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FEBRUARY 2018

G.S PAPER - II

1. POLITY

1.1. Supreme Court's Decision on Khap Panchayats

Why in news?

Supreme Court has ruled that Khap panchayats has no right to interfere in any marriage.

What are Khap Panchayats?

- Khap panchayat is the union of a few villages, mainly in north India though it exists in similar forms in the rest of the country.
- These village councils run by unelected elders turned in to a quasi-judicial body promotes conservative, anti-women values in the name of preserving Indian culture and tradition.
- Most cases are reported in northern states such as Uttar Pradesh and Haryana.
- Khaps have not only continued to flourish, but also have found patronage from mainstream political leaders.

How badly Khaps interfere in the freedom of youths?

- These societies are unwilling to accept the choices made by young women when it comes to their marriage.
- Often the perpetrators are relatives seeking to punish young couples for bringing "shame" to the family.
- There were 291 "honour" killings in India between 2014 and 2016, as per data from the National Crime Records Bureau.
- The regressive marriage diktats and intimidation tactics like ostracism, social boycotts, etc. issued by the khaps denies adults basic freedoms guaranteed by the Constitution.
- In few villages the khaps had even banned mobile phones for women.

What was the recent ruling of SC is about?

- SC directed the Khaps to stay away from marriages between consenting adults.
- It also told the khaps that they had "no right to interfere" in fact, nobody had the right to interfere in any marriage.
- The SC also mentioned that solution for consanguineous marriages must be derived from counselling such couples rather than encouraging hostility against them.

1.2. Removal of High Court Justice

What is the issue?

- The parliamentary inquiry committee has concluded that Justice Shukla of the Allahabad High Court has committed judicial impropriety.
- This now mandates his removal through a motion in both houses of the parliament (which is not called impeachment).

What is the case about?

- Justice Narayan Shukla had come under adverse notice before a Supreme Court Bench headed by Chief Justice of India Dipak Misra last year.
- The Bench had found that he had violated a restraining order from the apex court by allowing the GCRG Memorial Trust, Lucknow, to admit students.
- Notably, allegations against him came to light from an FIR by the CBI against another medical college that tried to illegally influence public servants.
- Consequently, CJI formed a three-member committee, comprising of three high court judges to enquire further about the impropriety in the case.
- As, this committee too came up with an adverse ruling, the resignation or voluntary retirement of Mr.Shukla was expected, which hasn't been tendered.

- This hence leaves no option but for him face the ignominy of a parliamentary action, for which the CJI too has given his approval.

How are judges in the higher judiciary removed?

- The process of removing a “HC or a SC judge” is too elaborate and as it has considerable checks and balances.
- The judge can be removed for incapacity/proven misbehaviour.
- A motion introduced in the parliament, which needs the sign of 100 members in Lok Sabha or 50 members in Rajya Sabha.
- An inquiry committee is constituted to establish charges, which once established is put to vote.
- The removal motion has to pass in both houses with a 2/3rd majority of those present and voting, which must also be greater than 50% of the total strength.
- Significantly, no judge of the higher judiciary has ever been removed till now by means of such a parliamentary proceeding.

1.3. Cultural Freedom Vs Animal Welfare

What is the issue?

Supreme Court is yet to rule Jallikattu case involving community’s right to cultural freedom Vs values of animal welfare.

What is the existing act to protect animal welfare?

- The Constitution has imposed no binding obligation on the state to protect animal welfare.
- Due to the efforts of civil societies, in 1960 union government enacted the Prevention of Cruelty to Animals Act, 1960 PCA Act.
- The act criminalised several different types of actions resulting in cruelty to animals.
- But the exception to this include
 1. The performance of experiments on animals aimed purportedly at advancing discovery of drugs and a wide and
 2. General concession for “killing any animal in a manner required by the religion of any community”.

What is case pending before SC on Jallikattu?

- Earlier SC found that Jallikattu a bull-taming spectacle which is traditionally held during the pongal period in various parts of TN, violated many of the provisions of the PCA Act.
- It ruled that any attempt by Tamil Nadu to regulate these events could not be afforded any sanctity.
- Recently Supreme Court referred few cases to a Constitution Bench for final determination, Jallikattu case is one among that.
- Now, the issue before the Supreme Court arises out of Tamil Nadu’s amendment to the (PCA Act) made in 2017, amidst strident protests in the State.

What were the grounds used by TN to amend PCA?

- The amendment made to PCA by TN, discharges the practice of jallikattu by defining it as an event involving bulls conducted with a view to follow tradition and culture.
- Given that the subject of preventing animal cruelty falls in the concurrent list of the Seventh Schedule to the Constitution.
- TN government claimed that it possess an equal authority to determine what actions constitute cruelty to animals within its respective territory.
- Based on this TN legitimised jallikattu, by amending the PCA Act, and by exempting the practice entirely from the statute’s demands.
- Tamilnadu also argued that the amendment serves to preserve native varieties of bulls and the exemption in favour Tamil people’s right to conserve their culture.

What are the demands of the animal welfare organisations?

- Part III of the Constitution, which lists the various fundamental rights, provides to persons different manners of guarantees, including in Article 14 a right to equality, and in Article 21 a right to life.

- These enumerated rights, however, do not explicitly recognise animals as persons.
- The liberties contained in Part III have largely been understood as promises made to human beings, and, in appropriate cases, to associations of human beings, such as corporations, partnerships and other similar entities.
- Based on this animal welfare organisations in India claim efforts to be founded on qualities of politeness, on a belief that to inflict unnecessary pain on animals which is morally unconscionable.

What is conundrum pending before SC?

- To unravel this SC can hold that animals too possess a right to live with dignity, and, therefore, enjoy a right to life under Article 21.
- Or, it could hold that this right under Article 21 includes within its ambit a larger freedom to live in a society free of animal cruelty.
- But appealing such conclusions won't fit with the Constitution's text and structure.
- SC has previously held that the right to life under Article 21 partakes a right to a healthy environment, Tamil Nadu's law which strives to protect a community's cultural rights offends this larger.
- Thus the court's venture must be to independently construe Article 21, to see whether a finding that the right partakes a freedom to live in a society free of animal cruelty fits with India's larger constitutional design.

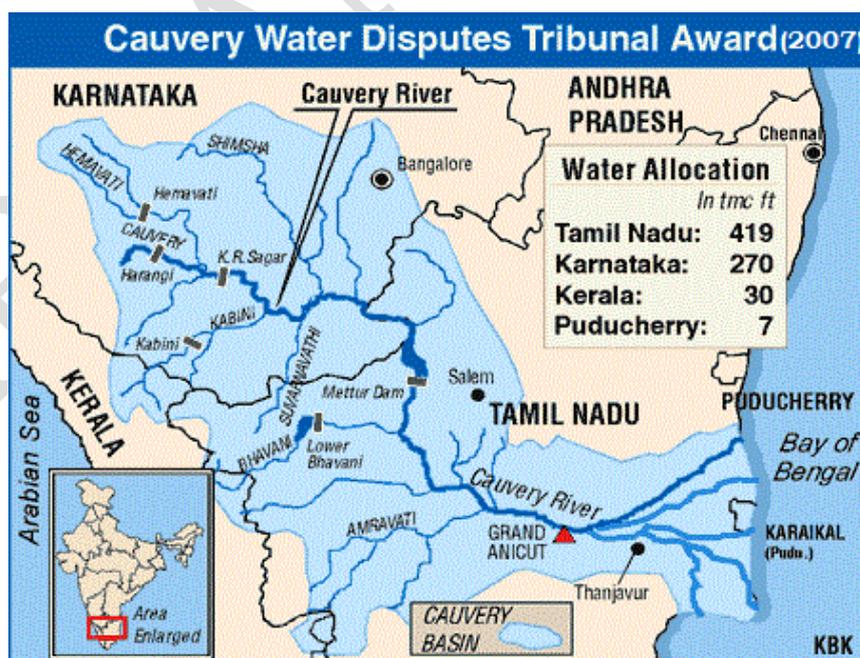
1.4. SC Verdict in Cauvery River Water Dispute

Why in news?

SC has pronounced its verdict on the sharing of Cauvery water.

How did the Cauvery dispute emerge?

- **Historically**, Tamil Nadu used about 602 TMC of the total yield of the river i.e. the available water in a particular year.
- As a result, only about 138 TMC was available for Karnataka until the turn of the 20th century.
- In **1924**, Tamil Nadu built the Mettur dam across the Cauvery river.
- Subsequently, Karnataka and Tamil Nadu signed an agreement effective for 50 years.
- Accordingly, TN was allowed to expand its agricultural area by 11 lakh acres to its the existing 16 lakh acres.
- Karnataka was authorised to increase its irrigation area from 3 lakh acres to 10 lakh acres.
- The Cauvery River thus primarily served the needs of farmers in Tamil Nadu.
- The **accord lapsed in 1974**, on completing 50 years.
- Subsequently, Karnataka claimed that the agreement restricted its ability to develop farming activities along the Cauvery basin.
- To make up the lost ground, **Karnataka** attempted to **expand farming activities** in the Cauvery basin.
- It started building reservoirs.
- With this, the Cauvery river water sharing issue emerged.
- It is now a major water sharing dispute among Tamil Nadu, Karnataka, Puducherry and Kerala.
- **Tribunal** - By Tamil Nadu's demand, the Union government formed the Cauvery Water Disputes Tribunal (CWDT) in 1990.



- The dispute was adjudicated by the CWDT in 2007.

What was the Tribunal's order?

- According to the tribunal's order, of the total 740 thousand million cubic feet (TMC) of water available for utilisation -
 - i. 419 TMC was awarded to Tamil Nadu
 - ii. 270 TMC to Karnataka
 - iii. 30 TMC to Kerala
 - iv. 7 TMC to Puducherry
- The remaining 14 TMC was reserved for environmental protection.
- To achieve this sharing, the order stated that **Karnataka must release 192 TMC of water from Biligundlu Station** (inter-state dam) in normal monsoon years.
- This should be at the rates specified by the tribunal for each month.
- The tribunal also noted that in case the yield was less in a distress year, the allocated shares shall be proportionately reduced.



What was the response?

- Both Tamil Nadu and Karnataka challenged the tribunal's order.
- Karnataka claimed 312 TMC of water as against the 270 TMC ordered by the tribunal.
- The court reserved its order in September 2017.

What is the present SC verdict?

- The Court declared Cauvery a "national asset".
- It upheld the **principle of equitable apportionment** of inter-State river water among riparian States.
- The judgment concluded that the CWDT did not take into account of an "confirmatory empirical data" that Tamil Nadu has a stock of 20 TMC of ground water.
- Of this 20 TMC, Court asked TN to draw out at least 10 TMC of groundwater instead of banking on Cauvery water from Karnataka.
- Accordingly, Karnataka is "entitled to marginal relief".
- SC has thus reduced the allocation of Cauvery water from Karnataka to Tamil Nadu.

State	Quantity of water allocated (Latest)
Karnataka	284.75 tmcft, including 4.75 tmcft for Bengaluru
Tamil Nadu	404.25 tmcft
Kerala	30 tmcft
Puducherry	7 tmcft

- This means a reduction of 14.75 TMC quota of Cauvery water to Tamil Nadu from the earlier 192 TMC as stipulated by the tribunal.
- This change will be adjusted from the Biligundlu site.
- Karnataka will now release only 177.25 TMC Cauvery water from Billigundlu site to Mettur dam in Tamil Nadu.
- Bengaluru was given an additional entitlement of 4.75 tmcft.
- The SC has given the Centre 6 weeks to frame a scheme to make sure the final decisions are implemented.



- SC has also directed the formation of the **Cauvery Management Board (CMB)** immediately.
- CMB will be an inter-state forum which will work to ensure the implementation of orders of the CWDT.
- The Board shall be under the control of the Ministry of Water Resources.
- The members of the Board will include a Chairman, two full-time members, and representatives of the central government and each of the four states.
- The expenses of the Board will be borne by the state governments.

Why is CMB important for TN?

- **Requirement** - June to September marks the south-west monsoon season in Tamil Nadu.
- Notably, Tamil Nadu gets less rainfall from the south-west monsoon than many other states.
- It thus requires more water during June-September than in other months.
- **Control** - With the Board and the Committee in place, Karnataka will lose its earlier supervisory control over the 4 Cauvery basin reservoirs.
- These are Krishnarajasagar, Hemavathi, Kabini and Harangi reservoirs.
- In other words, Karnataka cannot exercise the option to release water to Tamil Nadu.
- Tamil Nadu will be ensured a regular release of water as per the order.

What is the impact of the verdict?

- **TN** - The reduction will have only a marginal impact on Tamil Nadu as the quantum of reduction is small (less than 10%).
- SC accounted the quantity of available groundwater in calculating the final determination of the share.
- So TN now has an increased responsibility to protect its groundwater reserves by taking adequate measures.
- **Bengaluru** - The **tribunal's allocation** to the city is proved insufficient, as it had **miscalculated** Bengaluru's water needs.
- It had assumed that 50% of the drinking water requirements would be met by **ground water**.
- However, increasing urbanisation and population has been depleting and contaminating groundwater, making it unusable.
- Moreover, the tribunal had accounted only the **one-third of the city** that falls within the Cauvery basin.
- The Supreme Court has ruled out this approach.
- Thus, the share of water for a basin State is for addressing the social and economic needs of its community as a whole.

What are the jurisdictional implications?

- **Article 363** - The 1892 and 1924 agreements were between the princely State of Mysore and the Madras presidency.
- It pertained to the allocation of Cauvery water to regions now comprising Tamil Nadu, Karnataka, Kerala and Puducherry.
- Article 363 of the Constitution **restricts judicial review of a pre-Constitution treaty or agreement**.
- The court however dismisses the validity of Art 363 in the case of 1892 and 1924 agreements.
- It observes that these agreements were not political arrangements but based on public interest.
- **Article 262 & 136** - The Centre had earlier maintained that the Court lacked the jurisdiction to hear inter-state river water dispute.
- This is as per the Inter-State Water Disputes Act of 1956.
- The provisions of Act restrict the Supreme Court from hearing or deciding any appeals against the Tribunal's decision.
- The Centre had thus claimed the Tribunal award as final.



- The Court, however, held that the remedy under Article 136 was a constitutional right.
- Art 136 empowers the Supreme Court to grant leave to appeal from any judgment, decree or determination by any Court or Tribunal.

1.5. Concerns with powers of Chief Justice

What is the issue?

In India, there are controversies over the power of chief justice in constitution of benches.

What are the powers of a Chief justice?

- **SC** -The judges of the Supreme Court and high courts are appointed by the president after consultation with the chief justice of India.
- The chief justice of High court is appointed by the president after consultation with the chief justice of India and the governor of the state concerned.
- The consultation with the chief justice is obligatory in the case of appointment of a judge other than chief justice.
- Thus the advice tendered by the chief justice of India is binding on the president in the matters of appointment of the judges of the SC.
- **HC** - For appointment of other judges the chief justice of the concerned high court is also consulted.

What are benches?

- In the US Supreme Court, there will be nine judges and all sit together and decide all the matters.
- Likewise in India high courts and the SC discharge their function through the benches.
- In India the members of the bench is usually appointed by the chief justice of the respective court, a chief justice can also present in the bench.
- The constitution of benches is an administrative matter and is a privilege of the chief justice as the administrative head of the court.
- Therefore in India Chief justice is the administrative head of the respective court, but not its judicial head.
- The justice delivered by CJ's benches and other benches have equal weight and are equally binding.
- Both in the high court's and the SC for deciding matters involving constitutional disputes, a bench of no less than five judges should be constituted and the said bench should consist the senior-most judges.

What are the concerns in constituting the benches?

- **Power abuse** -The power to constitute the benches, also indirectly implies the power to shape justice and law.
- Few incidents claims that the power of CJ to constitute benches is liable to be abused.
- If a chief justice is so inclined, he may pack the benches by judges who will uphold a particular view.
- **Autocracy** -A chief justice of India (CJI) used to constitute benches to uphold his views expressed as a high court judge but overruled by the SC.
- Another CJI would instruct flexible colleagues to take particular views in the matter.
- By this the exercise of any power which has far reaching consequences has been left in the hands of one man, which has deleterious effects for democracy.

What measures needs to be taken?

- The power to constitute a bench must be shared with at least the next four senior-most judges, when political and sensitive cases are decided.
- Judges cannot be divided into senior and junior since all judges are equal, it must be understood that to sustain the confidence of the people in the judiciary, such a convention is warranted.
- Any judgment must appear to be the judgment of the court and not of one man or hand-picked men, which needs involvement of several judges.

1.6. Administrative Breakdown in Delhi

What is the issue?

Delhi administration faces a chaos due to a rift between political executive and Chief Secretary.

What are the duties of a Chief Secretary?

- The CS is a bureaucrat who is the head of the civil administration in the state or union territory.
- He represents his own service and all services within the civil administration.
- His word in sorting out contending arguments and dissension among officers is final.
- CS has to show leadership while overseeing that public interest is preserved in letter and spirit.
- It is his duty to run an efficient administration and give the CM fair and impartial advice.
- Thus for a good reason CS has a commanding presence in the administration.

What is the role of Chief Secretary in democracy?

- Democracy and participatory governance is preserved through rule of law and the authority to administer has to be integral to governance.
- This the reason the symbols of authority is given to every CS, in states and UTs.
- In Delhi, the CS has a more challenging role he has to report simultaneously to the CM and the lieutenant governor (LG).
- He needs to walk a tightrope between the vision and concerns of both, even when they are not always on the same page.
- CSs face challenges due to immense authority vested on them to organise and get things done.
- CS's authority will work only as long as both the CM and the LG understand and respect the role of the CS.
- If that is whittled down, the tremors will be felt across the services and an insult to the CS is seen as an insult to the official brotherhood.

What are the challenges before CS in UTs?

- In the states, the CS is invariably the choice of the CM and there is understanding and mutual trust between them.
- If the CS is unbending or difficult, it is easy to make a change quietly and elegantly.
- In the UT cadre or the AGMUT cadre as it is officially known, that is not so.
- By and large, the Ministry of Home Affairs (MHA), the authority controlling the cadre serving the NCT of Delhi as well as Goa, Arunachal Pradesh, Mizoram, Daman and Diu, Puducherry, Chandigarh and the Andaman and Nicobar administration, does not stand in the way of the CM having a CS of his choice.
- The officer knows his career is largely to be decided by the MHA and not by the CM of Delhi or elsewhere.
- Therefore, it is not necessary for the CS to always find a way to meet the demands of the CM, which is a point of difference with other state cadres.
- CMs recognise this and make the best use of what they have been given.

1.7. Supreme Court's Power to Overrule Itself

What is the issue?

- Three land acquisition cases have brought a constitutional question involving the powers of a SC bench to overturn previous verdicts.
- The core contention involves whether a 3 member bench of the Supreme Court can overrule another 3 member bench's order.

What was the Pune Municipal Corporation (PMC) case?

- "PMC & Ars vs Harakchand Solanki case" was related to proceedings for acquisition of 43.94 acres for the development of a "Forest Garden".
- The landowners challenged the acquisition proceedings before the Bombay High Court, which ruled in their favour.
- Subsequently, a 3 member bench of the Supreme Court upheld the High court order, in **January 2014**.

- This was with reference to the “Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013”.

What was Indore Development Authority Case?

- **High Court ruling** - Indore Development Authority (IDA), wanted to acquire land for the construction of a link road on the outskirts of Indore city.
- While IDA had deposited the compensation with the Land Acquisition Collector, the landowners simply refused to take it and approached the HC.
- Madhya Pradesh High Court ruled that the claimants had **not received** compensation and the acquisition has hence lapsed.
- This ruling was with the citation of the 2014 SC judgement in the PMC case.
- **The Appeal** – Indore Development Authority (IDA) proceeded with an appeal against the Madhya Pradesh HC order to the Supreme Court.
- This time, a 3 member bench, overturned the High Court order and unanimously ruled in favour of IDA’s claim.
- The Bench observed that once the amount of compensation had been unconditionally tendered, it would imply that payment has been made.
- Hence, claimants/landowners who’ve refused compensation can’t approach the court with the view that they’ve not been compensated.
- Further, it stated that the previous SC decision in the 2014 PMC case was not correct and that it could be reviewed in future through appropriate cases.

What was the Haryana Land Acquisition case?

- Haryana had acquired land belonging to G.D. Goenka Tourism Corporation Ltd and others in 2003.
- A case in this regard was filed in the Punjab and Haryana High Court in 2016, by those whose land had been acquired.
- The High Court found that compensation was never paid to the parties, and held that the land acquisition proceedings were deemed to have lapsed.
- Haryana government appealed against this ruling in the Supreme Court, which can be heard recently (Feb 21st 2018).
- **The problem** - The Bench that is hearing the Haryana government’s appeal, was informed of the Feb 8th IDA Case ruling.
- This left the bench wondering on how a three-judge Bench could overturn the 2014 decision, which too, had been delivered by a three-judge Bench.
- The bench has hence requested all HCs and other SC benches to defer their proceeding in cases that will be impacted by the Feb 8th order.
- This has virtually stayed the operation of the February 8 order until a decision on whether to refer this issue to a larger bench is taken.
- The current position is that any subsequent SC bench can overrule a previous SC bench order only when the number of judges in the latter is more.

2. GOVERNMENT ACTS, POLICIES AND SCHEMES

2.1 Ayushman Bharat Programme

Why in news?

The Government has announced two major initiatives in health sector, as part of newly announced Ayushman Bharat programme.

What are the provisions?

- The programme is aimed at making interventions to address health holistically, in primary, secondary and tertiary care systems.

- The initiatives under the programme are:
 - i. Health and Wellness Centre
 - ii. National Health Protection Scheme
- **Health and Wellness Centre** - National Health Policy, 2017 envisioned Health and Wellness Centres as the foundation of India's health system.
- Under this, 1.5 lakh centres will bring health care system closer to the homes of people.
- The centres will provide comprehensive health care, including for non-communicable diseases and maternal and child health services.
- These will also provide free essential drugs and diagnostic services.
- Contribution of private sector through CSR and philanthropic institutions in adopting these centres is also envisaged.
- **National Health Protection Scheme** - This will cover over 10 crore poor and vulnerable families.
- This would translate to around 50 crore beneficiaries.
- The scheme provides coverage of upto Rs. 5 lakh per family per year for secondary and tertiary care hospitalization.
- This is said to be the world's largest government funded health care programme.
- **Besides**, 24 new Government Medical Colleges and Hospitals will be set up, by up-grading existing district hospitals in the country.
- This would ensure that there is at least 1 Medical College for every 3 Parliamentary Constituencies.
- Also, at least 1 Government Medical College in each State of the country.
- This is to further enhance accessibility of quality medical education and health care.

What is the significance?

- Lakhs of families, at present, borrow or sell assets to receive inpatient treatment.
- The concern of the consequent impoverishment of poor and vulnerable families is a continuing one.
- Under the existing Rashtriya Swasthya Bima Yojana (RSBY), poor families get an annual coverage of Rs. 30,000.
- Several State governments have implemented or supplemented health protection schemes that provide varying coverage.
- The present initiatives will supplement these in taking health care to a larger mass.
- Higher health insurance cover is also seen as leading to a higher life expectancy.
- The scheme could potentially ensure enhanced productivity and well being, averting wage loss and impoverishment.

What are the challenges in achieving these goals?

- India's health system is of fragmented nature as few states already have their own health cover policy for the poor.
- The early experience with state-funded insurance for the poor also shows that some private hospitals resort to unnecessary tests and treatments to inflate claims.
- The steady growth of a for-profit health care sector poses a challenge of arriving at a basic care package for those who are covered by the NHPS, at appropriate costs.

How the Ayushman Bharat can be made successful?

- To address the health care fragmentation union government have to subsume all existing state-funded insurance schemes.
- Under NHPS beneficiaries should be given access not just within a particular State but across the country to empanelled hospitals.
- The wellness centres under NHP can dispense free essential medication by procuring those through a strictly regulated centralised agency.

- Union government need to determine the treatment costs for diseases that are covered under the scheme to reduce the deceitful claims of the private hospitals.
- This will also aid those with private health insurance, since it eliminates information asymmetry and provides a comparison point.

2.2 Health Insurance Scheme – The Challenges

What is the issue?

- The Union Budget has announced an ambitious “National Health Protection Scheme” (NHPS), which intends to provide health insurance to the masses.
- The scheme sounds more like a fantasy due to ambiguities in funding and the lack of infrastructure to support the initiative.

What is National Health Protection Scheme?

- One of the most significant announcements made in the 2018-19 budget was the one relating to the “National Health Protection Scheme” (NHPS).
- NHPS is touted as the world’s largest healthcare programme, and envisages providing the poor with a medical insurance cover of up to Rs. 5 lakh.
- The scheme intends to cover 10 crore families, which roughly translates to around 50 crore people (nearly 40% of the entire population).
- But the Finance Minister did not allocate any money for the scheme and rather just stated that resources will be raised when required.

Why NHPS?

- Out-of-pocket expenditure on healthcare is nearly 63% of the country’s total healthcare expenditure.
- This is one of the highest in the world, while it is “32% in China, 11% in the U.S. and the world average is 18.2%”.
- This expenditure is usually catastrophic for the poor and usually pushes millions into poverty every year in India.
- In this context, the NHPS was conceived to protect the vulnerable.

Why is the concept flawed?

- Even if the insurance policy becomes live, whether this will significantly improve “Medicare for the masses” remains.
- The proposers of the scheme seem to be oblivious to the crucial difference between “medical insurance and actual healthcare services”.
- The former is a financial product which focuses on enabling beneficiaries to access existing healthcare facilities through their insurance pool.
- It does not naturally ensure the creation of healthcare infrastructure as somebody will have to build hospitals/clinics and procure equipments.
- Also, doctors and nurses are to be staffed and the ‘cost of medical services’ much fall within the limits set by the insurance policy.

What are the shortfalls in the current public health infrastructure?

- **Infrastructure** - India had merely about 1,800 proper functional hospitals in rural areas, according to the government’s rural health statistics for 2017.
- There is a shortfall of “19% in sub-centres, 22% in Primary Health Centres (PHC) and 30% in terms of Community Health Centres (CHC)”.
- As of March 2017, the number of buildings required to be constructed to meet the current health requirement demands had crossed 40,000.
- Even if the buildings exist, they are often just shells, without the requisite staff.

- Also, a quarter of PHC in the country, do not have a reliable power supply and nearly a fifth don't have water supply.
- **Medical Personals** - Even the best-performing States like Kerala and Tamil Nadu had 5.9% and 7.6% doctor vacancies in PHCs respectively.
- Notably, the same for was over 40% in states like West Bengal, Chhattisgarh and Jharkhand and was 63.6% in Bihar.
- About half the primary and community health centres in Rajasthan, Haryana and Bihar did not even have a staff nurse, which was 75% in Jharkhand.
- The proportion of vacant specialist doctors is even higher and ranges from 16.7% in Tamil Nadu to a staggering 77.7% in Chhattisgarh as of 2015-16.

What is desired?

- The real challenge of creating the physical healthcare infrastructure on the ground, equip it, staff it, and run it remains very much intact.
- NHPS will indeed create a 50 crore strong potential consumer base for private medical services, which might prod them to make investments.
- But this will take time, and the age-old challenges of getting trained medical professionals to work in remote and rural locations still remains.
- Hence, given the enormity of the scenario, merely allocating funds is not sufficient and rather a more direct government role is desired.

2.3 Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill

What is the issue?

- Government is planning to introduce the Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill, 2016.
- There seems to be some flaws in the basic understanding and approach towards the social menace of trafficking.

What are the notable provisions?

- **Penalties** - The Bill has stringent penalties like life imprisonment for aggravated forms of trafficking.
- The burden of proof lies on the traffickers.
- Also, there are provisions for stripping traffickers of their assets.
- **Institutions** - An anti-human trafficking wing is proposed to be set up.
- This would be under a central investigation agency like the National Investigation Agency.
- A district-level anti-trafficking unit with an anti-trafficking police officer is also proposed.
- A designated sessions court for speedy trials is also part of the provisions.
- **Fund** - State governments need to create a Rehabilitation Fund.
- This will allocate financial resources for protection homes.
- They also offer legal assistance to victims and provide skill development programmes.
- The fund will also be used for victim and witness protection, and for generating awareness to prevent human-trafficking.

What are the present legal protections?

- The Indian Penal Code and the Immoral Traffic Prevention Act (ITPA), 1986 are noteworthy anti-trafficking provisions.
- The social welfare legislation on contract and bonded labour, and inter-state migrant work are also in place.
- In India, a combination of penal, labour and contract laws are used to impose obligations for better working conditions.
- These clutch of laws often delay the trial process.
- The Trafficking Bill would thus be an umbrella legislation in this regard.

What are the shortfalls?

- **Understanding** - The policy makers largely mistake trafficking to be equivalent only to sex trafficking and sex work.
- Thus, the criminal laws like the ITPA generally target the men traffickers.
- The current definition of trafficking in Section 370 of the IPC is also not limited to sex work.
- **Approach** - The present Trafficking Bill is clearly neoabolitionist.
- This is an approach which perceives trafficking only through the sensationalist accounts of “modern slaves”.
- This is seen as victimisation tricked by unscrupulous traffickers.
- Their only hope for rescue is believed to be the law-enforcing personalities.
- The Bill thus pursues the classic raid-rescue-rehabilitation model.
- It also seems to be extending the same model beyond sex work to other labour sectors.
- **Machinery** - The Bill also creates a range of new institutions with unclear roles.
- They are offered with enormous powers including for surveillance.
- However, there seems to be no accountability mechanisms.
- There is no clarity on how the Bill relates to the ITPA and to labour laws.

What should be done?

- The legislation should be comprehensive enough to address all forms of trafficking.
- It is thus essential to create the necessary regulatory response to reduce incidence of trafficking in the first place.
- The policies should consider:
 - i. a multi-faceted legal and economic strategy
 - ii. a robust implementation of existing labour laws
 - iii. improved labour inspection, including in informal economy
 - iv. corporate accountability for decent work conditions
 - v. self-organisation of workers
- There is also the need for systemic reforms to counter distress migration, and to end caste-based discrimination.
- Proper enforcement of the rural employment guarantee legislation would help in this regard.
- This would also avoid voluntary sex work and protect migrants’ mobility and rights.
- Working on these fronts is essential for India to meet its Sustainable Development Goal 8.7.
- It relates to eradicating forced labour, ending modern slavery and human trafficking, and ending child labour by 2025.

2.4 Draft National Auto Policy

Why in news?

The Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises has recently released the draft National Auto Policy.

What are the key provisions?

- **Import duty** - The Policy proposes lowering of import duties.
- This applies to capital goods, equipment and machinery for manufacture of new technology components.
- Companies will have to declare at the beginning of every financial year the volume of prototypes planned to be imported.
- The import duty exemption to companies will be given only on this pre-declared volume.
- **Green Mobility** - The policy emphasizes fast-tracking widespread adoption of green mobility in India.
- It calls for mandating a minimum share of green vehicles among those purchased by the government and municipal agencies.

- Accordingly:
 - i. central and state governments - 25% from 2023 and 75% from 2030
 - ii. municipal corporations in metros - 50% from 2023 and 100% from 2030
- **Emission** - The policy eyes adoption of a long-term roadmap for emission standards.
- It proposes to define emission standards that will be applicable after BS-VI.
- The standards will be with a target of harmonizing them with the most stringent global standards by 2028.
- Introduction of new norms will be initiated in 2026 with a 2-year phase-in period.
- It also envisions the Corporate Average Fuel Economy (CAFE) norms till 2025 and beyond.
- These norms are for improving the average fuel economy of vehicles, and fix incentives or penalties.
- **GeM portal** - The draft policy suggests utilising the Government e-Marketplace (GeM) portal.
- This is to aggregate all green vehicle orders with standard specifications and enable bulk procurement.
- **Infrastructure** - The policy recommends conducting a detailed study on requirement of public infrastructure for green vehicles.
- This is to make the necessary infrastructure investments for green mobility.
- **Skill development** - The policy proposes improving the skill development and training eco-system.
- It advocates increasing the accountability of Automotive Skills Development Council (ASDC) to achieve this.
- Performance based funding is suggested as a measure.
- Performance metrics include incremental employment generated, level of employment, curriculum coverage, etc.
- **Employment** - The draft policy suggests ASDC to implement a Labour Market Information System (LMIS).
- This is to facilitate aggregated information of certified candidates.
- It also serves as a marketplace to match demand and supply of skilled labour.
- It thereby helps boost employment creation in the sector.
- **Investment** - The policy entails incentivising Public Private Partnership (PPP) based industry investments.
- This is particularly for research and development of commercially viable technologies through a Hybrid Annuity Model (HAM).
- The policy also calls for encouraging FDI in the country's Automobile sector.
- This is proposed to be in coordination with Invest India to attract investments in identified areas.
- Initiating trade pacts with countries with attractive markets for Indian automotive exports is also called for.
- **Besides**, the draft auto policy also suggests setting up of a 'technology acquisition fund'.
- It proposes creation of a nodal body with a two-tier structure having an Apex Body supported by the National Automotive Council (NAC).
- The apex body will have government representatives as well as stakeholders nominated from the industry and academia.

2.5 Consumer Protection Bill 2018

What is the issue?

The Consumer Protection Bill, 2018 proposed by union government is pending before the parliament.

What are the salient features of the bill?

- It is a pending Bill in the parliament, it will replace the Consumer Protection Act, 1986.
- The Bill covers transactions, both online and offline, and includes tele-shopping and multi-level marketing.
- It involves the right to seek redress against unfair or restrictive trade practices, or unscrupulous exploitation of consumers.

- It makes provisions for establishing an executive agency known as the Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of the consumers.
- CCPA is to be headed by a Chief Commissioner and it is empowered to investigate, recall, refund and impose penalties.
- The Bill provides for product liability action in cases of personal injury, death or property damage caused by or resulting from any product, and mediation as an alternate dispute resolution.
- The CCPA is also empowered to deal with unfair trade practices and misleading advertisements.
- The Bill seeks to set up a monitoring cell, to be constituted by the president of the National Consumer Disputes Redressal Commission to oversee the functioning of the State consumer commissions from the administrative point of view.
- The Bill provides for a State government to establish a consumer mediation cell to be attached to each of the district commissions and the State commissions.
- Further, the Bill proposes that the Centre establishes a consumer mediation cell to be attached to the National Commission.

What are the advantages of the bill?

- As online transactions become a way of life, the bill provides a step in ordinary consumers some protection of their interests.
- It establishes points for quick and effective administration and settlement of disputes.
- The definition of “consumer rights” in the Bill exhaustively covers the right to be protected against the marketing of goods, products or services that are hazardous to life and property.
- It also focusses on the right to be informed about the quality, quantity, potency, purity, standard and price of goods, products or services, as the case may be, so as to protect a consumer against unfair trade practices.
- It also includes the right to be assured, wherever possible, of access to a variety of goods, products or services at competitive prices.

2.6 Government Savings Promotion Act

Why in news?

The Centre has proposed the Government Savings Promotion Act to merge some existing small savings schemes.

What is the proposal?

- The Centre has proposed to merge two Acts with the Government Savings Banks (GSB) Act, 1873.
- These are the Government Savings Certificates Act, 1959 and Public Provident Fund (PPF) Act, 1968.
- The Government Savings Certificates Act, 1959 covers National Savings Certificates and Kisan Vikas Patra.

What is the significance?

- **Governance** - The merger is to remove existing ambiguities due to multiple Acts and rules for small savings schemes.
- The merger will strengthen the objective of “Minimum Government, Maximum Governance”.
- It will make implementation easier for the depositors and introduce certain flexibilities for the investors.
- **Investment** - The salaried class contributes to Employees’ Provident Fund (EPF), which gives higher returns than PPF.
- However, the self-employed do not have a similar recourse.
- Popular schemes like Public Provident Fund (PPF) remain the most sought after investment option.
- Small savings schemes' interest rates have been falling since April 2016.
- At present, interest rate on PPF is 7.6%.
- However, despite the cut in rates, investing in PPF is beneficial.
- This is because it builds a tax-free retirement corpus.
- Deposits in PPF qualify for deduction from income under Section 80C, where the ceiling is Rs 1.5 lakh a year.

Will the merger affect existing provisions?

- There are apprehensions that certain Small Savings Schemes would be closed.
- Clearly, there are no proposals to withdraw the protection against the attachment of PPF account.
- The existing and future depositors will continue to enjoy protection from the attachment under the amended umbrella Act as well.

How are the existing shortfalls addressed?

- **Early withdrawal** - Under the existing Act, PPF account cannot be closed prematurely before completion of five financial years.
- This is a limitation, even if there is any urgent need for funds.
- At present, one can withdraw money every year from seventh financial year from the year of opening the account.
- However, under the proposed amendment, investors can withdraw their money from PPF account in case of exigencies.
- These include medical emergencies, higher education needs, etc.
- **Account for minors** - At present, a resident Indian can open a PPF account and the subscriber can even open another account in the name of minors.
- But the maximum investment limit will be Rs 1.5 lakh by adding balance in all accounts.
- The existing Act has no clear provision regarding deposits by minors in small savings.
- Under the proposed Act, new Investment in Small Savings Schemes can be made by Guardian on behalf of minor(s).
- The Guardian may also be given associated rights and responsibilities.
- If the minor dies and there is no nomination, the balances shall be paid to the Guardian.
- Also, provisions will be made to promote a culture of savings among children.
- **Special persons** - There are no clear provisions in all the three Acts for operating accounts in physically infirm and differently abled persons' name.
- The proposed Act will address these issues.
- **Nominee** - There was some inconsistency with the provisions of the Acts and an earlier verdict of Supreme Court.
- As per existing provisions, if a depositor dies and nomination exists, the outstanding balances will be paid to the nominee.
- But, the SC had stated that a nominee is merely empowered to collect the amounts as trustee for the benefit of legal heirs.
- Hence, rights of nominees have now been more clearly defined in the new Act.
- **Grievance redressal** - The existing Acts are silent about grievance redressal.
- The amended Act allows the Government to put in place mechanism for redressal of grievances.
- It also provides for amicable and expeditious settlement of disputes relating to Small Savings.
- The provisions proposed will add to the flexibility in operation of the Account under Small Savings Schemes.

3. GOVERNMENT INTERVENTIONS

3.1 Reduced PF Contribution for Women Employees

What is the issue?

- The Budget proposal to reduce the provident fund (PF) contribution of women employees is a welcome move.
- But the real need is addressing the employer's concerns in hiring women employees, to bring in gender balance in workplace.

What is the budget proposal?

- The Budget proposes to reduce the provident fund (PF) contribution of women employees to 8% from the standard 12%.



- This will be for the first three years.
- The move comes without any change in the employer's contribution.
- In general, both the employer and the employee pay an equal contribution towards provident fund.

What are the shortfalls in the approach?

- As stated in the Budget speech, PF relief is targeted at improving women's participation in the workforce.
- However, the reasons for the steady fall in female workforce participation rates are varied.
- So, how far will the move appreciably effect gender balance in workplace is uncertain.
- **Workplace** - Absence of a conducive workplace environment for women is a major reason for low participation.
- This ranges from providing the infrastructural facilities to protection from sexual harassment.
- This prime issue is little to be addressed by PF contribution.
- **Maternity leave** - Government recently expanded the provision for paid maternity leave from 12 weeks to 26 weeks.
- It also mandated the provision of crèche facilities in firms employing 50 or more employees.
- Multinational IT subsidiaries offer these facilities.
- State-owned entities also follow the mandates as they have the wherewithal to sustain such costs and are bound to follow the law.
- However, for many Indian companies, costs of meeting out these regulations may be burdensome.
- This acts as strong disincentive for hiring more women.
- **MSME** - This is particularly true with the medium and small scale (MSME) sectors.
- MSMEs remain the critical employment generators in India.
- Notably, many remain outside the formal employment arena.
- Embedding the incentive only in the organised sector would thus produce only a little change.
- As, this account only for a minuscule proportion of employment in India.

3.2 Union Budget - Announcements for the Education Sector

What does the budget hold for the Education sector?

- Union budget has allocated Rs85,010 crores for the sector for 2018-19.
- This was less than 4% increase from the previous year's estimate, which was probably because the government didn't have enough fiscal room.
- The budget has intended to focus on education holistically without segmentation from pre-nursery to Class XII.
- This would imply that the government is viewing an integrationist approach by merger of several school schemes in the near future.
- 3% education cess will be replaced with a 4% education and health cess, which is expected to enhance revenue by about Rs.11,000 crores.

What are Ekalavya Schools?

- The union budget has proposed for the comprehensive expansion of the "Ekalavya Residential School" to every tribal majority block in the country.
- Asserting it's committed to provide the best quality education to the tribal children in their own environment, the budget envisions an ambitious mission.
- By 2022, it has been targeted that every block with more than 50% ST population and at least 20,000 tribal persons, will have an Ekalavya school.
- Ekalavya schools will have special facilities for preserving local art and culture, besides sports and skill development initiatives.

What is the RISE scheme?

- Revitalising Infrastructure and Systems in Education (RISE) scheme, was launched to revitalize the infrastructure of higher educational institutions.



- RISE scheme will be financed via a restructured “Higher Education Financing Agency (HEFA) that has been constituted as a non-bank finance company.
- HEFA was created to infuse fiscal discipline among government higher educational institutions by giving loans rather than budgetary grants.
- Its purpose is to lend low-cost funds to government higher educational institutions, and will rise Rs1 trillion for the purpose.
- While HEFA was granted a budgetary allocation of Rs250 crores in the current budget, for FY19, an allocation of Rs2,750 crores is envisioned.
- Significantly, the mechanism by which HEFA raises funds and the capacity of institutions to repay loans (taken from HEFA) needs to be closely watched.

How does the fund distribution across the sector look?

- Of the total Ed-fund, school education has Rs50,000 crores, and the rest Rs35,010 crores has gone to the higher education sector.
- In the school sector, SSA has been allocated a budget of Rs26,128 crores up from Rs23,500 crores in the previous budget.
- Similarly, “Rastriya Madhyamik Shiksha Abhiyan” (RMSA) will be provided with Rs4,213 crores, up by Rs300 crores from the previous budget.
- The flagship school meal programme of Mid-day-Meal will get Rs10,500 crores in FY19, an increase of Rs500 crores from the previous budget.
- Notably, allocation for both central school chains of Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas has gone down.
- In the higher education space, the total budgetary allocation has been reduced for IITs and IIMs considerably.
- Despite its digital education push, Budget 2018 has cut fund allocation for e-learning from Rs518 crores to Rs456 crores.

3.3 Laws to Prevent Damage to Public Property

What is the issue?

- The J & K government has recently proposed legislation, seeking monetary recovery for damages to public property, from protestors of the 2016 unrest.
- This consequently saw the opposition protesting against the alleged draconian clauses in the bill.

What brought up the legislation?

- J&K had witnessed violent, sustained street protests, in the Valley after the killing of Hizbul Mujahideen commander Burhan Wani in 2016.
- While several police stations and other public buildings were damaged, no official estimate of total damage has been presented yet.
- However, according to National Crime Records Bureau data, only eight cases were registered under the 1985 law that year.
- A new law for amending the “Jammu and Kashmir Public Property (Prevention of Damage) Act, 1985”, was introduced in the Budget session.
- It was subsequently referred to a Select Committee of the House due to opposition protests, who claimed that it had draconian provisions.
- Notably, an ordinance to that effect is already in place.

What is the law about?

- **Original law** - The J&K public property (Prevention of Damage) Act, 1985 - contains penal provisions against individuals who damage public property.
- The maximum sentence is five years in prison, along with a fine, which can extend up to 10 years in case of damage by fire or explosive substances.
- Bail is possible only after the prosecution gets a chance to oppose it in court.
- **Amendment** - The new law seeks to recover the market value of public or private properties damaged during the protests from protestors.

- It also states that all persons participating in protests would face imprisonment, even if they weren't directly involved in damaging properties.
- It also increases the minimum punishment from six months in jail to two years imprisonment and non recovery of damages could extend the term further.
- **Why** - The amendment is aimed at deterring protesters from indulging in violence and damaging property.
- Notably, the pelting of police stations with stones during the wave of protests were a strong provocation for bringing these clauses.
- **Prosecution** - Situations where damage to property is anticipated, can be videographed and submitted as proof in the court.
- For establishing a person as a protest organiser, additional proof is required.
- **Opposition** - The separatists and the opposition parties in the J&K assembly protested against the legislation, as it could be misused.
- They have stated that such laws have been opposed even in the parliament and other state assemblies as this could stifle even reasoned dissent.
- Additionally, it has been stated that J&K already has a multitude of laws in the same domain like - AFSPA and Public Safety Act.

What are the other significant developments in this domain elsewhere?

- Punjab and Haryana High Court recently ruled to recover damages from the "Dera", whose followers were involved in vandalism.
- In 2007, the Supreme Court took suo motu cognizance of issues related to damage to properties during public protests.
- Two committees were constituted to look into the matter - headed by retired SC judge K T Thomas, and the eminent jurist Fali S Nariman respectively.
- **Thomas Committee** – It recommended an amendment to the parliamentary law "Prevention of Damage to Public Property (PDPP) Act, 1984".
- The recommendation was to hold leaders of the agitating group guilty of abetment – but the parliament hasn't tabled such amendment yet.
- **Nariman Committee** – It had asked the apex court to "evolve a principle of liability, punitive in nature, on account of vandalism and rioting.
- The liability should lie with the actual perpetrators of the crime as well as organisers of the event giving rise to the liability.

3.4 CCI's Fine on Google

Why in news?

The Competition Commission of India has imposed a fine of Rs 1.36 billion on Google.

Why has Google been fined?

- Google was fined a Rs 135.86-crore for "search bias" and abusing its "dominant position".
- The order came on complaints filed back in 2012 by Bharat Matrimony.com and Consumer Unity & Trust Society (CUTS).
- Bharat Matrimony.com claimed that its rival, Shaadi.com, was more prominently displayed, even when "Bharat Matrimony" was searched.
- Google has been found "search biased" by displaying search results which were harmful to competitors and, indirectly, to users, thereby abusing its dominant market position.

Competition Commission of India

- CCI was formed under The Competition Act (Amendment) 2007 by the union government, consisting of a Chairperson and 6 Members.
- The Act follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.
- It is the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India.
- The Commission is also required to give opinion on competition issues on a reference received from any statutory authority.



- The fine imposed amounts to 5 per cent of the average revenue generated in India by Google and its subsidiaries between 2012 and 2015.
- It is perfectly acceptable for a mall or a store to display in-house brands more prominently, but this would not be acceptable in case of e-market due to dominance.

What are the difficulties in governing Google?

- Google arguably performs a public service by providing a search engine platform that aggregates data freely accessed by users.
- But that platform is also a marketplace, where businesses bid for keywords and compete to place ads.
- Google remains a de facto monopoly in cyberspace, both globally and in India, with respect to these two functions.
- Google is itself a service provider, it offers a basket of services (and also partners with specific businesses) similar to those offered by its clients.
- Thus regulating digital advertisements and search-related marketplaces through laws and principles that govern more conventional businesses is difficult.
- There are no proper mechanisms to solve the issues arising in the cyber space, a year is equivalent to generations in the cyber space.

4. SOCIAL ISSUES

4.1 Securing Witnesses is Crucial

What is the issue?

- 33 of the 49 witnesses examined by the prosecution recently in the Sohrabuddin Sheikh encounter have turned hostile.
- In several sensational cases, prosecution has failed after witnesses turned hostile either due to either intimidation or allurement by the accused.

How are witnesses treated in India?

- Criminal cases are built upon the edifice of evidence that is admissible in law, for which witnesses are of paramount importance.
- Yet, witnesses in India are treated shabbily with poor facilities, their allowances are delayed, and they also often face courtroom intimidation.
- Lengthy trials frustrate them, and the threat of bodily harm looms large - all of which contributes to a witness turning hostile.
- **Remedial options** - If a witness who was to prove is crucial has turned hostile, the concerned party may call other witnesses to counter the lie.
- Else, the party may impeach the credit of the witness with the permission of the court by proving inconsistencies in his testimony.
- Also, the witness may be cross-examined, and confronted with leading questions within the court room.
- **Legality** - In criminal trials, initial testimony of a witness who turned hostile is not altogether rejected and the judge decides its reliability based on facts.
- Hence, if a witness chooses to withdraw support, that would not result in the prosecution's case being thrown out completely.

How has the Indian State progressed in this domain?

- Various commissions had stressed the need for witness protection since independence and multiple judicial pronouncements have also been made.
- Based on the recommendations of the Justice V S Malimath Committee Report (2003) and the 178th Law Commission (2001), The Criminal Law (Amendment) Bill, 2003 was proposed.
- The Bill made it mandatory for police to record statements of witnesses before a judicial magistrate, although other protections granted were minimal.
- The centre has expressed its inability to legislate on this domain as law and order is a state subject, but the Supreme Court has been convinced.
- Sighting the example NIA Act, 2008, which also falls in the state domain, the Supreme Court has expressed its displeasure at the centre's attitude.



4.2 The Unwanted Girl

What is the issue?

The 2018 economic survey has come up with a new metric called “Unwanted Girls” that seeks to highlight “Gender Bias” in the country.

Who are the “Missing Women”?

- ‘Missing women’ are the number of girls and women below the age of 25, who would’ve been alive today if they weren’t aborted as fetuses.
- Girls who happened to die early due to gender based neglect in terms of nutrition and healthcare are also added up to the “missing women index”.
- The population census enumerates everyone in a country, and the missing women number is estimated based on the sex ratio.
- India’s missing women numbers stands at a whopping 63 million.
- This means that, if no gender bias existed in India, we would have recorded 63 million more women in our census.

Who are the “Unwanted Women”?

- The 2018 Economic Survey has tried to more accurately quantify gender bias through a new number called “Unwanted Girl Index”.
- Unwanted girls account for “live females”, who haven’t received the deserving healthcare and schooling, due to the gender related partiality.
- These are daughters that parents gave birth to when they were really hoping for a son, and were disappointed and dejected hence.
- The 2018 economic survey notes that India has 21 million ‘unwanted (or) less wanted girls’ (who aren’t favoured by parents) in the less than 25 age group.
- Notably, this index does not capture the number of parents would’ve preferred not having the baby at all if they knew it was girl.

How were the Unwanted (or) Less wanted girls detected?

- The common pattern is that couples intend to have two children, which ideally is one son and one daughter – but having at least one son is mandatory.
- This essentially implies that if both their 1st and 2nd child are girls, they’ll go for the 3rd kid or maybe even 4th to get a son.
- Contrarily, if they have two sons in a row, they might regret having no daughter but yet they might not consider having more children.
- Hence, if the matrix of families having more than 2 children looks like - “girl, girl, boy” or “girl, girl, girl, boy” (last kid is a boy), it is usually a case of gender biased attitudes.
- Here, every girl born instead of the expected boy is counted as unwanted, which means the 2nd and all other successive girls are unwanted.
- The aggregate data of all families in India when collated clearly captures that the “sex ratio of the last child” (SRLC) is male-skewed.
- Hence, SRLC is thus quantifies the desire for having sons, and the number also seems lesser sensitive to economical status of the parents.
- An important point to be noted is that this “boy oriented reproduction” does reduce the overall sex ratio as it contributes more girls (although unwanted).
- Further pondering reveals that even Kerala and Assam (which look problem-free in the “missing women index”) have a male-skewed SRLC.

What does it mean to be an unwanted girl?

- If a girl is born instead of the expected boy and she nonetheless gets treated equally, then there is no problem, but unfortunately that’s not the usual case.
- Girls get fewer resources in comparison to boys in general and moreover, parents who passionately want sons, unsurprisingly, favour them once born.
- Also, the previously discussed reproduction pattern would inherently imply that more girls grow up in larger families.

- Here, even if parents treat all their children equally, girls are disadvantaged by being in families with fewer resources to spend per child.
- Boys have been found to get better immunisation and nutrition, which is also reflected in India's stunting data that displays a visible gender gap.
- More noticeably, when a corrective heart surgery is advocated, 70% of the recommended boys undergo surgery whereas the number is only 44% for girls.

4.3 Gender ratio woes in India

Why in news?

Economic Survey 2017-18 has pointed out Meta preference and fertility stopping rule for skewed sex-ratio of the last child (SRLC).

What is the status of gender ratio in India?

- The sex-ratio of the last child (SRLC) born in Indian families is excessively slanted.
- At national level, it is around 9.5 per cent worse than it should be, compared to other countries at similar levels of development.
- In Gujarat, Punjab and Rajasthan, the SRLC is 2,100 boys for every 1,000 girls, In Haryana, it is even worse at 2,300 boys: 1,000 girls.
- The male child preference is highest in Punjab and Haryana and lowest in Meghalaya.
- While India has shown improvement in several parameters related to women's empowerment, the preference for a son has not diminished.

What are the reasons for this condition?

- An average Indian family prefers to have two children, there are instances where families have more than five children if the last child is not a male.
- Indian families carry on having kids until there is a boy and then, they stop having kids.
- The Survey calls this as "meta preference" and a "fertility stopping rule" by making an inference that there are 21 million unwanted girls of age group 0-25 were born because their parents wanted a boy.
- More than 2 million women go missing across age groups every year either due to sex-selective abortion, disease, neglect, or inadequate nutrition, according to the National Family and Health Survey (NFHS).
- Reasons behind preferring a male child are found to be compulsion of a woman to move to her husband's house post marriage, inheritance of property, rituals performed by sons, and dowry, among others.
- More women are educated, employed and earning than a decade ago they still do not have control over their earnings and childbirth.

What are the suggestions from the government in this regard?

- The government had introduced schemes Beti Bachao -Beti Padhao, Sukanya Samridhi Yojana, enhanced maternity leave and mandatory Crèches in workplaces for supporting female children and child births.
- Economic Survey recommended that the nation must confront the societal preference for male offspring.
- It has also called for a stronger commitment on the gender front similar to the government's push for Ease of Doing Business.
- Equal participation by women in the labour force could push up the gross domestic product by 27 per cent.
- It's axiomatic that women's empowerment, education and agency in terms of deployment of their income, travel, etc. can lead to a big leap forward

5. HEALTH

5.1 Healthy States, Progressive India Report

Why in news?

A report has been released by the Niti Aayog named *Healthy States, Progressive India*.

What is the report on?

- It ranks all states and Union territories based on their year-on-year incremental change and overall performance in health.

- All States and UTs have been ranked in three categories to ensure comparison among similar entities.
- They are accordingly Larger States, Smaller States, and Union Territories (UTs).
- The report has been developed by NITI Aayog with technical assistance from the World Bank.
- Ministry of Health and Family Welfare (MoHFW) was also consulted in the process.
- The report is the first attempt to establish an annual systematic tool to measure and understand the nation's health performance.

What are the highlights?

- **Larger States** - The Health Index is a weighted composite Index, which for the larger States, is based on indicators in three domains.
- These are Health Outcomes (70%), Governance and Information (12%) and Key Inputs and Processes (18%).
- Among the Larger States, Kerala, Punjab and Tamil Nadu ranked on top in terms of overall performance.
- Jharkhand, Jammu & Kashmir, and Uttar Pradesh ranked as top three States in terms of annual incremental performance.
- Some of the indicators for incremental performance ranking include:
 - Neonatal Mortality Rate (NMR)
 - Under-five Mortality Rate (U5MR)
 - full immunization coverage
 - institutional deliveries
 - People Living with HIV (PLHIV) on Anti-Retroviral Therapy (ART)
- Uttar Pradesh, Rajasthan, Bihar, Odisha and Madhya Pradesh occupied the bottom ranks.
- Odisha is estimated to have the highest neonatal mortality rate at 35 per thousand live births.
- **Smaller States** - Among Smaller States, Mizoram ranked first followed by Manipur on overall performance.
- In terms of annual incremental performance Manipur ranked top followed by Goa.
- Manipur registered maximum incremental progress on indicators such as:
 - PLHIV on ART
 - first trimester antenatal care (ANC) registration
 - grading quality parameters of Community Health Centres (CHCs)
 - average occupancy of key State-level officers
 - good reporting on Integrated Disease Surveillance Programme (IDSP)
- **UTs** - Among UTs, Lakshadweep showed best overall performance as well as the highest annual incremental performance.
- It showed the highest improvement in indicators such as:
 - institutional deliveries
 - tuberculosis (TB) treatment success rate
 - transfer of National Health Mission (NHM) funds from State Treasury to implementation agency

WHERE THEY STAND

OVERALL PERFORMANCE

TOP THREE

- Kerala
- Punjab
- Tamil Nadu

BOTTOM THREE

- Bihar
- Rajasthan
- Uttar Pradesh

INCREMENTAL IMPROVEMENT

TOP THREE

- Jharkhand
- J&K
- Uttar Pradesh

BOTTOM THREE

- Gujarat
- Haryana
- Kerala

Source: NITI Aayog Health Index

What does it imply?

- **Trend** - Clearly, States with a record of investment in literacy, nutrition and primary health care have achieved high scores.
- States and UTs that start at lower levels of development are generally at an advantage in notching up incremental progress.
- Whereas for States with high Health Index scores, it is a challenge to even maintain their performance levels.
- E.g. Kerala ranks on top in terms of overall performance but sees the least incremental change.
- However, the incremental measurement reveals that about one-third of States have registered a decline in their performance in 2016 as compared to 2015.

- **Significance** - Health-care delivery is the responsibility of States, with Centre providing the financial and policy support.
- States' performance in health is crucial for meeting the Sustainable Development Goals over the coming decade.
- The Index hopes to make a difference by leveraging co-operative and competitive federalism for potentially better health outcomes.

What does it call for?

- Intra-State inequalities in health performance have to be addressed.
- Both the Centre and the States have to scale up their investment on health as a percentage of their budgets.
- The findings stress the need for pursuing domain-specific, targeted interventions.
- Common challenges for most States and UTs include the need to focus on:
 - i. addressing vacancies in key staff
 - ii. establishment of functional district Cardiac Care Units (CCUs)
 - iii. quality accreditation of public health facilities
 - iv. institutionalization of Human Resources Management Information System (HRMIS)
- Additionally, almost all Larger States need to focus on improving the Sex Ratio at Birth (SRB).
- The index could be linked to incentives offered under the National Health Mission by the Ministry of Health and Family Welfare.

5.2 Suspicions over HPV Vaccine

What is the issue?

- Globally there are reliability debates over the efficiency of HPV vaccine.
- India has planned introduced the vaccine in its universal immunisation program, despite small risks of the vaccine.

What is HPV?

- Human papillomaviruses (HPVs) which can be easily spread through direct sexual contact, from the skin and mucous membranes of infected people to the skin and mucous membranes of their partners.
- HPV infection is so common, most people get HPV infections shortly after becoming sexually active for the first time.
- Low-risk HPVs can cause skin warts on or around the genitals and anus and recurrent respiratory problems.
- High-risk HPVs, which can cause cancer Cervical cancer, Anal cancer, Oropharyngeal cancers (cancers of the middle part of the throat)
- Most high-risk HPV infections occur without any symptoms, go away within 1 to 2 years, and do not cause cancer.
- Persistent infections with high-risk HPV types can lead to cell changes that, if untreated, may progress to cancer.
- HPV vaccination can reduce the risk of infection by the HPV types targeted by the vaccine.

What are the issues with the HPV vaccine?

- There are suspicions over the HPV vaccine that they may be causing a trio of rare illnesses such as
 - i. Postural Orthostatic Tachycardia Syndrome (POTS) - It is an abnormal increase in heart rate when a patient stands up.
 - ii. Complex Regional Pain Syndrome (CRPS) - It is unexplained, severe pain in a limb.
 - iii. Chronic Fatigue Syndrome (CFS) - It is debilitating tiredness that leaves patients unable to function normally.
- All three are poorly understood conditions and often go undiagnosed.
- POTS and CFS sufferers may have other symptoms like nausea, sleep disturbances, and chronic pain.
- It is important to note that these are only suspicions, there is no evidence that these illnesses are caused by the vaccine.



- On the other hand, even if POTS and CRPS are shown to be caused by the vaccine, the incidence in vaccine recipients is likely to be very low.

What is the stand of India over the vaccine?

- India has the largest burden of cervical cancer in the world and about 70,000 women die of it each year.
- Around 70% of these cases are caused by infections from HPV strains, which the vaccines prevent.
- So India is introducing HPV vaccines in its Universal Immunisation Programme (UIP), by which millions of girls in India aged between 9 and 14 years will get the vaccines for free.
- Given the rarity of these side effects and high burden of disease, India has taken the decision to go ahead with the vaccine.
- India senses that there is a small risk of the vaccine being linked to the syndromes, but the benefits outweigh the risks.

5.3 Link between Sanitation and Stunting

What is the issue?

Results of different studies involving the impact of sanitation on stunting have implications for India.

What is Stunting?

- Stunting is a complex problem which is related to the low height of the children with respect to their age.
- The factors which are believed to implicate stunting are prenatal health, breastfeeding and diet.
- Researchers have homed in on an alternative hypothesis, that poor sanitation plays a greater role in stunting, because faecal bacteria and parasites deprive the child of nutrition.
- Various trials showed that intestinal inflammation, possibly caused by exposure to faecal germs, is correlated with stunting.
- Children in richer South Asian countries are shorter on average than those in poorer Sub-Saharan African countries, and no intervention so far has closed this gap.
- Much of the height variation among those regions could be explained by differences in open defecation rates

What were the results of the study conducted in this regard?

- WASH, this study was made with trials, which implemented water, sanitation and hygiene (WASH) interventions in Bangladeshi and Kenyan villages for two years.
- The WASH interventions included replacing poor-quality toilets with improved ones, chlorinating drinking water, and promoting hand washing.
- This was an effort to prevent stunting (low height for age) seen in children under two years in developing countries.
- When the trials ended, researchers found these children were not taller than those who did not receive these interventions; this is because the study required at least two generations of trials.
- The findings are a setback to the hypothesis that improving sanitation can thwart childhood stunting, but the findings have given various insights on developing countries.

What are the important insights of the study?

- India is the only country today in which over 50% of the rural population still defecates in the open.
- Bangladesh, while close to India in population density, brought down open defecation rates from 42% in 2003 to just 1% in 2016.
- Only around 3-9% of the participants in the trial in Bangladesh, and less than 5% in the trial in Kenya, defecated in the open.
- Even in countries like Bangladesh, poor-quality toilets can cause heavy faecal contamination, villages saw high rates of both contamination and stunting
- The study also showed that open defecation had a stronger impact on height when population density was higher, as is the case of India.

What are the implications for India?

- India introduced Swachh Bharat Abhiyan (SBA) to eliminate open defecation by 2019.

- National Family Health Survey reports shows that open defecation still remains quite common in rural India and its distribution across districts looked pretty similar to 2011.
- This proves India's Swachh Bharat Abhiyan (SBA) it is difficult to change people's sanitation habits.
- Thus programmes like the SBA that focus on constructing toilets can't do much in the face of deep-rooted cultural beliefs about open defecation.
- If behavioural change campaigns are not initiated to tackle the problem, Indians will continue to defecate in the open even if they get toilets for free.
- Against this backdrop, the Bangladesh study is significant because it did succeed in changing participant behaviour.

5.4 Punjab's Opioid Crisis

What is the issue?

- Punjab is one of the hotbeds of drug abuse in India, has a worsening Opioid crisis.
- Punjab state government has taken various measures to enhance Opioid Substitution Therapy (OST).

What are Opioids?

- Opioids are a class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription.
- These drugs are chemically related and interact with opioid receptors on nerve cells in the body and brain.
- Opioid pain relievers are generally safe when taken for a short time and as prescribed by a doctor.
- As they produce euphoria in addition to pain relief they can be misused, when misused opioid pain relievers can lead to overdose incidents and deaths.

What measures were taken by Punjab to counter drug abuse?

- It is estimated that Punjab has between 1.7 lakh and 2.7 lakh addicts.
- State government has promised to end the drug menace, through policing and by medical interventions.
- State government on pilot basis had introduced Buprenorphine-based Outpatient Opioid Assisted Treatment (OOAT) programme.
- Buprenorphine is currently administered in four rehabilitation and 21 community health centres in the state.
- As of mid-January 2018, 1,712 new patients were registered in the three districts where the pilot is running, the patient retention rate currently stands at 82.13%.

What is the role of Buprenorphine in OST?

- Opioid substitution therapy (OST) is the proper procedure for the treatment endorsed by WHO, Buprenorphine is one of the OST drug given on a long-term basis.
- The treatment involves doctor-administered doses of Buprenorphine under controlled circumstances.
- The drug can play a major role in rehabilitating addicts if used under medical supervision along with psychosocial interventions.
- In India Buprenorphine is a Schedule H drug and is available at government-recognised pharmacies only.

What are the Risks involved with Buprenorphine?

- Patients may get addicted to Buprenorphine, and start consuming it in non-medical environments.
- If injected along with depressant drugs, this can even lead to death.
- In Punjab there was a boom in the demand for Buprenorphine as addicts found the drug to be an alternative.
- Private psychiatrists had started prescribing the drug in excessive quantity to addicts, and it was being sold as an alternative to heroin.

What measures were taken to address misuse of OST drugs?

- Punjab government had ordered a high-profile crackdown on drug peddlers by placing restrictions on Buprenorphine.
- The government issued orders to restrict its supply after there were reports of misuse and illegal sale.
- Its availability was restricted to government and private rehabilitation centres only.

- Buprenorphine is sold under strict regulations and cannot be purchased without the prescription of a qualified doctor.
- It is also listed as a psychotropic substance under The Narcotic Drugs Psychotropic Substances Act.

5.5 UNICEF's Neonatal Mortality Report

Why in news?

- A recent UNICEF report, titled “Every Child Alive”, gives a country-wise ranking of neonatal mortality rates (NMR).
- NMR is the probability of dying during the first 28 days of life, expressed per 1,000 live births.

What are the highlights of the report?

- **India** - India ranks 12th among 52 low-middle income countries having the highest infant mortality rates.
- Neonatal mortality rate is recorded at 25.4 deaths per 1,000 live births in India in 2016.
- A small mortality rate can translate to numerous deaths when the birth-rate is high.
- It thus translates to death of over six lakh children within the first month of their birth in India in 2016.
- Worryingly, this is more than any other country.
- With this, India is ranked below Sri Lanka (127), Bangladesh (54), Nepal (50) and Bhutan (60).
- **Global** - Globally, 2.6 million children died in the first month of life in 2016.
- The average newborn mortality in low-income nations is nine times the rate of high-income countries.
- In low-income countries, the average newborn mortality rate is 27 deaths per 1,000 live births.
- In high-income countries, it is 3 deaths per 1,000 live births.
- Newborns in Pakistan, the Central African Republic and Afghanistan face the worst odds.
- Babies born in Japan, Iceland and Singapore are said to have the best chance of survival.

What is the concern with India?

- India has more than halved the number of deaths among children under the age of five in the last quarter century.
- India is nearly meeting its MDG target, with a 66% reduction in under-five deaths during 1990 to 2015.
- However, it has not made similar progress in ending **deaths among children less than one month old**.
- Notably, India is ranked behind poorer countries such as Bangladesh, Nepal and Rwanda.

What does it call for?

- **Political will** - A majority of these deaths are preventable.
- The report has stressed that financial resources were not the biggest constraint in improving this health indicator.
- It is rather the political will that is essential now to ensure better newborn survival.
- Evidently, Rwanda, which falls in the lowest income group, has reduced its mortality rates from 41/1000 in the 1990s to 16.5.
- This is achieved through programmes targeted at poor and vulnerable mothers.
- **Health care** - Addressing gaps in quality of health care is the need of the hour in India.
- Hospitals should ensure that the critical products to save the newborns are available.
- It ranges from a piece of cloth to keep the baby warm to antibiotics and disinfectants to stave off killers like sepsis and meningitis.
- **Mother's health** - The biggest cause of death is premature birth.
- The second is complications like asphyxia during delivery.
 - Preventing these would mean paying attention to the mother's health during pregnancy.
 - It should be ensured that she delivers in a hospital attended by trained doctors or midwives.
 - Programmes such as the Janani Suraksha Yojana should be expanded to reach the poor and vulnerable in remote areas.
- **Gender gap** - The issue of neglect of the girl child is much broader and needs interventions beyond health.

- The associated concerns with social norms and cultural practices should also be addressed.
- Focussing on factors outside the healthcare system, like female literacy rates is also essential.
- States like Kerala and Tamil Nadu have focussed on these factors, bringing down newborn deaths to fewer than 15 per 1000.
- It is time for the rest of India to take lessons from these successful states.

6. INDIA AND ITS NEIGHBORHOOD

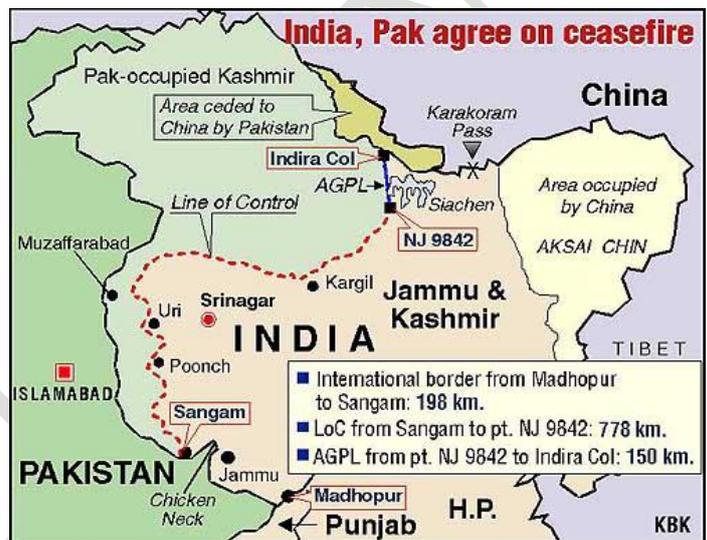
6.1. Violating India Pakistan Cease Fire Agreement

Why in news?

- Four Indian soldiers, including an Army Captain, were killed in the Bhimber Gali sector in cross-border firing.
- This has been a part of a series of violations of the cease fire agreement between India and Pakistan.

How did the cease fire agreement evolve?

- The 2003 cease fire agreement between India and Pakistan came just four years after the Kargil war, and soon after both the countries almost went to war following the December 13, 2001 terrorist attack on the Indian Parliament.
- Pakistan Prime Minister announced a unilateral ceasefire on the Line of Control.
- India accepted Pakistan's offer and suggested including the Siachen heights.
- The ceasefire was eventually extended to the International Boundary.
- It had resulted in a dramatic drop in military casualties, and thousands of border residents had been able to return home from temporary shelters on both sides.



What is the present scenario?

- The recent casualties are an extension of what has been unfolding along the International Boundary as well as the Line of Control for the past several months.
- The two countries are caught in a spiral of almost daily exchanges of fire along the border.
- 2017 has turned out to be the worst year since the commencement of the agreement, with at least 860 incidents of ceasefire violations recorded on the LoC alone.
- So there is a danger of political rhetoric acquiring its own momentum.
- January 2018 recorded the highest number of ceasefire violations in a month since 2003.
- Thousands of civilians have been forced to flee their border homes.

What should be done?

- Peace on the border is difficult to achieve by military leaders.
- Restoring the ceasefire requires real statesmanship, through high-level political intervention.

6.2. Myanmar Dam near Manipur

What is the issue?

- Myanmar is building a new dam, close to the border near Manipur.
- This has raised some concerns among the border villages in Manipur.

What is the project?

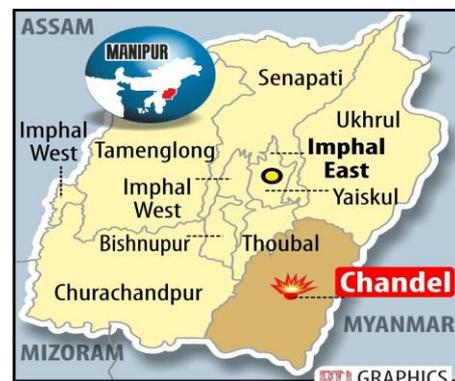
- The dam, called Tuidimjang, is being built on the Twigem river.
- Twigem river flows into Myanmar from Manipur.



- The dam is barely 100 metres from the zero line separating the two countries.
- International rules warrant border countries to check activities in No Man's Land.
- This applies to a 150-metre strip on either side of the boundary line.

What are the concerns?

- Border villagers in Kengjoi subdivision of Manipur's Chandel district are concerned of the project.
- The residents of Khangtung village recently reported to the district officials.
- Khangtung is inhabited by the Thadou tribe and is 137 km south of Manipur capital Imphal.
- The villagers, dependent on the river, are already facing water scarcity.
- Given the topography of the area, the new project could make it even more vulnerable.
- If the dam comes up, Khangtung and other Indian villages will be submerged.
- Villagers will have to be relocated and rehabilitated.
- This may have huge negative social, cultural and economic impact on the residents.



How are the internal dams in Manipur?

- **Mapithel** - Mapithel dam, initially known as Thoubal Multipurpose Project, aimed to produce 7.5MW of power.
- Irrigation and providing drinking water were also the objectives.
- Despite inking an understanding with the State government, the villagers were not facilitated with a proper relocation site.
- In June 2015, a tribal village named Chadong in Ukhrul district was submerged.
- **Khuga dam** - Taken up in 1980, the project lies south of Manipur's Churachandpur town.
- Lying dormant until 2002, it led to a cost escalation from the initial Rs. 15 crore to more than Rs. 350 crore in 2009.
- The project sanction by the Planning Commission was said to have inherent flaws.
- Resultantly, the power component of 1.5MW incorporated in the initial design was scrapped despite near-completion of a powerhouse.
- **Tipaimukh** - It is a mega hydroelectric project proposed on river Barak in Manipur 35 years ago.
- Bangladesh is against this project, as Barak flows into it from Manipur through southern Assam.
- It feeds the Surma and Kushiara rivers in Bangladesh.

What do they imply?

- Many of the internal dams in Manipur are already facing varied controversies and limitations.
- A number of ecological, political and procedural aspects of the projects are causes of concern for the region.
- The dam by Myanmar, close to the border, is a new threat to the ecological and water sustainability of the region.
- The Chandel district officials are expected to survey the dam construction site to assess the condition.

6.3. Maldives Declares Political Emergency

What is the issue?

- While the Supreme Court has ordered the release of many jailed opposition leaders, Maldives government has openly refused to comply.
- Contrarily, it has declared a state of emergency for 15 days, and government forces have also taken over the Supreme Court complex.

What were the fallouts?

- The recently political storm started by the Supreme Court's surprise verdict to release some opposition leaders has been spiralling out of control.

- The government has been openly refusing to comply and has started repressive action against opposing voices.
- **Emergency** - President Abdulla's Yameen declared a state of emergency in Maldives, which is the 2nd such declaration since he came to power in 2013.
- The 1st was in 2015, when an alleged attempt on Yameen's life seemed to have warranted such a declaration.
- The president has clarified that while certain rights will be restricted, general movements, services and businesses will not be affected.
- **Gayoom's Arrest** – Former President Moumoon Abdul Gayoom, who reigned for 30 years till democracy was established in 2008, was also arrested.
- Notably, 80 year old Gayoom is the half brother of Yameen and of late, he has openly sided with the dissenting opposition for toppling the government.
- Also, troops stormed the Supreme Court premises and taken procession.
- **Parliament Suspended** - The President is required to inform the Parliament about the declaration of emergency within two days.
- But to circumvent this, Yameen has suspended the parliament indefinitely.
- Notably, as the Supreme Court had also restored 12 MPs who had defected from Mr. Yameen's party, the majority is effectively with the opposition.
- This thereby increases the vulnerability of the president to be subjected to impeachment in the 85-member parliament.

What are the options for India?

- **Historic Perspective** - India has committed itself to the principle of “non-intervention” in the internal affairs of other countries.
- It is also strongly against external strings in its domestic politics and has regularly criticised western powers for interventions in developing countries.
- But despite this, India has made multiple interventions in its neighbourhood when pressing concerns have called for such action.
- The Bangladesh liberation of 1971, Sri Lankan intervention in the late 1980s, and more recently, in shaping the Nepali constitution are some examples.
- **Maldivian Case** - When the former president Nasheed was ousted from office in a coup in 2012, India had backed him strongly.
- But the subsequent rise of Nasheed's nemesis and the current president Yameen, India was forced to recalibrate its stands.
- This was partly due to Yameen's strong Islamic diplomacy with the Arab world and his ties with China which is backed by high-profile infrastructure projects.
- **Current Situation** - Yameen is currently looking towards China to secure his position, despite mounting international pressure.
- Hence, India has the option to either remain neutral or put its weight delicately behind the opposition to rally for a regime change.
- While the former is the safer option, an intervention can be beneficial but would inherently invite the ire of China and holds with it the risk of failure.
- India needs to make its move after weighing all the stakes involved.

7. BILATERAL RELATIONS

7.1 Relook at India-US Nuclear Deal

What is the issue?

- It's been nearly a decade since the memoranda of understanding on India-US civil nuclear deal was inked.
- It calls for a reassessment of the deal in the context of the newly emerged global realities over the years.

What is the deal on?

- The U.S.–India Civil Nuclear Agreement or Indo-US nuclear deal or the 123 Agreement was signed between US and India in 2005.
- Under the agreement, India agreed to separate its civilian and military nuclear activities.

- It also agreed to open up the civilian part to inspection by the International Atomic Energy Agency (IAEA).
- In return, the US offered to resume full nuclear trade i.e. selling of reactors, Transfer of Technology, Uranium sale with India.
- The deal went through several complex stages including:
 - i. amendment of U.S. domestic law (Atomic Energy Act of 1954)
 - ii. civil-military nuclear Separation Plan in India
 - iii. India-IAEA safeguards agreement
- Around 3 years ago, during the then U.S. President Obama's visit, India-U.S. civil nuclear deal was announced.
- This finalised the agreement between India and the U.S. on supplier liability and tracking requirements.
- It enabled American companies to build nuclear power reactors in India.
- In 2016, during Indian PM's visit to US, 6 nuclear reactors were decided to be built in India by the American firm Westinghouse.
- Despite bilateral agreements, there is no sign yet of any contract between an American company and the Indian authorities.

What are the challenges?

- The U.S. sending the Westinghouse officials to India will reopen negotiations on the deal.
- Before deciding on a go ahead with the commercial contract, the Indian government should consider the following:
 - **Liability** - Westinghouse went into major cost overruns leading to a financial crisis.
 - It had to halt two of its reactors projects in the U.S, by when the construction was already 5 years over schedule.
 - Amidst this, the Westinghouse's new buyers have already diluted the arrangement in India.
 - They will not construct the nuclear power project in India, and will only supply reactors and components.
 - Even if the India-U.S. techno-commercial contract gets finalised in 2019, it would take nearly another 10 years to construct a reactor.
 - Given this, in case of a Fukushima-type nuclear accident in India, the liability that U.S. companies would carry is highly uncertain.
- **Trump effect** - Trump's US presidency has taken a sharp turn away from renewable energy.
 - There are increased calls for mining, exporting and encouraging oil, gas, coal and shale trade into its foreign outreach.
 - Notably, India recently, made orders for both oil and gas shipped from America.
 - India may stand to lose Obama era support in financing renewable energy projects and facilitating India-U.S. nuclear deals.
 - Also, the US has pulled out of the Paris climate change accord, coming as a shock for India.
 - Notably, Obama administration had promised to help India reduce its dependence on fossil fuels on India's entry into Paris accord.
- **India's requirements** - India's own requirements from the India-U.S. civil nuclear deal have changed considerably.
 - The Cabinet recently approved the 7,000 MW construction plan for 10 Indian-made pressurised heavy water reactors (PHWRs).
 - With existing constructions and the current capacity of 6,780 MW, India hopes to have 14,600 MW of nuclear power by 2024.
 - Besides the nuclear power plants, the Department of Atomic Energy is advocating PHWRs in more inland sites.
 - This includes sites in Rajasthan, Haryana, Karnataka and Madhya Pradesh.
 - It comes in the backdrop of concerns on too many nuclear projects in the southern coastline lying along tsunami and earthquake faultlines.
 - India has also found much more comfort in its existing agreement with Russia's Atomstroyexport.

- This began with the Intergovernmental Agreement for Kudankulam 1 and 2 in 1988.
- It has kept a slow but steady pace in delivering reactors and operationalising power projects.
- **Cost** - Another issue relates to the cost that India is prepared to pay for nuclear energy through foreign collaborations.
- Indo-French negotiations for six 1,650 MW European Pressurised Reactors (EPRs) in Maharashtra's Jaitapur is delaying.
- This is notably over the differences between Department of Atomic Energy and the French company Areva (now handed over to EDF Energy company, UK).
- It pertains to arriving at the cost per unit.
- **Besides** - India must consider the shifts in the world nuclear industry before getting into negotiations with new companies.
- Many nuclear companies globally are facing with major losses over their nuclear businesses.
- As the pressure to lower nuclear power tariffs increases, nuclear safety requirements have become more stringent.
- More countries now see nuclear power as a "base-load" option.
- It is only preferred as a back-up option for unstable, but infinitely less costly and eco-friendly, solar and hydroelectric power options.
- All these signal that nuclear power is losing its primacy in the energy mix, which India must be aware of.

7.2 India's Stand on Indo-Israel-Palestine Relationship

What is the issue?

- Israel-Palestine conflict is a long standing one in which India has taken different stands for years.
- Present Indian Administration is taking a pragmatic approach through a diplomatic relationship between both nations.

What is the conflict between Israel-Palestine?

- Brutal European anti-Semitism in 19th century convinced the Jewish people could never survive outside of a country of their own which made an emphasis on Zionism.
- Zionism is Israel's national ideology and it believe Judaism is a nationality as well as a religion, and that Jews deserve their own state in their ancestral homeland, Israel.
- Palestinians are the Arab population who hails from the land which is under Israel, are against the Zionism ideology.
- Arabs often see Zionism as a species of colonialism and racism aimed at appropriating Palestinian land and systematically excluding the Palestinians that remain.
- Due to this Palestinians wants the territory as Palestine to be established as a state by that name on all or part of the same land.

What are recent incidents in Israel-Palestine conflict?

- The west bank and Gaza strip of the Israel is claimed by the Palestinians, and Tel Aviv is being the capital of Israel as of now.
- But in December 2017, US administration introduced a proposal for making Jerusalem (a holy place of Jews, Muslims and Christians) as the capital of Israel.
- This proposal was opposed by many nations by introducing a resolution in UN.
- India also signed against US moves amidst of maintaining a good ties with Israel.

What was India's stand on Palestine so far?

- In 1950s India ultimately accepted Israel as a country following the lead given by two Muslim-majority countries, Turkey and Iran.
- In 1953, Israel opened a consulate in Mumbai, but didn't had a diplomatic presence in New Delhi.



- On the other hand, India in 1975 became the first non-Arab country to recognise Yasser Arafat's Palestine Liberation Organisation (PLO) as the sole legitimate representative of the Palestinian people, and permitted it have an independent office in New Delhi.
- In 1978, India raised its voice to protest against the injustice being meted out to Palestinians by the Zionist attempts.
- India's position on Palestine has been guided by the general consensus in the Arab world, the Non-Aligned Movement and the United Nations.

What is the present stand of India in the issue?

- India established full diplomatic relations with Israel in January 1992, over 40 years after it recognised that country.
- Since then, successive governments have followed a policy of strengthening the relationship with Israel, while maintaining diplomatic support for the Palestinian cause.
- But present Indian administration is expected to be tilted towards the Israel, as India elevates its strategic partnership with Israel in areas such as defence, security, agriculture, water management and innovation.
- At the same time with its vote in the UN Jerusalem, India has demonstrated the willingness and capability to follow its own geopolitical and pragmatic interests.

7.3 New Agreements between India and UAE

Why in news?

India and UAE has signed five new agreements related to energy sector, railways, manpower and financial services.

What are the agreements signed?

- A MoU between the Indian Consortium and the Abu Dhabi National Oil Company was signed for the acquisition of a 10% participating interest in the Abu Dhabi's offshore.
- To cooperate in the field of manpower, India and the UAE signed a MoU that aims to institutionalise the collaborative administration of contractual employment of Indian workers in the Gulf country.
- A MoU for technical cooperation in railways was also signed between the two sides, it aims at cooperation in infrastructure sector especially railways.
- To deepen bilateral cooperation in the field of finance, a MoU between Bombay Stock Exchange and Abu Dhabi Securities Exchange was also signed.
- A MoU between the Government of Jammu and Kashmir and DP World was also signed to establish multi-modal logistics park and hub in Jammu comprising warehouses and specialised storage solutions.



What are the prospects of these agreements?

- The concession on oil will be for 40 years from 2018 to 2057, with 60% of the participating interest will be retained by ADNOC and remaining 30% will be awarded to other international oil companies.
- This is the first Indian Investment in upstream oil sector of UAE, transforming the traditional buyer-seller relationship to a long-term investor relationship.
- Labour related MoUs will end the existing malpractices, combat trafficking and organise collaborative programs for education and awareness of contractual workers.
- Railway related MoU will facilitate development of joint projects, knowledge sharing, joint research, and technology transfer and envisages formation of a Joint Working Group.
- The financial MoU will enhance cooperation between both the countries in financial services industry and facilitate investment in financial markets by investors from both the countries.

7.4 Indo-Iran Bilateral

What is the issue?

- Iranian President Hassan Rouhani recently concluded his bilateral visit to India on a successful note.
- The visit has underlined the criticality of the Indo-Iran engagement.

What were the highlights of the visit?

- **Qualitative Aspects** - The importance of bilateral ties and the strategic imperative for their growth were stressed in the joint statements issued.

- Discussions were held on enhancing bilateral trade, investment, and ease of doing business between the India and Iran.
- The constitution of an expert group to recommend “trade remedy measures” and a Double Taxation Avoidance Agreement (DTAA) was also contemplated.
- Mr. Rouhani endorsed India’s bid for a permanent seat at the UN Security Council with the veto.
- The joint statement also had a toughly worded warning to the countries harbouring “sanctuaries for terrorism”.
- **Quantitative Aspects** - India and Iran signed agreements and Memorandums of Understanding (MoUs) on a variety of issues.
- India was also awarded the contract to operate the “Shahid Beheshti Port terminal at Chabahar, after the project is completed.
- Significantly, no announcement was made on the Farzad-B gas field that India has expressed an interest in, but a follow up on the same is expected.

What are the significant trade concession give to Iran?

- Just before Mr. Rouhani’s visit, India announced it would allow Indian investment in Iran to be done in rupee terms.
- Notably, this concession is presently enjoyed by only Bhutan and Nepal.
- This allows money lying in Indian banks to be repatriated as payment for Iranian imports, which is mostly oil.
- Till recently, these funds were been blocked because international banks had refused to trade with Iranian entities, fearing further US sanctions.
- In return, Iran extended the credit period for oil payments from India by issuing more generous guidelines.

What are the larger geo-political implications?

- The present Indo-Iran bonhomie is also in the larger geo-political context, considering that the US has been openly hostile to Iran lately.
- Trump administration has been taking a hard line against the Iranian nuclear deal and even called for its scrapping and re-imposition of sanctions.
- Also, USA has recently asked countries to keep a check on their investments in Iran as these might be supporting terrorism and unrest in the Middle East.
- It is hard to predict if the implications if Indian overtures to Iran would impact the Indo-US ties or the Indo-Israeli ties.
- But irrespective of this, Iran is a crucial energy supplier to India and a gateway to central Asia, which mandates a continued cordial relationship to last.

7.5 Khalistan Movement

What is the issue?

An Indian-origin businessman with ties to the Khalistan movement, has become the new thorn in the relationship between India and Canada.

What are the historical events responsible for Khalistan?

- **1947 Partition of India** -Independence of India was not a joyful event for Sikhs, partition left Sikhs in a lot of discontentment with regard to their traditional lands being lost to Pakistan.
- **Punjabi Suba movement** - A movement was initiated in 1955 under Akali Dal a Sikh dominated political party.
- It seek re-organisation of Punjab along linguist lines, seeking division of the state into Punjabi and non-Punjabi speaking areas.
- However, the division acquired communal overtones, with Sikhs voting for Punjabi as mother-tongue (even if they spoke Hindi) and Hindus voting for Hindi as mother-tongue (even if they spoke Punjabi).
- The State reorganisation commission made its recommendations and it rejected Akali Dals demand which seeks separate statehood.
- The movement resulted in trifurcation of Punjab into Punjab, Haryana and Himachal Pradesh.
- The disputes of Chandigarh and Sharing of waters of Ravi-Beas and Sutlej between the two states, Punjab and Haryana were the foundation on which the Khalistan dispute was created.



What was the course of Khalistan Movement?

- The Khalistan movement is a Sikh nationalist movement that wants to create an independent state for Sikh people, via armed struggle or political, inside the current North-Western Republic of India. Such a state existed in Punjab from 1709 to 1849.
- The idea of Khalistan was an idea first created in 1940s, remained idle but was revived by an NRI seeking a separate homeland for Sikhs.
- In early 1980s, the movement had emerged as a major separatist movement, fed mostly by bias of Indian Government against Punjab in the case of Chandigarh and sharing of Ravi-Beas waters.
- There was intense political rivalry between Congress Party and the Akali Dal, Akali Dal was gradually gaining ground as the political representative of the Sikh community.
- Congress leadership of that time tried to divide the Akalis by propping up diverse groups of people within the Akali Dal.
- Jarnail Singh Bhindranwale led the Khalistan as an extremist movement, he was initially used by Congress to counter Akali Dal but later he was inspired by the Khalistan ideology and turned against Indian government.
- The movement was fed on arms under the patronage of Pakistan's ISI who was seeking revenge for creation of Bangladesh.
- Bhindranwale emerged as the extremist voice of Sikhs, over-ruling the moderate voices of leaders declared himself as the protector and arbiter of Sikh rights and acquired arms.
- Demands for separate nation-hood for Punjab was carried out through violent protests and killings of high profile persons in Indian government.

What are the events which intensified Khalistan movement?

- Operation Blue star was conducted to capture Bhindranwale in Harmandir Sahib Complex, but the operation resulted in a strong anti-India sentiment.
- The then PM Indira Gandhi was seen as an enemy of the Sikhs and two Sikh guards of her killed her in 1984.
- Her killing was followed by wide-spread riots against the Sikhs across India, the genocide of Sikhs across India fuelled more anti-India sentiment.
- From early 1980s to early 1990s, Punjab went through a phase of wide-spread terrorism.
- Manifold extremist groups like the Khalistan Liberation Force, Khalistan Commando Force, Babbar Khalsa and umpteen others gained prominence and roamed around freely across Punjab.
- Sikhs being a patriotic group started to act against the protracted terrorist struggle and chose to side with the Indian nation, the then Punjab Police department succeeded in defeating the movement in 1990s.

What is present status of the movement?

- At the present, Khalistan movement is a dormant movement in India.
- It does not hold much traction in the urban or local populace of Punjab.
- But the movement gets ideological support from Sikhs living in Canada, UK or USA.
- They pump money, ideological support to the struggle, ISI of Pakistan is still pumping money and effort in reviving the movement.

7.6 Khalistani Issue Clouds the Canadian PM's Visit

What is the issue?

- The Khalistan issue has become a big irritant in the India – Canada relations.
- Issues concerning this dominated the Canadian PM Justin Trudeau's recent visit to India, and it is in the interest of both countries to course correct.

How has the Indo-Canadian relations fared over the years?

- The previous decade saw Indo-Canada bilateral relationship going strong and co-operation across multiple sectors were established.
- This included agreements on - energy, trade, civil nuclear cooperation and a commitment from Canadian pension funds to invest in India.
- India and Canada have much in common as two pluralistic, diverse democracies with very strong people-to-people ties.

- Besides this, Indian Diaspora accounts for over 1.3 million in Canada, and an 100,000 Indian students pursue their studies there.
- Despite these overwhelming commonalities, as the recent visit of Mr. Trudeau showed, the relationship seems to be turning sour.

What has caused the Indo-Canadian tensions?

- Liberal Party shepherded a resolution recently in the Ontario provincial legislature calling the 1984 anti-Sikh violence “genocide”.
- Canadian PM Justin Trudeau was even attended a rally in Toronto, which was organised by pro-Khalistani Sikh groups.
- Such attitudes of Canada’s ruling dispensation didn’t go down well with the Indian authorities who had expressed their apprehensions.
- Hence, tensions were simmering in the underneath, long before the Canadian PM’s arrived for an eight-day state visit to India.
- Considering these, New Delhi had preferred to keep Mr Trudeau’s state visit a shorter, formal and more business-like.
- But Ottawa opted for a five-city tour, with a bilateral meeting with Prime Minister Narendra Modi on the penultimate day.

What were the stress points during the visit?

- As a symbolic snub, a junior minister was delegated to welcome the Canadian PM, in clear contrast to how other heads of governments had been received.
- **Punjab CM** - The Indian government wanted Mr. Trudeau to reach out to the Punjab Chief Minister Amarinder Singh during the visit.
- Notably, this was to make up for the Canadian government’s action in 2016, when it had snubbed Mr.Singh, when he had requested for an official visit.
- But as Mr. Trudeau’s office did not confirm a meeting with the Punjab CM till after his arrival in India, this too accentuated the tensions.
- **Khalistani elements** - To India’s annoyance, the Canadian delegation also had members suspected of sympathising with extremist Sikh groups.
- Notably, Mr. Japal Atwal, who was part of the Canadian delegation, is a suspected Khalistani and is said to have attempted assassinating an Indian minister in 1986.
- While the courts in India have acquitted him due to lack of evidence, his presence has caused severe embarrassment during the bilateral meet.
- **Overall** - Expect for the final meet with Mr. Modi, throughout the trip, the Canadian PM was unaccompanied by suitably ranked officials.
- Ottawa had been insensitive to Indian concerns all along, which seems to have forced the India to be this vocal about displeasure.
- Considering the criticality of the bilateral relationship, both sides could’ve handled the visit better.

7.7 Blacklist and Look Out Circular

Why in news?

Jaspal Atwal, an earlier blacklisted Khalistani militant, was invited to a dinner honouring Canadian PM Trudeau.

What is a blacklist?

- It is a list of persons against whom a “look out circular” (LOC) has been issued.
- It could contain the names of both Indian citizens and foreigners.
- The blacklist is maintained by the Foreigners Division of the Ministry of Home Affairs (MHA).
- It is sent to all Indian diplomatic missions across the world, as well as to immigration check posts within the country.
- The list is reviewed from time to time, with name of individuals being added or deleted.
- This is done on the recommendations made by central agencies or state police.
- At present, there are nearly 30,000 individuals, including foreign nationals, in the blacklist database, pruned from 38,000 in 2016.



What is an LOC?

- A “look out circular” (LOC) is a coercive measure used by the investigating agencies and the courts.
- It is used to compel the suspects who are awaiting trial to surrender.

What is the procedure?

- **Authorities** - The authorities on whose request an LOC can be issued include the:
 - i. Ministry of External Affairs
 - ii. Customs and Income-Tax departments
 - iii. Directorate of Revenue Intelligence (DRI)
 - iv. Central Bureau of Investigation (CBI)
 - v. regional passport officers
 - vi. police authorities in various states
 - vii. International Criminal Police Organisation, commonly known as Interpol.
- **Procedure** - The agencies are supposed to follow a process before requesting an LOC.
- The investigators must submit a written request to an **officer notified by the Ministry of Home Affairs**.
- The request should provide details regarding the individual’s involvement in a crime.
- The officer, among others, should not be below the rank of:
 - i. deputy secretary to the Government of India
 - ii. joint secretary in a state government
 - iii. superintendent of police at the district level or in CBI/NIA
 - iv. zonal director in NCB
 - v. deputy commissioner in DRI
 - vi. assistant director of Intelligence Bureau or bureau of immigration
 - vii. deputy secretary in R&AW
 - viii. assistant director of Enforcement Directorate
- LOCs can also be issued on the direction of any **criminal court** in India.
- In a 2010 Delhi High Court verdict, it was observed that a **request** for issuance of LOC **cannot emanate from a statutory body**.
- **Validity** - Unless specified, an LOC is valid for one year.
- However, agencies concerned are allowed to make a request to immigration authorities for the extension of an LOC before its expiry.

What are the cases eligible for LOC?

- Investigating agencies can approach immigration authorities for issuance of an LOC in certain cases.
- These include offences recognised by the Indian Penal Code (IPC) or other penal provisions.
- Also, when the accused/suspect is deliberately evading arrest or not appearing for trial in court.
- The evasion should be in spite of a non-bailable warrant and similar coercive measures.
- LOC can also be issued when there is a likelihood of the suspect leaving the country to evade trial or arrest.
- However, in cases where the offence is not recognised by the IPC, LOC cannot be issued to prevent the individual from leaving the country.
- In such cases, the agencies can only ask to be informed about the arrival or departure of these individuals.

What are the legal remedies?

- The blacklisted individuals can approach a court or the competent officer, who issued the LOC, for its withdrawal.
- However, according to legal experts, it is more advisable to cooperate with investigating agencies.
- **Role of a subordinate court** - An LOC can be issued on the basis of a non-bailable warrant by a subordinate court.
- In this case, a cancellation of that warrant by the court will make it invalid.



8. INTERNATIONAL ISSUES

8.1 PyeongChang Winter Games

Why in news?

- Winter Olympics will begin shortly at PyeongChang in South Korea.
- The official Russian Ban and the North Korea – South Korea Bonhomie are two of the most significant aspects to look out for in the event.

How did the Russian Doping Scandal Evolve?

- The alleged state sponsored doping, first surfaced in the aftermath of the 2014 Winter Olympics in Sochi, Russia, in which Russia finished as the table topper.
- Consequently, International Olympic Association (IOC) banned Russia from officially participating in international events in 2015.
- In the current games too, the ban was retained, as investigations are pointing to a confirmed “systemic manipulation of the anti-doping rules”.
- However, clean Russian athletes have been allowed to compete as neutrals under the “Olympic Athletes from Russia” (OAR) banner at PyeongChang .
- **Disagreements** – OAR route for Russian athletes hasn't gone down well with many countries despite the IOC assurances that they'll be vetted carefully.
- Notably, OAR squad is expected to consist of more than 150 members and will form one of the largest contingents at the Games.
- Hence, although there will be no place for the Russian flag and anthem, the mere size of the squad makes the 'ban' look like a mockery.
- Further, Russian athletes might even be allowed to march under their own flag at the closing ceremony if they comply to all IOC conditions during the games.
- This episode has in fact fueled the notion that IOC is incapable of effectively punishing a sporting superpower like Russia.
- **Court Ruling** - Recently, the “Court of Arbitration for Sport” overturned lifetime bans on 28 Russian athletes which was imposed by the IOC.
- IOC had banned them after concluding investigations against their role in the 2014 Sochi episode, and has expressed its displeasure on the recent verdict.
- Several countries have also expressed frustration at the decision, noting that it “may have a serious impact on the future fight against doping”.

How is the Detente in the Korean Peninsula shaping up?

- PyeongChang is expected to help in easing tensions between the North and South Korea through people to people contact.
- Notably, the two nations will march together at the opening ceremony under a flag representing a unified Korea and also field a joint Ice Hockey team.
- There are questions over how the two sets of players will get along to form a winning proportion, but the political significance far outweighs the trophy.
- This will provide the historic opportunity for the people of both countries to cheer their side together, which can contribute to building strong bonds.
- North Korea has agreed to field 22 athletes in all and is expected to send hundreds of delegates and cheerleaders across the border.

8.2 South Africa gets a New President

Why in news?

‘Cyril Ramaphosa’ has replaced ‘Jacob Zuma’ as President of South Africa due to pressure from within the ruling, “African National Congress” (ANC) party.

How did Mr. Zuma's tenure fare?

- The President of South Africa is elected by the National Assembly, the lower house of Parliament, and is usually the leader of the largest party.

- In May 2014, Jacob Zuma was inaugurated as the President of the Republic of South Africa for his second term in office.
- During his entire tenure, 75-year-old Mr. Zuma had survived 8 non-confidence motions and was even nicknamed “Teflon president”, for his resilience.
- But pressure from within his own party saw him peeve within weeks, which ultimately ended his nine-year-long scandal hit tenure.
- Allegations and charges of fraud, money laundering and racketeering, had marred his and his party’s reputation over the years.
- The growing pressure on Mr. Zuma was reflected on his close acquaintances like the India-born Gupta brothers, whose properties were raided by officials.
- The Gupta brother trio, whose business interests range from mining to media and technology, are accused of having made illegal gains with Zuma’s help.
- The allegations include - “state capture” by possessing inside information, influencing ministerial appointments and swinging big state contracts.

What forced Mr. Zuma’s ouster?

- The unseating of Mr. Zuma has come at a time when ANC’s popularity is at an all time low since the anti-apartheid struggle (which it led).
- It is also significant to note that the general elections are slated for 2019, which the ANC will have to face with a very poor track record.
- Significantly, South Africa is now characterised by high levels of inequality and corruption and a flagging economy, with 30% unemployment and low growth.

8.3 Oxfam Scandal

What is the issue?

- Oxfam International is following an opaque mechanism in regulating its employers involved in Haiti scandal.
- Due to this agency faces an uncertain future for its International support and funding.

What is Oxfam International?

- Oxfam is a confederation of 20 independent charitable organizations around the world.
- It is based in UK but it has its operation across 90 countries.
- Oxfam international releases **global inequality report** annually.
- Around the globe, Oxfam works to find practical, innovative ways for people to lift themselves out of poverty and thrive.
- Oxfam works with partner organizations and alongside vulnerable women and men to end the injustices that cause poverty.

What was the role of Oxfam in Haiti?

- In 2010, A 7.1 magnitude earthquake devastated the island of Haiti, killing over 220,000 and injuring over 30,000.
- During this disaster billions of dollars of aid poured in, with international aid organisations playing a pivotal role in the recovery and relief effort.
- Among those to take a lead role was Oxfam, the Oxford-based charity, which had a ₹629 crore fund for its relief efforts in the country.

What are the scandals of Oxfam?

- During the relief operations in Haiti many employees of Oxfam has indulged in sexual abuse on women and children as young as 14.
- It also emerged that one of the alleged perpetrators had faced allegations while working in Chad for Oxfam, but had still been assigned to Haiti following the earthquake
- Moreover, some of the men were able to get jobs at other organisations in contact with vulnerable people.





- UK's Charity Commission had failed to report incidents of sexual exploitation and abuse and that the scale of abuse was likely to be far wider than was being reported to Oxfam.

What are the actions taken in this regard?

- The scandal has already triggered the resignation of the charity's deputy head, while corporate sponsors are urgently seeking clarity on the situation.
- The charity had allowed three senior male staff to resign following an inquiry into sexual transgression, and fired four others for gross misconduct and bullying.
- Recently Britain's charity regulator the Charity Commission opened a statutory inquiry into Oxfam.
- This includes concerns that the charity had not "fully and frankly" disclosed materials about the allegations at the time.

What are the challenges in taking actions on Oxfam?

- Oxfam has a "strong policy framework" for protecting staff and beneficiaries from sexual exploitation and abuse.
- The Oxfam aid is being used by the beneficial nations to expand their trade and national interests, so they are hesitant to take any action against the charity.
- The Charity Commission and government departments of UK are not even ready to any disciplinary action against the organisation even within their territory.
- The charity is strongly backed by UK's political forces and no international proceedings has been initiated against the organisation.
- Thus it is hard to confront the issue of sexual abuse and exploitation across the aid sector in Britain and beyond.

G.S PAPER III

9. ECONOMY

9.1 Union Budget 2018

Why in news?

The NDA government presented its 5th union budget recently, which will be the last full budget before the 2019 parliamentary elections.

What are the highlights?

- **Significance** - This is the first budget after big-ticket economic reforms like the GST, dynamic fuel pricing, mega PSU bank recapitalisation etc.
- This budget also includes the Railway Budget, which was presented separately till it was decided to present a joint annual budget in 2017.
- **Backdrop** - Notably, the recent economic survey had predicted a growth revival after the 2017 slowdown and a 7-7.5% growth for 2017.
- The survey also found that the tax net widened in the 2017 fiscal with a huge increase in individual taxpayers.

Sector wise breakdown

- **Fiscal Prudence** - Under the new GST regime, the last date for filing of GST returns remains the 20th of the succeeding month.
- This is expected to have a significantly impact balance sheets as indirect tax receipts will be only for 11 months (excluding the receipts for March).
- Also, Rs 21.57 lakh crores were transferred in the form of net GST to finance the shortfalls of states against the predicted Rs 21.47 lakh.
- Considering the upended government spending and the above mentioned fiscal constraints, the government wasn't able to meet its fiscal target of 3.2%.
- Notably, the 2018-19 target has been set at 3.3% of GDP and the actual fiscal deficit for 2017-18 was calculated to be "Rs 5.95 lakh crore or 3.5% of GDP".
- **Agriculture** - The government's resolve to double farmers' income, and increase production was reasserted.
- In a major relief to farmers, minimum support price (MSP) for all upcoming Kharif crops has been raised to 1.5 times the cost of production.



- “Agricultural Market and Infra Fund” with a corpus of Rs 2,000 crore will be created for 22,000 gramian agricultural markets and 585 APMCs.
- Also, Rs 11 lakh crore credit for the farm sector has been proposed and allocation for Food Processing Ministry has been doubled.
- A restructured “National Bamboo Mission” with corpus of Rs 1,290 crore to boost bamboo cultivation has been provided for.
- Emphasis has been given to organic farming and export of agri commodities has been liberalised to meet India’s agri exports potential of \$100 billion.
- kisan credit cards has been extended to animal husbandry and fisheries and Rs 10,000 crores has been allocated for these domains.
- A favourable taxation treatment for farmer producers organisations has been intended and agricultural products will now be in futures markets.
- A special scheme to manage crop residue and contain winter smog in the northern plains around Delhi has also been proposed.
- **Rural Welfare** - Deposit free gas connections will be provided to 8 crore poor women under the PM Ujjwala Scheme.
- Rs 16,000 crore for PM Saubhagya Yojana was allocated for connecting 4 crore households with free electricity.
- Also, under Housing for All by 2022 and PM Awas Yojana (rural), 51 lakh affordable housing units constructed in rural and 50 lakh in urban areas.
- Allocation to National Livelihood Mission was set at Rs 5,750 crore and target for loans to women self help group has been increased to Rs 75,000 crore.
- Extra and non-budgetary resources of Rs 14.34 lakh crore has been estimated for housing, infrastructure and livelihood in rural areas.
- Constructing at least 2 crore toilets under Swachh Bharat Mission has been targeted for 2018.
- **Education** - By 2022, every block with over 20,000 tribals and over 50% STs has been envisioned to have a special “Eklavya school”.
- The budget establishes a single segmentation from KG till class 12 for education and the blackboard to digital board migration has been stressed.
- To arrest brain drain, a new scheme has been proposed to identify bright UG students and nudge them with PG opportunities at premier institutions.
- Selected students to get special fellowships and will be expected to teach in institutes of higher education, particularly in rural areas.
- An integrated B.Ed programme for teachers has been envisioned for improving quality of teachers and education.
- 1.5 lakh centres under “Aayushman Bharat programme” to provide health facilities with an allocation of Rs 1,200 crore is to be set up.
- Establishment of at least one medical college for every three parliamentary constituencies has to be envisioned.
- Allocation of Rs 1 lakh crore has been proposed for revitalising and upgrading various aspects of the sector as a whole.
- Government has also planned to establish two new Schools of excellence for “Planning and Infrastructure”.
- **Health** - Allocation of Rs 600 crore has been proposed for TB patients who are undergoing treatment.
- As many as 10 crore people to get Rs 5 lakh health coverage for hospitalisation every year and the move towards universal health coverage are envisioned.
- National social assistance program that provides financial assistance to the elderly, widows, the disabled and orphans has been allocated Rs 9,000 crore.
- Setting up of 1.5 lakh centres under “Aayushman Bharat programme” to provide health facilities with an allocation of Rs 1,200 crore has been targeted.
- **Financial Schemes** - 60 crore bank accounts under PM Jan Dhan Yojana is envisioned which is currently 16 crores.



- All the existing “Jan Dhan accounts”, are touted to be brought under micro insurance and pension plans of the government.
- Notably, “PM Jivan Jothi Bima Yojana” is currently benefiting about 5.22 crore families.
- It was stated that 1.26 crore bank accounts have already been opened under the “Sukanya Samriddhi Scheme” for the financial security of the girl child.
- Rs 52,719 crore has been allocated for social inclusion of scheduled castes.
- **Financial Markets** - Government to encourage a strong environment for Venture Capitalists and angel investors.
- Meanwhile SEBI would make it mandatory for large corporations to meet a quarter of their debt needs from bond markets.
- The disinvestment target for FY2019 has been set for Rs 80,000 crore and for the current fiscal has been set at Rs 1 lakh crore.
- The National Insurance Co, Oriental Insurance Co and United Assurance Co will be merged into one entity which will then be listed.
- It has been stated that bank recapitalisation may set the path for public banks to lend an extra Rs 5 lakh crore.
- **Industry** - There seems have been a mass formalisation of MSME industry after GST and demonetisation.
- Rs 3,794 crore capital support and subsidy for the sector has been allocated.
- Under Mudra Yojana, a credit target of Rs 3 lakh crore has been envisioned for 2018, while it was noted that Rs 4.6 lakh crore was sanctioned till now.
- Consumers get relief due to central excise cut on unbranded petrol and diesel by Rs.2 to Rs.6.33 and Rs.4.48 per liter respectively.
- **Railways** - Targeted for capital expenditure for Railways is set at Rs 1,48,528 crore and a “special railway university” is envisioned at Vadodara, Gujarat.
- All trains will soon be equipped with CCTVs and WiFi, and to cut travel times and delays, cutting 4,267 unmanned railway crossings have been targeted.
- In a bid to overhaul the railway stations’ infrastructure, all station that have a footfall of 25,000 passengers will now have escalators.
- Allocations for Mumbai rail network were pegged at Rs 11,000 crore and for Bengaluru Metro was Rs 17,000 crore was allocated.
- **Taxation** - No change in personal income tax rates for salaried class.
- Jaitley said in his speech that there has been a 12.6% growth in direct taxes in 2017-18 and 18.7% growth in indirect taxes in 2017-18.
- As many as 85.51 lakh new taxpayers filed their tax returns in 2017-18, as against 66.26 lakhs new registration in 2016-17.
- The total filers now stands at 8.27 crore by end of 2017 and IT collections saw an increase of Rs.90,000 crores over the previous year.
- Liberalisation of presumptive income scheme for small businesses with income below Rs 2 crores and professionals earning below 50 lakh is stated.
- Corporate tax reduced has been reduced from 30% to 25% for companies with turnover up to Rs 250 crore, this is expected to boost MSME sector.
- Long-term capital gains are proposed to be taxed at 10% on investments over Rs 1 lakh and Short term capital gains tax to remain unchanged at 15%.
- For senior citizens, exemption of interest income on bank deposits has been raised to Rs 50,000 for senior citizens.
- Bank FD and post offices deposits tax exemption of upto Rs. 10,000 was given.
- The budget proposes 10% tax on distributed income by equity-oriented mutual funds as well as 100% deductions for cooperative societies.
- **Infrastructure** - There is a requirement of Rs 50 lakh crore for the infrastructure sector.

- A new tunnel at Sera Pass is to be constructed and 10 prominent tourist sites will be upgraded as iconic tourist destinations.
- Bharatmala project aims to connect India's eastern and western ends with a 35,000 km highway and roads network.
- An outlay was announced to the tune of Rs 5.35 lakh crore under phase 1.
- For toll payments on highways, the government will introduce a new system called "pay as you use".
- **Trade** - Customs duty on mobile phones, TVs has been hiked from 15% to 20% for providing a fillip to Make in India initiative.
- Government also proposes 10% social welfare surcharge on imports.
- **Employees** - Government pledges contribution of 12% in wages of new employees in all sectors for the upcoming 3 years under EPF scheme.
- Women contribution to EPF slashed for initial three years to 8%.
- **Defence** - The total outlay for defence in budget 2018 is Rs 2.95 lakh crore, according to PTI, up from Rs 2.74 lakh crore last year.
- It was stated that thus far, emphasis was given on modernisation and enhancement of operational capabilities of the armed forces.
- The intention has been to boost local manufacturing in defence sector but to meet the immediate needs, foreign procurements are made.
- A new industry-friendly defence production policy 2018 for giving a boost to domestic production for private and public sector has also been promised.
- **Technology** - Rs 3,073 crore was allocated for "Digital India scheme".
- To give access of broadband services to 5 crore rural citizens, an allocation of Rs 10,000 crore was proposed.
- This will see the installation of more than 5 lakh WiFi hotspots across India.
- Government will now explore the usage of Blockchain technology but it will also take steps to prohibit circulation of cryptocurrencies.
- **Aviation** - Government plans to expand airport capacity by five times and aims to take the trip count to 1 billion per year.
- An initial investment of Rs 60 has been set aside for this.
- Under UDAN scheme, 64 airports will be connected across the country to boost low cost flying.
- **Miscellaneous** - The food subsidy has been increased for the from Rs 1.4 lakh crore in 2017-18 to Rs 1.69 lakh crore in 2018-19.
- To commemorate the 150th birth anniversary of Mahatma Gandhi, Rs 150 crore has been set aside.
- Also, it has been proposed that the emoluments of MPs may be increased based on index to inflation.

9.2 Long Term Capital Gains Tax

Why in news?

Stock markets have reacted adversely to the proposed Long-Term Capital Gains Tax (LTCG) on securities.

What is a LTCG?

- Any profit from the sale of a capital asset is deemed as 'capital gains'.
- A capital asset is officially defined as any kind of property held by an assessee, excluding goods held as stock-in-trade, agricultural land and personal effects.
- If an asset is held for less than 36 months, any gain arising from selling it is treated as a short-term capital gain (STCG).
- If an asset is held for 36 months or more, any gain arising from selling it is treated as a 'long-term' capital gain (LTCG).
- Shares and equity mutual funds alone enjoy a special dispensation which is, holding period of 12 months or more qualifies as 'long-term' in this case.

What is the current scenario?

- Prior to the budget, long-term capital gains arising from the transfer of long-term capital assets, which are held as equity shares is exempt from taxation.

- However, transactions in such long-term capital assets are liable to securities transaction tax (STT).
- This regime is seen as inherently biased against manufacturing and has encouraged diversion of investment to financial assets.
- It has also led to significant erosion in the tax base, which has been further compounded by abusive use of tax arbitrage due to ambiguities in exemptions.

What is the new proposal?

- The withdrawal of the exemption to LTCG from April 1, has been proposed in the budget.
- Hence, the long-term capital gains arising from transfer of long-term capital assets like such as shares or share-oriented products, exceeding Rs. 1 lakh will be taxed at a concessional rate of 10%.
- The short-term capital gains tax at 15% will continue for transfer of shares within 1 year.
- **The Application** - The new tax is applied if the assets are held for a minimum period of 1 year from the date of acquisition.
- Long-term capital gains will be computed by deducting the **cost of acquisition** from the full value of consideration on transfer of the capital asset.
- The proposed tax applies to the following types of equity capital:
 1. Equity Shares in a company listed on a recognised stock exchange
 2. Unit of an equity oriented fund
 3. Unit of a business trust
- **'Grandfathering' Clause** - It is the exemption granted to existing investors or gains made by them before the new tax law comes into force.
- The government said that gains from shares or equity mutual funds made till January 31, will be grandfathered/exempted. There will be no LTCG tax on notional profit in shares till then.

What are the concerns?

- **Inflation Indexing** - Inflation indexation is a technique to adjust the the cost of acquisition to present level of inflation.
- This will convert the profit earned by transaction of long term capital assets in real terms and safeguards the purchasing power of the public.
- But in the current proposal, Inflation indexation of the cost of acquisition would not be available for computing LTCG tax.
- This has been provided in the proposal and has been subsequently clarified.
- **Continuation of STT** - The STT is made to continue.
- STT is paid at the time of transaction.
- But it is to be noted that the STT was introduced as an alternative to LTCG tax on equities.
- So retaining STT is a bigger shock for investors.
- Logically there should only be on tax.

9.3 Customs Duty

Why in news?

The recent budget proposed an increase in customs duty on a range of products, particularly in the labour-intensive sectors.

What is the rationale?

- **GST** - Addressing GST and the associated hurdles in the manufacturing sector is one of the reasons for the tariff move.
- **Imports** - More importantly, it is to discourage imports, mostly from China and other Asian countries.
- Some items in tariffs increases are certainly due to the threat of flooding of cheap Chinese goods, affecting India's small industries.
- This includes mobile phones (15 to 20%), adapters and phone chargers (nil to 10%), silk fabrics (10 to 20%), etc.
- **Job Loss** - The move is also an effort to address the crisis over jobs lost due to Free Trade Agreement-related imports over time.

- The draft industrial policy 2017 finds mention in this context.
- The policy observes that a “duty structure that favours import of final products can act as disincentives for domestic manufacturers”.

What would the impact be?

- The tariff measure is expected to boost local manufacturing and incentivize domestic value addition.
- The move, in particular, will facilitate and take forward the Make in India programme.
- This, in turn, is expected to promote creation of more jobs in the country.
- The job opportunities in turn will benefit the youth and contribute towards the overall growth of the economy.

What are the possible challenges?

- India could be dragged to WTO over the recent tariff increases.
- The imposition of higher duties on electronics goods, including phones, goes against WTO’s Information Technology Agreement.
- Under this 1996 agreement, India is required to eliminate tariffs on some electronics goods and IT products, including mobile phones.
- However, India maintains that IT and telecom technologies have evolved with new applications and equipment.
- These were neither existent nor even conceived at the time of signing the ITA-I in December 1996.
- Also, India is not undertaking any fresh commitments under ITA-2 agreement that came into force more than two years ago.

9.4 Labour Reforms - Fixed Term Employment

Why in news?

The Finance Minister advocated “fixed term employment” in the budget speech.

How have the labour laws evolved?

- Present labour laws are a carryover from **war-time legislation** promulgated by the **British** to protect industry from disruption.
- These laws were incorporated into the **Industrial Disputes Act** in 1947.
- The crux of the law is **government intervention in industrial disputes** to balance between labour and management.
- This never worked well and succeeding labour ministries tried to end this war-time anachronism.
- The role of the State in essentially an issue between labour and management was sought to be reduced.
- The aim is to ensure **bilateral resolution** of conflict, as happens in every liberal democracy.
- During the emergency period it was ruled that **permanent workers** cannot be sent away.
- Nor were the places of work be closed down without the consent of the state.
- Industry’s response to the rule on permanent workers has been a massive **shift to contract labour**.

How is contract employment in India?

- There are firms which employ no permanent workers at all, except for a small clutch of officers.
- Industries are also increasingly diluting the law that forbids the employment of contract labour in core processes.
- Permanent workers are unconcerned with these changes so long as their interests and emoluments are secure.
- The trade unions are just beginning to organise contract workers.
- The unions at most ask for minimum wage for the contract labourers.
- The unions cannot call a strike because permanent workers will not back it.
- The contract workers themselves cannot go on strike because they risk losing their jobs.
- Employers will in any case not pay more.
- Although employers are the driving force behind the shift to massive contract employment, the government also seems to be supporting this.

How can fixed term employment help?

- The **present unfixed contracts** can be terminated any time.

- Organised industry is riding on **cheap contract labour**, due to immortality on the enterprise.
- In this backdrop, the fixed-term employment does not promise lifetime employment.
- However, it will be a **clear tenure**, as a company or an enterprise hires an employee for a specific period of time.
- The contract can be **renewed or terminated** according to the performance of the worker.
- A fixed term contract will enhance **workers' security and remuneration**.
- It will also allow the **employers the flexibility** they desire.

9.5 RBI's New Framework for Resolving NPAs

Why in news?

The RBI has come up with a revised framework for quicker and time-bound resolution of non-performing assets (NPA).

How will the new framework look like?

- The new framework will subsume most of the existing stressed asset schemes such as the Strategic Debt Restructuring Scheme (SDR) and the Scheme for Sustainable Structuring of Stressed Assets (S4A).
- It would give primacy to the Insolvency and Bankruptcy Code (IBC) of 2016, Click [here](#) to know more about IBC.
- It will also disband the concept of a Joint Lenders' Forum (JLF), which is a dedicated grouping of lender banks that is formed to speed up decisions when an asset (loan) of Rs.100 Crore or more turns out to be a stressed asset.
- With the JLF out of the way, the new RBI guidelines demand that banks identify stressed accounts as soon as they go into default.
- The banks are supposed to categorise them as special mention accounts, report to the RBI and start the resolution process straight away.

What is the prime focus of the new framework?

- A focus on timely identification of bad loans and the speedy resolution of such assets has been roped in.
- The central bank has toughened the reporting of default to the central repository by making it a monthly, instead of a quarterly, requirement.
- All borrower entities in default with an exposure of more than Rs 50 million have to be reported on a weekly basis.
- RBI made it clear that default in the borrower entity's account with any lender all banks, singly or jointly shall initiate steps to address it, which makes the banks to start the resolution process.
- The RBI has laid clear timelines, not exceeding 180 days from March 1, for the resolution process to yield results, failing which insolvency proceeding will have to commence within 15 days.

What are the significances?

- The new framework will obviously lead to short-term pain for many banks and may throw up challenges for borrowers.
- For example, the strict timelines to come up with a resolution plan could mean that a larger number of accounts will go into insolvency.
- The condition that a restructuring plan must be agreed upon by all banks involved in large accounts may be difficult to implement as experience shows such a thing rarely happens.
- Over the long term, however, the revised framework should work well as the process still provides over one year to resolve a stressed assets problem initial 180 days to implement the resolution plan and then another 270 days under the IBC.

9.6 Rising Inequality in India

What is the issue?

- The research advocacy "Oxfam" recently published a comprehensive report on the economic inequality in India.
- The report is glaring and calls for wide corrective actions.

What does the Oxfam Report say?

- A recent report titled "Widening Gaps - India Inequality Report, 2018" was released by 'Oxfam India' revealed the extent of inequality in the country.



- It has been pointed out that while inequality was stagnant in the 1980s, it started to increase since 1991, and continues to surge at present.
- This has mainly been attributed to the “lopsided” economic and developmental policies of successive governments, particularly after liberalisation.
- Significantly, the wealth of the India’s Billionaires (totally 101 in 2017) was 10% of GDP in 2013 and has subsequently rose rapidly to about 15% currently.
- Also, a large share of wealth of the richest lot has been attributed to “crony capitalism” rather than to innovation or the fair rules of the market.
- Further, Specific policy choices favouring capital rather than labour, has inherently become part of the growth trajectory in India.
- These designs along with accumulated inheritances has consequently, seen the share of the poorer lot dip continuously in the wealth matrix.

What are some of the specifics?

- **Regional divergence** – Differential wealth between states have existed even before independence and the Indian planning process had aimed to undo this.
- But the outcome has not been as expected as income inequality between states has been found to be continuously increasing over time.
- Hence, the rise in inequality in India is due to – growing income divergence between states and increasing unequal income distribution within states.
- **Caste Groups** - Among various social groupings, SCs continue to remain the most disadvantaged, with a significantly lower per-capita income share.
- Also, declining trend in the income shares for the ST group, with a corresponding increase in the share of others has been deciphered.
- **Religion** - Religious identities too has been found to be significant for an individual’s access to basic services, and his ability to mobilize resources.
- In some cases, these may cause isolation, exclusion, and stereotyping of communities, which can impact jobs and livelihood opportunities.
- Significantly, smaller minorities such as Christians, Parsis and Jains have a larger share of income/consumption than their population share.
- But for Muslim populations, this is not the case and they even seem to fare worse than SC and STs in urban areas.
- The share of Muslims in national income (per-capita), has also indicated a decline over a period of time, both in rural and urban areas.

9.7 PNB Banking Fraud Case

Why in news?

One of the branches of State-owned Punjab National Bank (PNB) has recently detected fraudulent transactions worth over Rs 11,000 crores.

What is Letter of Understanding (LoUs)?

- LoU is an assurance given by one bank to another to meet a liability on behalf of a customer.
- It is similar to a letter of credit or a guarantee.
- It is used for overseas import remittances and involves four parties — an issuing bank, a receiving bank, an importer and a beneficiary entity overseas.
- According to norms, they are usually valid for 180 days.
- LoUs are conveyed from bank to bank through “Society for Worldwide Interbank Financial Telecommunication” (SWIFT) instructions.
- Notably, till now, there is no record of a breach in SWIFT instructions anywhere in the world.

What has happened with PNB?

- PNB has alleged that two of its employees had “fraudulently” issued LoUs and transmitted SWIFT instructions to the overseas branches of Indian Banks.

- This was done to raise buyer's credit for the firm of a diamond merchant without making entries in the bank system.
- The bank has alleged that one such fraudulent LoU issuance took place on January 2018, the trail of which revealed the entire design.
- These LoUs were mostly issued to two Hong Kong branches of Indian Banks and was for the aforesaid diamond merchant.
- The details on whether LoUs were backed by collateral or the quantum of liability that the bank faces against these LoUs aren't out yet.

How will the fraud impact PNB?

- Hong Kong branches of Allahabad Bank and Axis Bank have given money to the beneficiary entity on behalf of Modi's firms.
- As a result, PNB will have to settle the LoUs with these branches according to the norms of the Hong Kong Monetary Authority.
- Market sentiment has already been impacted and PNB stock fell 9.81% in a single day, which consequently saw investors loose over Rs 3,000 crores.
- The bank may have to set aside higher provisioning in the next few quarters if it unable to recover the money from the accused firms.
- The fraud has been unearthed at a time when Indian banks are reeling under a pile of stressed assets of about Rs 10 lakh crore.
- Also, higher provisioning and a rise in bond yields, has resulted in losses for most public sector banks in the previous quarter

9.8 Drug Patents Law in India

What is the issue?

India's rejection of secondary patents has kept blockbuster medicines affordable for many.

How are patents and drug pricing related?

- Patents offer their owners **market exclusivity** for a limited period of time.
- For medicines, this exclusivity should last as long as the **primary patent** is in effect, typically 20 years.
- Primary patent relates to the **active pharmaceutical ingredient (API)** of the medicine.
- The **end of patent exclusivity** is referred to as a patent cliff.
- This is because **drug prices fall** steeply by as much as 80% after the end of patent exclusivity.
- The price fall is driven by the **generic competition** that sets in.
- Resultantly, pharmaceutical companies witness **fall in profits**.

What are secondary patents?

- Secondary patents are **claimed for derivatives and variants of the API**.
- This may include a physical variant of the API, a new formulation, a dosage regimen, or a new method of administering the medicine.
- The pharmaceutical companies, who face losses, attempt to **postpone their patent exclusivity** by filing secondary patents.
- The secondary patents prop up before the expiry of a primary patent.
- It thereby **stretches the patent exclusivity** beyond 20 years.
- This practice of extension of patent exclusivity is called "**evergreening**".
- The strategy is most lucrative when employed in the context of so-called **blockbuster medicines**.
- These are medicines that reap annual revenues exceeding \$1 billion.

What is the recent Humira case?

- Humira is one of the world's best-selling prescription drug.
- Its main ingredient is adalimumab which is a biologic used for the treatment of arthritis.
- In 2015, Humira faced imminent expiry of patent of its main ingredient.

- AbbVie Inc, makers of Humira, reassured its investors by citing the option of filing secondary patents which is allowed in the US.
- Humira thus continues to grow even after the expiry of the patent over its main ingredient.
- Over the years, AbbVie has increased the price of Humira in the U.S. by 100%, by steadily filing secondary patents.

What is the case with secondary patents in India?

- The U.S. recognises and encourages secondary patents.
- India, however, does not encourage and has limitations in securing secondary patents.
- **Humira** - Indian Patent Office (IPO) had rejected Humira's secondary patents.
- Consequently, cheaper versions of the drug were introduced in India.
- Evidently, Humira costs Rs.85,000 in the U.S., and the same treatment costs only Rs.13,500 in India.
- **Other cases** - Another patent case worth mentioning is the Novartis' Glivec, a crucial leukaemia cure.
- The Supreme Court of India in 2013 upheld the rejection of a secondary patent for Novartis' Glivec.
- Likewise, Spiriva, a medicine for asthma, enjoys patent protection until 2021 in the U.S., largely due to secondary patents; rejected in India.

How is the Indian patent law unique?

- As per the Patents Act, the product in question must feature a **technical advance** over what came before.
- Secondary patents for pharmaceuticals are often sought for trivial variants.
- They typically fail to qualify as an invention as prescribed in the Act.
- Further, when a medicine is merely a variant of a known substance, the Patents Act necessitates a **demonstration**.
- This is mandated in terms of showing the improvement in its **therapeutic efficacy**.
- The provision also bars patents for new uses and new properties of known substances.
- This additional requirement is unique to Indian law.
- Thus, to be deemed patentable, applications for secondary patents have to clear significant hurdles.
- The patent approval procedure ensures that bad patents stay out of the system.
- Indian patent law is thus commendable in preventing the evergreening practices by pharmaceutical companies.
- This is supportive in making affordable the blockbuster medicines which are crucial to the success of public health.

9.9 Global Stocks Fall - From Wall Street to Dalal Street

Why in news?

- US stocks suffered their worst falls in more than 6 years.
- This was after steep losses on Wall Street that slashed the Dow Jones Industrial Average (DJIA) by 4.6%.

What is DJIA?

- The **Dow Jones Industrial Average** (DJIA) or simply Dow Jones is a stock market index.
- It is the price-weighted average of 30 significant stocks traded on the New York Stock Exchange and NASDAQ (an American stock exchange).
- The Dow Jones Industrial Average fell 4.6% overnight, recently.
- The developments in Wall Street found ramifications in Dalal Street.
- Wall Street in the New York City is generally associated with the financial markets of the US as a whole.
- Dalal Street in Mumbai houses the Bombay Stock Exchange and several related financial firms and institutions.

What triggered this?

- The US Labour Department reported that **employment** had risen more than expected in January.
- This was with the biggest **wage gain** in more than eight-and-a-half years.

- The workers commanding **higher salaries** fuelled apprehensions of a **rise in inflation**.
- In turn, there was anticipation that the Federal Reserve may **raise interest rates** faster.
- The markets were worried that it may push **investors** to move to **US Treasury bonds**.
- This is because returns on Treasuries would look relatively more attractive than stocks at this juncture.
- The US 10-year **Treasury yield** also surged to a level that is the highest since January 2014.
- This was ultimately expected to **suck out liquidity** from the equity markets.
- All these triggered a fall in stocks, leading to a plunge in Dow Jones by 4.7%, its largest single-day point drop in history.

What are the developments in India?

- Sensex scaled to new peaks almost on a daily basis in India until the presentation of the recent Budget.
- However, the post budget scenario started to take a turn.
- The Budget slapped a 10% **long-term capital gains (LTCG) tax** on equity gains of over Rs 1 lakh.
- The budget also projected a higher **fiscal deficit**.
- Resultantly, investors dumped stocks across the board and the **Sensex fell**.
- This was also driven by the **undermined market sentiment** due to:
 - i. rising bond yields in India and across the world
 - ii. the possibility of higher inflation
 - iii. fear of interest rate hikes (by RBI in India and by US FED as well)
- The fall in stock market was further **accelerated** by the recent plunge in Wall Street.

What would the impact be?

- The interest rates hikes in the US could lead to **outflow of foreign portfolio investor funds** from emerging markets.
- This is a concern for India, as funds would move out of the country to be parked in US Treasury bonds.
- The continued inflow of retail money into Indian equities through Mutual Funds could act as a counterbalance to FPI outflows.
- However, the imposition of the **LTCG tax** may disrupt that inflow of retail money.
- **Retail investors** are concerned on **compliance issues**.
- These include keeping track of days of investment and calculation of capital gains for payment of tax.
- Resultantly, **new investors** coming into India may not reflect the positive trend as in the last 3 years.
- Besides, fund outflows could have ramifications on the **current account deficit (CAD)**.
- This is because India has been balancing CAD through higher inflows.
- The possible outflows and a widening CAD may lead to more complications for **government finances**.
- Also, hundreds of companies that have lined up **Initial Public Offering market** will have to rework their plans.
- The **disinvestment** of public sector companies could also get hit.
- Evidently, in the last year, a number of PSUs had floated IPOs, raising thousands of crores for the government.

9.10 SC's Ruling on Synchronised Trading

Why in news?

The Supreme Court has recently upheld an adjudication order by SEBI and set aside a SAT order on synchronised trading.

What is synchronised trading?

- A 'synchronised' trade is a pre-negotiated trade.
- **How** - Here, the buyers and sellers enter the quantity and price of shares on the screen they wish to transact at nearly the same time.
- The buy and sale transaction at the same day for the same quantity between the same set of broker/clients is called reversal of trade.
- Except the parties who have pre-fixed the price, nobody has the position to participate in the trade.
- This is done with the support of the brokers.



- Through circular trading between related entities of the company promoter, the price of the stock would be inflated.
- A year later the investor would sell the shares to promoter entities at the inflated price.
- The profit gained would then be shown as long term capital gains (used to be tax free till the recent Budget made it taxable).
- **Purpose** - The 'profit' would be returned to the promoter in either cash or through another set of fake transactions.
- These transactions may not necessarily happen through the stock exchange platform.
- It thus serves as a means of converting black money to legitimate income.
- Market is also manipulated to book artificial losses for tax purposes.
- **Effect** - Synchronised trading may at times distort price discovery and affect other investors also.
- SEBI had no way of proving these offline cash transactions.
- It found it hard to raise charges of tax evasion and stock manipulation.

What is the present case?

- SEBI had imposed a penalty of ₹1.8 crore on Rakhi Trading.
- This was for indulging in synchronised trading through the 'reversal of trade' route in March 2009.
- Notably, the price did not reflect the value of the underlying in synchronized and reverse transactions.
- SEBI considered this a violation of the Prohibition of Fraudulent and Unfair Trade Practices Regulations.

What was SAT's order?

- The case went for appeal before the Securities Appellate Tribunal (SAT).
- SEBI's order was struck down by SAT in 2011.
- SAT admitted that the trades were synchronised.
- But it held that the trades had no impact on the market and neither induced the investors.
- As, SAT held that the derivative trades could not influence the market (Nifty index).
- SEBI however alleged that the fictitious trades created false liquidity in the Nifty options contract, manipulating the market.
- SEBI then appealed the SAT ruling in the Supreme Court.

What is the SC's ruling?

- The Supreme Court has now set aside the SAT order.
- The Court observed that the stock market is not a platform for any fraudulent or unfair trade practice.
- SC has not mentioned the tax evasion angle in its judgement.
- However it had made it clear that the synchronized trades did affect market integrity.
- It held that orchestrated trades, whether in the cash or derivatives segment, are a misuse of the market mechanism.
- Moreover, protection of interest of investors as per SEBI Act, 1992 necessarily includes prevention of misuse of the market.
- The bench reiterated the need for a more comprehensive legal framework governing the securities market.
- It stressed the need for SEBI to keep pace with changing times and develop principles for good governance in the stock market.

What is the significance?

- SC's ruling on synchronised trading strengthens SEBI in prosecuting cases of price manipulation in future.
- It empowers SEBI to impose severe penalty even on the smallest manipulations in the derivative segment.

10. INFRASTRUCTURE

10.1 Maharashtra's Hyperloop Plan

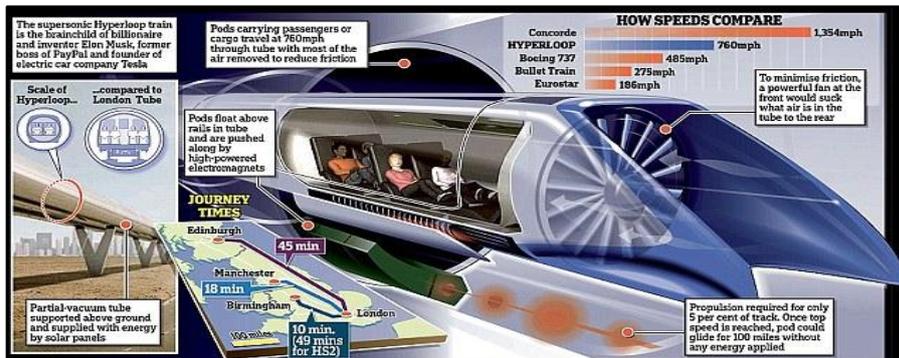
Why in news?

Maharashtra government has signed an agreement with Virgin group to build a Hyperloop.

What is Hyperloop?

- Hyperloop is a proposed system of transport that would see pods or containers travel at high speeds through a tube that has been pumped into a near-vacuum.
- The train pods would either float using magnetic levitation technology.

- The pods would be able to travel at immense speeds with a projected top speeds of 760mph.
- The pod would initially launch using an electric motor before levitation takes place and the pod can glide at cruising speed in the low-pressure environment.
- Hyperloop One is the company which is working on this technology, has proposed routes in UK, Netherlands, Finland and Dubai, where it has backing from the governments to explore the potential of the system.
- The proposed Hyperloop route in India will be connecting Mumbai and Pune in Maharashtra.



What are the advantages of Hyperloop?

- 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.
- Motion will not involve contact, so the vehicle will be virtually noiseless.
- The capital and operational costs of Hyperloop will be two-thirds that of high-speed rail.
- Tunnels for the Hyperloop would be built either above or below ground, taking up a smaller ground footprint than traditional rail and road.
- Hyperloop is “energy-agnostic”, drawing from whichever source is available, if that’s solar or wind, the system will be carbon-free.

10.2 Boost for Digital India Flagship

Why in news?

Union government has proposed to double the expenditure on the Digital India programme.

What are the schemes under digital India flagship?

- The Digital India programme is a flagship programme under Ministry of Electronics and Information Technology.
- The vision of this program is to transform India into a digitally empowered society and knowledge economy.
- There are about more than 23 mission mode projects under the programme few are enlisted below
- **Digi Locker** - The service was launched to store crucial documents like Voter ID Card, Pan Card, BPL Card, Driving License, education certificates, etc. in the cloud.
- **MyGov.in** - The portal works as an online platform to engage citizens in governance through a “Discuss”, “Do” and “Disseminate” approach.
- **E-Sign Framework** - This initiative would enable users to digitally sign a document online using Aadhaar authentication.
- **Swach Bharat Mission mobile app** - The app will enable organizations and citizens to access information regarding the cleanliness drive and achieve the goals of the mission.
- **National Scholarship Portal** -From submitting the application, verification, sanction and disbursement to end beneficiary, everything related to government scholarships can be done on this single portal online.
- **E-Hospital** -Online Registration System under this initiative enables people to avail services like online registration, payment of fees and appointment, online diagnostic reports, checking on the availability of blood online, etc.
- **Digitize India Platform** -This initiative will involve digitization of data and records on a large scale in the country to make easy and quick access to them possible.
- **Bharat Net** -Under this initiative, a high-speed digital highway will connect 2, 50,000 gram panchayats of the country.
- This is the world’s largest rural broadband project using optical fibre.
- **Wi-Fi Hotspots** -Development of high speed BSNL Wi-Fi hotspots throughout the country is yet another initiative to improve digital connectivity in the country.



- **Next Generation Network** -Launched by BSNL, this service will replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.
- **Electronics Development Fund** -The fund will be set up to support the manufacturing of electronics products that would help create new jobs and reduce import.
- **Centre of Excellence on Internet of Things (IoT)** -In partnership with NASSCOM, Centre of Excellence will be established for rapid adoption of IoT technology and encourage a new growth strategy.

What are the recent announcements on digital India?

- Expenditure on programme doubled to Rs. 3,073 crore for the next financial year from Rs. 1,425.63 crore in 2017-18.
- Under Digital India the budget is allocated in the following order of priority
 1. Promotion of electronics manufacturing.
 2. Delivery of e-governance services.
 3. Government's digital literacy programme
 4. Development on manpower.
- The Government also proposed to set up 5 lakh Wi-Fi hotspots which will provide broadband access to 5 crore rural citizens.
- The Budget proposed an allocation of around Rs. 14,500 crore to strengthen telecom infrastructure projects, including BharatNet, during the upcoming fiscal.
- Of this, Rs. 4,500 has been allocated for building a dedicated optical fibre-based communications network for defence forces in lieu of airwaves vacated for civilian use.
- NITI Aayog would initiate a national programme to direct efforts in the area of artificial intelligence, including research and development of its applications.

11. AGRICULTURE

11.1 Decoding the MSP Formula

What is the issue?

- Finance ministry has announced a hike in MSP for Kharif crops in budget 2018-2019.
- Farmers are not satisfied with the announcement as the MSP formula used by the government is blurred.

What are the cost concepts used for calculating MSP?

- There are several cost concepts that the Commission for Agricultural Costs and Prices (CACP) considers while recommending MSPs of 23 crops.
- Cost A2 - These are the costs the farmer actually pays out of his/her pocket for buying various inputs ranging from seeds to fertilisers to pesticides to hired labour to hired machinery or even leased-in land.
- Cost A2 +FL - In agriculture, farmers also use a lot of family labour and if their cost is imputed and added to cost A2, that concept is called cost A2+FL.
- Cost C2 - the Comprehensive cost (cost C2), it includes imputed costs of family labour, imputed rent of owned land and imputed interest on owned capital.
- National commission on farmers head by M.S Swaminathan recommended a 50 per cent margin over C2, which is also being the demand of the farmers.

What is the stand of the government in this regard?

- In 2014 the union government has promised to offer 50 per cent margin over cost C2 but this was never spelt out in detail.
- Recently Finance ministry has announced that the MSP will be in lines with its earlier announcement on Rabi crops.
- For rabi crop the government is using 50 per cent margin of Cost A2 or maybe cost A2+FL, by this the MSPs given by the government is still lower than cost C2.
- The ministry also claims that only the present administration offers 50% margin in cost A2+FL, but the fact is even in FY 2013-14, the MSPs for all rabi crops were way above 50 per cent over cost A2+FL.

What are the challenges in hiking MSP?

- The government senses it is impractical to give 50 per cent margin over cost C2 in all crops.



- The C2 is normally 35-40 per cent higher than cost A2+FL, this would have required massive increases in MSPs.
- For example, paddy MSP would have to go up by 46 per cent, cotton by 52 per cent and so on).
- It may also be mentioned that cost plus pricing of MSPs, be it cost A2+FL or C2, is fraught with dangers as it totally ignores the demand side.
- The terms of reference of CACP fails to consider demand-supply, cost of production, price trends in domestic and international markets, terms of trade, inter-crop price parity, etc before recommending the MSP.

11.2 Restructured National Bamboo Mission

What is the issue?

The proposed “Restructured National Bamboo Mission”, can capitalise on the immense bamboo potential for the north-eastern states.

What hindered the development of the Bamboo Industry in India?

- Bamboo is a multi-utility grass and more than 300 ethnic groups in the northeast have traditionally been using it as food, housing and other needs.
- It is essentially a type of grass, but was classified as a tree in India for over 90 years till recently.
- This prevented the northeast, which grows 67% of India’s bamboo, from exploiting it commercially until recently.
- While forest bamboo was out of bounce, till recently, the lack of policy support also didn’t allowed commercial use of non-forest bamboo.
- Notably, China is the only country with a richer bamboo genetic resource than the north-east and exports a significant amount of bamboo.

How does the scenario look presently?

- Bamboo’s commercial journey began when it was struck off the list of trees by amending the Indian Forest Act last year.
- The recent budget has allocated of Rs. 1,290 crores for a restructured National Bamboo Mission (NBM).
- This has raised hopes for a range of bamboo-based industries — from food processing to construction and the holistic development of bamboo industry.
- But the restructured NBM needs to be more focussed on value-chain management and value-addition of bamboo at the community level.
- Such an approach is what will bring more income to the bamboo farmers and bamboo processors.

What have been the controversies associated with bamboo?

- Flowering of bamboo happens every 50-55 years, and this leads to dramatic increase in the population of rats that destroy crops and triggers famines.
- Notably, once such famine (Matuam famine) in 1966 led to the creation of the Mizo National Front and a subsequent violent uprising.
- There have also been instances of bamboo cartels shedding blood while competing for limited commercial opportunities.
- But Arunachal Pradesh and Manipur governments have signed agreements for supplying bamboo to the upcoming bio-refinery at Numaligarh.
- Such initiatives will offer a permanent source of revenue generation to bamboo growers and enhance commercial options for producers and marketers.

11.3 Pilot Projects on DBT in Fertilizers

Why in news?

Union government with the guidance of NITI Aayog is implementing pilot projects on DBT in fertilizers.

How the pilot project is being implemented?

- Initially NITI Aayog decided to roll out the pilot project on DBT in fertilizers in 16 districts.
- Since then DBT in fertilizers has been rolled out in 19 States and Union Territories and 12 States are expected to come on board by Feb 2018.
- By June 2018, DBT in fertilizers is expected to expand its footprint in the entire country.



- These initiatives have been supplemented by Department of Fertilizers, including appointment of 24 State DBT co-coordinators, and organising about 4,500 training sessions across India.

What is the role of technology in DBT in fertilizers?

- Each time a farmer purchases fertilizers from a dealer, he/she presses his or her thumb at a point-of-sale (PoS) device and an authenticated receipt comes out giving details of the purchase and subsidy to be paid by the government directly to the manufacturer.
- The records of dealers are automatically updated and payment is made digitally or in cash.
- Training videos are also placed on YouTube, and the comprehensive redress system in place is being expanded to a multilingual help desk.
- Connectivity issues has been addressed through flexibility in choosing the connectivity option (Wifi, LAN, PSTN) or use of external antenna to improve signal strength.

What are the benefits of DBT technology?

- Farmers, especially those purchasing urea were facing constraints of availability and occasionally overcharged in the past, now satisfied with new DBT mechanism.
- DBT in fertilizer envisages transfer of subsidy to manufacturers upon authentication of purchase by farmers.
- This restricts diversion, prevents leakages, and brings about greater transparency, accountability and efficiency.
- Through this new mechanism farmers received transaction receipts, and were charged the same amount as mentioned in the receipt.
- The grievance redress mechanism has improved and retailers are also satisfied.

What more needs to be done?

- The application device must be made agnostic so that retailers can use desktops, laptops, tablets, smartphones, etc. to run the application.
- A toll-free number need to be created soon to allow conversations in regional languages will help the farmers.
- The waiting time for farmers purchasing fertilizers need to be reduced.
- While Aadhaar is the preferred form of identification of buyers, other forms of identification should also be used.
- The Standing Committee on Chemicals and Fertilizers (2016-17), in its 36th Action Taken Report, has recently emphasised that while implementing DBTs, subsidy should be disbursed directly to the farmer's bank account.
- This requires serious consideration while Phase-I is implemented and stabilised.

12. SCIENCE & TECHNOLOGY

12.1 Privatising the Space Sector

What is the issue?

- Elon Musk's "SpaceX" and its high profile projects have highlighted the increasing significance of the private players in the space sector.
- This has also opened up debates on the possible horizons of future explorations and the need for regulatory reforms in the sector.

What was SpaceX's latest milestone?

- SpaceX recently launched a car into space that is headed towards the asteroid belt with a dummy strapped in the driver's seat.
- The silliness has indeed managed to capture the imagination of the masses, which could be put to further advance research.
- The car was launched through the reusable "Falcon Heavy" rocket (currently, the most powerful launcher) from NASA's Kennedy Space Centre.
- As it is reusable, it has contributed significantly to bring down costs by enhancing launch capacity by 64 tonnes at the low price of merely \$90 million.
- This project is in line with current decadal trend of the increasing role of private sector in space exploration.

How has the role of the private sector evolved over the years?

- Private sector companies have operated in the space sector since the 1980s in most of the elite space club countries.



- In India, despite the various strategic, security and regulatory constraints, a private ecosystem has evolved around the ISRO.
- But there is a substantial difference between older business models and what Musk and the new-gen space entrepreneurs have been attempting lately.
- Previously, private were merely contracting with national space agencies to build satellites and subsystems.
- Contrarily, the current trend is developing entire vertically integrated operations without licensing or purchase agreements with national agencies.
- This has also triggered diversity in ambitious targets, with Musk envisioning mass exploration and companies like Amazon envisioning space tourism.
- While most of these targets are indeed overstretched in the current scenario, and involve multiple risks, the vision does indeed hold potential sway.

What are the new potential areas?

- Some have argued that liberalising space access to private would unleash a new leap-frog moment in technological progress like the “internet revolution”.
- Entrepreneurial energy in the sector is already starting to combine, with even start-ups competing for privately conceived projects by larger space firms.
- The rush to enhance internet connectivity for the masses is also a significant “demand oriented pull factor” for increased commercial interest in space.
- This is already driving the need to commission massive constellations of small communications satellites in the “Lower Earth Orbit”.
- Asteroid mining is also another potential area that looks promising, with scope for monetization and disrupting commodity markets.

How has the regulatory framework shaping up?

- There hasn't been much progress in this domain as space activity is still governed by the 1967 Outer Space Treaty.
- This bars state actors from militarizing or claiming celestial bodies and calls upon them to regulate all private sector activity within their borders.
- Most countries including the US and India haven't yet comprehensively understood the evolving trends and regulatory reforms needed in the sector.
- But Luxembourg is already envisioning as an asteroid mining hub and has passed a law passed recently to establishing the necessary legal frameworks.
- This might give it the first mover's advantage and India too needs to urgently capitalise on its private sector's potential to make significant gain.
- **India's Case** - India even lacks an independent body that can create a level playing field for government and private space enterprises.
- But there are signs of progress, and a few months ago, the “Department of Space” had published a draft “Space Activities 2017 Bill” for public comments.
- While the bill fails to take the substantially different requirements of various space-related activities on board, it is indeed a start in the right direction.
- India has the public and private sector potential to exploit first-mover advantage—if it addresses the private sector space race with more urgency.

12.2 A Moon Trip that Failed to Take-off

What is the issue?

- An agreement was made between Antrix Corporation (commercial arm of ISRO) and a start-up TeamIndus on a mission to moon.
- Recently that project was called off due to some practical difficulties.

What was agreed mission was about?

- Google Lunar XPrize was contest which was to soft-land a spacecraft on the moon, and move a robotic rover for 500 metres on the lunar terrain.
- It was also demanded that the robot must send videos and pictures from there all this before March 31, 2018.



- It was mandated that each team must be at least 90% private-funded.
- In 2007 a Bengaluru based start-up TeamIndus conceived the moon-landing contest, this made corporate icons and about 70-odd individuals to bless TeamIndus and put their money in it.
- Some of ISRO's retired brains, who had led its 2008 Chandrayaan-1 and Mars orbiter missions, were roped in to achieve the mission
- TeamIndus also won an encouraging milestone prize of \$1 million from google.
- In December 2016, it also found timely space transport through ISRO's PSLV rocket.

What is the reason for the failure of the project?

- About 100-plus young engineers for over seven years were working for this project but the project was failed.
- It noted that the teams could not raise the funds they needed, they also ran into technical and regulatory difficulties.
- It needed another six months to raise the money for hardware imports for the spacecraft and the rover.
- The landing spacecraft and the rover should have been sent to the ISRO for flight qualification clearance about six months before the launch date. TeamIndus was nowhere near it.
- Antrix and TeamIndus, which are contract-bound not to disclose details of the deal, have not clarified the whispers around the cancelled launch.

What are constrains in funding a space project?

- Pioneering state-funded lunar landing missions of the U.S. and the former Soviet Union did not succeed at first shot, the Google Lunar XPrize itself conceded a private-funded "moonshot" is not easy.
- TeamIndus raised about half of the \$60-65 million (around ₹400 crore) it needed to complete the mission, new investors did not appear enthused.
- Space travel costs are high even it is a ride on an internationally economical PSLV.
- It may have cost TeamIndus ₹150-200 crore plus insurance to launch its 600 kg spacecraft.
- TeamIndus was to pay Antrix in instalments and clear the entire sum before the launch but the company was only able to pay its 1st instalment.

12.3 Prospects of 5G Technology

What is the issue?

- The global roll-out of 5G commercial services is expected by 2020.
- India government is taking various measures for the sooner deployment of the technology.

What is 5G technology?

- 5G promises ultra-reliable, very fast speeds and high bandwidth mobile connectivity, which provides peak speeds of 20 times, compared with 4G.
- It is expected to provide 10-plus Gbps speeds, which allow access to high-bandwidth multimedia and data services for various industry applications.
- 5G is intended to support mission-critical applications such as financial transactions and healthcare, and latency and high speed will be achieved through the use of Fibre optic cables.

What are Prospects for 5G in India?

- High-speed broadband remains the top priority for telecom service providers, the government and the citizens alike.
- 5G will significantly contribute in transforming everyday lives of Indians by resolving real issues within e-healthcare, e-education, infrastructure and e-governance.
- This technology would entail accelerating the BharatNet programme for deploying connectivity infrastructures.

What are the measures taken by India in this regard?

- **Bharat Net** - BharatNet project was establish in 2017, to provide digital infrastructure on a non-discriminatory basis by an affordable broadband connectivity of 2 Mbps to 20 Mbps for all households.
- The objective is to facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet and other services to the rural India.

- **National Optical Fibre Network (NOFN)** -National Optical Fibre Network (NOFN) is an ambitious initiative to trigger a broadband revolution in rural areas.
- It aims to connect all the Gram panchayats in the country and provide 100 Mbps connectivity to all gram panchayats (GPs).
- **NTP-** Union government has initiated measures to introduce 5G technology in India via the National Telecom Policy (NTP), from March 2018.
- It aims to achieve 100% tele-density, high-speed internet highways and delivery of citizen-centric services electronically.
- **Forum to develop 5G roadmap** - Recently, the Department of Telecommunications set up a high-level forum to develop the roadmap for operationalizing 5G services in India by 2020.
- **Waivers for Private telecoms** -The government also announced a subsidy of `3,600 crore to private telecom players such as Bharti Airtel, Vodafone India and Reliance Jio to set up Wi-Fi in rural areas as part of the second phase of the BharatNet project.

13. ENVIRONMENT

13.1 SC Order on Goa Mining

Why in news?

Supreme Court has recently cancelled the iron ore mining leases of 88 companies in Goa.

What led to this?

- In Goa, the State government has displayed disregard for rules and processes while renewing licences for a second time in 2015.
- It inexplicably chose not to exercise its right to view the licences as fresh leases that require new environmental impact assessments.
- The government in Goa invited a cloud of suspicion by hastily launching the renewal of licences.
- This was just a day after it unveiled a Grant of Mining Leases Policy on November 4, 2014.
- Quite extraordinarily, it issued 31 orders on a single day, January 12, 2015.
- This is apparently to pre-empt the Centre's Mines and Minerals (Development and Regulation) Amendment Ordinance that came into force the same day.
- Besides, the Union Environment Ministry's Expert Appraisal Committee raised some concerns in 2013.
- It said many of the past leases were issued without approval of the National Board for Wildlife.
- And miners had extracted ore in excess.
- The requirement for clearance from the Central Ground Water Board was ignored.
- Last year, public protests over contaminated groundwater and fouled air underscored the need for strict environmental controls.

What is the significance?

- The mining operations are to be stopped from March this year till fresh mining leases and environmental clearances are granted.
- With SC's order, grant of fresh licences and proper accounting of the losses, mining activity in its entirety should begin on a clean slate.
- Future decisions should be guided solely by the true cost to the environment and to human health.
- The court order should help restore some balance to the exploitation of iron and manganese ore in ecologically fragile Goa.
- The order has highlighted the grievous effect of commercial mining activity in absence of clearly laid down and strictly enforced rules.
- The Supreme Court's directions provide Goa with an opportunity to change course and become a mainstream tourist State.
- It can regain its position as a top destination for global visitors and broaden employment in services.
- Tourist charters need to replace its open cast mines and dust bowls.

What is the State government's stance?

- Goa has argued that the mining industry is crucial to its economy as it brings in foreign exchange.
- It also provides employment and supports a transport industry.

- Given that mining has a severe destructive impact on the ecology, resumption of large-scale activity should await a scientific audit.

13.2 Water Crisis in Cape Town

What is the issue?

- The southern coastal city of Cape Town in South Africa is currently facing its worst drought in over 300 years, which has entered its 3rd year.
- The region is also experiencing a long-term decline in average rainfall.

How bad is the situation?

- Reservoirs in Cape Town and surrounding areas now have water below their 25% mark.
- The largest dam supplying water to the city, the “Theewaterskloof Dam”, is filled to only 11.3% of its capacity.
- Water supply has already been reduced from about 1,200 million litres per day in 2015 to about 566 million litres per day now.
- The city is fast approaching a situation where “water supply” to nearly 75% of the population would have to be cut.
- Once such a situation is reached, water would then have to be rationed at some designated distribution points only.
- Notably, residents of the city at present do not have more than 50 litres of water per person per day.

Is climate change the cause?

- It is difficult to ascertain the impact of climate change over a small geographical region.
- But preliminary analysis suggests that three-year cumulative rainfall deficits have become five times more likely due to global warming.
- The area has become prone to fluctuations in rainfall, and climate change does accentuate the variability.
- But there is good reason to believe that Cape Town’s case has significant links to larger changing climatic patterns.

13.3 Asian Water-bird Census

What is the issue?

- Asian Water bird Census (AWC) that surveys sites across 23 countries (including Australia) was recently conducted.
- The trends highlight the dangers facing water birds and their habitats.

How does the migratory bird landscape look?

- Every winter, the thousands of wetlands that dot India, transform from muddy slips of water to harsh bird parties.
- Ducks and geese from Ladakh and Tibet swim through aquatic vegetation, and wader on half-submerged banks, and ‘oriental darters’ spear the water for fish.
- While the data for the current census isn’t out yet, the census by energetic citizens over the years has pointed to some clear trends.
- India has the biggest species diversity among the regions sampled by AWC, tallying to a mean figure of 1.8 million water birds over 300 sites.
- Chilika Lake in Odisha alone supports a staggering half-a-million water birds.
- Most of these water birds are migratory and winter in India’s wetlands.
- For instance, the bar-headed goose, breeds in Mongolia, Tibet and Kyrgyzstan and crosses the Himalayas and Hindu Kush to reach India.

Are the bird numbers declining?

- There has been a noticeable decline in several species visiting India over the years, which is concerning.
- The Oriental darter (long necked), which was once a common sight in many wetlands, numbered just 4,000 in the sites that got surveyed currently.
- The Indian skimmer (with a bright orange bill) – which can ‘skim’ over water to snap up fish, were counted to be just 300.



- Sarus crane, the world's tallest flying bird, often found in pairs or small groups, accounted for as little as just about 100 birds over several years.
- These are mainly because, the wetlands, which are cherished equally by local residents, and birdwatchers are in peril.

What is the status of wetlands in India?

- The National Wetland Atlas, prepared by the ISRO in 2011, found that India has over 2 lakh wetlands, most which aren't notified as such.
- They thus run the risk of being destroyed and many court cases across the country reflect the precarious existence of wetlands.
- The iconic East Kolkata Wetlands, which is also designated 'Ramsar wetland' of international importance, is being steadily eaten up by construction.
- Like in many cities, this wetland too is becoming a sewage canal, and a case has been filed with the National Green Tribunal (NGT).
- In Delhi-NCR, birdwatchers have filed a case to protect the Basai wetland, which is fed by sewage but continues to harbour almost 300 bird species.
- Similar cases were also filed to conserve Najafgarh jheel (a riverine wetland).
- Also, Sukhna Lake in Chandigarh, Deepor Beel in Guwahati, and the lakes in Nainital, are all choked by sewage, garbage and encroachment.
- Notably, the new "Wetland (Conservation and Management) Rules, 2017" has made matters worse as it denounces manmade water bodies as wetlands.
- The previous rules had stated that manmade water bodies like tanks and salt pans are also wetlands (these do support bird populations in reality).

How does the future look?

- The census clearly indicates that several water bird populations in the Central Asian flyway (comprising migratory routes) are declining.
- Urgent national and regional action is needed to reverse this trend and hundreds of wetlands in India are in need of identification and notification.
- India was an active participant in the 2017 Conference of the Parties to the "Convention on the Conservation of Migratory Species of Wild Animals".
- It even offered to initiate consultations for the creation of a "Central Asian Flyway Action Plan" to Conserve Migratory Waterbirds and their Habitats.
- The vision of the action plan is to reduce threats to waterfowl and conserve wetlands while also tackling threats such as power lines and windmills.

13.4 Measures to Conserve Groundwater – Punjab Model

What is the issue?

- In India groundwater is rapidly getting depleted due to various reasons.
- Union and State governments are taking various measures in this regard.

What is the status of groundwater depletion in India?

- Central Ground Water Board (CWGB) has conducted a study on Rapidly-depleting groundwater in 6584 blocks across the country.
- The CWGB assessment shows that groundwater in 1,034 of 6,584 blocks were over-exploited.
- More water was being drawn out annually than was being recharged.
- Further 934 blocks suffered from different stages of groundwater depletion.
- Tamil Nadu had the most number of over-exploited blocks but Punjab was the worst in percentage terms with over 75% of its assessed blocks falling in the over-exploited category.
- Other worst affected states were Haryana, Rajasthan and Delhi.

What are the measures taken by the union government?

- Government of India has planned to implement a Water Conservation scheme Atal Bhoojal Yojana, with a fund of Rs.6,000 crores.



- Under this scheme, ground water will be recharge and hence it will provide sufficient water for the use of agriculture purposes.
- This scheme will also revive the water bodies like rivers so that the level of ground water can be increased especially in the rural areas.
- The fund for this project will be raised by the Ministry of Finance and the World Bank.

What are the measures taken by Punjab government?

- Punjab governments initially nudged the state's farmers into increasing paddy acreage by providing nearly-free electricity for pumping out groundwater and backing intensive MSP-driven procurement of paddy harvest.
- Now the Punjab state government is looking at steps to reduce the cultivation of water-intensive paddy.
- Recently the government has launched a pilot project in three villages under which digital meters will be installed on tube wells belonging to nearly 1,000 farmers in the three villages.
- Instead of compensating the state discoms for free power supply, the state will deposit certain amount of money in the accounts of the farmers.
- The farmers will be billed directly by the Discom on the basis of actual consumption.
- The state has entered into an agreement with experts from the World Bank, Punjab Agricultural University and various state departments.
- These agencies will estimate the actual power use by farmers and how it might change following the direct benefits transfer (DBT).
- If the actual costs for farmers surpass the DBT amount, it is possible that farmers might rethink their paddy preference.

13.5 Bengaluru's Water Profile – An analysis

What is the issue?

- A recent BBC report listed 11 world cities that were “most likely to run out of drinking water” in which Bengaluru is numbered 2nd.
- While the recent verdict on Cauvery has come as a relief for the city, much more needs to be done to sustain Bengaluru's water resources.

What is the crux of the BBC report?

- **The Report** - It mentioned the acute shortage of water in Cape Town in South Africa, where people are now being rationed 50 litres daily.
- Notably, many fear that Cape Town could become the first major city to run dry in the modern era.
- Among the list of cities slated to face such crisis in the future - São Paulo in Brazil is rated 1st, which is followed by Bengaluru in India.
- Other cities on the list were Sao Paulo, Cape Town, Beijing, Cairo, Jakarta, Moscow, Istanbul, Mexico City, London, Tokyo and Miami.
- **Bengaluru's Case** - The report noted that more than half of Bengaluru's drinking water is wasted due to its outdated plumbing setup.
- Notably, 85% of the city's lakes had water, but it is reported to be polluted severely that it has become unsuitable for drinking or bathing.
- But the “Bangalore Water Supply and Sewerage Board” (BWSSB) — has refuted these by saying that the report was based on old data.

How serious is the drinking water crisis in Bengaluru?

- Bengaluru originally had multiple sources of water supply with over 200 lakes, and was gifted with abundant groundwater.
- Supplies were also added from reservoirs in the Arkavathi river basin.
- These sources are all but dead now due to the depletion of catchment areas in the wake of uncontrolled infrastructure expansion.
- Bengaluru's 11 million Residents currently get 65 litres per capita per day (lpcd) on average, less than half the ideal amount of 150 lpcd.



- Notably, the availability of water in many of the city's poorer areas is currently estimated to be as low as 40-45 litres-per capita-per day.
- All these factors have made Bengaluru critically dependent on the Cauvery River, which flows more than 100 km away.
- **Cauvery Allocations** - Earlier, 270 thousand million cubic feet (tmc ft) of water was allocated annually to Karnataka from the Cauvery.
- Out of this, 17.64 tmc ft was used for Bengaluru's drinking water needs.
- In the current renewed allocation, Karnataka's share has gone up by 14.75 tmc ft and Bengaluru's share has gone up by 4.75 tmc ft.
- Notably, at 150 litres per person per day, Bengaluru's present water need is estimated to be 24 tmc-ft annually, which will go up to 30 tmc-ft by 2025.
- So, even after the additional allocation from Cauvery Bengaluru will be short of 1.25 tmc ft of water per annum.
- Hence, there is little doubt that the city's water resources must be managed more efficiently to evolve a sustained solution to the water problem.

What all have exacerbated the water situation?

- The proliferation of bore-wells in the core city areas has led to a massive depletion of groundwater beyond rechargeable limits.
- Only about 70 of the 272 lakes in and around the city from four decades ago survive now and most of the surviving ones are highly polluted. .
- The government has reclaimed dozens of lakes for bus stands, stadiums, and housing complexes, and real estate development.
- Garbage and sewage have poisoned lakes, and the concretisation of catchment areas has choked inlet channels.
- Drastic decline in water table has also led to quality deterioration of groundwater due to increasing concentrations of iron, fluoride, and nitrate.
- It is currently estimated that over 207,000 million litres of groundwater is being drawn annually while the recharge capacity is only 81,100 million litres.

How does the future look?

- The water board has stated that it is confident of ensuring adequate water for the city's residents for the next decade by – effectively using current supplies, tapping into rainwater sources, and recycling wastewater.
- The fact that Cauvery is perennial, and that Bengaluru gets a decent amount of rainfall every year, is also reassuring to some extent.
- Infrastructure enhancement is being undertaken to enable the "Cauvery Water Supply Scheme" to reach all areas of the Bengaluru region.
- A tie-up has been sealed with Japan International Cooperation Agency (JICA) to building capacity for bringing 10 tmc ft of water from Cauvery to the city.
- Waste water treatment and rainwater harvesting can prove decisive in enhancing water availability in future.
- Both supply management and the demand management would have to be worked on if the problem needs to be effectively addressed.
- Importantly, citizens too have to use water judiciously, avoid groundwater overuse and also build rainwater harvesting structures.

13.6 Surprise Weathers in North-Western India

Why in news?

The Northwest, Central and Western India is likely to experience less temperatures and spell of showers for few more days.

What is the present weather condition in North of India?

- Recently India Meteorological Department (IMD) reported fairly widespread precipitation across Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, and Maharashtra's Vidarbha and Marathwada region.
- There were also reported snowfall in Jammu & Kashmir, Himachal Pradesh and Uttarakhand.

- This showers are due to the interaction of western disturbances (cyclonic storms originating in the Mediterranean) and low-level easterlies.
- The current spell of rain in North and Central India will be beneficial to the standing Rabi crop, especially wheat.
- Minimum temperatures is also likely to come down by 2-3 degrees Celsius in Northwest, Central and Western India for few more days.

How this temperature will help Rabi crops?

- Usually till the last week of January both maximum and minimum temperatures will be at above normal levels in most wheat-growing areas.
- Generally this weather helps to prevent diseases like stem rot, white rust, blight, frost or aphid attacks etc. which take place during low or high temperatures, along with high humidity.
- For the crops is in the pre-flowering stage, and the light showers will help bring down temperatures, and provide much-needed water.
- The flowering transfer of pollen from the male to female parts of the flower) of the crop in northern and north-western India happens towards the last week of February.
- This ends with seed setting, and is followed by the “dough”, or grain-filling, stage from mid-March.
- Even in the grain-filling stage, day temperatures should not ideally cross the low 30s, so that the starch material accumulates gradually in the kernel for it to become hard and ripe for harvesting from mid-April.

What are the concerns of the farmers?

- The present light showers also create few concerns over chickpea and lentils that are in the maturity or harvesting stages.
- Apart from that farmers and scientists are worried about a recurrence of March 2015, which saw unseasonal heavy rain, accompanied by strong winds and hailstorms, in large parts of North, West and Central India.
- The Rabi crop that was either in the grain-filling stage, or lying in the fields after harvesting, suffered massive damage.
- If rain is followed by sunshine, there can be grain shattering (dispersal before pod ripening) and harvesting losses.
- But any such concern is currently limited mainly to the pulses crop, particularly in Maharashtra and MP.

14. INTRNAL SECURITY

14.1 Rafale Deal Controversy

Why in news?

The Defence Minister refused to share the price details on Rafale purchase, citing the Security Agreement provisions.

What is the Rafale aircraft?

- Rafale is a twin-engine medium multi-role combat aircraft.
- It is manufactured by the French company Dassault Aviation.
- Dassault claims Rafale has 'Omnirole'.
- This is the capability to perform several actions at the same time.
- Rafale can carry out both air-to-ground as well as air-to-air attacks.
- It can also carry out interceptions during the same flight.
- The aircraft is fitted with an on-board oxygen generation system (OBOGS).
- It suppresses the need for liquid oxygen re-filling or ground support for oxygen production.

India to buy French Rafale fighter jets
India's defence ministry has announced that it will buy 126 French-made Rafale combat aircraft in a massive \$11 billion deal that will increase the might of the world's fourth largest air force

Dassault Rafale was lowest bidder in two-way competition with **Eurofighter Typhoon**. Both aircraft saw action during recent Libyan campaign

Engines
Twin **SNECMA M88-2** turbofans, each rated at 75kN

Rafale-C

Wing area 46 sq m

SPECIFICATIONS	
Type	Single / twin-seat multirole fighter
Entered service	December 2000
Max. take-off weight	24,500kg
Maximum speed	Mach 1.8 (1,910km/h)
Combat radius	1,850km
Armament:	One 30mm cannon with 125 rounds, up to 9.5 tonnes of weapons on 14 hardpoints
Typical air defence mission	6 x Mica air-to-air missiles (AAMs)
Ground-attack	3 x laser-guided bombs, 6 x Mica AAMs
Nuclear strike	Nuclear stand-off missile, 6 x Mica AAMs

Sources: Airforce-technology, wire agencies Picture: Getty Images © GRAPHIC NEWS



How did the deal evolve?

- Indian Air Force (IAF) raised the requirement for Medium Multi Role Combat Aircraft (MMRCA) in 2007.
- This was to replace the aging fleet of MiG aircrafts.
- **Tender** - Tenders for 126 Medium Multi Role Combat Aircraft (MMRCA) fighters were issued by India in 2007.
- It was an open competition between companies including Dassault Aviation of France.
- Dassault was announced as the lowest bidder in 2012.
- **Earlier Deal** - Of the 126 jets required, 18 fighters were to be imported in a fly-away condition.
- Hindustan Aeronautics Ltd (HAL) would manufacture the remaining 108 jets.
- This was agreed to be with Transfer of Technology (ToT) from Dassault.
- **Stall** - India and France were unable to decide on a price for the jets.
- The workshare agreement between HAL and Dassault Aviation was signed in 2014.
- But with the new NDA government in place, clarity on the progress of the deal remained unclear.
- **New deal** - On PM's visit to France in 2015, India's intention to buy 36 Rafale aircraft in "fly-away" condition was announced.
- Defence Minister announced the previous 126 fighter jet deal to be dead.
- Subsequently, the deal for the acquisition of 36 aircraft was signed by the Defence Ministers of India and France in 2016.
- This was done through a government-to-government deal.

What are the present concerns?

- **ToT** - The current deal has a 50% offset component.
- Accordingly, Dassault will manufacture items worth 50% of the deal in India.
- However, the absence of transfer of technology (ToT) component is raised as an issue.
- Also, no role is guaranteed for any Indian public sector company, including HAL.
- **Deal** - The present deal as direct government-to-government agreement, as against the earlier open tender, is criticised.
- Also, the 36 fighters are said to be purchased at a much higher price than earlier negotiated.

What is the dispute with sharing price details?

- **Earlier deal** - The previous government's price for 126 aircraft was never finalised, and no contract was signed or executed.
- Hence, no official figure on the price was ever given.
- **New Deal** - Recently, the Defence Minister declined to share the cost of the Rafale fighters under the new deal, with Rajya Sabha.
- It was said that the price details were "**classified information**".
- This was as per the **Inter-Governmental Agreement** (IGA) between the Governments of India and France.
- Accordingly, material exchanged under IGA is governed by the provisions of the **Security Agreement**.
- However, in 2016, Minister of State for Defence had shared the price in the Lok Sabha in a written reply.
- The basic price of each Rafale aircraft was said to be around Rs 670 crore.
- At the time of its signing, the 36-aircraft deal was said to be worth around Rs 59,000 crore.

What is the Security Agreement?

- **Security** - Signed between the two nations in 2008, it has some confidentiality provisions.
- It relates to Protection of Classified Information and Material in the field of Defence.
- For any contract or sub-contracting contract with classified information and material, a security annex shall be drawn up.
- The competent security authority from the information forwarding party shall specify what has to be protected by the receiving party.
- **Renewal** - It was specified that the Agreement shall remain in force for a period of 10 years.
- It shall be renewed by "tacit consent" for new 5-year period.
- Accordingly, the agreement will continue unless one of the Parties notifies its intention to not renew.

- This has to be given in writing 6 months prior to the end of the current period of validity.
- The initial 10-year life of the Agreement signed in 2008, ended on January 24, 2018.
- It is not clear if it has been renewed by tacit consent by the government.

What is the parliamentary procedure?

- It has generally been the practice to share the cost of defence deals with Parliament.
- However, in some cases, the details have been kept secret for reasons of national security.
- Nevertheless, the government is duty-bound to share the pricing details with Comptroller and Auditor General (CAG) and the Public Accounts Committee (PAC) of Parliament.

14.2 Looking into Army Excesses

What is the issue?

Instances of excesses committed by the security forces call for a fair probe and judicial redressal.

What is the case in Manipur?

- The Extra-Judicial Execution Victim Families Association (EEVFAM), an NGO, documented over 1,500 murders by the armed forces.
- The court is hearing a PIL petition seeking a probe into these **extra-judicial killings** in Manipur from 2000 to 2012.
- Fake encounters are alleged to have been executed by the Army, the Assam Rifles and the police in Manipur.
- The Supreme Court has earlier directed a time-bound probe by the CBI into over 80 such deaths.
- The CBI's SIT recently appraised the Court that 42 cases had been registered on such killings.
- Following this, the Court expressed its dissatisfaction with the progress made by the SIT in the case.
- Following SC's reprimand, the CBI has registered 11 more fresh FIRs related to suspected extra-judicial killings in Manipur.

What is the recent case in Kashmir?

- **Two civilians were killed** allegedly when Army personnel fired at a stone-pelting mob in Ganovpora village in Shopian, J&K.
- The Chief Minister ordered an inquiry into the incident.
- An FIR was filed against Major Aditya Kumar in connection with the killing.
- **Petition** - A petition was filed before the Supreme Court seeking the quashing of the FIR.
- The petition also sought guidelines to protect soldiers' rights and payment of adequate compensation for them.
- This is to ensure that no Army personnel was harassed by criminal proceedings for bona fide actions in exercise of their duties.
- **Court** - The Supreme Court subsequently issued notice to Jammu and Kashmir government and Centre.
- The court sought their responses within two weeks.
- Importantly, it directed that "**no coercive action** shall be taken" against Major Kumar till then.
- **Pellet guns** - Using pellet guns is another worrying issue in Jammu and Kashmir.
- The Kashmiris do not want police using the pellet-firing, 12-gauge shotgun that the CRPF uses against them.
- Pellet-firing has notably torn out the eyes of over 1,000 Kashmiris, including children and bystanders.

What do these cases imply?

- These incidences are perceived as excesses by the armed forces.
- **Kashmir** - It is clearly not possible for the Jammu and Kashmir government to coerce the Indian army.
- The Kashmir chief minister does not even have control over the state's policing force.
- The CRPF that operates in Kashmir reports directly to the Union Home Minister.
- **AFSPA** - The existence of controversial AFSPA is another reason behind the excesses.
- AFSPA confers special powers to the armed personnel including unwarranted arrest and search in disturbed areas.
- There are various reports and evidences making allegations of constant rights violations using AFSPA.

How is the legal response?

- **Cases** - Charge sheets have been filed against the soldiers in Kashmir before as well.

- A total of 50 cases have been received by the Union Government from the Government of Jammu and Kashmir.
- This is for getting Prosecution Sanction against Armed Forces personnel under AFSPA, 1990.
- The cases, going back to 2001, include rapes, murder, kidnap, and torture by the armed personnel.
- Notably, no case had received sanction from the union government for prosecution.
- In 47 of the cases, permission is “denied” and in another three of the cases, the earliest from 2006, permission is “pending”.
- **Army** - The army claims to be delivering justice under its martial courts.
- However, the opaque working of martial courts leaves scope for scepticism.
- **Court** - The Supreme Court seems to be protective when it comes to soldiers in Kashmir.
- However, its active response in prosecuting those involved in extra judicial killings in Manipur signals a change in response.
- What makes for the double standards need to be inquired into.
- The army meant for protecting the civilians should be cleansed of its criminal behaviour with fair justice system.

14.3 Sunjwan Army Camp Attack

Why in news?

The Sunjwan Army camp near Chenni in Jammu was recently attacked suspectedly by Jaish-e-Mohammed (JeM) militants.

What happened?

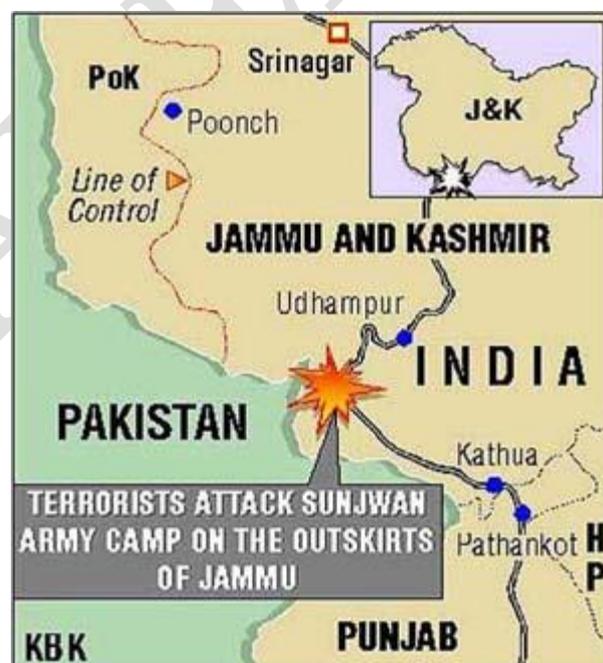
- At least three terrorists are said to have entered the camp through a nullah (water stream).
- Six persons, including 5 soldiers and a civilian, were killed.
- 3 suspected JeM terrorists were killed in Army's retaliatory action.
- A large quantity of arms and ammunition was seized from them.
- The army continued with the search operation at the camp.

Is this new?

- This is not the first time the Sunjuwan Army camp is targeted.
- In 2003, it was attacked by 2 fidayeen, and 12 soldiers were killed.
- They were said to have cut a wire fence on their way in.
- Other notable attacks in the recent past include the following -
 - 2002 - Kaluchak, where terrorists targeted a tourist bus and an Army camp, killing 38
 - 2003 - fidayeen entered the Army camp in Tanda, north of Jammu, and killed 8 men
 - 2015 - attack on a camp on the Jammu-Pathankot National Highway in Samba district; 2 army personnel were killed
 - 2015 - militants stormed a police station in Kathua, killing 7 people
 - 2016 - fidayeen targeted an Army camp in Nagrota in Jammu, killing 7 soldiers

What is the perpetual problem?

- **Civilian settlements** - Jammu city alone has 5 major Army camps under the Western Command.
- These are Chatha, Ratnuchak, Kaluchak, Satwari and Sunjuwan.
- Besides, there are a couple of smaller camps.
- Each of these small and large bases is surrounded by civilian settlements, with hotels, malls and even schools lining up.
- The militants often choose these vulnerable sites with sprawling civilian population with women and children as their targets.





- Efforts at evicting people closer to the camps have seen opposition from property owners and matters still remain in the court.
- These make it difficult to monitor the militants' movements and thwart their plans.
- **Security** - Army camps in the Jammu region have for long been vulnerable to militant attacks.
- Notably, many of the camps are protected only by barbed wire.
- Fortifying the camps is essential for securing them.
- But converting camps in the middle of thickly populated urban areas into permanent fortresses is hardly possible.

What should be done?

- It is important that any plan to address the issue of attacks should be multi-pronged.
- Clearly, **camp security** is just one aspect.
- Boundary walls, some sort of smart fencing, sensors, a control room to monitor the perimeter are some of the options.
- Security plans for camps must remain “dynamic” to keep pace with changing environments around them due to the civilian push.
- **Consolidation** i.e. squeezing of smaller pockets of camps into bigger ones is another important aspect.
- This may make it easier for guarding the troops that are spread out.
- The plan must also include bringing down the levels of **infiltration** from across the border.
- A combination of manpower and smart technology should be employed.

14.4 Status of Navy War Room Leak Case

What is the issue?

The Navy war room leak case which posed a threat to the nation is yet to be solved.

What is the Navy war room leak about?

- In 2005, over 7,000 pages of sensitive defence information from the Navy War Room and the Air Headquarters were leaked to arms dealers and middle man.
- The leak of sensitive information came to light in May 2005 when an officer was found in possession of an unauthorised pen drive containing documents had a direct bearing on national security.
- Naval Intelligence conducted an in-house investigation with fixed responsibility on three war room officers Commander Vijendra Rana, Commander Vinod Kumar Jha and Captain Kashyap Kumar.

What were the documents found leaked?

- A file containing a war game marked ‘Top Secret’, based on inputs sent to Naval HQ by Indian intelligence.
- Details of the Navy’s operations, including its fleet and submarines, for the next 20 years, information that could translate into windfall gains for any defence equipment company.
- Details of “vulnerable areas” and “vulnerable points” in India’s air defence network, a standard operating procedure for the Pechora missile project.
- A brief on Sir Creek, marked ‘Secret’, for the Deputy Chief of the Naval Staff ahead of his talks with Pakistan, Files relating to Sir Creek and the Navy’s positioning in this disputed territory.
- Details of the joint response by the Army, Navy and Air Force in case of a Pakistani ingress in Kutch sector.

What were the actions taken on the offenders?

- All three officers were sacked without a trial, using a provision under Article 311 of the Constitution.
- Which allows summary action in case “the President or the Governor, as the case may be, is satisfied that in the interest of the security of the State, it is not expedient to hold such inquiry”.
- The probe and action was initially limited to Naval Headquarters, due to its significance the government handed the investigations to the CBI in 2006.
- CBI registered an FIR and raided over 20 locations connected to the middle men and arms dealers.
- Few accused in the case are currently facing trial in a special CBI court, the main offender Captain Kashyap Kumar was neither arrested nor charge sheeted so far.

- Some other prime suspects were asylum in UK and Europe, due to lack of extradition treaty and other operational difficulties they are yet to be arrested and penalised.

PRELIM BITS

HISTORY

Indus Script

- Mathematical models were used to find that the Indus script was written from right to left.
- However in some long seals the Boustrophedon method of writing was adopted.
- Boustrophedon writing is the way of writing in the reverse direction in alternate line.

Paleolithic Sites

- The study of over 7,200 stone artefacts collected from the archaeological site at Attirampakkam in the Kortallayar river basin throws light over the transition period from lower to middle Paleolithic period
- The Old stone age period extends from 2.6 million years ago to 10000 BC
- The period is divided into Lower, Middle and Upper phases

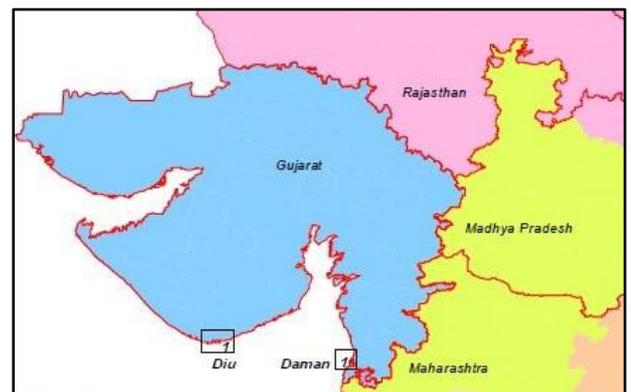
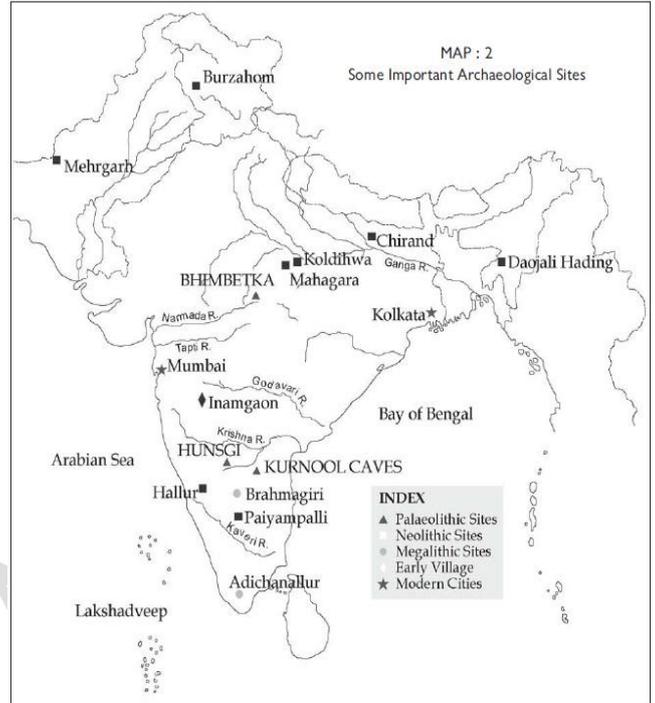
POLITY

Whip

- The issue of expulsion of Member of Legislative Assembly of Tamil Nadu for violating the party whip is before the Madras High Court.
- Whip in general denotes an official of a political party appointed to maintain parliamentary discipline among its members, especially so as to ensure attendance and voting in debates.
- The office of Whip is not mentioned in the constitution but it is based on parliamentary convention.
- In the 14th All India Whips Conference, 2008, the former Vice President Mohd. Hamid Ansari outlined the functions of whip as follows,
- Facilitate the functioning of the legislature and optimize its output.
- Be the channel for communicating party policy, on a day to day basis, to the rank and file of the party in the legislature
- Act as counselors to their Members and advisors to party leadership
- Function as the channel for dispensing favors and for enforcing discipline.

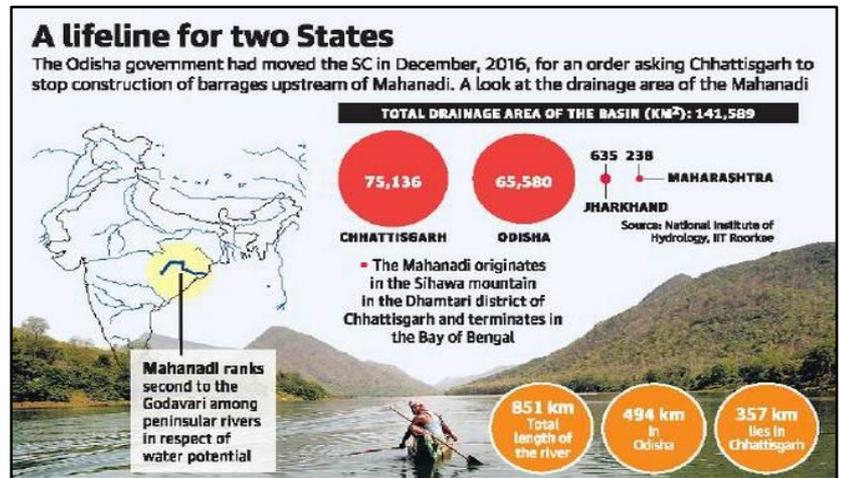
Daman and Diu

- Prime Minister launched various development projects worth Rs.1000 crores in Daman & Diu recently.
- Some of the projects launched are water treatment plant, electricity generation, solar power generation, university, gas pipeline and CNG station, flight connection under UDAN scheme.
- Union Territory of Daman and Diu comprises two districts namely Daman and Diu.
- After Liberation on 1961 from Portuguese Rule Daman and Diu became a part of the U.T. of Goa, Daman and Diu.
- Union territory of Daman and Diu came into existence on 1987 with Goa attaining the statehood.
- Districts of Daman and Diu are near Gujarat State separated by about 700 kms from one another.
- Diu District is an island on southern portion of Gujarat Peninsula and is joined with Una District of Gujarat State by two bridges over a sea creek.



Mahanadi Tribunal

- The Union Cabinet approved the setting up of Mahanadi Water Dispute Tribunal.
- The tribunal will settle the row between Odisha and Chhattisgarh on sharing the waters of the Mahanadi River.
- The tribunal is expected to determine water sharing among basin States on the basis of the overall availability of water in the complete Mahanadi basin, contribution of each State, present utilization of water resource in each State potential for future development.
- The tribunal will be setup as per the provisions of the Inter-State River Water Disputes (ISRWD) Act, 1956.
- The Tribunal shall consist of a Chairman and two other Members nominated by the Chief Justice of India from amongst the Judges of the Supreme Court or High Court.



ART AND CULTURE

Medaram Jatara

- Medaram Jatara is a tribal Hindu festival of honouring the goddesses Sarakka celebrated in the state of Telangana.
- During the festival, the tribals worship 'Sammakka', the tribal folk goddess
- The festival is also called as Sammakka Saralamma Jatara

Shigmo Festival

- Shigmo is the traditional spring festival celebrated by farmers in rural Goa.
- It is an annual float parade held in major cities of the state performing the Goan folk art such as GhodeModni, Goff, and Fugdi.
- The parades consist of traditional folk and street dancers, dancing on the tunes of Dholtashas, flutes.
- It was traditionally celebrated as the homecoming of the warriors who had left their homes and families at the end of Dusshera to fight invaders.

First International Kala mela

- First International Kala Mela is being inaugurated by the vice president in Delhi.
- Lalit Kala Akademi, the premier institution for the promotion of Art and Culture is organizing an International Kala Mela (Arts Festival)
- It is going to prove a boon to especially those artists who cannot afford to exhibit their works of art in the Art Galleries.
- Central objective of Kala Mela is to focus on direct interaction between the artist and the connoisseur.

Sheen Khalai (Blue Skin)

- It is an Afghan community in India who fled with their families from the tribal areas between Afghanistan and Pakistan during the Partition in 1947.
- The women are part of a community of Pushtun Hindus that lived in the Baloch areas and belong to the Kakari tribes still living in afghan.
- Pushtuns are an Iranic ethnic group who mainly live in Pakistan and Afghanistan
- They speak the Pashto language and adhere to Pashtunwali, which is a traditional set of ethics guiding individual and communal conduct

Vadnagar

- Gujarat and the Centre are jointly developing the historical and ancient town of Vadnagar as a major tourist hub.
- The projects cover Vadnagar's famous Kirti Toran, Sharmishtha lake, Hatkeshwar Temple and archaeological sites.

- The town full is of sites that are related to Hinduism and Buddhism
- The famous Chinese traveler Hiuen Tsang has visited the place around AD 640 and referred to it as Anandpur.
- It is also the birth place of Prime Minister Narendra Modi.

Udhyagiri Caves

- The Udayagiri caves, in Vidisha, Madhya Pradesh, contain some of the oldest Hindu temples and iconography, related to Vaishnavism, Shaivism and Shaktism.
- They were built during the Gupta period (350-550 CE).
- Though it is present north of Tropic of Cancer, it is believed that historically, on the day of summer solstice, the sun was directly overhead in this place, making Udhyagiri (Mount of sunrise) a place of worship.
- It also houses some important Gupta age inscriptions.
- Iconic Varaha Sculpture rescuing the earth symbolically represented by Bhudevi clinging to the boar's tusk as described in Hindu mythology is a salient feature of the place.

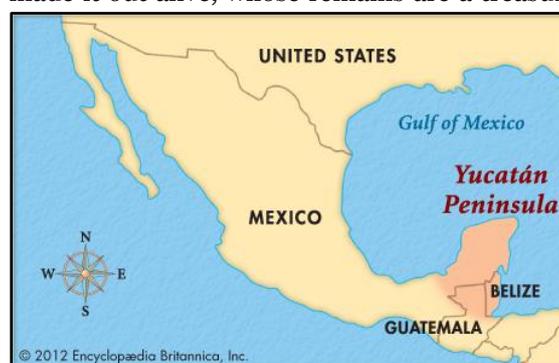
Buried Pyramid City- Mexico

- An Ancient pyramid city was discovered underground in heartland of Mexico.
- They discovered the lost city known as Angamucó which contained 40,000 buildings by using by using lasers to sends beams of light from an aircraft to the ground in order to construct a map of the area (LIDAR Technology).
- The lost city was built by Purépecha who were rivals to the Aztecs around 1,000 years ago.
- The Purépecha are a group of indigenous people from the northwestern region of Michoacán, Mexico
- Around 100,000 people are thought to have lived in the ancient city between 1000 and 1350AD.
- The findings have implications for understanding the region's history of migration, land use and conservation and even early climate changes.



Underwater Cave in Yucatan peninsula

- Recently a biggest flooded cave was found in the Yucatan Peninsula, Mexico, by scuba divers.
- Archaeologists explored that cave and found fossils of giant sloths and an elaborate shrine of the Mayan god of commerce.
- The Yucatan peninsula is studded with monumental relics of the Maya people, whose cities drew upon an extensive network of sinkholes linked to subterranean waters known as cenotes.
- Researchers believe that the water level in the caves has fluctuated over time, and that they were a source of water in times of severe drought.
- Some of the animals and humans who ventured inside never made it out alive, whose remains are a treasure trove for scientists,
- It enables to piece together bits of the cave's history dating all the way back to the Pleistocene epoch (2.6 million to 11,700 years ago).
- The artifacts left inside by humans are burnt human bones, ceramics, wall etchings and more.
- Similarly the animal remains include gomphotheres — an extinct elephant-like animal — as well as giant sloths and bears, archaeologists told a press conference.



Global Theatre Olympics

- The Vice President of India will inaugurate the 8th Global Theatre Olympics coming Saturday at the majestic Red Fort in New Delhi.
- The theatrical extravaganza is being hosted for the first time in India by the National School of Drama under the aegis of Ministry of Culture, Government of India.
- The theme of the 8th Theatre Olympics is “Flag of Friendship”.

- It aims to bridge borders and bring people of different cultures, beliefs and ideologies together through the medium of theatrical art.
- The Theatre Olympics was established in 1993 at Delphi, Greece.

Maramon Convention

- Maramon Convention is the Asia's largest weeklong annual Christian meet.
- The convention is organized in the vast river bed of Pampa near the Kozhencherry Bridge.
- The ongoing 123rd convention at Maramon, Pathanamthitta, Kerala began with a call to conserve the river Pampa and the environment

Swami Ramakrishna Pramahansa's Birth Anniversary

- Ramakrishna Pramahansa's birth anniversary was on February 18th.
- His spiritual movement indirectly aided nationalism, as it rejected caste distinctions and religious prejudices.
- Ramakrishna's religious and spiritual philosophy was centered on Shakti, Advaita Vedanta and universal tolerance.
- Foremost among his innumerable disciples was Swami Vivekananda, who was instrumental in establishing the philosophy of Ramakrishna at a global stage.
- Vivekananda established the Ramakrishna Mission in 1897 to carry out the visions of his Guru Ramakrishna.

Dara Shukoh

- An exhibition was conducted to showcase the forgotten Mughal Prince Dara Shukoh, at Indira Gandhi National Centre for the Arts, in New Delhi.
- He was the eldest son of Emperor Shah Jahan and heir apparent to the Mughal throne.
- The religious insight of the Mughal prince marks him out from most other Mughal rulers.
- Dara Shukoh leaned towards the Chishti order of Sufism that is known to have promoted tolerance.
- He commissioned the translation of all the Upanishads from Sanskrit to Persian for Muslim scholar to learn.
- He wrote the Majma-ul-Bahrain (The confluence of two seas) to elaborate upon the syncretism between Sufism and Vedic philosophies.
- Prince Dara Shukoh was defeated by Prince Aurangzeb in the battle of Samugarh.

Kailash Mansarovar Yatra

- Kailash Mansarovar Yatra (KMY) is a journey of religious values and cultural importance for Hindus as they consider mount Kailash as Lord Shiva's Residence.
- Mount Kailash is considered sacred by Buddhists, Jains and followers of Bon religion.
- Ministry of External Affairs organizes the Yatra during June to September each year through two different routes - Lipulekh Pass (Uttarakhand), and Nathu La Pass (Sikkim).
- The Yatra is organized with the support of the state governments of Uttarakhand, Delhi, and Sikkim; and the cooperation of Indo Tibetan Border Police (ITBP).
- Mount Kailash is located in the South-Western corner in the Himalayas of Tibet.
- Kailash is one of the highest parts of the world and close to the source of four mighty rivers of Asia - Indus, Sutlej, Brahmaputra and Ganga.
- Two sacred lakes- Lake Mansarovar and Rakhsat Tal is found in the region.



Galapagos

- Rising tourist arrival puts pressure on the fragile volcanic archipelago.
- The Galápagos Islands, part of the Republic of Ecuador, distributed on either side of the





Equator in the Pacific Ocean surrounding the centre of the Western Hemisphere.

- The island inspired Charles Darwin's Theory of evolution and was his field of study.
- The Galápagos Islands and their surrounding waters form the Galápagos Province of Ecuador, the Galápagos National Park, and the Galápagos Marine Reserve.
- UNESCO recognised the islands as a World Heritage Site and as a biosphere reserve

GOVERNMENT INITIATIVES

Khelo India Program

- First Khelo India school games were declared open at New Delhi.
- The program focuses on the entire sport ecosystem in country.
- It includes infrastructure, community sports, talent identification, coaching for excellence, competition structure and sports economy.
- Salient features of the program are,
 1. Pan Indian Sports Scholarship scheme
 2. Long-term athlete development pathway would be made available to gifted 14.5 and talented youngsters
 3. Promote 20 universities across the country as hubs of sporting excellence.

National River Conservation Plan

- Under the National River Conservation Plan the river Sal project in Goa was sanctioned by the Ministry of Environment, Forest & Climate Change
- The aim of the plan is to prevent pollution of rivers and improving water quality.
- The activities under National River Conservation Plan include following
 1. Sewage treatment plants for treating the diverted sewage.
 2. Low cost sanitation works to prevent the open defecation on riverbanks.
 3. Public awareness and public participation.
 4. Electric crematoria to ensure proper cremation of the bodies brought to burning Ghats.

Prime Minister's Research fellow scheme

- 'Prime Minister's Research Fellows (PMRF)' scheme aims to improve the quality of research by attracting the best talents across the country.
- It will help in tapping the talent pool of the country for carrying out research indigenously in cutting edge science and technology domains.
- Also, the scheme will address the shortage of quality faculties and our national priorities.

ASH TRACK App

- Union Minister of State for Power and New & Renewable Energy launched a Web based monitoring System and a Fly Ash mobile application named ASH TRACK.
- The Platform will provide a better interface between fly ash producers (Thermal Power Plants) and potential ash users such as – road contractors, cement plants etc.
- Fly ash, the end product of combustion during the process of power generation in the coal based thermal power plants.
- It is a proven resource material for construction industries and currently is being utilized in manufacturing of Portland Cement, bricks/blocks/tiles manufacturing, road embankment construction and low-lying area development, etc.
- Now the usage of flyash stands at 63% and the aim is to raise to 100 %.

National Urban Housing Fund

- The Union Cabinet has given approval for creation of National Urban Housing Fund (NUHF) for Rs.60, 000 crores.
- The motive of fund is to finance the government's Housing for All Program, which aims to build 12 million affordable housing units in urban areas by 2022.
- The newly created fund will be placed under the aegis of the Building Materials and Technology Promotion Council (BMTPC).

- BMPTC is an autonomous body registered under the Societies Registration Act, 1860, The newly created fund will be placed under the aegis of the Building Materials and Technology Promotion Council
- The fund will be raised from non-budgetary sources and help in plugging the budgetary shortfalls.

Pradhan Mantri LPG Panchayat

- Over 100 beneficiaries of the Pradhan Mantri Ujjwala Yojana (PMUY), from 20 states will share their experiences of how the clean cooking fuel has changed their lives, in the presence of President of India, at Rashtrapathi Bhavan.
- The LPG Panchayat, which was launched in Gandhinagar last year, is aimed at driving rural households to adopt Liquefied Petroleum Gas.
- After the launch of the Pradhan Mantri Ujjwala Yojana, LPG consumption witnessed an increase of 10 per cent to 21.5 million tons during 2016-17, compared to the previous year.

Senior Citizen's Welfare Fund

- Insurance regulator IRDA has asked all insurers to transfer the deposits of policyholders that have been laying unclaimed for over 10 years to the Senior citizen's welfare fund.
- The corpus of the Senior Citizens Welfare Fund comprise of any credit balance in any of the accounts under the small savings like Post Office Saving Schemes, Banks, etc. remaining unclaimed for 7 years from date of declaration as an inoperative account.
- The nodal Ministry for the administration of the Fund shall be the Ministry of Social Justice and Empowerment.
- The Fund shall be utilized for such schemes that are in line with the National Policy on Older Persons and the National Policy on Senior Citizens.

Sambandh Initiative

- Western Naval Command hosted the Sambandh exercise last year.
- Participants were from the 10 Indian Ocean Littoral countries Maldives, Myanmar, Indonesia, Sri Lanka, Bangladesh, Oman, Qatar, United Arab Emirates, Malaysia and Mauritius.
- Naval officers and cadets from smaller countries that do not have big navies were welcomed aboard INS Vikramaditya -India's aircraft carrier as a part of the initiative.
- Apart from the Sambandh initiate, the Indian Navy sent its Mobile Training Team (MTT) to these countries.
- Training teams of the Indian Navy were sent to neighbouring countries to train other countries cadets at their home base.



Galvanizing Organic Bio-Agro Resources (GOBAR) Dhan

The Opportunity

- Total cattle population in India is 300 million*, which puts the production of dung at ~3 million tonnes per day.

The Proposal

- Collection of cattle dung & solid waste from farmers for sale to entrepreneurs; ODF GPs as aggregators
- Entrepreneurs to produce manure, biogas/bio-CNG from the waste
- Three likely models: Household, Community, Professional
- Launch in April 2018

First Phase

- 350 districts to be covered in Phase 1
- Remaining districts in Phase 2

* 19th Livestock Census 2012

Twitter: @swachhbharat | Facebook: facebook.com/sbnggramin | Website: gnyurt.com/sbnggramin

Gobar Dhan

- During the budget, the finance minister announced the launch of "GOBAR-Dhan" (Galvanising Organic Bio-Agro Resources-Dhan).
- The initiative has two objectives:
 - To make villages clean and generate wealth
 - Energy from cattle and other waste.
- The GOBAR-Dhan initiative is expected to convert cattle dung and other organic waste to compost, biogas and even larger scale bio-CNG units.
- The Swachh Bharat Mission-Gramin will pilot this initiative.

Operation Greens

- Our Finance minister in his budget speech announced the 'Operation Greens' on the lines of Operation Flood.
- The main objective of the project, according to the finance ministry, is to reduce price volatility in agri commodities such as vegetables.
- Operation Greens aims to promote farmer producers organizations, agri-logistics, processing facilities and professional management.

- Operation Flood was launched in 1990 by National Dairy Development Board (NDDB), India to boost the milk production and income of cattle owners.

National Technology Centre for Ports, Waterways and Coasts (NTCPWC)

- Minister for Road Transport & Highways, Shipping and Water resources, laid the foundation stone for setting up of NTCPWC, at IIT Chennai recently.
- NTCPWC is being set up under the Shipping Ministry's flagship program Sagarmala.
- It will act as a technology arm of the Ministry of Shipping for providing engineering and technological inputs and support for Ports, Inland Waterways Authority of India and other institutions.
- The setting up of NTCPWC would give a boost to the development of indigenous port and maritime sector technology in India, which will reduce our dependence on foreign institutions.
- It will also reduce the cost of research drastically and result in cost and time savings for work in the port and maritime sector.

GOVERNMENT SCHEMES

Rashtriya Vayoshri Yojana

- The Ministry of Social Justice and Empowerment has launched the 'Rashtriya Vayoshri Yojana (RVY).
- Its objective is to provide senior citizens belonging to BPL category, who suffer from age related disabilities, with such physical aids and assisted living devices which can restore near normalcy in their bodily functions.
- The Scheme is entirely funded from the Senior Citizens' Welfare Fund (SCWF).
- Under the Scheme, assisted living devices such as walking sticks, elbow crutches, walkers/ crutches, tripods/ quadpods, hearing aids, wheelchairs, artificial dentures, spectacles are distributed to the beneficiary senior citizen.

Pradhan Mantri Vaya Vandhana Yojana

- This scheme deals with senior citizen insurance scheme which promises assured annual return of 8% for 10 years.
- The insurance is sold by Life Insurance of India for the citizens.
- The Minimum age of entry is 60 years of age with no maximum limit

Atal Bhoojal Yojana

- Atal Bhoojal Yojana is an ambitious plan aimed at efficient management of available water resources.
- Atal Bhoojal Yojana will focus on demand side management (how to meet requirements by minimum use of water).
- The emphasis of the scheme will be on recharge of ground water sources and efficient use of water by involving people at the local level.
- The half of the fund of 6000 crore will be supported by a world bank loan of 3000 crore and the rest will be funded by central government.
- It would initially be implemented with community participation in Gujarat, Maharashtra, Haryana, Karnataka, Rajasthan, Uttar Pradesh and Madhya Pradesh.

Chardham Mahamarg Pariyojana

- The Cabinet Committee on Economic Affairs has given its approval to the construction of 4,531 km long 2-Lane Bi-Directional Silkyara Bend - Barkot Tunnel with escape in Uttarakhand.
- The project will be built under Engineering, Procurement and Construction (EPC) Model which will provide all weather connectivity to Yamunotri, one of the dham on Chardham Yatra.
- It will encourage regional socio-economic development, trade and tourism within the country.





- The project will be implemented by the Ministry of Road Transport & Highways (MoRTH), through National Highways & Infrastructure Development Corporation Ltd. (NHIDCL).

NATIONAL INSTITUTES IN NEWS

Centre for Science and Environment (CSE)

- The Centre for Science and Environment (CSE) is a public interest research and advocacy organization based in New Delhi.
- The Centre for Science and Environment (CSE) has been ranked the top environment policy think tanks in India and 16th at the global level.
- The rank was given by The Think Tanks and Civil Societies Program (TTCSP) of the Lauder Institute at the University of Pennsylvania.
- The CSE's efforts are built around five broad programs
 1. Communication for Awareness
 2. Research and Advocacy
 3. Education and Training
 4. Knowledge portal
 5. Pollution monitoring
- CSE publishes the fortnightly Magazine 'Down to Earth'.

Railway development Authority

- Rail Development Authority will help the Indian Railways take decisions on pricing of services, consumer interests, generating revenue and competition.
- Government has approved formation of a Rail Development Authority (RDA) comprising Chairman and three Members.
- The objective underlying RDA is to get expert advice/make informed decision on:
 - Pricing of services commensurate with costs.
 - Suggest measures for enhancement of Non-Fare Revenue.
 - Protection of consumer interests, by ensuring quality of service and cost optimization.
 - Promoting competition, efficiency and economy.
- Other than the above-mentioned objectives the authority also deals with resource allocation, setting service benchmark etc.,

National Bank for Agriculture and Rural Development (NABARD)

- Amendments were passed by Parliament to the NABARD Act, 1981 support the government's push to boost the rural and agricultural sector.
- National Bank for Agriculture and Rural Development (NABARD) is an apex development financial institution in India, headquartered at Mumbai.
- NABARD was established on the recommendations of B.Sivaraman Committee, to implement the National Bank for Agriculture and Rural Development Act 1981.
- The 1981 Act was enacted to establish a development bank
 - to provide and regulate credit
 - to promote and develop agriculture, small-scale industries, cottage and village industries
 - to support handicrafts and allied economic activities in rural areas.

Khadi and Village Industries Commission (KVIC)

- The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament 1956.
- In 1957, it took over the work of former All India Khadi and Village Industries Board.
- The broad objectives that the KVIC has set before it are
 - Social objective: providing employment.
 - Economic objective: producing saleable articles.
 - Creating self-reliance amongst the poor and building up of a strong rural community spirit.

- Khadi and Village Industries Commission (KVIC) is the nodal implementing agency for Prime Minister Employment Generation program (PMEGP) at the national level.

Enforcement Directorate

- Enforcement Directorate has registered a money laundering case against the Punjab National Bank for its fraudulent transaction of Rs.11, 500 crores in one of its branch.
- Enforcement Directorate is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance.
- It enforces Foreign Exchange Management Act (FEMA) and Prevention of Money Laundering Act (PMLA).
- Its headquarters is situated in New Delhi and headed by the Director of Enforcement.
- The director is appointed by the Appointments Committee of the Cabinet headed by Prime Minister.

Pension Fund Regulatory and Development Authority (PFRDA)

- PFRDA is a statutory regulatory body established by an Act of Parliament in 2013.
- The mandate of the body is to promote, develop and regulate pension sector in India.
- PFRDA appoints the Board of Trustees that takes care of National Pension Scheme (NPS).
- The amount collected under Atal Pension Yojana (APY) is managed by Pension Funds appointed by PFRDA. PFRDA recently identifies 21 Banks as Makers of Excellence under Atal Pension Yojana Outreach Programme.

Institute of Chartered Accountants of India (ICAI)

- ICAI, the chartered accountants regulator will look into the PNB scam to ascertain if there was professional misconduct or wrongdoing by auditors.
- The Institute of Chartered Accountants of India (ICAI) is a statutory body established by an Act of Parliament, viz. The Chartered Accountants Act, 1949.
- The Institute, functions under the administrative control of the Ministry of Corporate Affairs, Government of India.
- The ICAI is the second largest professional body of Chartered Accountants in the world, with a strong tradition of service to the Indian economy in public interest.
- Some of the functions of ICAI are,
 1. Regulating the profession of accountancy
 2. Formulating the accountancy standards in the country
 3. Laying down ethical standards

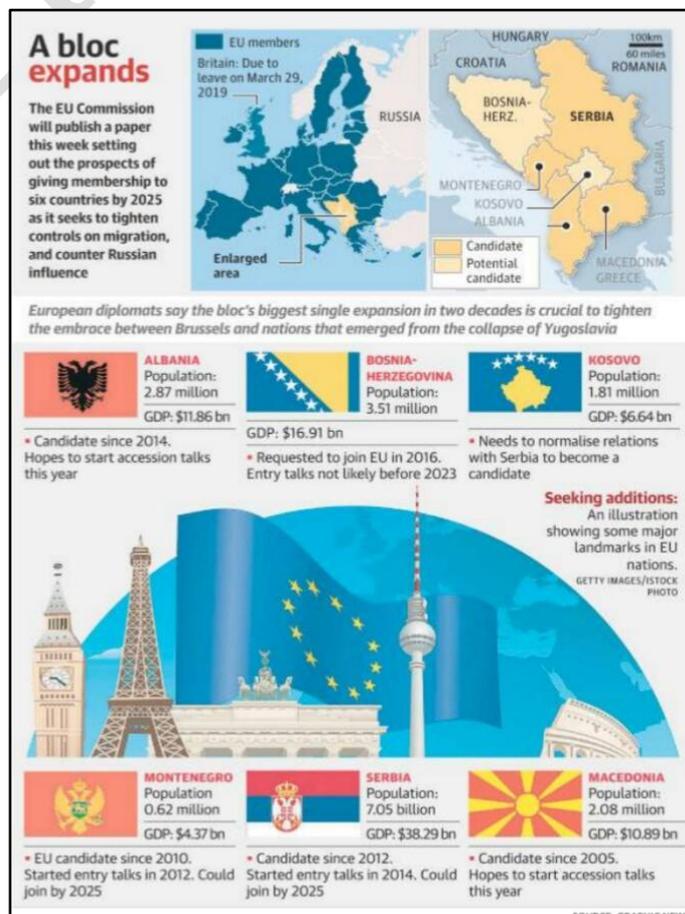
INTERNATIONAL ISSUES AND EVENTS

European Commission

- European commission will publish a paper setting out the prospects of giving membership to six countries by 2025
- The countries are Albania, Bosnia, Kosovo, Montenegro, Serbia and Macedonia.
- The European Commission (EC) is an institution of the European Union, responsible for proposing legislation, implementing decisions, upholding the EU treaties and managing the day-to-day business of the EU
- The Commission was to act as an independent supranational authority separate from governments.
- The Commission's Headquarters is in Brussels.
- The commission consists of a President and commissioners from the 28-member nations.

World Government Summit

- PM Modi will address World Government Summit in his coming UAE Tour.
- The World Government Summit is an annual event held in Dubai,UAE.



- It brings together leaders in government for a global dialogue about governmental process and policies with a focus on the issues of futurism, technology and innovation.
- The first World Government Summit was held in Dubai in 2013, and has been held annually since then.
- In 2017, the World Government Summit held the first Global Dialogue for Happiness, a one-day event prior to the summit

UN broadband Commission for Sustainable Development

- International Telecommunication Union and UNESCO set up the Broadband Commission for Digital Development to step-up UN efforts to meet the Millennium Development Goals (MDGs).
- The Commission was established in May 2010 with the aim of boosting the importance of broadband on the international policy agenda.
- Following adoption of the UN's Sustainable Development Goals in 2015, the Commission was re-launched as the Broadband Commission for Sustainable Development.
- Its aim is to showcase and document the power of ICT and broadband-based technologies for sustainable development.
- The Commission has re-evaluated and launched new framework of Targets 2025 in support of "Connecting the Other Half" of the world's population.
- It publishes the "State of Broadband" annual report.

Global Seed Vault

- The Global Seed Vault marks its 10-year anniversary by adding new seed samples from all over the world.
- The Global Seed Vault is located deep inside a mountain on Svalbard, a remote Arctic island in a Norwegian archipelago.
- Dubbed the "Noah's Ark" of food crops the vault has the capacity to store up to 4.5 billion seeds.

Wakhan Corridor

- The corridor is a narrow strip of inhospitable and barely accessible land in Afghanistan bordered by the mountains of Tajikistan and Pakistan, and extending all the way to China.
- Wakhan corridor is known by its Persian name Bam-e-Dunya, or "roof of the world"
- The area is populated by the Wakhins, members of a nomadic tribe in the region.
- Created in the 19th century as a Great Game buffer zone between tsarist Russia and British India, the corridor has since remained untouched by any kind of government
- It can be reached from surrounding countries through the "Pamir Knot", where three of the highest mountain ranges in the world converge.



ECONOMY

Res extra commercium

- A Latin phrase meaning 'outside commerce' is used by the government to restrict the tobacco industry's legal trade rights.
- The Res extra commercium doctrine dating back to the roman period, would open the door to an outright ban on tobacco sales if a state so wished.
- With an aim to curb tobacco consumption, the government has raised tobacco taxes, started smoking cessation campaigns and introduced laws requiring covering most of the package in health warnings

MCLR

- The Marginal Cost of Funds-based Lending Rate (MCLR) refers to the minimum interest rate of a bank below which it cannot lend.
- Reserve Bank of India will link the base rate with the Marginal Cost of Funds based Lending Rates (MCLR).
- RBI decided to shift from base rate to MCLR because the rates based on marginal cost of funds are more sensitive to changes in the policy rates.

Standing Deposit Facility Scheme

- RBI uses array of instruments such as Cash Reserve Ratio, Open Market Operation, Market Stabilisation Scheme to absorb excess liquidity in the economy.
- These measures are considered as Liquidity Adjustment Facility (LAF) to bring the liquidity gap under control.
- However, these tools were not proven to be useful when the money market liquidity is in excess to deal with. Eg. Post demonetization scenario.
- During post demonetization, RBI ran out of government securities to offer as collateral and had to temporarily hike its CRR.
- Now, there is a proposal to introduce Standing Deposit Facility Scheme (SDFS) which was already recommended by Urjit Patel Committee in 2014.
- It is to empower RBI with an additional instrument for liquidity management.
- SDFS is a toolkit of monetary policy for absorption of surplus liquidity from the system but without the need for providing collateral in exchange

Strategic Petroleum Reserves

- Abu Dhabi National Oil Company (ADNOC) will send ships carrying crude oil to fill half of the 1.5 million tonne strategic oil reserves India has built at Mangaluru.
- Indian Strategic Petroleum Reserves Ltd has built 5.33 million tonnes of strategic crude oil storage at three locations – Padur and Mangaluru on the western coast and Visakhapatnam on the eastern coast
- The oil stored in the underground rock caverns at the three locations is to be used in an emergency.

Society for Worldwide Interbank Financial Telecommunication (SWIFT)

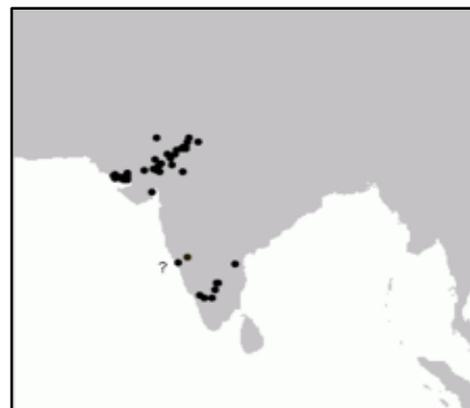
- India's City Union Bank suffered a cyber attack via the SWIFT financial platform.
- It is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes.
- SWIFT is headquartered in Belgium.
- It also brings the financial community together – at global, regional and local levels – to shape market practice, define standards and debate issues of mutual interest or concern.
- For money transfers, SWIFT assigns each participating financial organization a unique code with either eight or eleven characters

ENVIRONMENT

SPECIES IN NEWS

White -Naped tit bird

- White-naped tit was the centre of attention at the 21st Indian Birding Fair, Jaipur.
- White-Naped is a robust, strongly patterned, mainly black-and-white coloured bird with yellow in the flanks and sides of the breast
- The white-naped tit (*Machlolophus nuchalis*) is endemic to India where it is found in dry thorn scrub forest in two disjunct populations, in western India and southern India.



- International Union For conservation of nature (IUCN) classifies the bird as vulnerable.
- The Bird is considered vulnerable to extinction because of the scarcity of suitable habitats.

Red Sanders

- Pterocarpus santalinus occurs in the Southern Tropical Dry Deciduous Forests.
- It is generally found at altitudes of 150 - 900 m.
- It prefers lateritic and gravelly soil and cannot tolerate water logging.
- Red Sanders has a highly restrictive distribution in the South Eastern portion of Indian peninsula to which it is endemic.
- Red Sanders is said to be used in the making of oriental musical instruments like Shamisen, Koto and Erhu.



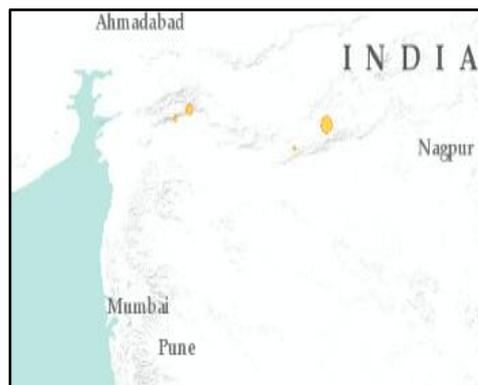
Shell Fish Reef

- Virtually all of Australia's shellfish reefs have disappeared, making them the country's most threatened ocean ecosystem.
- Shellfish reefs are made up of oysters and mussels.
- They accrete dead shell material such that the reef grows in size and mass over time.
- Just like coral reefs, they support the growth of important fish species whilst also helping to improve water quality and increase biodiversity.
- The shellfish reef plays a crucial role in water filtration, increased local fish production, bank stabilization and sustaining biodiversity.
- Shellfish reefs have declined by up 99% since British colonization.
- The reason behind the decline are
 - a. Early destruction for lime for mortar used in the construction of roads,
 - b. Overharvesting of shellfish for food and oysters,
 - c. Destructive fishing practices,
 - d. Introduction of non-native shellfish and
 - e. Habitat loss from coastal development.



Forest Owlet

- The century old debate on forest owlet's genetic relationship with spotted owlet is resolved.
- The bird belongs to the same genus as spotted owlet (Athene).



- The *Heteroglaux blewetti* is endangered under IUCN classification.
- Also the bird is endemic to the central Indian forests.
- It is sedentary resident with recent sightings from fairly open dry deciduous forest dominated by teak.
- The species faces a number of threats such as forest loss and degradation as a result of illegal logging and human encroachment, forest fires and minor irrigation dams.
- The birds is included under CITES Appendix 1.

Echindas

- Echidnas, also called spiny anteaters, are mammals
- Echidnas are one of the world's oldest surviving mammals.
- They are egg-laying mammals.
- It is listed as 'least concern' in IUCN classification.
- However, the short-beaked echidna found only in Australia and Papua Guinea is threatened.
- The main threats are land clearing and habitat loss ,traffic, feral cats and potentially the rapidly changing climate.

Antarctic Krill

- The krill population in the Antarctic is under threat, due to a combination of factors including industrial-scale fishing and climate change.
- Antarctic krill are one of the most abundant and successful animal species on Earth.
- The loss of krill could endanger the entire Antarctic ecosystems, with predators, especially penguins, in potential danger.
- Krill are essential feed for whales, penguins and seals.
- Modern trawlers that suck in large quantities of water at a time are a primary cause of their demise.
- Krill oil is a scientifically proven to be a super source of omega-3 fatty acids.
- Krill numbers have declined by as much as 80% since the 1970s.



New Plant species – West Bengal

- Scientists from the Botanical Survey of India have identified a new plant species from Buxa and Jaldapara National Parks in West Bengal.
- The plant is named after former President Abdul Kalam as *Drypetes kalamii*.
- It is a small shrub adding to the rich floral wealth of India.
- The newly described plant is unisexual in nature, which means they have separate male and female plants.
- The new species is found in wet, shaded areas of subtropical moist semi-evergreen forests, at a height ranging 50-100 meters.
- Being exclusive to these two parks, the plant is classified as critically endangered.

Ring tailed Lemurs (*Lemur catta*)

- Lemurs are primates found only on the African island of Madagascar and some tiny neighboring islands.
- Ring-tailed lemurs have powerful scent glands and use their unique odor as a communication tool and even as a kind of weapon.
- It is under the endangered category in the IUCN red list.
- It is listed on Appendix I of CITES.
- Ring tailed lemurs is hunted for food and frequently kept as a pet



CONSERVATION RESERVES IN NEWS

Tiger Census

- India's tiger census has been commissioned by the union environment ministry's National Tiger Conservation Authority (NTCA).

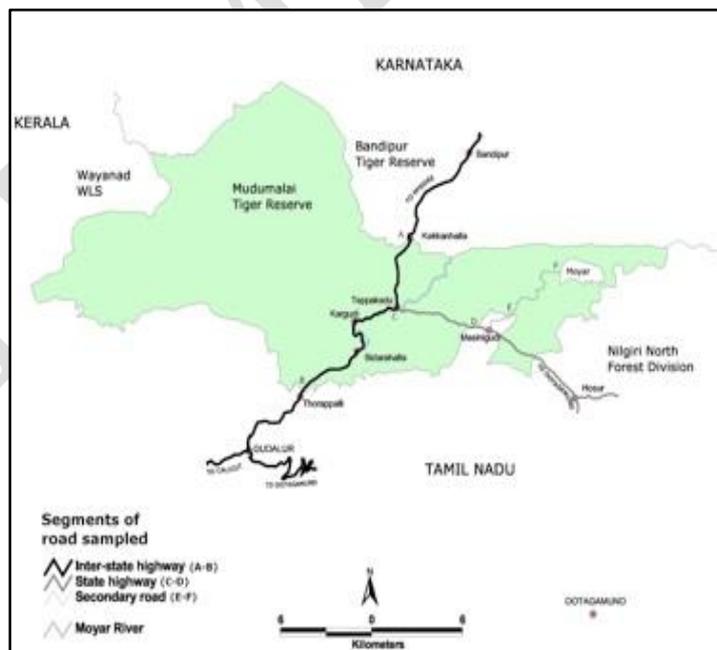
- The census will see coordination with Bhutan, Nepal and Bangladesh in estimating the territorial spread of the animal in the subcontinent.
- The Wildlife Institute of India, a Union Environment Ministry-funded body, has been tasked with coordinating the tiger estimation exercise.
- Along with tigers, the survey also collects information on the prey population of deer and other animals.
- The techniques used to estimate tiger population are Pugmark Technique, camera trapping and DNA fingerprinting

Nagarjunasagar-Srisailem Tiger Reserve

- The reserve is situated in the Nallamalais - an offshoot of Southern Eastern Ghats of Andhra Pradesh.
- River Krishna forms northern most boundary of the Tiger Reserve.
- The nomadic, shy, food gathering and hunting primitive tribe "Chenchus" of these hill ranges live in groups called gudems amidst forests of this sanctuary.
- The reserve primarily comprises of southern tropical dry mixed deciduous forest.
- The Nagarjuna sagar- Srisailem wildlife Sanctuary attained the Project Tiger status in 1983, then in 1992, it was renamed as Rajiv Gandhi Wildlife Sanctuary.
- Post bifurcation of the state ,the northern part of the reserve in Telgana state which is called Amrabad Tiger reserve

Mudumalai Tiger Reserve

- Mudumalai Tiger Reserve (MTR) is situated at the tri-junction of Tamil Nadu, Karnataka and Kerala.
- The reserve straddles the Ooty -Mysore interstate national highway.
- It is contiguous with Wyanaad Wildlife Sanctuary on the west, Bandipur Tiger Reserve on the north.
- The Moyar river flows downstream into the Mudumalai Tiger Reserve and is the natural line of division between Mudumalai and Bandipur Sanctuary.
- The MTR also forms part of the Nilgiri Biosphere Reserve
- The Reserve has tall grasses, commonly referred to as "Elephant Grass", Bamboos of the giant variety, valuable timber species like Teak, Rosewood.
- Fauna found in the region are Tiger, Elephant, Indian Gaur, Panther, Barking Deer, Malabar Giant Squirrel and Hyena etc.,
- Sathayamangalam, Kalakkad Mudunthurai and Anamalai are the other tiger reserves in the state of Tamil Nadu.



Sunderbans Mangrove forest

- Unique mangrove ecosystem that hosts a sizeable tiger population is unable to expand due to developmental pressures and sea level rise.
- The Indian Sunderbans that comprise almost 43% of total mangrove cover.
- 'State of Art Report on Biodiversity in Indian Sundarbans' published by World Wide Fund for Nature, India, outlines the threats facing the ecosystem.
- The threats are climate change, habitat degradation due to industrial pollution and human disturbance, fuel-wood collection.
- If the present rate of change prevails, the Sunderbans may disappear due to sea level rise.
- Its natural response to retreat further inland is blocked by geographical features and man-made obstructions.
- The population density of the Indian Sunderbans outside the Tiger Reserve area is 1,000 people per sq km.
- Rehabilitation of former mangrove areas and creation of new mangrove habitations through intensified afforestation program are the only way out.

Assam- Wildlife Protection

- In a major initiative for wildlife protection, the forest guards in Assam were given modern weapons to check poaching of rhinos, tigers and other wild animals.
- Also for the first time wildlife fast-track courts have been set up to exclusively deal with poaching and wildlife crimes.
- Assam has five national parks and 19 wildlife sanctuaries and is home to 91% of Indian rhinos.
- The five national parks in Assam are
 1. Kaziranga
 2. Manasa
 3. Nameri
 4. Rajiv Gandhi Orang
 5. Dibru Saikhowa
- Manas and Dibru saikhowa are the Biosphere reserve in the state.



Eravikulam National Park

- Eravikulam National Park is located in the Kannan Devan Hills of the Southern Western Ghats in the Idukki District, Kerala State.
- In the local language, Eravikulam denotes streams and pools.
- The highest peak in peninsular India, Anamudi (2695 m), is situated in this park.
- Three major types of plant communities found in the park are: Grasslands, Shrub Land and Shola Forests.
- Neelakurunji ,a plant endemic to the Western Ghats, blooms once every 12 years is found in this national park.
- It also is home to and the sanctuary of the Nilgiri tahr, an endangered goat species.
- The catchment area of three important rivers, Periyar, Chalakudy and Pambar is located in this area.
- The Muthuvans are the indigenous people, who have traditionally been associated with the management of the park.



Tungabhadra Otter conservation reserve

- Karnataka declared first otter conservation reserve, 34 km along the Tungabhadra ,in 2016.
- The Otter reserve stretches from from Mudlapura village to Kampli in Ballari district.
- The reserve also passes through Hampi, a UNESCO heritage site.
- The reserve houses a good number of smooth-clawed otter, Eurasian and smooth-coated otters, mahseer fish, fresh water crocodiles and giant soft shelled turtles.
- Smooth-coated otter is distributed throughout the country from the Himalayas and to the south in India.
- According to the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, Smooth-coated species is vulnerable.
- The highest protection under Schedule 1 (small-clawed otter) and Schedule 2 (smooth-coated otter) of the Wildlife Protection Act, 1972 is provided for the otters.



ENVIRONMENT CONVENTIONS AND MEETINGS

Minmata Convention on mercury

- The Union Cabinet approved the proposal for ratification of Minamata Convention on Mercury.



- The Convention protects the most vulnerable from the harmful effects of mercury and also protects the developmental space of developing countries
- The objective of the convention's implementation to protect human health and environment from the anthropogenic emissions and releases of mercury and mercury compounds.
- The Convention is named after the Japanese city Minamata, as the city went through a devastating incident of mercury poisoning

Wetlands International

- Wetlands International coordinates the International Water bird census of which Asian Water bird census is an integral part.
- It is a global not-for-profit organization dedicated to the conservation and restoration of wetlands.
- It is one of the International Partner Organizations of the Ramsar Convention.
- It was formerly known as International Waterfowl & Wetlands Research Bureau (IWRB) and their scope included the protection of wetland areas.

Clean Air Campaign

- The 'Clean Air for Delhi' was launched on February 10, 2018 jointly by the Central Government and the Government of Delhi to address all sources of pollution in Delhi.
- Joint teams of officials of Ministry of Environment, Forest & Climate Change, Central Pollution Control Board, Delhi Government, and Municipal Corporations were constituted.
- These teams will visit every administrative division of Delhi, monitor causes of pollution and initiate remedial measures, including penal actions against serious polluters on the spot.
- The campaign will also include enforcement of pollution-control measures for vehicles, driving discipline, inspection of power plants in Delhi.

World Sustainable Development Summit 2018

- The Prime Minister will soon inaugurate the World Sustainable Development Summit (WSDS 2018) in New Delhi.
- WSDS is the flagship forum of The Energy and Resources Institute (TERI).
- The theme of the 2018 Summit is 'Partnerships for a Resilient Planet'.
- The 'Greenovation Exhibition' at WSDS 2018 will showcase the latest technological advancements to meet Sustainable Development Goals.
- The summit seeks to bring together on a common platform, global leaders and thinkers in the fields of sustainable development, energy and environment sectors.
- The Energy and Resources Institute (TERI) is a leading think tank dedicated to conducting research for sustainable development of India and the Global South.
- TERI's key focus lies in promoting clean energy, water management, pollution management, sustainable agriculture and climate resilience.

OTHERS

Invisible oil spill

- The collision in the East China Sea that sank an Iranian tanker gave rise to an odd environmental disaster.
- It is the largest oil spill in the decades yet hasn't attracted the global attention as it happened in a remote location in the high sea and also due to the type of petroleum spilt – condensate.
- Condensate is a toxic, liquid byproduct of natural gas production and does not clump into black globules that can be easily spotted.
- Absorbed into the water, it will remain toxic for a time; its exposure is extremely unhealthy to humans and potentially fatal.
- The East China Sea area produced five million tons of seafood of up to four dozen species for China including crab, squid, yellow croaker, mackerel and hair tail.
- The only real solution is to let it evaporate or dissolve.
- The condensate may find its way in to the rich Japanese Fisheries source.

Plastic pollution

- India will host the official global World Environment Day celebrations on June 5.
- The Theme of this year Environmental day will be "Beat Plastic Pollution".

- The following are some insights into the plastic pollution in the country,
- The average production and consumption of plastic products between 2011-12 and 2015-16 at 707 million metric tons (MMT) per year.
- A report by Central Pollution Control Board in 2015 estimated that around 4,059 tons per day of plastic waste is generated from major cities.
- In 2015, the government had approved a scheme for “setting up of need-based plastic parks with requisite state-of-the-art infrastructure to assist the sector move up the value chain.
- Ockhi Cyclone resulted in agglomeration of plastic debris along the coasts of Maharashtra, Kerala, Karnataka, Goa and Gujarat.



SCIENCE AND TECHNOLOGY

SPACE

SpaceX Falcon Heavy

- SpaceX's big new rocket Falcon Heavy, carrying a red sports car was launched successfully on its first test flight.
- Falcon Heavy is the most powerful operational rocket in the world.
- It can lift about twice the payload at one third of the cost by Delta 4 rocket which was the most powerful rocket till now.

LAUNCH VEHICLE	FALCON HEAVY	SPACE SHUTTLE	PROTON M	DELTA IV HEAVY	TITAN IV-B	ARIANE 5 ES	ATLAS V 551	JAPAN H2B	CHINA LM3B
PAYLOAD TO LOW EARTH ORBIT (LEO)	63,800 kg 140,660 lb	24,000 kg 53,790 lb	23,000 kg 50,710 lb	22,560 kg 49,740 lb	21,680 kg 47,800 lb	20,000 kg 44,090 lb	18,510 kg 40,810 lb	16,500 kg 36,380 lb	11,200 kg 24,690 lb

- In addition ,SpaceX is also involved in making of Dragon capsule which is a suborbital reusable launch vehicle (RLV), intended for low-altitude flight testing.
- ISRO in 2016 tested Reusable Launch Vehicle - Technology Demonstrator (RLV-TD) successfully.

Solar Cycles and Sun spots

- The amount of magnetic flux that rises up to the Sun's surface varies with time in a cycle called the solar cycle, which lasts 11 years on average.
- This cycle is sometimes referred to as the sunspot cycle.
- Sunspots are regions where the solar magnetic field is very strong.
- In visible light, sunspots appear darker than their surroundings because they are a few thousand degrees cooler than their surroundings.

- They are usually concentrated in two bands, about 15 - 20 degrees wide in latitude, that go around the Sun on either side of the solar equator.

National Large Solar Telescope

- National Large Solar Telescope (NLST) is a proposed ground based 2-m class optical and near infra-red (IR) observational facility in the country.
- It is designed to address the scientific issues related to origin and dynamics of solar magnetic fields.
- The instrument has a broad scope to support and substantiate the solar atmospheric observations from space-based ADITYA mission and ground based MAST telescope (Udaipur).

Hubble Space Telescope

- Hubble Telescope has tracked the Neptune's Mysterious Shrinking Storm.
- It is the world's first large, space-based optical telescope, named in honor of astronomer Edwin Hubble.
- The Hubble is a joint project between NASA and the European Space Agency.
- Sun is the energy source of this space based telescope.
- Some of the interesting Hubble Discoveries are
 1. Creating a 3-D map of mysterious dark matter.
 2. Discovering Nix and Hydra, two moons of Pluto.
 3. Helping determine the rate of the universe's expansion.
 4. Discovering that nearly every major galaxy is anchored by a black hole.
 5. Helping refine the age of the universe.

Chandrayan 2 Mission

- ISRO planning to launch Chandrayaan-2 mission around April, 2018.
- It is the first time India attempts to land a rover on the moon's South Pole.
- Only USA Russia and China were able to soft land successfully on the lunar surface and these landings were near the lunar equator.
- The components of the mission are – Orbiter, Lander and Rover.
- The purpose of the mission is to collect data on the lunar topography, mineralogy, elemental abundance, lunar exposure and signatures of water-ice.
- India's Chandrayaan-1 mission was its first mission to moon where India was the captain and carrying the payloads built in UK, USA, Bulgaria Germany and Sweden.
- The mission comprised an orbiter and an impactor launched by ISRO's workhorse PSLV.
- Chandrayaan-1's greatest discovery was the widespread presence of water molecules in the lunar soil.

DEFENCE

ENCORE

- The Eastern Naval Command Operational Readiness Exercise (ENCORE), Theatre Level Readiness and Operational Exercise concluded on the Eastern Seaboard by the Indian Navy and Indian Air Force aircrafts.
- The exercise was conducted in phases to test various facets of war-fighting capabilities of the combat units.
- The exercise was conducted in real time covering a vast expanse of Indian Ocean Region (IOR).

Operation Cactus

- In 1988 a group of Maldivians led by Abdullah Luthufi tried to overthrow then Maldivian Government.
- The attempt was a failure due to the intervention of the Indian Armed Forces.
- The operation was code named as Operation Cactus.
- INS Godavari and Betwa were used by the Indian Navy in the operation

Prithvi-II

- India successfully test-fired its indigenously developed nuclear capable Prithvi-II missile from a test range in Odisha.
- The surface to surface missile has strike range of 350 km.
- It is capable of carrying 500-1,000 kilogram of warheads and is thrust by liquid propulsion twin engines.

- The state-of-the-art missile uses advanced inertial guidance system with manoeuvring trajectory to hit its target.

INS Chakra

- Russian authorities have demanded over \$20 million for rectifying the damage suffered by nuclear submarine INS Chakra.
- INS Chakra is a Russia-made, nuclear-propelled, hunter-killer akula class submarine.
- INS Chakra is one of the quietest nuclear submarines around, with noise levels next to zero.
- INS Chakra has been taken on lease from Russia for 10 years and would provide the Navy the opportunity to train personnel and operate such nuclear-powered vessels.
- The INS Chakra joined the Eastern Naval Command at Visakhapatnam in 2012.

Dakota DC3 Aircraft

- Air Chief Marshal (ACM) B.S. Dhanoa received a restored World War-II DC3 Dakota aircraft from an IAF veteran.
- The gift deed was signed between ACM Dhanoa and Air Cdre (Retd) Chandrasekhar at a handover ceremony.
- The DC3 Dakota aircraft Parashurama bearing the Tail Number VP-905 will be part of the IAF's vintage fleet.
- DC-3 transport aircraft, the world's first successful commercial airliner, readily adapted to military use during World War II.

ICGS Vajra

- The Indian Coast Guard ship 'Vajra', was decommissioned in Paradip.
- The Indian Coast Guard ship rendered three decades of service in maritime security along the northeast coastal waters.
- The ship monitored the coastal activities along with Odisha and West Bengal.
- It was built by Mazagon Dock, named 'Vajra', after the weapon of Lord Indra, and commissioned on 1988.

Rustom-2

- DRDO successfully flew its Medium Altitude Long Endurance (MALE) RUSTOM-2, unmanned aerial vehicle (UAV) at its Aeronautical Test Range (ATR) at Chitradurga.
- Rustom 2 is developed on the lines of predator drones of the US to carry out surveillance and reconnaissance (ISR) roles for the armed forces.
- The significance of this flight is that this is the first flight in user configuration with higher power engine.
- Rustom 2 is capable of carrying different combinations of payloads like synthetic aperture radar, electronic intelligence systems and situational awareness payloads
- The UAV is designed and developed by Aeronautical Development Establishment (ADE) of the DRDO, and aerospace major Hindustan Aeronautics Ltd and Bharat Electronics Ltd are its production partners.

Exercise MILAN

- Milan is a eight-day mega naval exercise with an aim to expand regional cooperation and combat unlawful activities in critical sea lanes.
- The exercise is being hosted by the Indian Navy under the aegis of the Andaman and Nicobar Command.
- It is a biennial exercise that will host navies from 16 countries.
- 'Milan' was first held in 1995 with the participation of five navies.
- The aim of the initiative was to have an effective forum to discuss common concerns in the Indian Ocean Region and forge deeper cooperation among friendly navies.

Raman Effect

- Raman Effect deals with the change in the wavelength of light that occurs when a light beam is deflected by molecules.
- The method can provide key information easily and quickly by characterizing the chemical composition and structure of a sample.
- Raman Effect has a wide range of application in fields such as geology, material science, forensic science, nuclear science and pharmacology.
- The effect is named after the Indian Physicist Sir C.V. Raman who observed the same.
- He was awarded Nobel Prize in Physics in 1930.

- To mark the discovery of Raman Effect, February 28 is celebrated as the National Science Day in the country.

REPORTS AND INDICES

Global Democracy Index

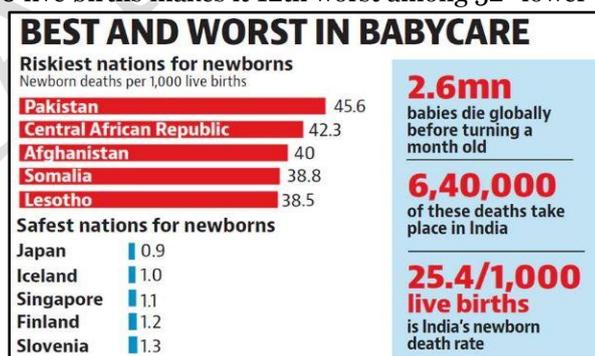
- India has slipped to 42nd place on an annual Global Democracy Index.
- India has moved down from 32nd place last year and remains classified among “flawed democracies”.
- The index is compiled by the UK based Economic Intelligence Unit(EIU)
- The index ranks on the basis of five categories: electoral process and pluralism, civil liberties, the functioning of government, political participation and political culture.

Global Terrorism Index:

- The Global Terrorism Index (GTI) is a report published annually by the Institute for Economics and Peace (IEP)
- Two third of the countries experienced a terrorist attack in 2016
- India is one among the ten most impacted countries by terrorism
- Five countries account for three quarters of all deaths from terrorism: Iraq, Afghanistan, Syria, Nigeria and Pakistan.
- The major reason for terrorism in most impacted countries is internal conflict.

UNICEF Report- Neonatal Deaths

- The released UNICEF report states that over 6, 00,000 children died within the first month of their birth in 2016.
- The country’s neonatal mortality rate at 25.4 deaths per 1,000 live births makes it 12th worst among 52 “lower middle-income countries” that pose risk for newborns.
- Even among states the difference is stark. For instance, Kerala and Goa’s neonatal mortality stands at 10/1000 live births, whereas Bihar and Utrakhand neonatal mortality rate is 44.
- The causes for the death are preventable and treatable as 80% of these fatalities happen for no serious reason.
- India is currently not on track to meet the Sustainable Development Goal target for neonatal mortality of 12 by 2030.
- The study also points out that India had made positive stride in Under-5 mortality rate (under-five mortality fell to 39 from 43 in the previous year).



State of Forest Report (SFR 2017)

- The Biennial report is published by Forest Survey of India (FSI), a premier institution under the Ministry of Environment and forest.
- The latest report states that, India posted a marginal 0.21% rise in the area under forest between 2015 and 2017.
- The document says that India has about 7, 08,273 square kilometers of forest, which is 21.53% of the geographic area of the country.
- Andhra Pradesh, Karnataka and Kerala topped the States that posted an increase in forest cover.
- India’s northeast showed a decrease in the forest cover.
- Madhya Pradesh has the largest forest cover in the country in terms of area, followed by Arunachal Pradesh and Chhattisgarh.
- In terms of percentage of forest cover with respect to the total geographical area, Lakshadweep has the highest forest cover, followed by Mizoram and Andaman and Nicobar Island.
- The top five States where maximum forest cover has increased are Andhra Pradesh, Karnataka, Kerala, Odisha and Telangana.
- The survey, which has for the first time assessed water bodies, said that during last decade, the area under water bodies is increased by 2647 sq.km.
- The five States where forest cover has decreased most are Mizoram, Nagaland, Arunachal Pradesh, Tripura and Meghalaya.

- The main reasons for the decrease are shifting cultivation, other biotic pressures, rotational felling, diversion of forest lands for developmental activities, submergence of forest cover, agriculture expansion and natural disasters

Mumbai 12th wealthiest City in the world

- According to a report by New World Wealth, Mumbai, the economic hub of India is the 12th wealthiest city.
- Mumbai also features among the top 10 cities in terms of billionaire population.
- The list of 15 wealthiest cities was topped by New York with a total wealth of \$3 trillion.
- Among the 15 cities listed, San Francisco, Beijing, Shanghai, Mumbai and Sydney were the fastest growing in terms of wealth growth over the past 10 years, the report said

Global Corruption Index

- India's rank on the Corruption Perception Index fell two notches to 81 in 2017 from 79 in 2016.
- The Berlin-based non-government body Transparency International ranked 180 countries in 2017.
- New Zealand was the least corrupt and Somalia was the most.
- The 2017 index revealed – despite attempts to combat corruption, most countries were moving too slowly with their effort.
- India is a worst regional offender of press freedom in Asia Pacific, according to Corruption Perception Index.
- Transparency International finds crackdowns on NGOs and media are associated with higher levels of corruption in the world.
- On average, every week at least one journalist is killed in a country that is highly corrupt.
- The analysis by Transparency International showed that in the last six years, more than 9 out of 10 journalists were killed in countries that score 45 or less on the Corruption Perceptions Index.
- Transparency International is a Berlin-based non-government organization.

HOW INDIA FARES		
Nations	Rank in 2016	Rank in 2017
India	79	81
Brazil	79	96
Russia	131	135
China	79	77
South Africa	64	71
Pakistan	116	117

TOP, BOTTOM ONES	
Top nations	Bottom nations
New Zealand	Syria
Denmark	South Sudan
Finland	Somalia

Source: Transparency International Corruption Perceptions Index

Artificial Intelligence – Pwc India Report

- The impact of artificial intelligence (AI) on employment is expected to be severe, but the benefits outweigh its concerns, says the Pwc India report.
- Some of its findings are,
 1. 68% of Indian business decision-makers believe AI will help their business in boosting productivity, generating growth and addressing societal issues.
 2. AI will open up opportunities for people to do more value-added work.
 3. Will allow for greater flexibility and work-life balance.
- In the budget speech finance minister said that Niti Aayog would set up a national program to direct efforts in research and development of different AI applications.
- Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.
