertilizers, improving the agricultural productivity.
- It will also helps for better returns to the farmers and also promotes the growth of the indigenous fertilizers industry.

Floods in Krishna River

- Krishna river, the lifeline of south-western Maharashtra, has wreaked havoc in the districts it flows through.
- Large tracts of land in Satara, Sangli, Kolhapur and Pune continue to remain under water.
- Dams dot the course of Krishna and her tributaries across Maharashtra, Karnataka, Andhra Pradesh and Telangana.
- These dams are the lifeline of western Maharashtra, and are a major supporting factor for the area's sugarcane-based economy.
- Almatti, a major dam on Krishna, located in Karnataka, close to the Maharashtra border, controls the flow of water into the neighbouring state.
- The position of Almatti dam is unique, as this is the first dam on Krishna river after it leaves Maharashtra.
- The amount released from the dam is important to prevent any flooding upstream of Krishna, which is Maharashtra.
- Poor dam management, where the dam gates were opened suddenly, and the catchment areas were flooded.
- Dam management is an inter-departmental job.
- It involves close coordination between the departments of revenue, water resources and agriculture and the weather forecaster.
- The release of water is managed by taking into account the projected water usage for human consumption, agriculture and industries.
- In case of a weak monsoon, less water is released to tide over the non-monsoon months.

Bhakra Dam

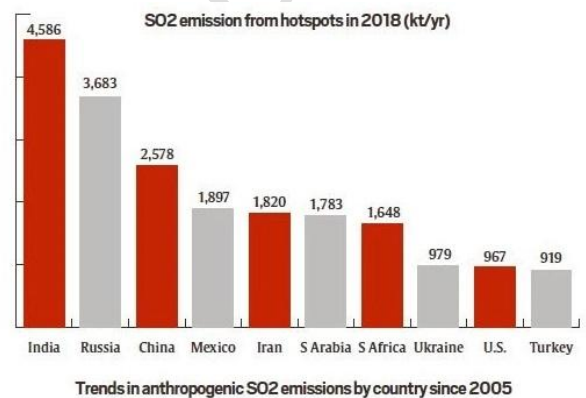
- The Bhakra Beas Management Board (**BBMB**), manages the Bhakra Dam on Sutlej in Nangal, Punjab.
- It has been working hard to manage Sutlej's flow, and reduce the losses downstream in the recent heavy rainfall.
- Very heavy rain have resulted in the Sutlej river overflowing and wreaking havoc in around a dozen districts of Punjab.
- The reservoir height is 1,690 feet but the upper limit for water was fixed at 1,680 feet by the BBMB.
- The dam is built on Sutlej River and it is the 2nd tallest dam in Asia after Tehri dam.
- The Gobind Lake, an artificial lake formed on river Sutlej can have enough amount of water to flood the whole of Chandigarh, parts of Haryana, Punjab and Delhi.
- It provides for irrigation and electricity to Haryana, Rajasthan, Gujarat, and Himachal Pradesh.

Management of Bhakra Dam

- **BBMB** is assigned for the administration, maintenance and operation of the dam.
- It was constituted in 1966.
- The members of the board are appointed by,
 1. the government of India and
 2. the states of Punjab, Haryana, Rajasthan, Himachal Pradesh, Delhi, and Chandigarh.
- It works for the regulation and operation of Bhakra dam, Dehar hydroelectricity project, Pong dam, Ganguwal and Kotla power station.
- Its mission is to set high standards in Operation, Maintenance, Renovation & Modernization of Hydel Projects.
 1. Transmission, Canal Systems and to exploit New Hydro Power Potential to optimally utilize the existing infrastructure & resources.

Sulphur Dioxide Emission

- A new report by Greenpeace India shows, India is the largest emitter of sulphur dioxide in the world.
- The report also includes NASA's data on the largest point sources of sulphur dioxide.
- More than 15% of all the anthropogenic **SO₂** hotspots are in India, as detected by the NASA OMI (Ozone Monitoring Instrument) satellite.
- Almost all of these emissions are because of coal-burning.
- The vast majority of coal-based power plants in India lack flue-gas desulphurisation technology to reduce air pollution.
- To combat pollution levels, the MoEFCC introduced,
 1. **SO₂** emission limits for coal-fired power plants in 2015.
 2. But the deadline for the installation of flue-gas desulphurisation (FGD) in power plants has been extended from 2017 to 2022.
- Air pollutant emissions from power plants and other industries continue to increase in India, Saudi Arabia and Iran.
- China and the US have reduced emissions rapidly by switching to clean energy sources and enforcement for **SO₂** control.



SPECIES IN NEWS

CoP 18 of the CITES

- Over 100 nations, acting within the framework of **CITES**, approved a proposal by India, Nepal and Bangladesh.
- It is to prohibit commercial international trade in a species of 'Otter' native to the subcontinent and some other parts of Asia.
 - The Conference also accepted a separate proposal by India, moved together with the EU, the US and the Philippines.
 1. It is for inclusion of a species of 'Gecko lizard' for protection as a species not necessarily threatened with extinction.
 2. It is found widely in South Asia, the US, and Madagascar.
 3. To control the trade in order to avoid utilisation incompatible with their survival.



- Members voted to move the Smooth-coated otter (*Lutrogale perspicillata*) from CITES Appendix II to CITES Appendix I.
 1. It is considered to be facing a high risk of extinction
 2. It is detrimentally affected by international trade and habitat loss.
- The other proposal that was passed was to include the ‘Tokay gecko’ (*Gekko gecko*) in CITES Appendix II.
- India had proposed Appendix I status for the small-clawed otter, mako shark, the Indian star tortoise and the Tokay gecko.

CITES

- It is an international agreement aimed at ensuring that international trade in specimens of wild animals and plants does not threaten their survival.
- It was drafted after a resolution was adopted at a meeting of the members of the **IUCN** in 1963.
- Convention was agreed in Washington DC, therefore, sometimes referred to as the ‘Washington Convention’.
- It entered into force on July 1, 1975, and now has 183 parties.
- States and regional economic integration organisations adhere voluntarily to CITES.
- The Convention is legally binding on the Parties in the sense that they are committed to implementing it.
- However, it does not take the place of national laws and it provides a framework for Parties to make domestic legislation.
- To ensure that the Convention is implemented effectively in their national jurisdictions.

19. ECONOMY

Consumer Price Index

- **CPI** along with Wholesale Price Index (**WPI**) are 2 widely used indexes to calculate the inflation in the country.
- CPI measure changes over time in general level of prices of goods and services that households acquire for consumption.
- The National Statistical Office (**NSO**), Ministry of Statistics and Programme Implementation is releasing CPI (Rural, Urban, Combined) with the base year 2012 as monthly basis.
- It is widely used as a macroeconomic indicator of inflation, as a tool by governments and central banks for inflation targeting.
- It is also used for indexing dearness allowance to employees for increase in prices.
- India has adopted 4 CPIs.
 1. CPI (Industrial Workers)
 2. CPI (Urban Non- Manual Employees)
 3. CPI (Agricultural Labour)
 4. CPI (Rural Worker)
- Monthly price data are collected from 1114 markets in 310 selected towns by NSSO and from 1181 selected villages by the Department of Posts.
- The prices are being collected through Web Portals.
- Web portal for rural prices was developed by NIC and for urban prices by the Computer Centre in MoSPI.
- In India, RBI uses CPI (combined) for inflation purpose.

Wholesale Price Index



- A wholesale price index (WPI) is an index that measures and tracks the changes in the price of goods in the stages before the retail level.
- I.e. goods that are sold in bulk and traded between entities or businesses instead of consumers.
- WPI is usually expressed as a ratio or percentage, it shows the included goods' average price change and is often seen as one indicator of a country's level of inflation.
- Although many countries and organizations use WPIs in this way, many other countries, including the United States, use the producer price index (PPI) instead (a similar but more accurately named index)
- India uses base year 2011-12 for calculating WPI.

Rate of Inflation

- Inflation refers to an overall increase in the Consumer Price Index (CPI), which is a weighted average of prices for different goods.
- The set of goods that make up the index depends on which are considered representative of a common consumption basket.
- Therefore, depending on the country and the consumption habits of the majority of the population, the index will comprise different goods.
- Annual inflation, refers to the percent change of the CPI compared to the same month of the previous year.

Panchamirtham of Palani gets GI tag

- The renowned 'Palani Panchamirtham' which is served as the prasadam in Palani temple was bestowed with the tag recently.
- This is the first time a temple 'prasadam' from Tamil Nadu has been bestowed with the GI tag.
- Panchamirtham finds mention in the ancient Tamil texts and this offering is said to be dating back to the 9th-century AD.
- In Tamil, 'Pancha' means five and 'amirtham' refers to divine nectar.
- It is made by combining in a prescribed proportion 5 natural substances, banana, cow ghee, cardamom, jaggery and honey.
- Dates and sugar candies are added to it for extra flavours.
- The GI limitation for producing the Panchamirtham is not limited to the temple alone, but to the Palani town.
- The Palani panchamirtham is made under the guidance of Mysuru's Central Food Technological Research Institute, a Government of India undertaking. It is also certified by FSSAI.
- It is reportedly made without adding any water, preservatives, artificial ingredients, or any chemical processes.
- The whole process of producing panchamirtham is automated to cater to the increasing demand.
- 'Tirupati Laddu' is another temple prasadam which has a GI tag.

Other GI Tags

- The **GI Tag** under the Department for Promotion of Industry and Internal Trade (**DPIIT**) has recently registered new GIs.
- **'Tirur Betel vine'** from Kerala
 1. Tirur betel vine is mainly cultivated in Tirur, Tanur, Tirurangadi, Kuttippuram, Malappuram and Vengara block panchayaths of Malappuram district.
 2. It is valued both for its mild stimulant action and medicinal properties.
 3. It is commonly used for making pan masala for chewing.
 4. It has many medicinal usages and is considered as a remedy for bad breath and digestive disorders.

- **‘Tawlhlohpuan’** of Mizoram

1. It is a medium to heavy, compactly woven, good quality fabric.
2. It is known for warp yarns, warping, weaving and intricate designs that are made by hand.
3. Tawlhloh, in Mizo language, means ‘to stand firm or not to move backward’.
4. It holds high significance in the Mizo society, is produced throughout the state of Mizoram.
5. Aizawl and Thenzawl town are the main centre of production.

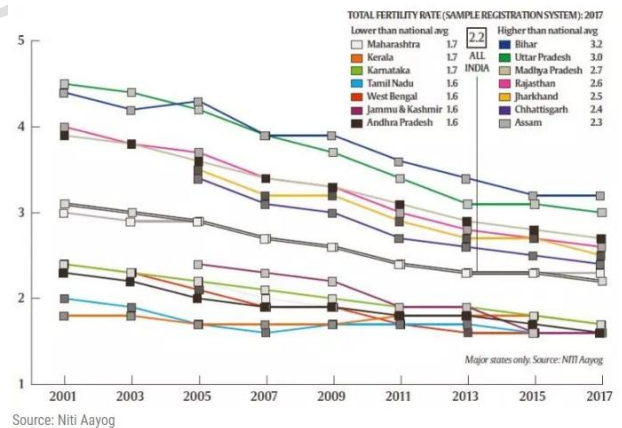


- **Mizo Puanchei** of Mizoram

1. It is a colourful Mizo shawl/textile, which is considered as the most colourful among the Mizo textiles.
2. It is an essential possession for every Mizo lady and an important marriage outfit in the state.
3. It is also the most commonly used costume in Mizo festive dances and official ceremonies.
4. The weavers insert the designs and motifs by using supplementary yarns while weaving to create this beautiful and alluring textile.

Total Fertility Rate

- TFR, defined as the number of children born to a woman until the end of her child-bearing age.
- It is a key indicator for population trends.
- India is expected to soon overtake China as the world’s most populous country.
- The TFR has been falling almost everywhere in India.
- The graph is based on TFR data from the Sample Registration System (SRS) undertaken by the Office of the Registrar General.
- SRS estimates provide dynamic trends underlying the population growth.
- For the four successive years (2013-2016) the TFR stagnated at 2.3 births per woman of child-bearing age.
- The latest SRS estimates (2017) show the TFR dropping to 2.2.
- This figure is only marginally higher than the fertility rate (2.1) required for replacement of the existing population.
- Even the states that have a higher TFR, UP(3.0), Bihar(3.2), MP(2.7), Rajasthan(2.6), Assam(2.3), Jharkhand(2.5) have been witnessing a declining trend in fertility rates.
- Gujarat and Haryana, recorded a TFR of 2.2, which is above the replacement rate but is equal to the national average.
- These 9 major states account for 52% of the 2011 population.
- States with a lower TFR include,
 1. Kerala (1.7),
 2. Tamil Nadu (1.6),
 3. Karnataka (1.7),
 4. Maharashtra (1.7),
 5. Andhra Pradesh (1.6),



6. Jammu and Kashmir (1.6).

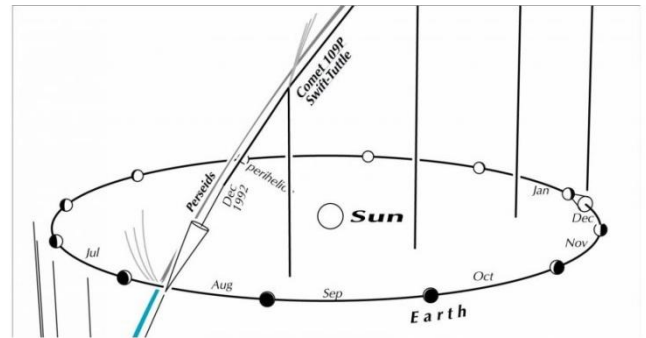
- The replacement level in these states is either 2.1 or has gone below it.

20. SCIENCE AND TECHNOLOGY

SPACE

Perseid Meteor Shower

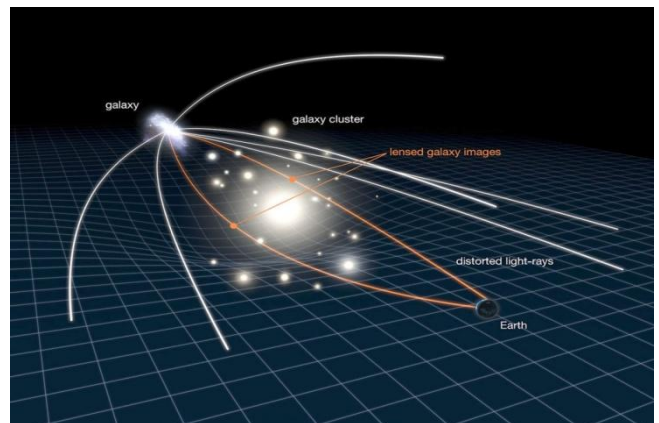
- The 'Perseids', are a prolific meteor shower which peak during mid-August, are considered the best meteor shower of the year.
- They are also known for their 'Fireballs' and also for their brightest Meteor Shower.
- Fireballs are larger explosions of light and color that can persist longer than an average meteor streak.
- Meteors come from leftover comet particles and bits from broken asteroids.
- When comets come around the sun, they leave a dusty trail behind them.
- Every year, from around July 17 to August 24, Earth crosses the orbital path of Comet Swift-Tuttle, the parent of the Perseid meteor shower.
- Debris from this comet litters the comet's orbit.
- The bits and pieces from Comet Swift-Tuttle slam into the Earth's upper atmosphere at some 210,000 km/hour, lighting up the nighttime with fast-moving Perseid meteors.
- The Perseids currently visible in the night sky are not due to the debris left behind by the comet Swift-Tuttle during its most recent pass, which happened in 1992.
- This particular comet goes around the Sun once in 133 years.
- The meteors now visible were left behind by the pass before the last one or perhaps even earlier.



The Perseids happen every year. Their parent comet – Swift-Tuttle – takes about 130 years to orbit the sun once. It last rounded the sun in the early 1990s and is now far away. But we see the Perseids each year, when Earth intersects the comet's orbit, and debris left behind by Swift-Tuttle enters our atmosphere. Chart via Guy Ottewill.

Gravitational Lensing

- Using NASA's James Webb Space Telescope researchers plan to investigate how new stars are born.
- For this, a natural phenomenon called "Gravitational lensing" is to be used.
- The gravitational field of a massive object will extend far into space, and cause light rays passing close to that object to be bent and refocused somewhere else.
- This phenomenon is 'Gravitational lensing', simply put, 'mass bends light'.
- The effect is analogous to that produced by a lens.
- The more massive the object, the stronger its gravitational field and hence the greater the bending of light rays.
- It is just like using denser materials to make optical lenses results in a greater amount of refraction.
- In effect, these are natural, cosmic telescopes, called gravitational lenses.





- These large celestial objects will magnify the light from distant galaxies that are at or near the peak of star formation.
- The effect allows researchers to study the details of early galaxies too far away.
- Gravitational lensing happens on all scales,
 1. The gravitational field of galaxies and clusters of galaxies can lens light.
 2. On smaller objects such as stars and planets.
 3. Even the mass of our own bodies will lens light passing near us a tiny bit, although the effect is too small to ever measure.
- The Milky Way today forms the equivalent of one Sun every year, but in the past, that rate was up to 100 times greater.
- NASA now plans to look billions of years into the past in order to understand how our Sun formed.
- The programme is called 'Targeting Extremely Magnified Panchromatic Lensed Arcs and Their Extended Star Formation', or **TEMPLATES**.

DEFENCE

QRSAM

- Recently 'Quick Reaction Surface-to-Air (QRSAM) Missile' was successfully test-fired.
- The state-of-the-art missile has been developed and tested by the 'Defence Research and Development Organisation' (DRDO).
- It uses solid-fuel propellant and has a range of 25-30 km, with the capability of engaging multiple targets.
- It is equipped with indigenously developed phased array radar, Inertial Navigation System, Data Link and RF seeker.
- It is also equipped with electronic countermeasures against jamming by aircraft radars.
- The entire mission was captured by various Electro Optical Tracking Systems, Radar Systems and Telemetry Systems.
- It is an all-weather missile that will help the Indian Navy in Inertial Navigation System.

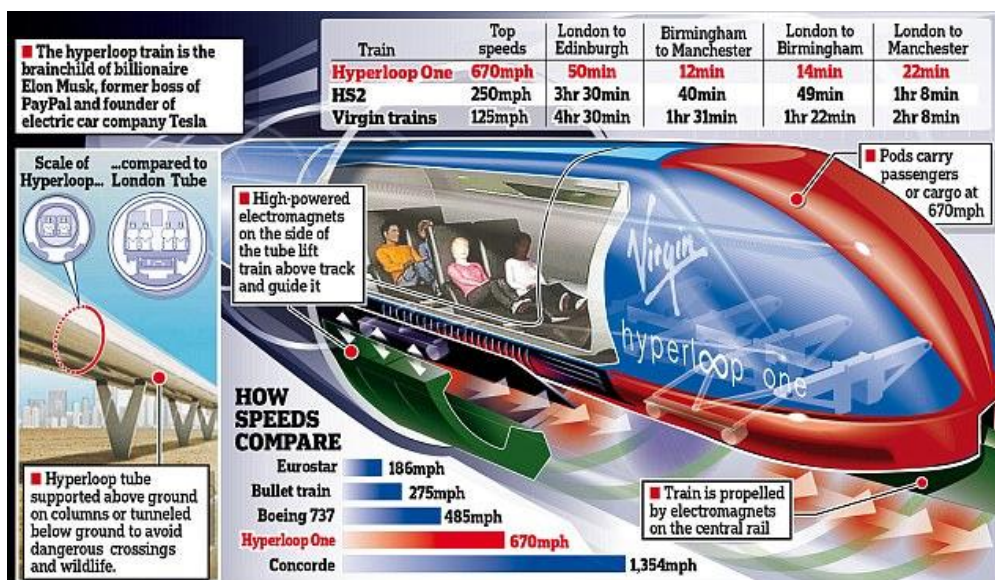
INS Tarkash

- It is a state-of-the-art stealth frigate of the Indian Navy.
- It is the 5th Talwar-class frigate constructed for the Indian Navy, built at the Yantar shipyard in Kaliningrad, Russia.
- It is equipped with a versatile range of weapons and sensors capable of addressing threats in all three dimensions.

OTHERS

Hyperloop

- It is the futuristic transportation system concept, proposed by Elon Musk.



- It envisages pods or capsules travelling at high speeds through low-pressure tubes erected on columns or tunneled underground.
- The system is fully autonomous and sealed, so no driver-related error is anticipated.
- In a sealed environment with almost no air resistance, the pods are expected to reach very high speeds.
- It uses magnetic levitation, and is propelled by a proprietary electric propulsion system.
- Its motion will not involve contact, so the vehicle will be virtually noiseless.
- It is so far only a concept with no resemblance to any public transport system known to man.

Restricted Use of Pesticides for Basmati

- Punjab has over 40% of the total Basmati export of India.
- There is a huge demand of Punjab Basmati across the globe.
- So to meet the demand, farmers use the pesticide on the recommendation of pesticide dealers.
- It is against the instructions of the agricultural experts and are not recommended by Agriculture Department.
- In the past, Punjab Basmati has faced rejection due to detection of residue of such pesticides which are not permissible in Europe, US and other countries.
- So, the Punjab government restricted 9 pesticides, which are,
- Acephate, Carbendazim, Thiamethoxam, Triazofos, Tricyclazole, Buprofezin, Carbofuron, Propiconazole and Thiophanate Methyl.
- The use of these restricted pesticides makes the input cost go up Rs 2000 to Rs 4000 per season, with pesticide companies making a huge profit.
- Basmati is grown during a period (in July) when naturally there is no pest attack on the crop during the initial stage.
- But farmers in Punjab are known to use pesticides as a preventive measure which is not recommended.

Rotavirus Vaccine

- 'Ministry of Health and Family Welfare' plans to expand Rotavirus vaccine coverage to all states.
- Rotavirus is a viral infection that causes severe diarrhea in children, particularly in youngsters less than 2 years old.
- In India, every year 37 out of every 1000 children born are unable to celebrate their 5th birthday and one of the major reasons for this is diarrheal deaths.



- It is very contagious and the virus is found in the stool of a person during and after the time, the person has diarrhea.
- Not washing a child's hands can lead to the virus contaminating other objects, such as toys.
- Other children can then become infected, if they also touch these contaminated objects.
- The virus easily spreads and causes inflammation in the stomach and intestines.
- Two brands of vaccine are available to protect against rotavirus.
- Antibiotics will not help because they fight bacteria not viruses.
- Since rotavirus disease can cause severe vomiting and diarrhea, it can lead to dehydration.
- The best way to protect against dehydration is to drink plenty of liquids.
- Rotavirus vaccine along with proper sanitation, hand wash practices and zinc supplementation will help in reducing the mortality and morbidity due to diarrhoea in children.
- National Technical Advisory Group on Immunization (**NTAGI**), recommended introduction of rotavirus vaccine (RVV) in the Universal Immunization Programme (UIP).
- Government is committed to ending morbidity and mortality in children due to diarrhoea by 2022.

National Technical Advisory Group on Immunization

- **NTAGI** is the highest advisory body on immunization in the country.
- It consists of independent experts who provide recommendations on vaccines after reviewing data on disease burden, efficacy and cost-effectiveness of vaccines.
- The Immunization Technical Support Unit (ITSU) was established to support MoHFW for evidence based planning.
- One of the functions of ITSU was to host the NTAGI Secretariat to facilitate the secretarial work of NTAGI.

Tardigrade

- On April, the Israeli spacecraft 'Beresheet' attempted to land on the Moon, but crashed on the surface.
- It was carrying a number of items, including thousands of specimens of a living organism called 'Tardigrade'.
- It is also called "Water bear" or "Moss piglet", a free-living tiny invertebrates.
- It can only be seen under a microscope. Half a millimetre long, it is essentially a water-dweller but also inhabits land.
- It can survive in the cold vacuum of outer space and it can endure extreme hot and cold temperature levels.
- It looks like an eight-legged bear, with a mouth that can project out like a tongue.
- Its body has 4 segments supported by 4 pairs of clawed legs.
- A tardigrade typically eats fluids, using its claws and mouth to tear open plant and animal cells, so that it can suck nutrients out of them.
- It is also known to feast on bacteria and, in some cases, to kill and eat other tardigrades.
- Although they are famed for their resilience, they are destructible too.
- A study found that if all other life were to be wiped out by a cataclysmic event, a large asteroid or a supernova, the 'Tardigrade' would be the likeliest to survive.
- The tardigrades on the spacecraft were dehydrated and the organism is known to come back to life on rehydration.
- On the Moon, they have to find liquid water and revive, the Tardigrades might not last very long in the absence of food and air.



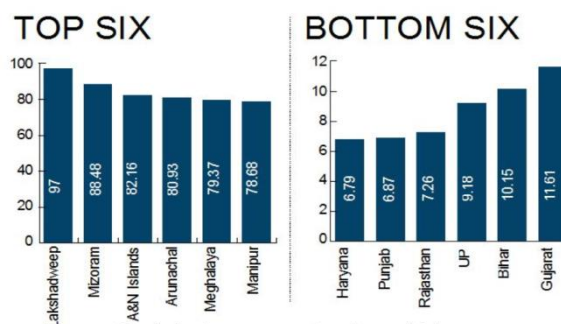
21. INDEX AND REPORT

National Crisis Management Committee

- Recently Cabinet Secretary chairs NCMC meeting to review flood situation in Maharashtra, Karnataka, Kerala and Gujarat.
- It is a temporary committee set up by the Government in the wake of a natural calamity.
- It is for effective coordination and implementation of relief measures and operations.
- It oversees the command, control and coordination of the disaster response.
- **Composition-**
 1. Cabinet Secretary - Chairperson
 2. Other members - Secretary to Prime Minister Member, Secretaries of Ministries/Departments with specific Disaster management responsibilities.
- It gives direction to the 'Crisis Management Group' (CMG) as deemed necessary.

India State of Forest Report

- Recently this data was shared in Parliament by the Ministry of Environment, Forest and Climate Change.
- According to the data, a quarter of India's geographical area (24.49 %) is under forest and tree cover.
- Northeast crowds the list of states with most dense tree, forest cover.
- Manipur, Arunachal Pradesh, Mizoram and Meghalaya are among the top 6 states with highest forest and tree cover.
- The lowest forest and tree cover is in Haryana at 6.79 % of its geographical area. Punjab follows with 6.87 %.
- Top 3 States with maximum Forest cover (in terms of area):
 1. Madhya Pradesh (77,414 sq km)
 2. Arunachal Pradesh (66,964 sq km) and
 3. Chhattisgarh (55,547 sq km).
- Top states with highest Forest cover in terms of percentage geographical area:
 1. Lakshadweep with (90.33%),
 2. Mizoram (86.27%) and
 3. Andaman & Nicobar Islands (81.73%)
- Rajasthan's forest and tree cover is over 7.26% of its geographical area while Madhya Pradesh's is 27.73 %.
- Top 5 States with maximum increase in forest cover,
 1. Andhra Pradesh (2141 sq km),
 2. Karnataka (1101 sq km)
 3. Kerala (1043 sq km),
 4. Odisha(885 sq kms) and
 5. Telangana (565 sq kms)
- Goa and Kerala are two other states with more than 50 per cent of their geographical area under forest and tree cover.
- Forest Survey of India (FSI) has been assessing the forest and tree resources of our country on a biennial basis since 1987.
- The results of the assessment are published in its biennial report titled "India State of Forest Report (ISFR)".



*Tree plus forest cover as a percentage of geographical area
Source: Ministry of Environment, Forest & Climate Change*

Henley Passport Index

- Henley and Partners, a London-based global citizenship and residence advisory firm, prepares the Henley Passport Index.
- It ranks passports based on their power and mobility.
- The index gathers data from the International Air Transport Association (IATA) that manages inter-airline cooperation globally.
- It is updated in real time according to countries' visa policy changes and it covers 227 destinations and 199 passports.
- It ranked India at 86, down 5 places from 81 in 2018.
- Last year, an Indian passport holder had visa-free access to 60 countries. this year, it is down to 58.
- A value of 1 is attributed to the score,
 1. Based on the sum of number of countries accessible by that passport holder without requiring pre-departure government approval for visa-types.
 2. It includes a visitor's permit, visa on arrival or an electronic travel authority (ETA).
 3. For instance in 2019, India's score is 58, which means an Indian passport holder has a visa-free access to 58 countries.
 4. India ranks 86 in the list.
- A value of 0 is attributed to a score when,
 1. A passport holder has to seek pre-departure government approval for visa-types including e-visa.
- Japan and Singapore, are ranked 1 and have a score of 189.
- Afghanistan holds the weakest passport, with a score and ranking of 25 and 109, respectively.
- Syria and Pakistan follow with rankings of 107 and 106 and scores of 29 and 30, respectively.
- The index assumes only the passport of citizen of country and it is not for diplomatic, emergency or temporary in nature.

Other Passport Index

- **Arton Passport Index**, which ranks United Arab Emirates's passport at rank 1.
- As per this index,
 1. India has a mobility score (MS) of 67
 2. Visa required for 131 destinations,
 3. visa on arrival required for 41 destinations and
 4. 26 visa free destinations.
- It uses UNDP HDI 2018 in its methodology to rank passports.
- It is powered by Arton Capital, a global financial advisory.

Composite Water Management Index 2.0

- NITI Aayog is set to release the second Round CWMI 2.0.
- 'Jal Shakti Ministry' launched the 'Jal Shakti Abhiyaan' a campaign for water conservation and water security.
- To supplement the efforts of Jal Shakti Ministry, NITI Aayog has prepared the Second Round of CWMI 2.0.
- The CWMI is an important tool to assess and improve the performance of States and Union Territories in efficient management of water resources.
- This has been done through a first of its kind water data collection exercise in partnership with,
 1. Ministry of Jal Shakti,

2. Ministry of Rural Development and
 3. all the States/ Union Territories.
- The index would provide useful information for the States and to Central Ministries to formulate and implement suitable strategies for better management of water resources.
 - CWMI 2.0 ranks various states for the reference year 2017-18 as against the base year 2016-17.
 - The Index and this associated report are expected to,
 1. Establish a clear baseline and benchmark for state-level performance on key water indicators.
 2. To uncover and explain how states have progressed on water issues over time.
 3. To identify areas for deeper engagement and investment on the part of the states.
 - The Index comprises 9 themes with 28 different indicators covering,
 1. Groundwater and surface water restoration,
 2. major and medium irrigation,
 3. watershed development,
 4. Participatory irrigation management,
 5. On-farm water use,
 6. Rural and urban water supply, and
 7. Policy and governance.

Indicator themes and weights

| No | Themes | Weights |
|----|--|---------|
| 1 | Source augmentation and restoration of waterbodies | 5 |
| 2 | Source augmentation (Groundwater) | 15 |
| 3 | Major and medium irrigation — Supply side management | 15 |
| 4 | Watershed development — Supply side management | 10 |
| 5 | Participatory irrigation practices — Demand side management | 10 |
| 6 | Sustainable on - farm water use practices — Demand side management | 10 |
| 7 | Rural drinking water | 10 |
| 8 | Urban water supply and sanitation | 10 |
| 9 | Policy and governance | 15 |

- The earlier report was widely acknowledged and provided actionable guidance to States on where they were doing well and what they needed to focus on to secure their water future.

India Child Well-Being Report

- The report has been prepared by 'World Vision India' (child-focused humanitarian organisation) and 'IFMR LEAD' (research organisation) based in India.
- Children are the happiest in Kerala and the least happy in Madhya Pradesh.
- Kerala, Tamil Nadu, Himachal Pradesh and Puducherry topped the charts while Meghalaya, Jharkhand and Madhya Pradesh featured at the bottom.
- Poor nutrition and low child survival rate has pushed Jharkhand and Madhya Pradesh to the bottom of an index.
- Findings based on a study of 24 data indicators including,
 1. The indicators are a mix of health, education, human rights, family income and so on.
 2. Health indicators such as,
 - Stunting and Infant mortality, Under-five mortality rate,

- Mental health/illnesses, Sex-ratio,
- Adolescent pregnancy (women aged 15 to 19 years who were already mothers or pregnant),
- 3. Education indicators such as passing tenth grade,
 - The pupil-teacher ratio, basic reading and math skills, drop-out rates in secondary school,
- 4. Crime indicators such as juvenile crimes, suicide rates,
- 5. Economic indicators such as houselessness, households with income less than Rs 5,000 and
 - Labour indicators such as manual scavenging.
- 6. All indicators were brought to a common scale of measurement and normalised.
- Among the UTs, the National Capital Territories of Delhi scored 0.53, closely followed by Dadra Nagar Haveli at 0.52.
- The report is important considering that 40% of the country's population is made of children between the ages of 1 and 18.

