IAS PARLIAMENT
Information is a *Blessing*
A Shankar IAS Academy Initiative

CURRENT AFFAIRS MAGAZINE

APRIL 2018

I N D E X

APRIL 2018 - GS COMPILATION

1. POLITY

1.1 SC's verdict on PoA Act

Why in news?

A nationwide protest against the Supreme Court's decision on SC/ST Act has resulted in violence.

What is the recent verdict of SC on the PoA?

- SC has ruled that Section 18, which bars grant of anticipatory bail to anyone accused of violating its provisions, is not an absolute bar on giving advance bail to those against whom, prima facie, there is no case.
- In addition, the Bench has prohibited the arrest of anyone merely because of a complaint that they had committed an atrocity against a Dalit or a tribal person.
- In respect of public servants, no arrest should be made without the written permission of the official's appointing authority.
- And for private citizens, the Senior Superintendent of Police in the district should approve the arrest.

What were the reasons for this verdict?

- There has been increasing number of false and frivolous complaints filed under the SC/ST act for personal motives.
- No guidelines were present in the act to prevent the misuse of the law and for protecting the innocent.
- There are also acknowledged abuses of the power to arrest under this Act which perpetuated casteism.
- Thus, this verdict was made to explain that interpretation of the PoA Act should promote constitutional values of fraternity and integration of society.

What are the implications from the SC's verdict?

- In response to the verdict, most parties demanded that the Union government file a petition to review the order.
- They contend that the judgment and some of its observations would result in leaving dalits unprotected against atrocities.
- Following this, there has been nationwide protests resulting in violence due to the explosion of dalit anger after the verdict.
- The dalit victims also claimed that itwouldbe more difficult for them to get their complaints of caste-based violence and discrimination investigated.

How did the case fare with regard to the judiciary?

- While the SC has admitted the review petition, the bench had reiterated its concern on the SC/ST Act being misused by some.
- Further, the bench stated that the previous judgment was merely to ensure due protection the liberties of the people (rather than diluting it).
- While public sentiment can't be a ground for the SC to reverse its earlier order, the court needs to recognize that its previous order was a legislative overreach.
- The judiciary is not supposed to enter into parliament's domain in cases where there is an existing law (irrespective of its quality).
- While checking the validity of the law, the judiciary should only be looking into its legality and consistency with the basic structure of the constitution.

1.2 T.N. Protests over Cauvery Issue

Why in news?

In Tamil Nadu protests are witnessed against the union government's failure to set up Cauvery water management board.

What is the significance of Cauvery for T.N.?

- Cauvery is regarded as the lifeline of Tamil Nadu as it is the only major river of the state, unlike Karnataka which gets water from the Krishna and the Godavari.
- The River also accounts for 70% of canal irrigation and nearly 25 lakh acres are recognised as irrigated area, under the Cauvery in Tamil Nadu.

- The paddy cultivating districts which account for 40% of the total area of the state, contribute 35% of the total crop production.
- In the past 10 years, the Cauvery has also become a major source of drinking water for a number of districts.

What is the recent verdict on Cauvery water dispute?

- In its recent verdict over Cauvery issue, Supreme Court has declared Cauvery a "national asset" and reduced the allocation of Cauvery water from Karnataka to Tamil Nadu.
- It upheld the principle of equitable apportionment of inter-State river water among riparian States.
- The SC had given the Centre 6 weeks to frame a scheme to make sure the final decisions are implemented.
- SC also directed the formation of the Cauvery Management Board (CMB) immediately.

What is T.N. concerns with the 'scheme'?

- The word 'scheme' was mentioned in the SC's judgement which required for the implementation of the final order given by the Cauvery Water Disputes Tribunal in February 2007.
- The Tribunal's final order states that the board would ensure timely water release in right quantum and at the right time taking into account the irrigation requirements of the states.
- Tamil Nadu demands that the 'scheme' should have entailed setting up of the Cauvery Management Board and the Cauvery Water Regulation Committee.
- Whereas, **Karnataka** argues that there is no mention of a 'board' in the court's order.
- Union government is also delaying the interpretation of the scheme and setting up of CMB.

Why union government is delaying setting up of the board?

- The Union government has clarified to the Supreme Court that there are divergent views over the judgement by the constituting states of the Cauvery basin.
- It has also mentioned that setting up of a board will lead to public outrage causing law and order problems during the upcoming Karnataka assembly elections.

1.3 Issues with Shifting of IPL Matches

What is the issue?

- In Tamil Nadu protests are being conducted after the SC's verdict on the Cauvery issue.
- This has led to the Indian Premier League cricket matches shifting out of Chennai.

What is the account of the protest in Tamil Nadu?

- In its recent verdict, the SC had directed the Union government to frame a scheme for proper allocation and management of water resources between T.N. and Karnataka.
- The SC also declared Cauvery a "national asset" and reduced the allocation of Cauvery water from Karnataka to Tamil Nadu.
- Tamil Nadu demands that the 'scheme' should have entailed setting up of the Cauvery Management Board (CMB) and the Cauvery Water Regulation Committee.
- Therefore, there is legitimate concern of people in Tamil Nadu over the Union government's inexplicable delay in framing a scheme to resolve the Cauvery problem.

4

What is the reason behind change in venue of the matches?

- Recently in Chennai during the first match of IPL, aggressive protests around the stadium resulted in road blockades and scuffles between the police and the protesters.
- Due to this the IPL management felt that the state government would be unable to provide adequate police security for conducting the further matches.

What are the implications of this move?

- It is misleading to see the development as a victory for protesters espousing the Cauvery cause and only temporary result of the current political mood in Tamil Nadu.
- By conveying its inability to give adequate police security to the remaining matches to be held in the city, the State government administration becomes dubious.
- The sheer irrationality of singling out one tournament which has no connection to the Union or the State government or the Cauvery crisis leads to the diversion from the actual demands for CMB.

1.4 TN Governor's Misadventure

What is the issue?

- The utility of a politically vested governor has been contested for long.
- Amid multiple controversies, the calls for removing the current TN governor have gained significant strength.

What is the role of the Governor?

- **Constitutional -** Governor is the bridge between the concerned state government and the union government.
- The office needs to be above politics to maintain neutrality and deserve the trust all concerned political parties and people.
- He is the nominal executive head of the concerned state and exercises certain functions in accordance with the Constitution.
- The Governor will normally be aided and advised by the Council of Ministers except in those functions which specifically calls for his discretion.
- **State Laws -** Governor also enjoys statutory powers under laws made by the state legislatures (which can also be modified by the concerned legislatures).
- For example, Governor functions as ex-officio Chancellor of some universities through university specific laws like "Anna University Act - 1978".
- The reason for such conferment is to ensure that the university administration and finances come under stricter and high profile supervision.
- In his capacity as chancellor, as the Governor is bound by state laws, it implicitly means that he has to work on the advice of the council of ministers.
- Significantly, this was even iterated in some of the previous Supreme Court pronouncements in landmark cases like "Samsher Singh vs. Punjab - 1974".

What are the TN Governor's misgivings?

- The Governor has also been conducting "review meetings" with officials across the state, which is an over-reach of his Constitutional duties.
- The appointment of a vice-chancellor to Anna University without consulting the state government is also a blatant violation of law.
- **The Scandal -** Recently, an assistant professor was found to be involved coercing her college students into an allegedly high profile sex-racket.
- Leaked voice tapes had actually even indicated the involvement of some form within the governor's office – which was a shocker.
- In this backdrop, in an unprecedented over-reach into the state government's domain, the governor commissioned an enquiry into the episode.
- Hence, when a press briefing was called for by the governor, it was thought that he would clarify the legal basis for his actions.
- **Suspicion -** Once the media interactions began, it became amply clear that he was ill prepared to handle the barrage of questions that were hurled at him.
- His only counter point to the accusations against of his alleged involvement in the controversy was that he was really old for such mis-deeds.
- **Professionalism -** At the end of the press interaction, the Governor patted a woman journalist in her cheek instead of replying to a question of hers.
- This was perceived as "sexually inappropriate, paternalistic and unprofessional" and prompted outrage.

- Significantly, the governor had later clarified that it was merely a grandfatherly affection and had apologised for the same, but that didn't cut ice.

1.5 Simultaneous Elections

What is the issue?

- The proposal for holding simultaneous elections to the centre and the states has gained traction in recent times.
- But there are many practical difficulties and democratic challenges that needs recognized before proceeding forward.

What are the political developments regarding simultaneous elections?

- **Advantages -** Simultaneous elections to the Lok Sabha and State Assemblies is said to have the benefits of saving poll expenditure considerably.
- It would also help the ruling parties to focus on governance instead of being put constantly in electioneering mode.
- **The Developments -** The BJP led government at the Centre has been talking about the need for simultaneous elections for some time now.
- The Union Law Commission has sought the opinion of the public, political parties, academicians and other stakeholders on the proposal.
- The Commission has also released a document outlining the amendments that may be required in the Constitution and electoral laws for achieving the same.
- While the final draft will be put out after the views of the public are incorporated, the present outline itself holds very significant provisions.
- **Envisioned Provisions -** Among the possible recommendations mentioned in the outline, there is a proposal for "constructive vote of no-confidence".
- I.e. while expressing lack of confidence in one government, members of the legislature will have to repose trust in an alternative.
- Towards this end, even a temporary waiver of anti-defection law is being considered to help in forming a stable alternative government.
- However, critics hold that such provisions for stabilising governments could be considered even now without simultaneous elections.
- **Political Motivation -** Obverses believe that voters would tend to prefer the same party at the centre and the state if elections are held simultaneously.
- In this backdrop, it is to be noted that PM Modi has clearly emerged as the primary pole at the centre with no potent alternative in sight.
- Hence, sceptics believe that BJP's zeal for simultaneous elections is driven by this situational advantage – which it seeks to capitalise on across states.

How can the electoral cycles be synchronised?

- The primary challenge is regarding the termination of existing legislatures to align it with the parliamentary election cycle.
- This would be difficult to execute as palpable political repercussions are bound to crop up on the timing and modalities of dissolution.
- Additionally, this would undermine the federal polity and representative democracy that India has cherished since independence.
- The Law Commission has suggested an alternative to this by indicating its openness to embrace 2 distinct electoral cycles into which states are clubbed.
- I.e. to align elections for one set of states elections with the central and the rest will face elections 30 months later (mid-way through Lok Shaba's term).
- The decision on which states are to be clubbed together is to be decided based on the proximity of the state legislature's current tenure with that of the parliamentary elections.
- Overall, there are multiple difficulties involved in the process and detailed debates and deliberations are needed before proceeding further.

1.6 Concerns with SC judgments on Master of Roster

What is the issue?

- In recent times, the master of roster controversy has emerged in the Supreme Court.
- This issue is focussed on Chief Justice of India's absolute power on the judicial administration.

What are the significance of master of roster?

- Master of Roster is a judge appointed by the SC to list out the allocation of cases to different judges, for preventing two different benches from hearing the same kind of case.
- The Roster will allow for effective case management, by allocating similar cases to judges with more experience.
- Last year, the SC through few judgements, formalised the "convention" that the CJI is *Sui generis* (unique) and hence the master of roster.

What events led to the judgements regarding issue of roster?

- Earlier in 2017, four senior most judges of the SC had blamed the present CJI for selectively allotting cases to preferred benches.
- In response to that, the CJI published a new subject wise roster for allocation of cases.
- This allocation, did little to pacify the judges as the CJI allocated most important public litigations matters to himself.
- Following this, a verdict responded to the criticism by declaring that the CJI is only a first among the equals as a judge.
- But the bench also agreed that no one, even the fellow judges of SC can question the powers of CJI as the court's top administrator.
- Final judgement confirmed that the CJI's dominance over the roster was necessary to protect the SC from anarchy.

What are the concerns of the SC judgements?

- There is a deterioration in the unwritten and righteous custom that the law of the land is supreme.
- Concentration of immense powers on a single person is harmful for the nation and is also against the principles of democracy.
- The issues triggering these judgements are also concerning as the cases were relating to allegations of a conspiracy to bribe SC judges.
- Previous norms of pronouncing sensitive judgements by consulting with collegium also will get affected as the CJI will solely decide on cases as well as judgements.

1.7 All About Impeachment of CJI

What is the issue?

- Vice president of India/ Presiding Officer (PO) in Rajya Sabha has rejected the impeachment motion passed to remove the CJI.
- It calls for understanding the whole impeachment procedure, a tool to ensure judiciary's credibility.

What are the constitutional provisions?

- There is **no specifically any provision** in the Constitution that deals with the **impeachment of the CJI**.
- "Proved misbehaviour or incapacity" is mentioned in **Article 124(4)** of the Constitution.
- It is the ground for impeachment of a **Supreme Court judge**.
- The CJI is only the first among equals.
- Hence, the CJI too, like other judges of the SC and HCs, can be impeached on this ground.

What is the impeachment procedure?

- The **Judges (Inquiry) Act, 1968** contains details of the process.
- The **motion** is to be signed by 50 members of Rajya Sabha or 100 members of Lok Sabha.
- If it is admitted, an **inquiry committee** will probe the charges.
- It will consist of an SC judge, a Chief Justice of an HC and a distinguished jurist.
- If the charges stand proven, the motion is to be presented to each House of Parliament.
- It has to be passed by a **majority** of the House **and 2/3rds** of those **present and voting** in the same session.
- Even if the charges are proved, the Parliament is not bound to remove the judge.
- Finally, the **President** will issue the **order removing the judge.**
- **Judge's Right -** The particular Judge has the right to be heard.

- However, this is not available at the time of admission of the motion.
- During the inquiry, the judge has the full right to defend.

What is the complexity?

- Impeachment process is **neither entirely political nor entirely judicial.**
- It is a fine and judicious blend of the two.
- Admission of the impeachment motion, constitution of inquiry committee, and its findings are in the nature of judicial processes.
- But the adoption of the motion by Parliament is certainly a political process, as members do vote along party lines.
- The complexity of the impeachment process has ensured that no judge has been removed so far.

What is the PO's role?

- The presiding officer may admit or refuse to admit the motion.
- But the PO should not ideally take over the role of the inquiry committee.
- The Presiding Officer is not supposed to mechanically admit any motion.
- It means that the requisite number of members having signed the motion is not the only criteria.
- "Proved misbehaviour" is the ground for the removal of a judge.
- But it is the job of the inquiry committee to give a finding on whether the charges are proved.
- But again, the charges could sometimes be prima facie totally without substance.
- In that case, the PO has the right to block the motion at this initial stage itself.

What all constitute 'proved misbehaviour'?

- The **Constitution does not define** 'incapacity' and 'proved misbehaviour'.
- The misconduct of a judge is to be proved outside Parliament before a non-parliamentary committee.
- The **Judges (Inquiry) Bill, 2006**, defines 'proved misbehaviour':
    i. wilful or persistent conduct bringing dishonour or disrepute to the judiciary
    ii. wilful or persistent failure to perform the duties of a judge
    iii. wilful abuse of judicial office, corruption, lack of integrity or committing an offence involving moral turpitude
- The **Judicial Standards and Accountability Bill, 2010**, proposed to widen the definition of misconduct.
- Under this, 'lack of integrity' included rendering judicial decisions for collateral or extraneous reasons.
- Giving judgements or any other acts that have the effect of subverting the administration of justice.
- The failure to furnish a declaration of assets and liabilities or wilful giving of false information was included within 'misbehaviour'.
- The **Supreme Court** itself has laid down that misbehaviour is a wider term.
- Therefore, if, due to a judge's conduct, the **judiciary's credibility has suffered**, it can be considered **'Misbehaviour'**.

Why was the current motion rejected?

- The Vice-President is not duty-bound to give reasons.
- However, in this case, M Venkaiah Naidu has given detailed reasons.
- He has said that misbehaviour has not been proved.
- There was little merit in any of the charges laid for impeachment.
- The **charges** are said to have been based on mere **suspicion and assumption.**
- He says the signatories themselves are unsure of the reliability of the charges.
- He has considered the implications for **judicial independence** if an investigation is ordered on unreliable charges.
- **Ruling** - He cited one of the earlier Supreme Court ruling in this regard.
- Accordingly, Speaker (or Chairman) has to act with utmost care, circumspection and responsibility.
- Seriousness of the imputations, nature and quality of the records have to be kept in mind.
- The effect on public administration of justice and independence of the judiciary are also to be considered.

Is this a case for "proved misbehaviour or incapacity"?

- The main charge against CJI Misra is that he misused his control over the roster.
- Cases were assigned selectively with a view to influence their outcome.

- But the question is whether impeachment is an option in the **absence of concrete material** to establish this charge.
- Evidently, the Opposition is divided on initiating impeachment proceedings.

1.8 Addressing the Concerns with ToR in 15th FC

What is the issue?

The 15th Finance Commission constituted recently is shaped with certain issues relating to the Terms of Reference (ToR).

What is the role of the Finance Commission?

- The Finance Commission (FC) is a constitutional body created to address issues of vertical and horizontal imbalances of federal finances in India.
- It is appointed every five years and consists of a chairman and four other members.
- The constitutional mandate of the FC is
    1. To decide on the proportion of tax revenue to be shared with the States
    2. The principles which should govern the grants-in-aid to States.
    3. Responsibility to make recommendations on policy issues referred by the President in the interests of sound finance.
- The recommendations made by the FC are advisory in nature and, hence, not binding on the Government.

What is Terms of Reference (ToR)?

- Besides the core mandated areas of FC like tax devolution, ToR is a set of other areas that the President mandates the FC to provide its recommendations.
- Although the FC is an independent quasi-judicial body, it can work on areas which suit the government's preferences by careful handling of the ToR.
- Some of the key ToR for the 15th FC are reviewing the need for revenue deficit grants, assessing the increased tax devolution of the 14th FC, measuring effect of flagship schemes, etc.

What are the concerns with ToR in 15th FC?

- Some provisions under the ToR of the 15th FC seem to transgress upon the discretionary domain of the Commission.
- The ToR of 15th FC has referred for estimation of revenue potential and fiscal capacity of only the Union and States leaving aside the local governments (LG), which are a crucial part of the Federal structure.
- There is a provision in ToR for examining the fiscal impact of the "enhanced tax devolution" of the 14th FC and of national development programmes including the New India 2022.
- Evaluating the fiscal impact of 14th FC whose period of recommendation ends in 2020 is beyond the purview of this Commission.
- The 15th FC's ToR has omitted certain significant provisions like 'sums to be paid to states in need of assistance', which are generally found in all the previous FCs.
- These provisions could hugely affect the LGs whose shares have increased many times since the last 2 FCs.

What measures needs to be taken to address these concerns?

- Provisions in ToR have to be in line with the principle of cooperative federalism which ensures citizens with comparable level of fundamental services irrespective of residential jurisdiction.
- The efforts to provide grants to local bodies have to be consolidated with the initiatives taken by 13th and 14th FC to improve the quality of basic services.
- Balanced regional development, inter regional equity are goals to be focussed by all tiers of the federal structure and not left to the states as implied in the ToR to usher in inclusive growth.

2. GOVERNMENT ACTS, POLICIES AND INTERVENTIONS

2.1 National Institutional Ranking Framework, 2018

Why in news?

Ministry of Human Resource Development recently released the National Institutional Ranking Framework (NIRF) 2018.

What are the latest rankings?

- The ranking of most colleges and universities have remained almost the same this year.
- Indian Institute of Science (IISc), Bengaluru, is again ranked first in both overall and university categories.
- The Indian Institutes of Technology (IITs) are the best among engineering institutes.
- The Indian Institutes of Management (IIMs) are the best among management institutes.
- This is for the third time in row on the NIRF ranking that IITs and IIMs are leading.
- IIT-Madras was adjudged the best engineering institute.
- IIM-Ahmedabad was adjudged the best management institute.
- The All India Institute of Medical Sciences was adjudged the top medical college.
- There were some institutes, which could not be placed in any of the 9 categories.
- These have been placed in special category because of the quality of research work.
- Some of them include the National Dairy Research Institute, Karnal, Indian Agricultural Research Institute, New Delhi, etc.

> **NIRF**
>
> - The National Institutional Ranking Framework (NIRF) was approved by the MHRD and launched in 2015.
> - The framework outlines a methodology to rank institutions across the country.
> - The parameters broadly cover -
>   1. Teaching, Learning and Resources
>   2. Research and Professional Practices
>   3. Graduation Outcomes
>   4. Outreach and Inclusivity
>   5. Perception
> - There were a total of 9 categories this year under which India's higher education institutions were judged.
> - The 2018 exercise newly added the disciplines of law, medicine and architecture.

What are the concerns?

- **Participation** - India has around 860 universities, 40,000 colleges and 11,600 standalone institutions of higher education.
- Of these, only around 4,500 institutes took part in the India Rankings 2018.
- Even among the institutions that participated, there is a clear skew towards southern, south-eastern and western India.
- The government is planning to cut some sort of funding to those which do not participate in the rankings.
- **Parity** - Older institutions with historical advantages now enjoy a higher ranking.
- This obscures newer entrants who may have stronger claims to excellence.
- **Approach** - The ranking approach worldwide is critiqued for failing to capture the crucial metric of learning outcomes.
- The rankings instead rely on proxy data on faculty strength and qualifications.

2.2 Pending National Sports University Bill

What is the issue?

Inspite of India winning medals in the Commonwealth games, the bill for establishing National Sports University is still pending

What is the bill about?

- The Bill aims to establish a National Sports University (NSU) in Manipur, which will be empowered to grant degrees, diplomas and certificates.
- NSU will promote sports education in the areas of sports sciences, sports technology, sports management, and sports coaching.
- NSU will impart training to sports officials, referees and umpires and evolve as centres of excellence in various disciplines.
- The bill also proposes to establish campuses and study centres in other parts of the country.

What is the need for such a bill?

- In India there are various gaps existing in the national sports environment like sports science, technology, management and high performance training, which needs to be improvised.

- There is also a need to support the athletes holistically who win medals for India and to encourage the talent present in the country.
- Thus a full-fledged sports university which provides sports education in international standards will deal with all these concerns.

What are the actions so far taken in this regard?

- The NSU is proposed to be set up within a period of 2 financial years, including establishment of outlying campuses inside and outside India.
- Memorandum of understanding has been signed by the Union government with Sports universities in Australia, for development of curriculum, research facilities and laboratories.

2.3 Aspirational Districts Programme

Why in news?

- NITI Aayog has recently launched the baseline ranking for 115 aspirational districts.
- This is in line with the Aspirational Districts Programme (ADP) announced earlier by the Prime Minister.

What is ADP?

- It aims to quickly and effectively transform some of India's most underdeveloped districts.
- It will identify areas of immediate improvement, measure progress, and rank districts.
- The broad ideas of the programme include -
    i. **convergence** of central and state schemes
    ii. **collaboration** of central, state level '*Prabhari*' (in-charge) officers and district collectors
    iii. **competition** among districts
- The states are the main drivers in the programme.
- Deliberately, the districts have been described as aspirational rather than backward.
- The motive is to view them as areas of opportunity and hope rather than of distress and hopelessness.

How were the districts selected?

- The 115 districts were chosen by senior officials of the Union government.
- This was in consultation with State officials on the basis of a composite index.
- The parameters included are -
    i. deprivation enumerated under Socio-Economic Caste Census
    ii. key health and education performance indicators
    iii. state of basic infrastructure

What is the present ranking on?

- The present ranking is based on 49 indicators across 5 sectors.
- These sectors are areas that have been targeted for transformation -
    1. health and nutrition
    2. education
    3. agriculture and water resources
    4. financial inclusion and skill development
    5. basic infrastructure
- A minimum of one district was chosen from every State.
- Apparently, the largest concentration of districts is in the States which have historically under-performed.
- This includes states such as UP and Bihar, or which are afflicted by left-wing extremism such as Jharkhand and Chhattisgarh.
- The present ranking would be followed by delta ranking of these districts based on their "incremental progress".

How is progress monitored?

- NITI Aayog in partnership with the government of Andhra Pradesh has created a dashboard.
- This is for monitoring the real-time progress of the districts.
- District collectors of all the aspirational districts can input the latest available data of their respective districts.
- The dashboard will also be open to the public.

What are the significant aspects of ADP?

- **Approach** - This is the first time India's most backward districts are being focussed.
- ADP is a better vision of how public services are best delivered to those who need them the most.
- **Governance** - Achieving success in this programme necessitates the contribution of all 3 tiers of government.
- The role of states is important in terms of facilitating resource, personnel, etc.
- On financial inclusion, the full cooperation of banks is necessary and only the Central government has leverage over them.
- The most crucial is the role of District Magistrate or Collector.
- As s/he is familiar with the challenges of his or her geography and has considerable power to implement government schemes.
- **Competitive federalism** - The spirit of cooperation needs to be supplemented by a culture of competition.
- ADP takes the principle of competitive federalism down to district administrations.
- **Civil society** - ADP has opened its door to civil society and leveraged the tool of corporate social responsibility.
- This will bring new ideas and fresh energy from non-government institutions, to join the "official" efforts.
- **Efficiency** - Many schemes of the Centre have flexible spending components, permitting autonomy at local level.
- But these are seldom used in practice due to controlling Central and State machineries.
- Thus ADP focuses on not spending more but spending better.
- There is no financial package or large allocation of funds in ADP.
- It only aims at leveraging the already existing resources of several government programmes, to use them more efficiently.
- **Smart data** - Data collection is often delayed or lacking in quality in India, distorting the development policy efforts.
- With real time data in ADP, those on the ground level can alter strategies after accurate feedback.
- In a way, the ADP reorients how government does its business of delivering development.

2.4 Aligning Minimum Agricultural Wages and MGNREGA Wages

What is the issue?

The gap between the minimum agricultural wages and MGNREGA wages is growing steadily in the last few years.

What are these wages meant for?

- **Minimum agricultural wage** - It is paid to agricultural workers.
- It is fixed by the respective state governments.
- The Supreme Court has upheld the minimum wages as a fundamental right.
- Moreover, any labour provided at below minimum wage is a "forced labour".
- **MGNREGA wage** - The NREGA was enacted in 2005 for livelihood security.
- The Central Government may, by notification, specify the wage rate for the purposes of this Act.
- This is notwithstanding anything contained in the Minimum Wages Act, 1948.
- Different rates of wages may be specified for different areas.
- Wage rate may be specified from time to time, at a rate of not less than 60 rupees per day.

What is the discrepancy?

- The union government brought MGNREGA wages at par with minimum agricultural wages in 2009.
- Notably, in 2011, only 4 states, Kerala, Goa, Haryana and Mizoram, had minimum agricultural wages higher than MGNREGA wages.
- In 2016, NREGA wages were lower than minimum wages in almost half of India's states.
- Since then, the gap between the two sets of wages has grown steadily.

IN MOST MAJOR STATES, NREGA WAGES ARE LOWER

State	Minimum agri wage (in Rs)	NREGA 2018-19 wage (in Rs)	Difference in wages (in Rs)
Gujarat	298	194	104 ▼
Bihar	237	168	69 ▼
Jharkhand	230	168	62 ▼
Chhattisgarh	234	174	60 ▼
Madhya Pradesh	230	174	56 ▼
Punjab	294	240	54 ▼
Uttar Pradesh	228	175	53 ▼
West Bengal	234	191	43 ▼
Jammu & Kashmir	225	186	39 ▼
Haryana	318	281	37 ▼
Odisha	213	182	31 ▼
Rajasthan	213	192	21 ▼
Karnataka	269	249	20 ▼
Maharashtra	194	203	9 ▲
Tamil Nadu	195	224	29 ▲

What is the latest revision?

- The Union government recently issued the revised wage rates for MGNREGA workers.
- The average wage hike for FY 2018-19 is 2.9%.
- This is only slightly higher than last year's 2.7%.
- In 2016-17, the average wage hike was 5.7%.
- Some states have seen only Rs 2 increase in daily wages.
- The wages remain unchanged in 10 states.
- These include states like Jharkhand, Bihar, Uttarakhand and Arunachal Pradesh.
- Notably, these are states where the wages are already the lowest.
- Unlike this year, in 2017-18 every state had an upward wage revision, even if marginal.
- With the latest revision, 28 out of 36 states and UTs have NREGA wage below the minimum agricultural wage.

Why is the disparity?

- The Ministry of Rural Development (MoRD) set up the Mahendra Dev (2014) and Nagesh Singh (2016) Committees.
- But the Finance Ministry failed to implement these recommendations.
- The rejection of Mahendra Dev Committee's recommendations led to the lowest ever NREGA wage increase until 2017.
- Nearly five states received an increase of only a rupee.
- In 2018, the wages hit a new low after the Nagesh Singh Committee's report was turned down.

What are the recommendations made?

- **Mahendra Dev Committee** - Workers should be paid either the minimum wage or the NREGA wage, whichever was higher.
- The panel estimated the need for an additional allocation of Rs 6,000 crore.
- This was a 17% increase to the then MGNREGA budget.
- The annual revision of NREGA wages should be based on CPI-R instead of CPI-AL.
- Consumer Price Index-Rural (CPI-R) reflects the current consumption pattern of rural households.
- On the other hand, CPI for Agricultural Labourers (CPI-AL) is based on a 35-year-old consumption basket.
- The Finance Ministry had turned down these recommendations.
- It insisted on setting up a panel to study the financial implications of the Mahendra Dev report.
- **Nagesh Singh Committee** - There was no need to bring MGNREGA wages on a par with minimum wages of states.
- But, the annual wage revision should be linked to CPI (R).
- As, CPI (R) is a better indicator of wage increase as it gives lower weightage to food items. Whereas, the basket of goods for calculating CPI (AL) is mainly food items (up to 72%).

2.6 PMFBY – The Implementation Challenges

What is the issue?

- PM Fasal Bima Yojana (PMFBY) is an all encompassing crop insurance scheme that was touted relieve farmers of their uncertainties.

- But its implementation has been patchy and widespread delays in payment have been defeating the very purpose of the scheme.

What are the statistics?

- PMFBY crop insurance covers losses at every stage, "from sowing to post-harvest" and was intended to insulate farmers from the strain of crop failures.
- PMFBY insures for production costs for various crops, and farmers having to pay about 2% of total estimated production value as insurance premium.
- An additional amount is pitched by the government (subsidy) for every policy to make the scheme financially viable for insurance companies.
- The amount to be paid by the government is decided based on the risk assessment done for various crops and regions – which presently accounts for approximately 50% of the total.
- **The Numbers -** Insurance companies collected premiums of Rs 22,180 crore in 2016-17 and Rs 24,454 crore in 2017-18 under PMFBY.
- But they disbursed only Rs 12,959 crore in claims for 2016-17 and have paid out just over Rs 400 crore for the last crop year so far.
- There is an argument that 2016 and 2017 were normal monsoon years (thereby resulting in lower payouts), and that claims might go up in calamitous years.
- However, this assertion doesn't correlate with the field reports, and it appears that PMFBY is faltering to delivering what was promised.

What are the teething troubles?

- The 2017 kharif crop's harvesting was over by December, but farmers have thus far got only Rs 402 crore of payments.
- This is against the estimated claims of Rs 13,655 crore by state government and Rs 1,759 crore approved by insurance companies.
- Even for the 2016-17 crop year, there is a difference of Rs 1,474 crore between the payments approved and actually made.
- The delay in payments is defeating the very purpose of the scheme, which is to reduce the financial distress and save them from the crutches of moneylender.
- Timely payments are critical to enable farmers settle previous borrowings and access formal credit for the next sowing.

What is the way forward?

- 50% of the PMFBY premium subsidy is borne by the state governments that are also responsible for determining yield losses.
- As insurance deserves higher priority that fertilizer and other agri-support, it makes sense for the centre to fund the entire subsidy amount.
- This will provide for better coordination in subsidy transfer to the insurers and also make claim disposals swift.
- The Centre can further link release of subsidy to the states adhering to prescribed operational schedules for assessing the extent of crop failure.
- Also, extensive employment of remote-sensing technology for sampling of fields and capturing survey data with time and date stamping is required.

2.7 Amending Anti-Rape Laws

What is the issue?

- The Criminal Law (Amendment) Ordinance, 2018, was passed by the Union Cabinet in response to current widespread outrage against rapes.
- While the ordinance has enhanced punishments, there are glaring systemic deficiencies that need to be addressed to genuinely improve the situation.

What were the major aspects of the ordinance?

- **Provisions -** The ordinance enhances the punishment for rape by amending Section 376 (rape laws) of the Indian Penal Code (IPC).

- The minimum punishment for rape has been increased from the existing 7 years to 10 years now (minimum for raping an 'under 16' is 20 years).
- All convicts in a gang-rape case will be sentenced to life and the maximum punishment for raping an 'under 12' has been enhanced to include death.
- **Gender Sensitive -** "Protection of Children from Sexual Offences (POCSO) Act" is a gender-neutral law and covers victims who are both boys and girls.
- However, the recent ordinance approved by the Cabinet has been worded to be stringent only against sexual crimes against females.
- This was probably due to their specific vulnerabilities, but "Ministry of Women and Child Development" has asked for making the ordinance gender neutral.

Was there no capital punishment in the rape laws until now?

- While many verdicts have granted the maximum punishment of death for 'rape along with murder', a death sentence wasn't an option for 'rape alone'.
- In the aftermath of the December 2012 Delhi gang-rape and murder, the justice JS Verma committee had decried 'Death Penalty for rape'.
- The committee held that granting death for rapes would be disproportionate and regressive in the context of sentencing and reformation.
- As the committee's views created public discontent, the then government decided to include death as the maximum punishment in two specific cases.
- Hence, death for rape was to be an option – for repeat offenders, and for rapes that cause the victim to go into a permanent vegetative state.
- The current ordinance enhances the scope for granting death to rapists.
- Notably, this development makes India the 14th country that has death sentence as an option for convicts in rape cases.

What are the arguments against the ordinance?

- Capital punishment is all about retribution, disregards the reformative aspect of the criminal justice system.
- Additionally, there is little evidence to support that it has a deterrent effect.
- The primary argument against awarding capital punishment for rape has been that it would drive the accused to kill the victim to get rid of evidence.
- The ordinance seems to disregard the fact that a majority of sexual assault cases go unreported due to the child's silence or lack of family support.
- Significantly, as per the statistics of "National Crime Records Bureau (NCRB)" on rapes, 94% of the rapists are known to the victim.
- Hence, critics feel that the incorporation of death penalty as an option will put the victims under pressure to suppress the matter and not pursue the case.
- The new ordinance provides for fast-track courts, and a two-month time period each for police investigation and completion of trial of all rape cases.
- But it is mum on the appointment of more judges to handle the burden or sensitising the judiciary and the police in dealing with such cases.
- It is also silent on victim support and rehabilitation, despite the dire need for such actions being felt across the spectrum of the judicial process and further.

Has anything been suggested as a way to deal with this?

- Deterrence of the crime and the victim's access to justice require both better implementation of existing laws and systemic changes.
- There is a huge pendency of cases – all of which needs to be fast-tracked through political will and coordinated action.
- There are provisions for taking actions against police officers who dissuade complainants from filing cases by coercion (or persuasion).
- But these are rarely invoked, although a number of victims complain of having been turned away at police stations.
- There are also considerable biases in verdicts as most convicts seem to be from the poor sections of the society.
- Notably, this is despite the fact that offenders are prevalent across the socio economic spectrum.

3. SOCIAL ISSUES

3.1 Social Progress Index - 2017

Why in news?

The Social Progress Index for 2017 has been released by a NGO Social Progress Imperative.

What is Social Progress Index?

- The Social Progress Index (SPI) measures the development of the country based on the social and environmental measures provided by the country to its citizens.
- It defines social progress as the capacity of a society to meet the basic human needs of its citizens to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.
- Fifty-four indicators in the areas of basic human needs, foundations of well-being, and opportunity to progress show the relative performance of nations.

What is the significance of SPI?

- Generally, many aspects of social progress tend to improve with income growth and wealthier countries deliver better social outcomes than lower-income countries.
- But it has been observed by SPI that where there is an imbalance between economic growth and social progress, political instability and unrest often arise, as in Russia and Egypt.
- This indicates lagging social progress also holds back economic growth.
- The SPI data also reveals that countries have a higher level of social progress even with lower GDP e.g. – Costa Rica.

How SPI differs from GDP?

- GDP is an old measure that was developed as a statistical tool for policy makers to determine the recovery from the Great Depression in 1930's.
- It focuses only on economic growth and is calculated quarterly to primarily analyse the strength of an economy, and for setting economic goals and objectives.
- It does not capture the social and environmental processes such as level of inequity which exists in the society regardless of overall economic growth.
- Therefore SPI is seen as a better yardstick to measure a country's level of progress by understanding the citizen's development needs and priorities.

What are the findings of the Index about India?

- The list is topped by Scandinavian countries like Denmark, Finland, Iceland, Norway, while India is at 93rd position.
- India's performance on health-related Sustainable Development Goals (SDGs) Index is the worst among BRICS nations.
- India still lags in areas such as water, sanitation and access to higher education.
- India also scored poorly on incidences of those under 18 who experienced sexual violence.

3.2 Impacts of Poor Work Environments

Why in news?

Recent studies have revealed that depression and stress are increasing among employees in private sector.

What are the findings of the study?

- Two recent studies have found that depression, anxiety and stress prevail among 43-46 per cent of employees in India's private sector.
- The harmful side effects of "management toxicity" are affecting more and more Indians.
- Some one-eighth of the 800,000 suicides across the world annually are literate Indians potentially employed or employable.
- India is the world capital for diabetes, and cardio ailments are affecting more and more Indians in their thirties.

What are the reasons behind these issues?

- Demanding work schedules, high pressure on Key Performance Indicators linked to higher perquisites and the always-on mobile phone syndrome are the top three culprits.
- Improper sleep, relationship issues, poor eating habits, lack of exercise, lifestyle issues such as EMI troubles and peer pressure to maintain luxurious lifestyles complete the list.
- Unhealthy workplaces diminish employee engagement, increase turnover, and reduce job performance, while driving up health insurance and health-care costs.

How work environments contribute to these factors?

- For white collar workers the stress at work is intangible and doesn't get measured which results in an ever-higher physical and psychological toll.
- An empirical studies found that long work hours are associated with adverse health including cardiovascular disease, diabetes, and disability.
- Working overtime was associated with a 61 per cent higher injury rate.
- There are also various evidence which shows significant positive mean correlations between overall health symptoms and hours of work.

What measures needs to be taken?

- Employees must comprehend what constitutes health risks in their work environments and choose their employers based on the stress-related dimensions of work.
- Employees need to learn how to say "No" when it is right to say so and to adhere to time management principles.
- Employers will need to determine the costs of their toxic management practices in terms of both direct medical costs and indirect costs.
- Respective government's needs to take action on the externalities created when enterprises retrench people who were physically and psychologically damaged at work.
- Societies also need social movements to advocate human sustainability and better work environments are as important as environmental sustainability.

3.3 Handling Child Rape Cases

What is the issue?

- With the recent Kathua and Unnao rape incidents, the demand for death penalty for rape convicts is back.
- However, the decision on death penalty needs a thorough view through the social and legal lenses of the nation.

What are the two recent cases?

- **Kathua** - It involves an 8-year-old girl from Kathua, J&K. She was abducted, drugged, raped and killed.
- The accused are identified and arrested. Notably, the deceased is a Muslim girl and the accused are Hindus.
- These identities have made it an issue of communal politics.
- **Unnao** - A minor girl was allegedly lured by promise of patronage and was raped by the local MLA from the current ruling party.
- Her family had to struggle to get a complaint registered. She then went missing, and a case of abduction was registered.
- She was recovered and gave a statement that did not implicate the MLA.
- She and her family persisted in alleging rape and began to protest outside the CM's residence in Lucknow, UP.
- Her father is said to have been beaten up by the MLA's brother and then, picked up by the local police. He was sent to jail, where he eventually died in judicial custody.
- The government interfered and the policemen involved in the arrest of the father were suspended.
- The case was transferred to the CBI and the MLA was arrested. The charges of rape may or may not be established, but the abuse of power is evident.

Why are child rape cases complex?

- **Nature** - Child sex abuse is a complex crime unlike murder.
- There is an attitude of equating family 'honour' with such incidents. Societal taboo, under-reporting and hostility to the victim make it more complicated.
- **Underreporting** - In 95% cases, the perpetrator is known to the child.
- In such cases, the child is under severe pressure to not report the abuse.
- In most cases, the child victim turns hostile. Apparently, only a lesser percentage of them actually testify against the accused.
- The severity of punishment holds children (family) back from reporting and testifying.
- This, along with poor investigation, results in low conviction rates.
- **POCSO** - The POCSO Act has provisions for special, child-friendly courts.
- It calls for in-camera testimony, child psychologists, protection officers and educators. However, these are rarely implemented in states.
- This results in hostile questioning by defence lawyers, threats by the perpetrators, and delays in registering of cases.
- In the present case, owing to its special status, J&K does not even have a POCSO law.

17

- So the perpetrators must be tried under the Indian Penal Code.

Is the call for death penalty valid?

- **Rationale** - The demand for death penalty arises from disgust and society's need for revenge.
- This alone could not certainly be the basis for deciding on death penalty.
- **Effect** - Death penalty is already a provision in most cases.
- Evidently, it has not been an effective deterrent against crime.
- It will only aggravate the problem of under-reporting of child sex abuse cases.
- **Judicial system** - There is a legitimate concern that the country's judicial system has not been consistent in awarding death penalty.
- The Law Commission earlier recommended abolition of death penalty, except in terrorism-related cases.
- It however observed that it is difficult to operate the 'rarest of rare cases' principle without a hint of arbitrariness.
- It is wrong to force judges to compare the relative 'merits' of rape victims based on age and choose between death sentence and life.

What is the way forward?

- **Legislation** - Public sentiments do matter in a democracy.
- But it cannot replace sensible policies and the rule of law.
- Legislation thus ought to be a well-considered exercise.
- It should not be a response to popular outrage in particular incidents.
- **Policing** - The issue of lack of public trust in the police should be addressed.
- It must be ensured that the police serve without fear or favour.
- They must abide by due process, and devote enough time and resources to handling heinous cases.
- They must be allowed to carry out investigations without undue pressures and influence.
- **Social** - Besides these, the social attitudes towards women and children ought to change.
- Sensitisation on gender matters and proper socio-psychological support are essential for the society in general and the potential perpetrators in particular.

4. GOVERNANCE

4.1 Concerns with PSU recruitments

What is the issue?

In recent times, the recruitment process of PSUs are not being done according to the Public Enterprises Selection Board (PESB).

What is the role of PESB?

- The objective of PESB is to evolve a sound managerial policy for the Central Public Sector Enterprises.
- It is responsible for the selection and placement of personnel in the posts of Chairman, Managing Director or Chairman-cum-Managing Director (Level-I), and Functional Director (Level-II) in PSEs as well as for other posts specified by the Government.
- It advises the government on matters relating to appointments, extension of tenure and termination of services of the personnel of the above mentioned levels.
- PESB also has a data bank containing all information relating to the performance of PSEs and its officers.

What are recent concerns with recruitment process in PSUs?

- **Coal India Ltd** - The chief of Central Coalfields, a subsidiary of Coal India Ltd (CIL)assumed additional charge of chairman and managing director of Coal India Ltd (CIL).
- This is in-spite of the chief's rejection for the postby the PESB few months before his recruitment.
- **Oil & Natural Gas Corporation** - The petroleum ministry proposed to recruit a person as the chairman of ONGC with just 1 year validity and quarterly appraisal to decide his further appointment.
- This was not accepted and the Appointments Committee of the Cabinet and the person was made CMD till his superannuation in 2021.
- **Banks Board Bureau -** Its broad agenda is to improve governance at Public Sector Banks and advise government on top-level appointments.
- But appointment of those officials are scrutinised and decided by the Finance ministry and not under the preview of BBB.
- There are also instances where appointments in top management of PNB, BOI took place and services of board members terminated completely bypassing the BBB.

4.2 Law Commission on BCCI

Why in news?

The Law Commission of India has recommended some changes with regard to BCCI.

What are the recommendations?

- **Public body** - Board of Control for Cricket in India (BCCI) should be declared a public body.
- The cricket board, as an entity, is permitted by the state to represent the country at the international stage.
- The ICC (International Cricket Council) recognises BCCI as the 'official' body representing India.
- It exercises 'state-like' powers in the regulation of cricket.
- Given these, it should logically come under the definition of 'state.'
- **RTI** - It should be brought under RTI Act's purview for scrutiny by any citizen.
- The board and all its member cricket associations should be brought under the Right to Information law regime.
- **NSF** - The BCCI virtually acts as a National Sports Federation (NSF).
- Thus, the Ministry of Youth Affairs & Sports website should explicitly mention BCCI in the list of NSFs.
- This would automatically bring it within the purview of the RTI Act.

What is the need?

- **Functions** - The BCCI is a private body that needs no financial help from the government.
- The SC also ruled in 2005 that the BCCI could not be termed an instrumentality of the 'State' under Article 12.
- However, subsequent developments have increasingly implied the public character of BCCI's functioning.
- **Rights** - The board's monopolistic activities, directly and indirectly, affect the fundamental rights of stakeholders.
- These include citizens, players, and other functionaries.
- A private citizen should be able to move the highest court against the BCCI for any violation of fundamental rights.
- **Concerns** - The board is currently veiled from public scrutiny.
- It enjoys an environment of opacity and non-accountability.
- There are concerns of corruption and other forms of malpractices in the board.
- It affects the general public's opinion on one of the most popular sports played in India.
- It has thus been felt for quite some time to make BCCI more transparent and accountable.

What is the way forward?

- The central government should consider seriously the recommendation of the Law Commission.
- The Supreme Court's intervention led to the constitution of the Justice R.M. Lodha Committee some time back.
- It recommended sweeping reforms in the board's structure and the rules governing its administration.
- Implementing these reforms at both national and State levels could impart greater transparency in BCCI's functioning.
- It could lead to an overhaul of cricket administration in India and restore faith in the board and the sport.

4.3 Cooling Off Period for Officials

What is the issue?

- Ex-foreign secretary S. Jaishankar recently joined the Tata Groups.
- The cooling-off period has been waived off for him, leading to questions on the decision.

What is a cooling off period?

- Bureaucrats serve a cooling off period after they retire and before they can join a private firm.
- As per rules for the all-India services, officials undergo a "cooling-off period" for a year.
- The period was reduced from the earlier 2 years, in December 2015.
- This applies to officers of Group "A" Central Civil Services/Posts and All India Services.
- Government permission is to be sought for post-retirement commercial employment.
- This is if the job is taken up within 1 year of leaving office.

What is the significance?

- Senior bureaucrats occupy key policymaking positions in the government.

- The cooling-off period is a way to reduce any possible conflict of interest.
- But it ensures their right to take up an employment of choice in the future.

What is the present case?

- Individual bureaucrats can apply for waivers from the "cooling-off period".
- Mr.Jaishankar had reportedly written to the Prime Minister.
- He had sought a waiver after he had been offered a position in the Tata Group. He has been offered waiver.
- He is appointed in the Tata Group as its new president in charge of global corporate affairs.

What were the earlier instances?

- Former finance secretary Ashok Jha was granted a waiver to join as head of Hyundai India.
- The present government changed the provisions of the TRAI Act through an ordinance, once it was in power.
- This was done to appoint the former chairman of TRAI as the principal secretary to Prime Minister.
- The ordinance relaxed the conditions, for former TRAI's chiefs to take up an employment under the central and state governments.

What is the concern?

- Well-laid procedure is in place for processing proposals to grant such permission to officers who retire as joint secretary and above.
- This is to ensure that grant of such permission does not depend on the discretion of the government of the day.
- It is not a credible practice for these choices to be made discretionarily on case by case.
- But the recent decisions leave scope for doubting the rationality.

5. HEALTH

5.1 India's Health Sector - The Challenges

What is the issue?

- Quality of life in a country is best gauged by its health indices.
- India has made considerable progress on these fronts since independence, but much remains to be done and the challenges are numerous.

What is the overview of our progress in the health sector?

- Over the years, diseases such as polio and tetanus have been successfully eradicated, and efforts against malaria and spread of HIV have been strong.
- But we are grappling with the twin problems of communicable and non-communicable diseases (NCDs) due to a variety of reasons.
- Both the public and private sector health services need to take up the big challenge of eradicating malnutrition and providing quality and affordable healthcare to all citizens.
- While we have made rapid strides in expanding medical facilities the growth has been lop-sided with the rural areas lagging far behind cities.
- Additionally, the rich get to access the best of treatment, while the poor are left to fend for themselves in poorly run public health institutions.

What is the magnitude of expansion needed?

- With the economy projected to improve further in the coming years, public expenditure on the health sector has to be enhanced significantly.
- The reach and the quality of the government run health centres in rural India needs to be improved, which demands more doctors and other professionals.
- Although the number of medical colleges in the country has increased to 470, India has far less than one doctor for every 1,000 people (the WHO norm).
- The doctor-population ratio is estimated to be 0.62:1,000 as per the current population, while the number of hospital beds is estimated to be 0.5 per 1,000.
- We need to introspect on our shortcomings and chalk out a time-bound roadmap to meet various goals to make India a healthy nation.

What are the specific areas needing attention?

- **Communicables -** Among the communicable diseases, tuberculosis needs to be tackled on a war-footing as MDR-TB is posing a major health concern.
- Seasonal outbreak of vector-borne diseases like dengue and growing antibiotic resistance is another major concern.
- Unhygienic conditions cause various infectious diseases, and programs like "Swachh Bharat" will definitely help in tackling this issue considerably.
- **Lifestyle disease -** Unhealthy food habits, tobacco and alcohol use, work-related stress and lack of physical activity are degrading human health.
- Non-communicable diseases (NCDs) like diabetes, heart disease, stroke, cancer and chronic respiratory disease are now becoming prevalent.
- It is estimated that NCDs are responsible for about 61% of deaths and the predominantly urban trend is lately been catching up in rural areas too.
- **Elderly Care –** Health of the elderly is another major area of concern for the governments and all other stakeholders involved in the health sector.
- Old age diseases such as dementia, Alzheimer's and Parkinson's diseases are on the rise, while depression in both young and old is also becoming common.
- Policies for promoting the establishment of special geriatric clinics or care centres across different localities need to be considered.
- **Maternal Care -** Rapid further upgrades in health infrastructure is needed to improve Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR).
- Economic status plays a major role in determining maternal health outcomes and ensuring proper nutrition and sanitation is highly significant in here.

What is the way ahead?

- The recently announced Ayushman Bharat scheme intends to provide health cover to 10 crore families, which will defiantly mark a giant leap in the sector.
- Additionally, the proposal to set up 1.5 lakh health and wellness centres will go a long way in providing the much-needed affordable healthcare to millions.
- As regards lifestyle diseases, it is time to launch a national movement to promote health consciousness and healthy lifestyles.
- Farm fresh food and organic alternatives need to make a greater proportion of our diet, and the sugar, salt and fat intake has to be reduced to healthy levels.
- Cleaner environment with fresh air and water, and some physical activity in addition to making work environments stress free are important for health.
- We should also promote and practice yoga to lead a healthy life and it should become a part of our daily routine from schools to workplaces.

5.2 Behaviour change for Universal Health

What is the issue?

- WHO commemorates this year's World Health Day (April 7) with the theme "Universal Health Coverage: Everyone, Everywhere".
- It is essential to understand at this point that healthcare policies incorporate the behavioural component in it.

What are the concerns?

- Health clinics that are accessible and affordable still go unutilised in rural and under-served people.
- Behavioural patterns, old traditions, conventional beliefs, and habits have a strong hold on people.
- There is a long entrenched practice of going to untrained and unqualified doctors.
- There is evidently a lack of trust on existing scientific healthcare models.
- All these in turn affect the success of healthcare efforts.

What is desired?

- The low turnout witnessed at health outlets call for a shift in the approach.
- It takes concerted efforts to address this which include:
  - i. breaking various myths
  - ii. sharing continued education and awareness
  - iii. rendering door-to-door services especially for women and child care
- Notably holding camps and reaching out to the villages proved to be more effective.
- It triggered a change in the behavioural patterns of the villagers who began trusting a scientifically sound model.
- They started moving away from the traditional practices.

What should policies aim for?

- Modifying individual behaviour is essential for the success of any public policy promoting health awareness and healthcare delivery.
- Effective people participation and engagement is significant.
- More interactive health policies are likely of developing public understanding, appealing to a larger consciousness and modifying habits.
- The health models need to be thought-out and viewed from public behavioural psychology during inception and while being drafted.
- Social media, digitisation, tele-assisted medicine, video and audio campaigns can play a significant role in reaching out to people.

5.3 Addressing the Nutrition Crisis

What is the issue?

There is no definite solution yet on what to feed children in anganwadis, to address poor child nutrition in India.

What is the nutrition scenario?

- The National Family Health Survey-4 (NFHS-4) shows a drop in underweight and stunted children under five years of age.
- But the absolute numbers are still high.
- Around 35% children are underweight and 38% are stunted in that age group.
- Many children have died of malnutrition in India.
- The body mass index of around 22% women aged 15-49 indicates chronic energy deficiency.
- NFHS data show several States performing worse than the national average.
- 'Nourishing India', NITI Aayog's recent report, refers to acute malnutrition levels of about 25% in some States.

What is the recent tussle?

- Minister of Women and Child Development has recently made a proposal in this regard.
- It suggested replacing ready-to-eat food as take-home dry ration with energy-dense nutrient packets.
- It suggests offering packaged/processed fortified mixes to children.
- These can be in powdered form and mixed with food for anganwadi beneficiaries.
- Instead of take-home ration, 30 such packets could be dispatched to a beneficiary for a month through the postal department.
- However, hot-cooked meal is put forth by many as unsubstitutable to address poor child nutrition.
- These include the officials of the Ministry themselves.

What are the Nutrition Council's decisions?

- The *National Council on Nutrition* (NCN) has unanimously **rejected the proposal** to replace ready-to-eat food.
- Existing practice of hot cooked meals for children (3-6 years) age group would be continued.
- Take-home ration (THR) would be continued for children (6 months-3 years), and pregnant women and lactating mothers.
- This would be as decided by the State governments in conformity with
    1. the National Foods Security Act, 2013
    2. the Supplementary Nutrition Rules, 2017
- It was also agreed to involve mothers of anganwadi beneficiaries.
- They would take part in preparation of meals, to ensure quality and encourage public participation.
- The council has also directed that pilot projects be conducted in 10 select districts on cash transfers instead of take-home rations.

POSHAN Abhiyaan (National Nutrition Mission)

- POSHAN Abhiyaan envisages undertaking activities to improve
    i. the service delivery system
    ii. capacity building of front line functionaries
    iii. community engagement for better nutritional outcomes
- An Executive Committee is set up under the Chairpersonship of Secretary, Ministry of Women & Child Development.
- It provides policy support and guidance to States/ UTs from time to time.
- A **National Council on India's Nutrition Challenges** is set up under the Chairpersonship of Vice Chairman, NITI Aayog.

National Council on India's Nutrition Challenges

- The National Council on India's Nutrition Challenges is headed by Vice-Chairman of the NITI Aayog.
- It was constituted to provide policy directions to address nutritional challenges in the country.
- It ensures effective coordination and convergence between Ministries which have a sectoral responsibility for the nutrition challenge.
- It is also tasked to review programmes on a quarterly basis.

- The Minster has however opposed the idea saying that there is no guarantee that beneficiaries would use the money for food.

6. INDIA AND ITS NEIGHBORHOOD

6.1 India's Conciliatory Neighborhood Policy

What is the issue?

- The government's foreign policy moves over the past few months represent an unannounced but profound shift in its thinking about the neighbourhood.
- This assumes significance in the context of the upcoming parliamentary elections scheduled for next year.

What were the perceptible changes?

- **China -** The peaceful resolution of the Doklam standoff had facilitated the possibility for a rapprochement between the India and China.
- Mr. Modi's meeting with Chinese President Xi Jinping in Xiamen last year also enhanced the scope for positive posturing from both sides.
- Significantly, India hadn't opposed the construction of bunkers and helipads by the Chinese army at the border near the site of the Doklam standoff.
- While China has also stationed a permanent force to man the point, India has maintained that as long as it is within Chinese boundary, it doesn't worry it.
- India had also visibly toned down planned celebrations marking the anniversary of the Dalai Lama's arrival from Tibet.
- A flurry of high-level visits are also on the cards and a summit meeting between the topmost political brass is also being planned.
- The easing of tensions has given out the possibility for progress in resolving the tricky border issues, narrowing trade deficit and other polarising aspects.
- **Maldives -** The Maldivian government imposed an emergency and arrested judges and opposition leaders and suspended several MPs recently.
- Maldives President Abdulla is a close Chinese ally and any hard headed Indian intervention against him would've driven a wedge between India and China.
- In this context, despite demands from the Maldivian opposition, and the US, the Modi government largely remained aloof of the Maldivian crisis.
- More significantly, India had even ignored the visit of the Pakistani Amry Cheif Gen. Qamar Bajwa to Maldives.
- **Nepal –** India had rough patch with Nepal's new PM K.P. Oli during his previous short stinct at power due to his open engagements with China.
- This time too, Mr. Oli emerged on his own with a comfortable majority and has asserted with confidence that he would step up engagement with China.
- Additionally, there was a perceptible anti-India rhetoric in his campaign and a clear sidelining of Indian concerns regarding the Madesh issue.
- But despite this confrontational positions, India was quick to reach out to him immediately after his victory and had succeeded in making peace with him.
- He had recently visited India, which is in continuance with the tradition of Nepali PM making India their first foreign destination.
- India too had mellowed down its interventionalist attitude and has proposed enhanced cooerpation across sectors (hydel power, infrastructure, oil).
- **Pakistan -** It was recently revealed that the National Security Advisers (NSA) of both countries had always maintained channels of communication open.
- This is significant as the tensions that erupted in due to the Pathankot and Uri attacks was thought to have compeletely disrupted all communication lines.
- Additioanlly, another standoff that got triggered due to the mistreatment of each other's diplomats also seems to have been put to rest amicably.
- **Others –** In both Bhutan and Bangladesh, the incumbents are more positively imnclined to India than the challengers (opposition).
- Both nations are facing election this year, the results of which will have significant bearing on relationships ahead.
- Nevertheless, India has maintained a consistent commitment towards them.

What are major areas of engagement ahead?

- **Transactional Relationship -** The softening of India approach towards China will sustain only if there are transactional dividends for both countries
- India could reduce its rhetoric against China's "Belt and Road Initiative" (BRI) and in return ask China to relax its opposition to India's bid for "Nuclear Suppliers Group" (NSG) membership.
- While India's bid for NSG membership might still get thwarted by others, a Chinese abstention would definitely create a lot of goodwill in Indo-China ties.
- On BRI, India has 3 major concerns – "territorial integrity, transparency, and financial sustainability", creative solutions are needed to address these.
- **Leadership -** Several countries are now echoing concerns that were initially raised by India about the environmental and financial risks in BRI projects.
- This provides India an opportunity to take the lead in designing an international template for infrastructure and connectivity proposals.
- This would involve concensus building between receiver and donar countries and establishing a structured approach for debt financing.
- Notably, India currently stands isolated in the neighbourhood due to its rigid opposition to BRI and a pragmatic approach is needed to overcome this.
- **Multilateralism -** South Asian Association for Regional Cooperation (SAARC) summit is slated to be held in Pakistan this year.
- Notably, India had stalled SAARC summit in 2016 as it was annoyed due to terrorism emanating from Pakistan.
- Most SAARC members were sympathetic to India's concern in 2016, but almost all of them are currently vouching in support of the summit.

6.2 Concerns with Rohingya Refugee Repatriation

What is the issue?

- Myanmar has claimed that it has begun repatriation of the Rohingya refugees.
- Bangladesh government has concerns over the measures taken by Myanmar government in this regard.

What is the status of Rohingya refugees?

- Facing persecution in Myanmar, Rohingyas have for years been fleeing to neighbouring countries, especially Bangladesh.
- UN reckons there were already 200,000 refugees in Bangladesh before the mass flight in August 2017, with about 700,000 refugees at present.
- Bangladesh has been at the forefront in aiding and providing food and shelter for the refugees and trying to create the conditions in Myanmar for their safe return.

What are the concerns with Myanmar's action on Rohingyas?

- Earlier this year, Myanmar and Bangladesh agreed to complete voluntary repatriation of the refugees in two years.
- Following this, Myanmar set up two reception centres and a temporary camp near the border in Rakhine to receive the first arrivals.
- Myanmar has also announced the repatriation of a Muslim family after they were scrutinized by immigration and health officials, were also provided with relief materials, but these measures are yet to be implemented absolutely.
- Bangladesh has rejected the repatriation claims of the Myanmar government, as there is no proof of the family's departure from Bangladesh nor arrival in Myanmar.
- Apart from this National Verification Cards (NVCs) which was announced as part of the Myanmar's effort to register Rohingyasis only seen as a temporary measure instead of offering them citizenship.

What measures needs to be taken to resolve the concerns?

- Myanmar has to improve the conditions for voluntary, safe, dignified and sustainable return of refugees.
- Apart from physical infrastructure and logistical arrangements Myanmar hasto recognise the rights of Rohingyas.
- International community also needs to put more pressure on Myanmar to take back their own people and ensure their safety.

6.3 Reviving India's China Outreach

What is the issue?

- There is now a mutual recognition in both India and China that a posture of hostility has undermined everybody's interests.
- While sprouts of recalibrating the relationship has started to show up, the process needs to be sustained to attain sufficient benefits.

How has Indo-China relations progressed lately?

- The India-China relationship has always been too complex and has varied from "Competition to cooperation to discord" at different points in time.
- 2017 witnessed all facets of this relationship through varied events:
    - India's trenchant critique of the Belt and Road Initiative (BRI),
    - India's entry into the Shanghai Cooperation Organisation,
    - The Doklam Crisis (The most significant of all)
    - BRICS - acceleration of multilateral cooperation
    - Both positive and negative economic engagements
- But despite these variations across engagements, the Doklam standoff highlighted a clear case of simmering animosity.

Why did Doklam escalate to such proportions?

- While trigger for Doklam was for control over a narrow stretch of barren land, the conflict nucleus was formed much earlier in other arenas.
- The main reason for the conflagration is the recent development of a deep rooted negative perception on both sides for the other's foreign policy moves.
- This collapse in geopolitical trust was a striking factor that was widely visible across domains – and China's expansionist ambitions only aggravated this.
- China's rising economic and political profile along with its massive initiatives like the BRI (Belt and Road Initiative) had got India concerned.
- Chinese foray into India's South Asian neighbourhood through infrastructure and strategic projects has been seen by India as an affront on its sovereignty.
- On the other hand, India's pursuit of deeper military engagement with "U.S. and Japan" (Beijing's main strategic rivals) wasn't to the liking of China.
- These conflicting pursuits nudged both countries to adopt an assertive foreign policy against the other to keep things under check.
- Consequently, India tilted closer to the U.S., while China moved towards Pakistan, and on a scale that wasn't witnessed even during the Cold War.

What was the result of such a hardball approach?

- Throughout the hard-line phase, neither side was able to extract any significant concessions from the other.
- NSG membership (Nuclear Suppliers Group) proved elusive for India majorly because of Chinese resistance.
- Contrarily, China's wasn't successful in its bid to get India to tone down its resistant rhetoric against its BRI.
- While China shielded Pakistan aided terror networks in international forums, India openly allied with anti-China forces as a counter.
- In this backdrop, the heightened escalation at Doklam proved to be a wake up for both sides to realise the futility of such masochistic approach.
- Hence, a policy reset seems to have commenced currently, and optimism is brewing on both sides for enhanced cooperation.

How does the future look?

- The conciliatory approach to China in the current setting has aroused scepticism from some, as they fear that vital issues might get compromised.
- But the government seems to be thinking that with a conciliatory approach with China, India can't tide over the multiple challenges in the neighbourhood.
- Further Indo-China friction will only enhance Pakistan's leverage over Beijing and reduce India's bargaining power vis-a-vis Japan and USA.
- Notably, despite their adverse relationship with China, both Japan and USA have truly valued their interdependence with Beijing, particularly in trade.
- Further, India also sees value in enhancing economic cooperation with China, which could better shape the overall geo-political outcomes in the region.

6.4 The History Siachen Glacier

What is the issue?

- The inhospitable Siachen glacier stands at a height of 5,400 m and is regarded as the world's highest battlefield.
- It's now 35 years since India took control over the territory, but the extreme weather and terrain has subjected the troops to sever hardship.

What is Siachen's story?

- **Boundary -** After the war of 1947-48, the UN-brokered peace and a Ceasefire Line (CFL) was demarcated as per the Karachi Agreement of 1949.
- The easternmost point of the CFL was "NJ9842", and the territory beyond that was high-peaks and inhospitable – which wasn't demarcated.
- The agreement simply said that the CFL would run north of the three glaciers in the region - Siachen glacier (western most), the Rimo and the Baltoro.
- Notably, CFL itself was to be just a temporary arrangement and was supposed to become irrelevant after the proposed plebiscite in Kashmir in 1950.
- But the plebiscite never took place and CFL was eventually revalidated as the Line of Control (LoC) in the Simla Agreement of 1972.
- While the wars of 1947, 1965 and 1971 saw both militaries crossing across the CFL on multiple occasions, the region north of NJ9842 was never touched.
- This was because the rigour of the terrain and weather made it impossible for both the militaries to intrude into the sector.
- **Intrusion –** In the 1960's, Pakistan had begun making certain cartographic changes to the CFL beyond the NJ9842, to symbolise its claim.
- The line was visibly being pushed eastward (almost reaching Karakoram Pass), in contrary to the intention of 1949 agreement on the region beyond NJ9842.
- Global mountaineering maps soon started portraying this as the authentic and internationally accepted CFL-LoC, backed by mountaineering legends.
- Pakistan used this change in perception to start permitting foreign expeditions in the area of the Siachen glacier to reinforce its claim on the area.
- By 1978, alerted by these expeditions, Indian Army too began undertaking mountaineering expeditions as a counter measure.
- **Escalation -** Treks were getting increasingly frequent on both sides, but Pakistan had the world's perception on its side.
- Heated diplomatic exchanges of territorial violation were sounded by both sides with regard to the Siachen sector and tensions mounted.
- Increased Pakistani presence led some in Indian Army to demand a permanent summer post at Siachen, but the idea was dropped due to the harsh weather.
- Instead, it was decided that besides mountaineering expeditions, Siachen glacier would be patrolled by the Army during the summer months.
- As tensions over the patrolling arrangement escalated in 1983, intelligence reports suggested that Pakistan was planning to physically occupy Siachen.
- **Occupation -** To avert a possible Pakistani takeover of the strategic Siachen heights, Indian army decided to take the summit pre-emptively.
- On Baisakhi Day (a major religious festival) in 1983, when the enemy would've least expected the commencement of a major operation, India made its move.
- The mission was to occupy Saltoro Ridge, and the operation was codenamed "Meghdoot", and the platoon advanced to braze the harsh weather.
- The siachen was soon secured and the two passes from the Pakistani side were sealed off in a comprehensively well executed operation.
- The glacier continues to be occupied by the Indian forced till date, but the financial and human cost of the occupation is indeed massive.

How does the future look?

- The 110 Km stretch north of NJ9842 is presently under Indian patrol and about 5000 soldiers are employed for the duty.
- In the past 35 years, the army has had 900 casualties in the sector due to the hostile weather and avalanches (without even a single bullet being fired).
- Also, the costs of maintaining the operations at such a height costs about 6 crores per day, which is a major pinch on the defence budget.
- The ecological impact of the occupation is also immense and many organisations that have called for scaling down military operations at Siachen.
- Hence, it would be prudent to work out a negotiated agreement with Pakistan to keep these pristine non-habitable zones free of conflict.
- Such a move might help in demilitarising the zone and also reduce the burden on our armed forces.

7. BILATERAL RELATIONS

7.1 India - Azerbaijan and NSTC

What is the issue?

- India's External Affairs Minister recently made a visit to Azerbaijan.
- Improving logistics is a key for bilateral trade, and here is how NSTC (North South Transport Corridor) could play a significant role in this regard.

How is India-Azerbaijan relation?

- Azerbaijan is a strategically located, $170-billion economy with substantial oil reserves.
- It however ranks low on India's diplomacy index.
- It supports Pakistan's claim on Kashmir, to the extent of calling for "reduction of Indian excesses in India occupied Kashmir".
- This is a cause of concern and needs focus.
- The period 2000-2010 saw a few senior ministers reaching out through various delegations and platforms to Azerbaijan.
- Despite these, it never really figured even in the second orbit of India's foreign policy outreach.

How is the trade scenario?

- Bilateral trade between India and Azerbaijan has been rather different from political diplomacy.
- Trade between the two has shot up almost 10-fold from 2005 to 2017.
- This jump in bilateral trade coincided with the opening of the Baku-Tbilisi-Ceyhan (BTC) oil pipeline to the Mediterranean port.
- Opened in 2007, this where Indian oil companies have been buying substantive quantities of crude oil from.
- ONGC Videsh is an investor in BTC.

What is the future potential?

- Naturally, the bilateral trade between the two countries has largely been hydrocarbon-centred.
- And India is a minor exporter of anything worthwhile (rice, beef and tea are some of the key items exported to Azerbaijan).
- Azerbaijan is looking to diversify and reduce its dependence on hydrocarbons.
- Three sectors that have substantial potential for bi-lateral trade are food processing, pharma and technology.
- In this backdrop, India can play an enabling role in partnering it for the same.

What is NSTC?

- North South Transport Corridor (NSTC) is a multi-modal network of ship, rail, and road routes.
- It is for facilitating freight movement between India, Iran, Afghanistan, Armenia, Azerbaijan and Russia.
- The objective of the corridor is to increase trade connectivity between major cities such as Mumbai, Moscow, Tehran, and Baku.

What is the significance?

- The route bypasses the Suez Canal and will ensure Indian products reach St. Petersburg in Russia in just 14 days.
- At present, this is a 42-day journey, skirting North Africa and Europe.
- Once the Iran-Azerbaijan leg of the NSTC is completed, Indian ports can be linked with Azerbaijan via Iran (Chabahar Port).
- It could provide a smoother logistics experience for suppliers.
- The new route could reduce distance and costs by 40% and 30% respectively.
- It could go a long way in reducing logistical complexity between India and Azerbaijan.
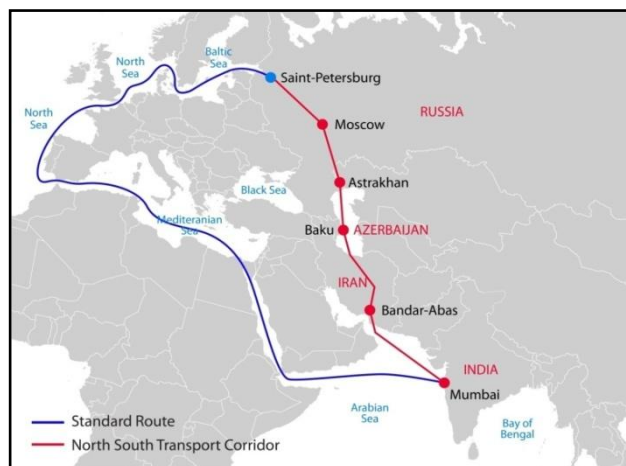
7.2 Commonwealth Heads of Government Meeting

Why in news?

The Commonwealth Heads of Government Meeting (CHOGM) was held recently in London.

What is the Commonwealth grouping?

- It is a group of nations of mostly former British colonies.
- It is now a 53-nation grouping.
- The present Queen Elizabeth II is the head of CHOGM.

How was the latest summit perceived?

- The meeting came with hopes of a "re-energised Commonwealth".
- The summit was held in the U.K., the founder State, after 32 years.
- Besides, Queen Elizabeth II attended the summit.
- She has skipped the meeting often in the last few years owing to her health.
- Also, the present meet took place amidst Britain's exit from the EU.
- All these led to hopes of reviving the grouping as Commonwealth 2.0.
- **India** - Mr. Modi was the first Indian PM to attend CHOGM in a decade.
- Some of the earlier summits were skipped over bilateral differences.
- It was widely expected that India would step up to play a leadership role.
- It was seen to be helping chart a future course for the Commonwealth.
- Prince Charles's visit to Delhi to invite Indian PM bolstered that belief.

Were the expectations met?

- The outcome of the meet was largely against the expectations.
- CHOGM again failed to make a case for its relevance in the 21st century.
- **Head** - It was announced that Prince Charles would 'succeed' his mother as the head of the Commonwealth.
- This has ignored calls by members for the position to be more democratically shared or rotated.
- **China** - There were statements on the Blue Charter on Ocean Governance and on the Commonwealth Connectivity Agenda for Trade and Investment.
- This could together counter China's Belt and Road Initiative.
- But there was little by way of a road map to achieve the goals.
- **Immigration** - Britain PM Theresa May apologised for her Home Office's threat to deport thousands of immigrants.
- They were brought as manual labour in the 1940s on the ship Empire Windrush from the Caribbean.
- But she failed to convince most members of the Commonwealth that Britain would reverse its present policies on immigration.
- **Trade** - The U.K.'s hard line on Indian "illegals" prevented the signing of a bilateral agreement on immigrant "returns" with India.
- This was in regard to return of illegal Indian migrants within a month of their being detected by authorities.
- This indicates that post-Brexit London is likely to welcome trade in goods from the Commonwealth, but not services.

7.3 Wuhan Meet –Hopes Brighten for the Asian Century

What is the issue?

- PM Modi and President Xi seem to have changed the tenor of India-China ties.
- They must now build on it to evolve a mutually beneficial geo-political space.

How has the Wuhan meet proceeded?

- The current Wuhan meet seems largely informal and unstructured, and both the premiers were accompanied only by their translators the entire time.
- Press statements issued denote that both leaders held discussions that were wide in their scope, and covered "bilateral, regional and global issues".
- An understanding had been reached to strengthen communication lines between both militaries to avoid Doklam like standoff in the future.
- Indo-China bilateral trade currently stands and $84 billion per annum and India faces a massive trade deficit of about $52 billion with China.
- The leaders have pledged to better balance this deficit by enhancing China's import of Indian goods in key sectors like agriculture and pharmaceuticals.
- An attempt has been made to address the international irritants in the relationship like
    - China's blocking of "India's NSG membership bid" and "terror designation for Pakistan-based groups".
    - India's opposition to China's Belt and Road Initiative (BRI) and tacit pampering of the Tibet issue.
- Additionally, Mr. Modi and Mr. Xi discussed a joint project in Afghanistan, which is a very significant step for the entire south Asian region.

What is the larger message?

- **Past –** Despite hundreds of years of engaging each other, the two neighbours have been to war only once.
- Sing the signing of the 1993 "Agreement on the Maintenance of Peace and Tranquillity", neither side has fired a weapon against the other.
- This is very significant as the 3500 Km long border is largely not demarcated.
- Also, despite both countries processing atomic weapons, parleys have never carried even a hint of the nuclear overhang.
- **Currently -** In the run up to Wuhan, there was a conscious toning down of rhetoric by both sides, after the high reached during the Doklam standoff.
- This has set out a strong message that Indian and China can work together on peaceful terms despite bilateral and geopolitical differences.
- While much else remains to be done, Wuhan has definitely set the tone for a mutually beneficial and sustained Asian Century.

7.4 Rationale for the Wuhan Summit (India-China)

What is the issue?

- Indian PM Modi and Chinese President Xi Jinping had an informal meet recently in the Chinese city of Wuhan.
- China's assent to going for an informal summit with India needs a deeper analysis in the prevailing geo-political scenario.

What was China's possible motive?

- India by itself may not be a serious problem for China.
- But China regards India as a potential ally of the US and Japan against China.
- The border is in control of the Chinese if they wish to exercise it.
- It's because they are on higher slopes and have more troops there.
- But arresting India's potential drift towards the US and its allies is in China's interest.
- Being informal, no documentary evidence was required for any agreements of great significance.
- So an informal summit was a low-cost, high-benefit option for China.

What do post summit statements suggest?

- Statements made by Xi Jinping after the summit, clearly indicate the above motives.
- **Strategic perspective** - He emphasised that India and China should look at their relations from a strategic perspective.

- This is clearly in mention of India's increasingly closer ties with the US.
- Further, compared to India, China takes Japan more seriously.
- There is possibility for a clash in the East China and South China Seas.
- Japan and India, by themselves would not worry China.
- But the combined might of the US and Japan would be a serious blow to the Chinese.
- **Economy** - Economic development also appeared in the post-summit statements.
- The Chinese do not think they need India for its development.
- However, deeper economic relations with India could be viewed as a means to an end.
- A means to ensure that India does not drift off into a US-Japan-India strategic triangle.
- **Civilisation** - Xi also stressed on a deeper and wider exchange between the two great civilisations.
- Generally, to talk about India's civilisation is a good diplomacy.

> **Wuhan**
>
> - Wuhan is the capital city of Hubei Province in central China.
> - It has been a major industrial city for a long time.
> - The 1911 Republican revolution started there.
> - An informal summit would normally take place in a place other than Beijing or Shanghai, and Wuhan was a natural choice.

How does it benefit India?

- Until the 2019 elections, the government in power would prefer to avoid any border threats.
- This is particularly in relation with problems with Pakistan.
- India used the summit as a kind of assurance from the Chinese.
- It is to ensure that China, as Pakistan's benefactor, did not interfere on the border.

What does the summit mean for Pakistan?

- Post-summit statements suggested that India and China should pursue "a joint economic project" in Afghanistan.
- India cannot take up its Afghanistan projects all alone.
- This would invite attacks from the Taliban, supported by Pakistani military.
- But the Taliban would not attack joint China-India projects.
- This is because the Pakistanis would not allow that to happen.
- Pakistan is too indebted to China, and China has its own interests in Pakistan.
- China is building a port there, and there is a China-Pakistan economic corridor, serving Chinese interests.

8. INETRNATIONAL ISSUES

8.1 Korean Peace - A Comprehensive Analysis

What is the issue?

- North Korea has lately been engaged in a string of diplomatic engagements to resolve the nuclear standoff in the Korean peninsula.
- While this is a positive, the other stakeholders will have to adopt a pragmatic approach to negotiations in order to achieve sustain peace.

What is the historic prespective to the Koran crisis?

- **History -** The Korean War (1950-53) split the Korean peninsula into the North and South Korea along the 38th parallel latitude.
- The North was communist dictatorship backed by USSR, while the South flourished into a vibrant democracy that is part of the US security alliance.
- After the fall of USSR and re-unification of East and West Germany, the North Korean regime got isolated internationally and saw a threat to its survival.

- Notably, both the North and South Korean governments claim to be the official representatives of the entire of Korea and do not recognize each other.
- **Survival -** While China is North Korea's strongest ally, despite pressure from Pyongyang, Beijing recognized South Korea in 1992.
- South Korea has now developed into a strong economic power and has become one of China's biggest trade partner and investment destination.
- All these factors have made North Korean leadership increasingly insecure as an US assisted South Koran annexation of North loomed large.
- While both Koreas have a stated official policy for reunification, neither seems ready to accept the political leadership of the other.
- Consequently, North Korea took refuge in developing nuclear weapons for securing its political survival since 2006.

What caused the recent tensions?

- **Weapons Program -** North has conducted 6 nuclear tests thus far and the latest one in Sept 2017 is said to be 6 times as powerful as Hiroshima bomb.
- The current North Korean supreme leader Kim Jong Un took over from his father Kim Jong Il in 2011 and has since accelerated the weapons mission.
- While his father conducted 16 missile launch tests during his 16 year rule till 2011, the current leader in his 7 years rule has conducted 80 launches.
- The last test in Nov 2017 successfully demonstrated the "Hwasong-15 missile", which has a 12,000 km range, and has the entire US territory within its reach.
- **Diplomatic Standoff -** The Weapons program got the whole world concerned and multiple sanctions were passed in the UN.
- These effectively cut-off all international ties of North Korea except China which continued to trade defying sanctions (although largely unofficially).
- Notably, China too got concerned due to
- Due to North's continued intimidations, Mr. Trump had threatened the Mr.Kim with a furious attack like never before in human history.

What are the evolving diplomatic engagements?

- Despite the harsh rhetoric of the other stakeholders, South Korean president Mr. Moon had been paddling a softer approach towards Pyongyang all along.
- Consequently, in Jan 2018, Mr. Kim had spelt out his willingness to negotiate a solution, which set of a new diplomatic breakthrough.
- North Korea participated in the recent Winter Olympic Games hosted by South Korea in Feb, and also Mr. Kim's sister led a delegation to the South Korea.
- Kim has also paused his weapons program and he recently travelled to Beijing for a short diplomatic meet with the Chinese premier Mr. Xi Jinping.
- A South Korean delegeation also visited Pyongyang, and Mr. Kim is said to have conveyed his willingness to denuclearise if negotiations are successful.
- Additonally, North and South Korean leadership is touted to meet in April at the "Peace House in Panmunjom" for furthering the warmth.
- Also, the North Koran and US leadership are expected to meet sometime in May, which is touted to be the most significant part of the engagement.

What are the expectations of various stakeholders?

- **South Korea –** South wants to restore peace in the peninsula by sustaining this dialogue and furthering the cause of reunification.
- It would also like to be kept in loop with any US decision regarding the North to ensure that its interests aren't compromised.
- Notably, despite the multi-power geopolitics in the Korean peninsula, the current initiatives are solely powered by the North and South Korea.
- **North Korea -** The North has been effectively isolated from the world due to sanctions, and it would like all sanctions to be lifted to help its economy.

- It would also want to ensure its regime survival and its concerns regarding the massive US troop presence in South Korea also needs to be addressed.
- While the desire for reunification is strong in both the Koreas, current engagements can increase the chances of a mutual and peaceful unification.
- **China -** It hopes that the peace process will result in denuclearisation of its neighbourhood and withdrawal of the US troop and arms from South Korea.
- While the reunification of the Koreas isn't to China's liking, the possibility of that happening anytime soon is low and isn't concern for Beijing currently.
- **USA -** For the US, it is treaty obligated to protect South Korea in addition to its assumed role of being the "world saviour".
- Additionally, it would want to curtail Beijing's increasing clout in the region, which demands an increased engagement in region's conflicts.
- But there are multiple hardliners in the Trump administration, who might vouch for unrealistic expectations and thwart a deal, which is a genuine risk.
- **Others –** Japan is also a key member in the Korean neighbourhood, and has been advocating a hard-line on North Korea for long.
- Notably, it's also part of the US military alliance and fears that a pro-North Korean shift by US would weaken its case vis-a-vis China.
- Additionally, Russia was an erstwhile player in the region during the Soviet era and has been asserting itself worldwide again under Mr. Putin.
- It may want to engage and has to be satiated through suitable dialogues.

8.2 US Invasion of Iraq and After Effects

What is the issue?

- The present day Iraq largely bears the impact of US-led invasion of it in 2003.
- The humanitarian catastrophe that Iraq is witnessing is a reminder to bring before law those responsible for this.

What was the 2003 event?

- The US-led invasion of Iraq in 2003 marks an important turning point in Iraq's history.
- The events brought an end to Ba'ath party's decades-long reign and Saddam Hussein's dictatorial administration.
- US attacked Iraq citing mainly two reasons -
    1. Saddam administration possessed weapons of mass destruction
    2. the administration had ties with al-Qaeda

What are the contentions?

- **Support** - The U.S. did not have a UN mandate to use force against Iraq.
- Repeated attempts by the George Bush administration to get Security Council approval failed.
- But the U.S. went ahead with forming an international coalition that included the U.K.
- **Claims** - The war notably had no legitimate basis and was founded on misleading intelligence information.
- The reasons cited were not convincing and proved to be false.
- Evidently, the occupying troops failed to find any weapon of mass destruction in Iraq.
- Moreover, al-Qaeda in Iraq was actually founded after the US invasion.

What impact has the war left?

- Fifteen years on, Iraq is still fighting the horrible effects of the destructive war.
- **People** - The war killed hundreds of thousands of Iraqis and displaced millions.
- The U.S. first disbanded the Iraqi military, leaving tens of thousands of soldiers jobless overnight.
- This posed a huge security threat.
- **Power** - There was no coherent strategy to stabilise post-Saddam Iraq.
- There were no plans to address the sectarian power struggle to fill the vacuum created.
- Destroying the state apparatus led a multi-ethnic, multi-religious country of Iraq into utter chaos.
- **Terrorism** - In this chaos, Abu Musab al-Zarqawi found the fertile ground to build his terrorist empire.
- This, after his death, came under the leadership of Abu Bakr al-Baghdadi.
- He transformed itself into the Islamic State of Iraq and Syria, the IS of today.

- In effect, the war got rid of a dictator, but left the country in a worse and much more dangerous situation.
- Despite a functional government in Iraq, humanitarian and political tragedies are still unfolding.
- Deepening sectarian and ethnic fault lines are evident.

What does it call for?

- Those responsible for the present chaos and disruption in Iraq have not been brought before the legal system.
- No action has been taken even based on the U.K.'s Chilcot report, which took apart the arguments used to justify the war.
- The present situations call for correcting the grave failure of the international system.

8.3 Chemical Weapons and Nerve Agents

What is the issue?

- Nerve gas is allegedly used in ongoing Syria attack.
- It is imperative at this juncture to look into the status of chemical weapons, particularly nerve agents or nerve gases.

What are chemical weapons?

- It is a toxic chemical in a delivery system such as bomb or artillery.
- Anything specifically designed for use in direct connection with the release of a chemical agent to cause death or harm is a chemical weapon.
- Each component of a chemical weapon is a chemical weapon, whether assembled or not, stored together or separately.
- E.g. choking agents - chlorine, phosgene, diphosgene and chloropicrin. Fluid builds up in lungs, choking victim.
- Blister agents - sulphur mustard, nitrogen mustard, phosgene oxime, Lewisite. Burns skin, mucous membranes and eyes; causes large blisters on exposed skin; blisters windpipe and lungs.
- Blood agents - Cyanide destroys ability of blood tissues to utilise oxygen, causing them to 'starve' and strangling the heart.
- Examples include hydrogen cyanide, cyanogen chloride, Arsine, VX.

What is CWC?

- The Chemical Weapons Convention (CWC) is a consortium of 192 countries as signatories.
- It seeks to limit the availability of chemicals that can be used as tools of mass destruction.
- However, it allows member states to retain rights to use some of these chemicals for peaceful purposes such as riot control.
- Teargas shells, for example, are frequently used for riot control.

How is chemical weapons possession status?

- Of the 192 CWC signatories, Albania, India, Iraq, Libya, Russia, Syria, and the US declared possession of chemical weapons.
- Of these, Albania, India, Libya, Russia and Syria declared completion of destruction of chemical weapons.
- Notably, by January 2016 the destruction of all chemical weapons declared by Syria has been completed.
- Despite these, there have been continuous instances of chemical weapons attacks in Syria.

What are nerve gases?

- Nerve gases are among the most lethal form of chemical weapons.
- They notably have no use other than in chemical warfare.
- The CWC lists chemicals under various degrees of manufacturing restriction.
- Under this, the nerve gases are among the most restricted.

How do nerve gases work?

- Nerve gas weakens the mechanism within the body responsible for the conduction of nerve impulses.
- Acetylcholineesterase is a compound that catalyses the breakdown of the neurotransmitter acetylcholine.
- Nerve gas prevents acetylcholinesterase from performing its normal function of breaking down acetylcholine.
- It leads to the muscles going into a state of uncontrolled contraction, a sign of paralysis or a seizure-like state.
- Death usually happens because paralysis extends to the cardiac and respiratory muscles.
- Other symptoms could include dilation of pupils, sweating and gastrointestinal pain etc.

- Nerve agents can also be absorbed through the skin.

What is Novichok?

- As restrictions on weapons are based on chemical formulae, newer molecules can bypass restrictions.
- Countries thus started to develop newer weapons to bypass the restrictions.
- This naturally led to the emergence of nerve agents and that is how Novichok evolved.
- Novichok is said to be 5-8 times more lethal than VX nerve agent.
- Also, its effects are rapid, usually within 30 seconds to 2 minutes.

8.4 US Congressional Hearings

What is the issue?

- In the wake of Cambridge Analytica issue, Facebook CEO Mark Zuckerberg's congressional testimony gains significance.
- It is essential in this context to understand what US congressional hearings are all about.

What is a US congressional hearing?

- A congressional hearing involves members of the two houses, the Senate and the House of Representatives.
- They collect and analyse information on various matters of interest to the polity and the country.
- The legislative hearings are to do with policy measures.
- The oversight hearings, on the other hand, monitor government programmes.
- Besides, Congress holds investigative hearings into suspected wrongdoings by public officials and by private citizens.
- More recently, the senate intelligence committee held hearings on alleged Russian meddling in the 2016 presidential elections.
- The congressional hearings are conducted by committees.

What are these Committees all about?

- **Committee** - A committee is usually a panel of chamber members.
- It is tasked with developing legislation, holding hearings and conducting oversight.
- Each committee has its own jurisdiction.
- Depending on the type of committee, they are either elected by the chamber, or appointed by the Speaker.
- The system is similar to the Indian parliamentary committees but far more powerful.
- **Structure** - There are 20 active Standing Committees in the House of Representatives and 16 in the Senate.
- There are also six joint committees.
- In addition, the House has a Permanent Select Committee on Intelligence.
- The Senate has four Special committees, including one on intelligence.
- Committees, on occasions, have joint hearings, like they did for Zuckerberg's testimony.
- **Composition** - A committee could typically have between a dozen and 40 members.
- Every committee has an all-powerful chair drawn from the majority party in the chamber.
- The chair decides which proposals the committee will consider first, and which can be pushed back. This is usually a political decision.
- The minority party appoints a shadow chair.

How are the hearings conducted?

- **Subjects** - A committee receives many proposals for hearings from several quarters, including from two chambers' members.
- But it is decided by assessing its importance to the nation, to specific political and other lobbies, and to the political leadership.
- It also decides if the issue fits in with its own goals and the political message that it wants to send out.
- **Nature** - Almost always the hearings are open to the public.
- Open hearings, covered extensively by the media, are seen as a way to rally public support for or against an issue.
- But committees have the power to "close" a hearing for reasons
    i. of national security
    ii. of protecting the privacy and reputation of an individual
    iii. of securing law-enforcement operations
    iv. if the witness is to reveal information that is protected by law
- **After hearing** - The reports are generally published and become a matter of public record.

What rights do witnesses enjoy?

- The witnesses enjoy certain rights by way of protections granted to them by the Constitution.
- Witnesses may refuse a committee's order to attend the court by citing the right to free speech, assembly, or petition.
- They enjoy protection against self-incrimination.
- Several committees provide witnesses the right to have their counsel present during testimony.

How is the Indian parliamentary committee system?

- **Nature** - The Indian system is modelled on the British parliamentary committee system.
- However, unlike the US and British systems, India does not have a system of public hearings.
- Also, in India, all proceedings are closed to the media.
- **Committees** - There are two kinds of committees in India.
- The Standing committees include financial committees, department committees, business advisory committees, etc.
- The ad hoc committees are appointed for a specific purpose when needed.
- One type of ad hoc committee is the joint parliamentary committee.
- The most high-profile of the JPCs have been investigative in nature.
- E.g. the JPC on Bofors, Harshad Mehta Stock Exchange scam, and the 2G spectrum case.
- The JPCs have summoned and questioned experts, government officials and others.
- Refusing summon from a JPC constitutes contempt.

8.5 U.S. Missiles upon Damascus

What is the issue?

- U.S. has recently launched missiles against select locations in the Syrian capital Damascus – which risks escalating the conflict.
- Significantly, this was in response to the alleged chemical attack by the Syrian government forces against its own citizens in rebel held territories.

What was the attack about?

- U.S. president Donald Trump had threatened the Syrian government with the threat of military action if chemical weapons were used.
- In mid 2017, when there was a suspected chemical attack in Idlib province, the U.S. had fired 59 cruise missiles at a government airbase.
- Despite this, the government forces allegedly carried out another chemical attack recently on rebel control "Douma region" near Damascus.
- Consequently, the US in alliance with UK and France decided to launch an attack against selected targets to punish the Assad regime.
- Over 100 missiles were fired at three regime facilities to completely destroy Syria's chemical weapons program.
- After the attack, the US has stated that its mission was a success and that it doesn't intend to follow up with further attacks.

Was the protocol followed?

- While the use of chemical agents against civilians deserves harsh punishment, the manner in which the U.S. and its allies have acted raises serious questions.
- Significantly, Organisation for Prohibition of Chemical Weapons (OPCW) hasn't even begun its investigation on the alleged chemical attack on Douma.
- The proper procedure would've been to wait for OPCW (inter-governmental watchdog) to probe the veracity of the alleged chemical attack.
- The US and its allies should've then approached the UN Security Council with requisite evidence and sought an approval for an assault.
- But contrarily, the US alliance seems to have acted merely on the basis of inputs from their intelligence agencies (which is a breach international law).

What are the risks?

- While Mr. Trump has already trumpeted that the US mission was a success, the statement seems to lack solid grounds.
- Notably, the previous US attack was also intended to dissuade Syria from using chemical weapons – which clearly has failed.

- Hence, if the Syrian regime was to resort to another chemical misadventure, the US would be forced to intervene again with more might.
- Such actions might drive the US more into the viscous Syrian entanglement and increase the risk of a direct conflict with Russian troops there.
- In fact, Russia has been strongly and consistently positioning itself behind Assad and the Syrian regime, which is a major worry.

What is the way ahead?

- The war is already 7 years old and more than 4 lakh people have died.
- There is no dispute that Mr. Assad is presiding over a monstrous military machine that has used brute force against his own people.
- But the Syrian maze is so complex that a sudden collapse of the regime would push the country into further chaos and make things worse.
- Significantly, more bombs and missiles would put the millions who currently live in the relatively stable regime held territories under risk.
- It is high-time that the West shifts from unilateral and coercive military action to aggressive multilateral diplomacy to end the unfolding misery.
- The only way out is for Russia and US to get to the negotiating tables for immediately stopping the violence and negotiating a long-lasting peace.

8.6 Concerns for Britain on Brexit Bill

What is the issue?

UK parliament's vote on the Brexit bill is expected to be in favour of continuing in the European Union.

What is Brexit all about?

- In 2016, Brexit was announced in Britain after the referendum for exiting the European Union.
- This decision was taken due to various reasons such as
    1. Limited space for Britain to negotiate trade agreements with non-EU nations.
    2. The trade deals with EU are more than the terms that can be made with other countries.
- After the referendum, the UK and EU provisionally agreed to settle financial, strategic and political issues over a transition period of 21 months.

What are the recent happening in UK parliament?

- Divisions are deepening among the ruling party over a hard or soft exit and they are interested in getting more rights over the UK citizens, post-Brexit.
- There also some expectations over the voting on the Brexit amendment bill, which could be against the stand taken by UK administration.

What are the reasons behind the recent move?

- Some analysts forecast that Britain would face economic consequences for leaving the EU.
- Such as a meagre 0.2-0.4% rise in GDP from a U.K. trade deal with countries outside the bloc, including the U.S. and China.
- The loss of trade with EU, could also be a huge burden for Britain to handle on its own.
- There are also controversies over the future of status of London in EU and an impending risk of hard border between Britain and the Republic of Ireland.

8.7 Ending the 'Great Game' in Afghanistan

What is the issue?

- A recent IS attack in Kabul and Taliban's new announcement have signalled an increased security challenge for Afghanistan.
- At this juncture, global and regional powers must desist from playing the 'Great Game' and build peace.

What is the recent IS attack?

- A bomb attack took place in Kabul at a voter registration centre, killing more than 50.
- It carries a doubly dangerous message from the Islamic State.
- One, it was the group's attack on Afghanistan's fragile democratic process.
- It implies that elections next year could face more violence.
- Two, a majority of the victims were Shias.
- This highlights the sectarian turn in the conflict.

What is the Taliban threat?

- Taliban has rejected Afghan President Ghani's offer of talks "without preconditions".
- Moreover, Taliban has announced its new "spring offensive".
- It includes the targeting of American forces in Afghanistan.

Have the earlier efforts paid results?

- Last year, the U.S. announced a new 'South Asia policy' for Afghanistan.
- It was officially welcomed by both New Delhi and Kabul.
- It was hailed as a game-changer for the region.
- But now the policy itself seems uncertain.
- The U.S. administration has taken some steps on Pakistani funding of terrorism.
- This is particularly across the Durand Line (border between Pakistan and Afghanistan).
- However, it has clearly not yielded calm on the ground.
- Continuous wave of terrorist violence has lashed Kabul and other cities.
- The Afghan forces control just a little over half the territory today.
- It is down from nearly three-fourths in 2015.
- The U.S. policies guiding Afghanistan are not making much headway.
- This is the same with Kabul's efforts to protect its own people.

What is the concern with the approach?

- Growing U.S.-Russia tensions are creating space for proxies for both on Afghan soil.
- The attacks by al-Qaeda and IS-related terror groups have their roots in the larger war between Iran and the Arab world.
- Tensions between India and Pakistan cast a shadow over Afghanistan.
- China, to secure itself from Islamist groups, is trying to build a rival military base in Afghanistan.
- Clearly, countries are motivated not only by peace in Afghanistan but by other interests too.
- Efforts have been made for bilateral and multilateral peace talks in recent months.
- But each one has amounted to too piecemeal an effort.

What could possibly be done?

- There is a need to stop the 'Great Game' by countries for influence in Afghanistan.
- It is necessary for both US and Afghanistan to take a more hard-headed, realistic view.
- It must be acknowledged that the current situation is a danger to all.
- Defeating terrorism in Afghanistan needs every stakeholder to put aside the differences and build peace.

8.8 North Korea's Denuclearisation

What is the issue?

- North Korea's upcoming meet with the US is expected to give a shape to its denuclearisation plan.
- With its effort to gain the trust of world nations and remove the sanctions, a look at the means and probabilities become essential.

What is the recent meet on?

- North Korean leader Kim Jong-un and South Korean President Moon Jae-in met for the first time recently.
- They have pledged to ensure peace, prosperity and unification of the Korean peninsula.
- North Korea has already pledged to close one of its nuclear test sites.

What is the complexity?

- Differences between the two leaders on the question of denuclearisation are evident.
- South Korea emphasised that complete denuclearisation was essential for peace.
- However, North Korea did not make its stance clear on this front.
- There was a clear indication of the need for equality between the two, during the talks.
- However, this equality is hard to be materialised in terms of nuclear security in the short term.

How have denuclearisations been?

- Denuclearisation is a key to the whole process, as it means different things to different people.
- For the U.S., the models are Iraq, Libya and the former republics of the Soviet Union.
- They all surrendered their nuclear assets in return for peace and normalisation.
- But North Korea seems to be opting for a different model.

What is North Korea's possible plan?

- **Recognition** - It much resembles the Indian model nuclear deal.
- Under this, it gets recognised as a "technologically advanced responsible state".
- On the basis of this, it in turn gets certain strategic assurances.
- It is an effort to legitimise the nuclear arsenal and earn recognition as a responsible state.
- **Credibility** - India arrived at the nuclear deal with the US by pointing to the direct nuclear threat from China and in turn from Pakistan.
- Mr. Kim has gone further by suspending all missile tests and taking steps to shut down a nuclear test site.
- This is much in line with earlier US 's demand to India to sign the Comprehensive Nuclear-Test-Ban Treaty to avoid sanctions.
- **Relations with US** - Kim is also likely to use the Indian model to bargain for normal relations with the U.S.
- This may be on the basis of guarantees such as:
    i. minimum deterrence
    ii. non-first use
    iii. no tests
    iv. commitment to nuclear disarmament in keeping with global developments, etc

Why is this model uncertain for North Korea?

- Trust and confidence in India as a responsible state and various other factors were behind the historic nuclear deal.
- Unlike India, the track followed by the earlier North Korean leaders and the present one appeared in disorder.
- This is ever since North Korea sought to leave the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) regime.
- The posture was of threat and arrogance rather than peace or reconciliation.
- It is now inclined to negotiate its way into removing sanctions and shaping its future.
- But the U.S. would be far more reluctant to make any concessions to North Korea without an agreement on denuclearisation.
- The forthcoming negotiations will prove whether the Indian model will help North Korea in restoring peace.
- Some amount of domestic reform at home, in terms of civil liberties, would help North Korea make its case better.

G.S PAPER III

9. ECONOMY

9.1 Delhi's Green Budget

Why in news?

Delhi released its first Green budget to improve quality of air in the National Capital Region.

What is the significance of the green budget?

- Under the green budget Delhi has announced many new programmes under four Departments namely Environment, Power, Transport and PWD.
- Some of the initiatives includes 1,000 new fully electric buses, subsidies for electric vehicles, LED street lamps and incentives for residential and agricultural users who install solar panels.
- The government has proposed to give incentive to industries to switch over to piped natural gas and subsidies to firms to switch over to clean fuel-based power generators.
- Apart from these, first comprehensive city-wide inventory of greenhouse gas emissions will also be carried out.
- Dedicated information system showing levels of pollution will be set up inside all government buildings.
- Government has also planned for an innovative scheme named Agriculture-cum-Solar Farm scheme.

What are the challenges in implementing these programmes?

- The Delhi Transport Corporation has 6,000 buses, but it needs to maintain a fleet size of 11,000 buses.
- An addition of 1,000 new electric buses may mean lesser emissions, but it does little to address the overall supply gap.
- This means more private vehicles on the street and consequently a greater dose of pollution.
- The primary sources of pollution vary seasonally like in winter, it is the crop burning in neighbouring Uttar Pradesh, Punjab and Haryana that affects Delhi's air quality.
- And in summer, it is dust from construction, storms, roads, etc.

What measures needs to be taken in this regard?

- Tackling the existing problems needs coordination between different states bordering the national capital, and also with the Union government.
- Thus synchronizing with the efforts of neighbouring governments is needed to tackle these issues effectively.

9.2 Southern States Concern on 15th FC's Decision

What is the issue?

- The 15th Finance Commission will be using data from 2011 census for the devolution of taxes.
- Few states have expressed concern over the decision as it would result in lower resource allocation.

What is the role of the Finance Commission?

- The Finance Commission is a constitutional body created to address issues of vertical and horizontal imbalances of federal finances in India.
- The Finance Commission is appointed every five years and consists of a chairman and four other members.
- The constitutional mandate of the Finance Commission is
    4. To decide on the proportion of tax revenue to be shared with the States
    5. The principles which should govern the grants-in-aid to States.
    6. Responsibility to make recommendations on various policy issues, as and when they arise.
- The recommendations made by the Finance Commission are advisory in nature and, hence, not binding on the Government.

What is the significance of census in Finance Commission?

- The population figure derived from the census is used for calculating the devolution of taxes to the states.
- However not the entire amount of taxes to be disbursed is based on the population but only a certain percentage of the funds.
- In the case of the 14th Finance Commission, that was 25%.
- The 1971 census recorded an increase in population compared to the pervious censuses and to counter the issue of growing population family planning methods were introduced.
- The 42nd Amendment picked the 1971 Census data as base for all calculations and froze it till 2001 Census.
- This is to equalise the shares and safeguard the states actively undertook the family planning programme.
- In 2001, the 84th Amendment further extended that to the first Census after 2026, which will be the Census of 2031.

What are the concerns of the states on this move?

- Northern states like Uttar Pradesh, Maharashtra and Bihar have more than doubled their population in the intervening years.
- Whereas southern states like Tamil Nadu, Karnataka and Kerala have had relatively slower growths in population with an exception of Andhra Pradesh.
- The usage of the 2011 Census is being opposed for the same reason the usage of 1971 Census was made mandatory.
- Which made sure states that have worked on population control do not lose out on benefits.
- Thus according to the southern states the decision of the 15th FC to use the 2011 census data is seen as discriminatory and affects the federal structure.

9.3 SEBI Acts on Kotak Committee Recommendations

What is the issue?

- Uday Kotak committee to suggest reforms in corporate governance was constituted by the SEBI in June 2017.
- While it has submitted a report with 80 recommendations, SEBI has accepted it only partially and plans to implement it in a piecemeal way.

What are SEBI's recent actions?

- Securities and Exchange Board of India (SEBI) has recently decided to implement some of the Kotak panel report's recommendations.
- While implementation will be done on a piecemeal (spread over time) basis, accusations that SEBI has cherry picked recommendations has sprouted up.
- Notably, only half of the 80 recommendations have been accepted fully, while others have been modified and 18 proposals have been completely discarded.
- Some have vouched that SEBI is going ahead without sufficient deliberation and that the efficacy of the new laws will need to be tested in practice.

What are some of the accepted recommendations?

- Some of the recommendations accepted by SEBI, if passed into law, can make a material difference to public shareholders in critical areas of governance.
- **Power Separation -** The proposal intends to make a mandatory separation between the "Chairperson of the Board and CEO" in listed companies.
- This is a significant move and is expected to reduce concentration of powers and root out conflicted decisions such as over-the-top managerial pay.
- But then, whether the Chairperson truly reins in top managers would depend on who appoints him/her and whether he/she is free of promoter influence.
- **Transparency -** Disclosure requirements on auditor resignations, related party deals and consolidated quarterly results is also being proposed.
- These will certainly improve the flow of material information to share holders and help them in knowing the company's deals better.
- **Shareholder Approval -** The proposal requires companies to seek shareholder approval in all material deals involving payments of over 2% sales.
- While this is to curb "cosy related party deals", it will be difficult for shareholders win a vote against promoters, due to the skewed ownership patterns in many firms.
- Also, shareholders are highly constrained in their ability to mobilise institutional support in critical meeting to get vet out transactions.

What are some of the rejected recommendations?

- It isn't clear on why the Chairperson-CEO separation or deadlines for holding general body meetings must apply only to the top listed companies.
- While the intent may be to reduce the compliance burden on smaller firms, it is untenable in the Indian context as retail portfolios are dominated by mid- and small-cap firms.
- Additionally, it is also the smaller sized firms that feature low levels of analyst scrutiny and thus are at greater risk of mis-governance.
- SEBI has also omitted the recommendation for expanding its own regulatory ambit to scrutinise qualified accounts and prosecute auditors.
- Given the seriousness of the issue, it would have been useful if SEBI has elaborated on its reasons for cherry-picking proposals.

9.4 MPC's Bi-Monthly Review

What is the issue?

- MPC has acted predictably in opting to keep interest rates unchanged and in retaining its 'neutral' stance (i.e. rates further could move in either direction).

- But the central bank's policy statements are in contradiction with its actions and therefore MPC has sent out mixed signals.

How does the inflation outlook look?

- Price stability remains the primary focus of RBI's **"Monetary Policy Committee"** (MPC) decisions regarding interest rates.
- Currently, trend line retail inflation (based on Consumer Price Index), continues to run above its medium-term target of 4%.
- The MPC has appreciably lowered its projections for CPI (consumer price index) inflation for the fourth quarter of 2017-18, and for the new fiscal year.
- RBI has predicted an inflation slowdown over the next quarter and has cited sharp declines in vegetable prices and moderation in fuel prices as reasons.
- But these inflation projections contradict public expectations.

What are the issues with RBI's projections?

- **Inflation -** RBI is not fully convincing in its assertions as a food price reversal and the assumption of a "normal monsoon" aren't clear.
- Notably, despite weather predictions of a normal monsoon, MPC itself has flagged risks of temporally or spatially deficient monsoon over food prices.
- Also, MPC seems to have glossed over the RBI's March survey of households' inflation expectations — where prices are seen to be increasing.
- Feedback from manufacturers also suggests that they expect input and output prices to rise, all which don't seem to indicate softening inflation pressures.
- Additionally, while fuel prices are said to ease, MPC seems to have ignored or down played the volatility in the sector.
- **Growth -** Gross Value Added (GVA) has been replaced by Gross Domestic Product (GDP) as the main measure of economic output, which is surprising.
- While the policy statement asserts that GDP growth will strengthen in the current fiscal, the earlier forecast of 7.4% has been left unchanged.
- Hence, the messaging on the economy by the RBI is ambiguous and could have been clearer and more consistent.

9.5 Making GSTN Government-owned

Why in news?

The finance ministry considers converting the Goods and Services Tax Network (GSTN) into a government-owned company.

What is the GSTN at present?

- The GSTN is a not-for-profit organisation at present.
- It provides the technological support to the GST.
- The government holds a 49% stake, with Centre and states share of 24.5% each.
- The balance 51% is held by five non-government institutions.
- These are LIC Housing Finance, HDFC, HDFC Bank, ICICI Bank and NSE Strategic Investment Co Ltd.

What is rationale behind the recent proposal?

- The Goods and Services Tax Network handles massive amounts of data.
- It deals with crucial data sets such as indirect tax returns and refunds.
- By now, over 10 million businesses have already registered on the GSTN portal.
- GSTN is apparently a repository of sensitive data on business entities nationwide.
- It is of strategic importance to the country.
- The government is thus concerned about the safety and security of "sensitive" data.
- It thus considers limiting the ownership to the government.

Is the logic valid?

- The implicit assumption here is that data is safer with a government company than with private sector entity.

- This seems to be illogical as there is no evidence as yet that safety of data is in any way related to the ownership of the GSTN.
- The government and private entities do not function under different data security norms.
- Moreover, government's own data security systems do not have an appreciable track record.
- Evidently, several government websites have been routinely hacked.
- The controversy over leaks in Aadhaar data further undermines the confidence in government's ability to be a safe custodian of data.
- Moreover, changing the ownership will likely hurt the freedom and efficiency with which the GSTN needs to work.
- This is especially significant given the fast-paced demands of businesses.

What is the way forward?

- In any case, the government already enjoys strategic control over the GSTN due to its 49% stake.
- Also, as per rules, the quorum for a board meeting requires that at least half of the government-nominated directors be present.
- Notably, most large government information technology related projects have been given to private software firms in the past.
- Given all these and the fact that the GST regime is, at last, settling down, the government should only build on this stability, and not risk it.

9.6 Concerns with RBI's Measures to Tackle Bad Debts

What is the issue?

- RBI has recently announced various measures for tackling the bad loans crisis.
- Such measures fails to concentrate on resolving the issue from its root.

What are the steps taken by the RBI to resolve the crisis?

- Initially, the central bank in its revised framework on resolving stressed accounts had scrapped the old restructuring schemes such as SDR, S4A or 5/25.
- This led to the increase in the provisioning for bad loans by the banks with respect to the existing norms for provisioning.
- Recently, the RBI identified 12 non-performing assets (NPAs), totalling 25 percent of India's gross NPAs, which would be taken up under the Insolvency and Bankruptcy Code (IBC).
- And it relaxed the norms for provisioning from 50 per cent to 40 per cent for those 12 accounts under IBC.
- Provisioning is an expense where banks set aside a portion of their capital to make up for the unpaid loans which are 'doubtful' or can potentially default.
- The provisions such as scrapping of restructuring schemes and tightening of banking regulations have brought in more transparency in the bad loans.

What are the concerns with RBI's measures?

- The accelerated NPA recognition would imply over Rs.25, 000 crore of additional provisioning for banks.
- Brief measures such as these, do little to re-build the eroded confidence of investors and depositors in the banking system.
- As an outcome of these measures, in long run banks would witness steep rise in provisioning beyond the current level to handle the bad loans.
- Apart from this, the recovery of accounts mentioned in IBC would also remain a challenge.

9.7 Cash Crunch in ATMs

What is the issue?

- Shortage of cash across ATMs has been noticed in some states.
- But experts have stated that this was largely a logistical challenge rather than a supply shortage.

Why is there a shortage of cash in ATMs in some states?

Multiple reasons have been stated for shortage of cash at ATMs:

- Printing of lesser number of Rs 2000 notes

- Capacity reduction in ATMs due to placement of smaller denominations
- Hoarding of cash by the public due to the festivals ahead
- Return of cash transactions after remonetisation with an increased average ticket size of ATM withdrawals as compared to the pre-demonetisation days.
- Mismatch between "growth of currency in circulation and growth in economic activity"

How does the RBI decide on how much cash is required?

- At the start of every calendar year (before the beginning of the financial year), RBI holds a meeting to calculate the country's annual cash requirement.
- It works on an econometric model that accounts for variables like the quantum and value of notes - that are in circulation, that are destroyed and those that need replacement.
- This is done with an eye on the projected GDP growth and inflation in the coming fiscal and the expected volume of e-transactions (fund transfers, card and e-wallet payments etc…).
- RBI collects data from its 19 regional offices, and then decides on how much currency to allocate to each office — remittances are generally made quarterly.
- 'Coins and Currency Division' of the Finance Ministry, that oversees the exercise is then intimated of the quantum to be printed in each denomination.
- The information on the amount of currency to be printed is a closely guarded secret between the RBI and the Finance Ministry.
- Based on the estimate of currency needed, an indent or order is placed with the country's four currency note printing presses.

Is the current crunch different from the one during demonetisation?

- During demonetisation, there was a cash crunch - not just at ATMs but also in bank branches as 86% of the currency was sucked out of the system.
- Some experts opine that "different states have seen cash crunches at different times, and this is not in itself a new phenomenon".
- Also, first half of April is said to always experience a demand spike for cash, as it is the beginning of the new financial year.
- Additionally, the possibility of government stopping the printing of new Rs 2000 notes could've increased the quantum of hoardings.
- High-denomination notes as percentage of the cash in circulation has perhaps settled at a higher level than it was pre-demonetisation.
- While there is indeed an attempt to reduce or re-normalise this, the current shortage at ATMs looks like a distribution issue rather than supply shortage.

9.8 Rising Current Account Deficit

What is the issue?

An independent research has shown that current account deficit (CAD) is expected to increase significantly in 2017-18.

What are the highlights?

- India's CAD in the current fiscal year is forecast to be the highest in 6 years.
- It may go up to between 1.6% and 1.8% of GDP.
- Another prediction projects CAD to be likely at 2.4% of GDP, higher than in 2013-14.
- This is even after taking Brent crude prices at an average of $65 per barrel (minimum possible).
- Moreover, the overall balance of payments is also projected to slip into a deficit this fiscal.
- As, capital inflows may be insufficient to cover the current account deficit.
- The rupee is therefore expected to weaken.

What are the possible reasons?

- Crude oil price could be the major reason for a problematic CAD.
- This is something which is beyond the government's control.
- But besides this, within the country, there is a significant increase in imports over the past year.
- And notably not all of it is oil-related.
- Gems and jewellery imports have also increased.
- Overall, the increase in imports was nearly twice as high as that in exports over the past financial year.
- Increasing imports naturally lead to outflow of capital by way of payments.

What are the policy shortfalls?

- Government has imposed consumption constraints similar to the limits on gold imports.
- Apart from this, the government does not have too many options to decrease imports.
- But this is not the case with exports.
- The deficit could have been balanced by encouraging the exports.
- However, the government has failed to boost export growth.
- Past few years had been years of stable macroeconomic indicators with a gift of cheap oil.
- But these have not been adequately exploited to improve export growth for the country's benefit.
- Exports have remained around or below the $300-billion mark since 2011.
- Rival exporting countries like Bangladesh and Vietnam have vastly increased their export revenues.
- Export growth remained in single digits even in 2017-18, the strongest year for world trade growth since 2011-12.
- Evidently, growing trade deficit is more a consequence of failing on exports rather than increasing imports.

What is the way forward?

- The only sustainable path to stability on the external account is through a vibrant and globally integrated exports sector.
- Some sector-specific "packages", beyond just tax incentives, are essential for export growth.
- Besides, the overall tax situation has to be improved.
- The limitations and the resultant crunch in exporters' working capital with GST implementation has to be sorted out.
- If indeed the balance of payments turns adverse, then at least the rupee might fall from its current over-valued levels.
- This could render exports cheaper.
- So, the government must work to render other aspects of the exports supply chain competitive.

9.9 India's Waning Lust for Gold

What is the issue?

- Gold imports are a major strain on the country's Balance of Payment (BoP).
- But there are indications that this pressure will ease in the current fiscal due to several economic factors and policy initiatives.

What are the recent trends in the market?

- **2017 Trend -** While there has been a recent drop in demand, on a whole, gold imports have considerably increased over the last year.
- A combination of retail restocking and high rural demand is thought to have pushed gold imports up by 67% in the financial year 2017-18.
- Overall, the gold import bill had rose by 13% (to $34 billion) and returns for Indian investors were 1% higher than the global average of 6%.
- **Current trend -** 'Akshaya Tritiya' is perceived an auspicious to buy gold, and demand for gold is usually higher around the occasion (recently).
- But this year's occasion was a damper due to high prices (Rs 32,500 for 10 gram), which is 10% higher than the previous year.
- Also, the rural earning stress and the cash crunch in the market are additional factors that have added to the demand uncertainty.
- **Contrast -** It is commonly assumed that higher gold demand is connected to the increasing anxiety about the macroeconomic stability.
- But the RBI has pointed out recently that the gold import figures have seen a sharp reduction in recent months – which contradicts the palpable anxiety.

Why should gold imports be curbed?

- An increase in imports of gold and precious gems is a form of capital flight out the economy and strains our trade balance and exchange rate.
- As precious gems are also another alternative to hedge against currency, "Gold vs. Economic conditions" graph might not have a direct correlation.
- Nevertheless, as gold is the dominant hedge, we need policies to constrain access to it and work for plugging the capital drain.

How does the future look?

- **Economic Changes -** "World Gold Council" has stated that enhancing transparency in purchases might bring demand down in many economies.
- In India, the "Prevention of Money Laundering Act, and GST" might suppress demand for the metal in the coming years.
- Also, many analysts hold that, as long as stock markets are effervescent (strong), gold demand will remain subdued.
- **Policies -** Finance ministry's "Gold Schemes" has already garnered considerable traction and it is hoped that these will net Rs. 50 Billion in 2017.
- Notably, these schemes had a poor response when it was unleashed in 2015, which indicated that gold was preferred not just for speculative interests but also for its ability to prove evasive for tax authorities.
- As such, the continuing efforts by the government to increase its supervision of the sector are both welcome and likely to hit demand going forward.
- Additionally, various "electronic gold purchase schemes" have been run by mobile wallet providers such as Paytm – but its take-up remains doubtful.

9.10 Effects of Downsizing CCI

Why in news?

The Union Cabinet recently approved rightsizing of Competition Commission of India (CCI) by halving the number of its members.

What is the recent decision?

- CCI currently has a chairperson and 6 members.
- With the recent downsizing, it will now have a chairperson and 3 members.
- The decision is in pursuance of the Government's objective of 'minimum government, maximum governance'.

What are the proposed reasons?

- **Workload** - The assets and turnover threshold for mergers and acquisitions (M&A) deals that would need CCI approval has been raised recently.
- The raised threshold and low coverage would reduce the workload of the CCI.
- **Time** - The corporate affairs ministry had also contended that the reduction would speed up the CCI's work.
- Few members would lead to faster turnaround in hearings that is expected to result in speedier approvals.
- This is because all members in office have to sign on to an order, and 4 members would facilitate this faster than earlier 7.
- **Decision making** - Downsizing especially reduces the scope for dissenting judgments.
- **DG's Office** - The director-general's office, the CCI's investigation arm, with just 14 people, is undoubtedly understaffed.
- It urgently needs more people to perform this critical role.
- It is argued that CCI's downsizing could help expand the director-general's office.
- **Besides**, competition regulators in advanced jurisdictions in UK, US, Australia and Japan also have minimum possible members.

Will downsizing benefit CCI?

- **Process** - In CCI's case, the downsizing may prove counterproductive due to various factors.
- The paperwork and processes that are required for companies to file for approvals remain voluminous.
- How efficiently can a small CCI take up these is highly uncertain.
- **Decision making** - If 7 members widened the scope for dissent, a quorum of 4 hardly diminishes it.
- The question of a possible 2:2 tie and a deadlock in decision remains unaddressed.
- Moreover, the law defines the chairperson as a member.
- So the issue of a casting vote becomes contentious.
- **Composition** - Technology is adding manifold degrees of complexity to commerce.
- The global dimension of business today also requires sectoral expertise.
- Global M&As may have unique local consequences or standard global practices may impact Indian consumers differently.
- Given these, general expertise in corporate and M&A law increasingly demands specialist knowledge to supplement.
- Thus, fewer CCI members may not provide scope for the addition of sector experts.

- Sector experts working on a rotating roster of cases may serve the cause of the competition regulator better than a reduced CCI.
- **DG's Office** - The two i.e. the CCI and the DG's office have distinct functions.
- So it is difficult to see why expanding one should prevent enlarging the other.
- In all, in CCI's case, a reduction in members is less likely to serve the perceived cause of efficiency.

9.11 Need for Cost–Plus Pricing in Petroleum Industry

Why in news?

In Indian cities the retail prices of petrol and diesel have risen to new high.

What is the status of increasing petroleum prices?

- The hike in petrol and diesel prices are attributed to the steadily increasing price of international crude oil.
- The share of Petrol and diesel out of total indirect tax   revenues increased significantly after international crude oil prices started declining from the middle of 2014.
- The Centre and states took advantage of the lower prices to increase excise duty and sales tax on petrol and diesel, respectively.
- Now there is demand for rolling back these duties as the crude oil prices have begun rising.
- However, conceding the roll back can be disastrous for the fiscal situation of the Centre and the states.

What factors determine the fuel costs?

- **Market factors -**The price is determined by the movement of crude oil price (the main raw material), the rupee/dollar exchange rate and demand-supply situation in the market.
- **Excise duty-**There was a series of excise duty hikes in the second half of 2015 and the initial months of 2016 on both petrol and diesel to help shore up finances.
- This has helped the Centre realise higher central excise duties will fetch higher revenues.
- **Oil companies -** Oil companies have the pricing freedom and Government has no business interfering in the day-to-day affairs of the companies.

What are the issues with current system of pricing?

- Daily pricing of petrol and diesel linked with market was introduced in keeping with international practices.
- This current system of pricing is based on trade parity, assuming 80 per cent of petrol and diesel is imported and 20 per cent is exported.
- At many instance companies buy crude oil at high price and they sell it for low price due to market trends, to match this losses they hike the prices.
- This system is no longer relevant as the country does not import any of these products and this system confers undue benefits to private sector refiners on their sales of petrol and diesel in the domestic market.

What measures can be taken to resolve this issue?

- The only way there can be a reduction of taxes on petroleum products is by including them in the GST regime.
- This is difficult to be implemented in the short run considering the undue shock to the revenues to the Centre and States.
- Hence, it would be more relevant to allow oil refiners to price their products based on their costs of refining, a reasonable rate of return and marketing overheads.
- This will introduce an element of competition among different oil refiners and allow more efficient and transparent price discovery for these products.

9.12 Fugitive Economic Offenders Ordinance

Why in news?

- The President recently promulgated the Fugitive Economic Offenders Ordinance.
- Passage of Fugitive Economic Offenders Bill was delayed due to disruptions in the Parliament.

What are the key features?

- The ordinance seeks to confiscate properties of economic offenders who have left the country to avoid facing criminal prosecution.

- **Offender** - A fugitive economic offender is a person against whom an arrest warrant has been issued for committing offence like
    i.   counterfeiting government stamps or currency, cheque dishonour for insufficiency of funds
    ii. money laundering
    iii. transactions defrauding creditors
- A fugitive economic offender is one who has left the country to avoid facing prosecution, or refuses to return to face prosecution.
- **Provisions** - The provisions of the ordinance will apply for economic offenders with following conditions:
    i.   who refuse to return
    ii. persons against whom an arrest warrant has been issued for a scheduled offence
    iii. wilful bank loan defaulters with outstanding of over ₹100 crore
- It provides for confiscating assets even without a conviction.
- It also provides for paying off lenders by selling off the fugitive's properties.
- Such economic offenders will be tried under Prevention of Money Laundering Act (PMLA).

What is the procedure?

- **Application** - A director or deputy director, appointed under the PMLA, 2002, may file an application.
- This is to declare a person as a fugitive economic offender.
- It can be filed before a special court, designated under the 2002 Act.
- It will contain the reasons to believe that an individual is a fugitive economic offender.
- Besides, it will have information about
    i.   the whereabouts of the offender
    ii. list of properties believed to be proceeds of a crime for which confiscation is sought
    iii. list of benami properties or foreign properties for which confiscation is sought
    iv. list of persons having an interest in these properties
- **Court** - Upon receiving the application, the special court will issue a notice to the individual.
- It requires the person to appear at a specified place within 6 weeks.
- If the person appears at the specified place, the special court will terminate its proceedings under the provisions of the Bill.
- **Property** - Property belonging to the offender may provisionally be attached without the prior permission of the special court.
- This is, provided that an application is filed before the court within 30 days.
- **Appeals** against the orders of the special court will lie before the high court.

10. INFRASTRUCTURE

10.1 Rejigging our R&D landscape

What is the issue?

- India's innovation policy has to shift beyond a mere focus on R&D spending to transforming the ecosystem.
- Structural and systemic challenges need to be addressed in order to usher in a sustained progress in innovation.

How does the Indian research landscape look?

- On paper, India should be in a good position in terms of research and development (R&D) spending.
- We are ranked 3rd in the world in number of science and technology PhDs awarded and our Global Innovation Index (GII) rank is currently 60.
- Yet, there is no Indian university in the top hundred and only 46,904 patents were filed in India in 2016 (China filed over a million patents).
- This implies that we have evolved a culture of publishing, but not "patenting, and prospering".

How does the fund flow look?

- India's gross expenditure on R&D has increased by three fold over the last decade, crossing Rs. 1 lakh crore in 2016-17, but as a percentage of GDP it has stagnated at around 0.7% for long.
- The government spent 45% of total R&D expenditure in 2015, private industry contributed 38%, whereas the contribution of higher education institutions was miniscule and lacklustre.
- In money value, the Indian government's R&D spending is matched by that of a single company like "Alphabet Inc" (Google's parent).
- Also, only 26 Indian companies figure in the list of top 2,500 companies globally in terms of R&D spending.

- Rather than being market oriented, our research seems to be largely conducted in enclosed ivory towers with little practical relevance.
- Constrained allocations and lack of access to loans are one reason for over 90% of Indian start-ups failing in their initial down slides itself.

What are the structural challenges in the sector?

- **Patents Regime -** There are other institutional constrains as well, as a mere 28% of patents registered for applications are eventually filed.
- Also, patent pendency time in India is among the highest in the world, with about 6-7 years between a request for examination and a final office action.
- In comparison, South Korea and China have pendency timings of 16 and 22 months, respectively.
- Additionally, patents are perceived as mere value additions to resumes without due regard for quality, which is stifling genuine innovation.
- **Innovation Instinct -** Lack of transformative innovative outlook across industries are also big concerns in India.
- Over 77% of Indian venture capitalists believe that India lacks unique business models or new technologies and R&D as a field also fails to attract top talent.
- Notably, we have just about 216 researchers per million, which is paltry in comparison with China's 1,177, Russia's 3,131 and the U.S.'s 4,232.
- Scientific publications in India has risen from 62,955 papers in 2009 to over 106,065 papers in 2013, and our global share has also gone up from 2.2% in 2000 to 3.7% in 2013.
- But then, over 35% of publications in "bogus journals" come from India.

What is the way ahead?

- Building an innovation culture is necessary, particularly giving the transformative shifts under way in sectors critical to India's economy.
- From electric cars in automobiles to insourcing in IT services, the economy is exposed to significant job losses and a fall in exports over the coming decade.
- India's educational policies need to be redesigned, with a focus on building cognitive abilities, beyond rote learning and focus on quantitative subjects.
- Inculcating an "out-of-the-box" thinking across domains in universities, and industries by providing sufficient technical and financial support is necessary.
- We need to strengthen our "Intellectual Property Rights" (IPR) policy regime, through legislative amendments to make research a remunerative avenue.

10.2 Rethinking India's mining policies

What is the issue?

- India's mining sector is at an inflexion point and facing unemployment issues.
- The full potential of mining sector need to be utilized to resolve such issues.

What are the potentials of Indian mining sector?

- India has abundant coal reserves, of 300 billion tonnes, there is room for exports.
- With greater development of India's natural resources sector, import dependency can be reduced by more than 50%.
- This has a potential to save $100 billion which in turn would create more than 20 million jobs.
- The vibrant mining sector can also create an entire eco-system of SMEs.

What are the concerns in Indian mining industry?

- The import of natural resources makes up for $200 billion, or over 50%, of India's total import bill of $400 billion.
- Only 10% of area with mining potential has been explored in India, against 95% in Australia.
- The contribution of India's mining sector to its GDP is just 2%, while it could contribute as much as 10%.
- The taxes and royalty on mining in India are one of the highest in the world.
- Currently, despite 100% FDI being allowed under the automatic route inflows into the sector are not encouraging, and account for less than 0.5% of the total inflows to the country.
- The Mines and Minerals Development and Regulation (MMDR) Act, has a major lacunae in its current form, wherein mines can be auctioned by state governments only after exploration.

- Recently SC ordered to shut coal mining activities in Goa due to environmental violations and inadequate policy measures.

What measures needs to be taken?

- India must increase mining activities on a massive scale, may be up to five times from the current production.
- This requires transparent policies and reduction in royalties to attract firms to invest, explore and produce.
- Government need to direct competent authorities to conduct environment impact studies of existing mines, and chalk out a plan for course correction.
- While union government takes concrete steps to encourage private investment in the mining and other sectors, it must also ensure protection of domestic industry from dumping via imports.
- Respective governments need to take measures for revoking the ban on coal mining and work to find a viable solution.

10.3 Strategic Partnerships for Defence Manufacturing

What is the issue?

- Defence Secretary Sanjay Mitra had said at the recently held "DefExpo" that the Strategic Partner (SP) policy was still at a preliminary stage.
- Notably, there are fundamental flaws in the current Strategic partnership (SP) policy and it will definitely take a few more years for orders to commence.

What is the Strategic Partnership (SP) Policy?

- The intention of the "SP" policy is to promote the private sector to primarily manufacture – fighter jets, helicopters, submarines and tanks, in India.
- The partnership envisions facilitating technology transfer from a foreign 'Original Equipment Manufacturers' (OEM) to a local partner on agreed terms.
- This will aid Indian firms to access the technical knowhow on weapons manufacturing while also simulataneously boosting foreign investments.
- Notably, to bring a spread in skills among many firms, the policy mandates only one class of weapons to be manufactured by one local partner.
- The process designated to select a SP is long and arduous and nominated firms must demonstrate its financial and technical potency to be selected.

What are the challenges?

- It is a fact that even the most strong of Indian firms dont currently pocess the capability to build sophisticated military hardware.
- For example, building a warship demands expertise not just in welding, fabricating, plumbing and wiring.
- More specifically, establising a battle ready platform requires expertise in high-tech propulsion systems, environment management tools and sensors.
- Notably, public sector shipyards like Mazagon Dock and Garden Reach took almost 50 years to aquire the current level of expertise to build warships.
- Similarly, even Hindustan Aeronautics, which is the only Indian company capable of manufacturing fighter jets, had taken decades for the achievement.
- These public enterprises literally began with nuts and bolts and simple sub-systems, and then graduated to more complex systems.

What is the risk of rushing through with partnerships?

- In the urge to quickly build private sector capability, the SP policy seems to be demanding unreaslistic technological capabilities from aspiring firms.
- Even with the best of intentions and handholding from foreign OEMs (foreign firms), Indian firms will be hard-pressed to build a modern fighter or frigate.
- SP projects require at least a 40% indigenisation, but the most costly components like propulsion systems and sensors will have to be imported.
- This implies that a large amount of fabrication and final integration has to be done in India to meet the 40% indeginisation target.
- All this would mean an undesirable dependence on the foreign partners to compensate for the slack by the local firms.

10.4 Addressing the Concerns in Indian Steel Industry

What is the issue?

- Across the globe there is revival in the demand of steel and a reduction in production capacity of steel.
- India has to concentrate on realigning its focus on steel production methods to become global leader in steel production.

What are the concerns in Indian steel production?

- India is witnessing growth in its steel industry, which ranks 3rd in world steel production.
- Inspite of this, India's growing economy lacks in productive and best-in-class steel industry.
- The cost of steel transportation in India is three times of what it should be with a normal transportation infrastructure.
- Congested and expensive rail infrastructure being one of the biggest impediments to a productive steel industry.
- India is primarily relying on coal based steel production, which has environmental implications.
- India is over-exploiting its already available raw material sources for steel production.

What actions need to be taken to improve steel production?

- New areas for raw material exploration for steel production is yet to be ventured.
- Clean coal energy sources like coal gasification will make steel at the lowest cost, lowest carbon footprint and with sustained profitability and returns.
- Appropriate raw material blending, exploration, acquisition and financial engineering, will increase earnings from steel production consistently.
- India is endowed with over 7,000 km of coast-line would be used to convert the logistical disadvantage of steel industries into unbeatable competitive advantage.
- This added with transport of slurry iron-ore through pipelines will be used to create a low cost, low carbon, multi-modal transportation infrastructure that decreases the cost of steel.
- Digital technologies, analytics, simulation and sensors will also transform the way steel is made.

10.5 Re-modelling our DISCOMs

What is the issue?

- Disruptions in technology, regulations, and business models are forcing power distribution companies (DISCOMs) to take stock of their future.
- DISCOMs need to get innovative and redesign their tariff structure and business model to tide over this impasse.

What are the problems in plaguing the Indian DISCOMs?

- Indian DISCOMs are financially strained - at the end of FY16, total outstanding debt was Rs 4,146 billion and annual losses were Rs 657 billion.
- There are significant challenges in the sector that demonstrate how short-term measures will not suffice to hold off the long-term collapse.
- **Purchase agreements -** 75-80% of a DISCOM's costs are in power purchase and many are locked into expensive agreements (PPAs) for decades.
- Improper planning, and technical constraints in operating the grid, has been costing as much as Rs 200 billion annually.
- **Cross Subsidisation -** DISCOMs charge "commercial and industrial (C&I) consumers" very high tariffs.
- This is tocompensate for subsidies provided to residential and agricultural consumers, for whom tariffs are kept artificially low for political reasons.
- High tariffs combined with unreliable supply have rendered Indian industry uncompetitive in global markets.
- To counter this, industries were forced to build capacity for captive electricity generation – which accounted for as much as 17% of all DISCOM sales in Fy17.
- Notably, C&I consumers currently have new options for distributed generation of renewable energy - like installing solar systems in their premises.
- Hence, by charging exorbitant tariffs and providing unreliable power supply, DISCOMs will eventually drive away their best paying consumers.

- **Government Initiatives -** "Power for All, Make in India, and speedy deployment of renewable energy" are further complicating the sector's woes.
- There is a need for DISCOMs to rethink their business models and reorient towards a more sustainable future.

11. AGRICULTURE

11.1 Challenges in Coffee Cultivation in India

What is the issue?

Coffee cultivation in India is being challenged with many issues affecting the sustainability of the plantation crop.

What is the brief account on coffee cultivation in India?

- Coffee is cultivated in the hill tracts of South Indian states, with Karnataka accounting for 71%, followed by Kerala with 21% and Tamil Nadu 5%.
- Coffee plant requires hot and humid climate with temperature varying between 15°C and 28 °C and rainfall from 150 to 250 cm.
- Coffee is generally grown under shady trees and dry weather is crucial only at the time of ripening of the berries.

What are the concerns with coffee production?

- Recent estimates shows that there is an average decline of 20 per cent over the earlier post-blossom crop.
- Coffee cultivation requires plenty of cheap and skilled labour for various operations including sowing, transplanting, and pruning, plucking, drying, grading and packing of coffee.
- But in India there is an acute shortage of skilled plantation labour, which is evident from the thousands of unskilled workers from Bihar, Jharkhand and Assam, migrating to coffee planting areas.
- Over the last few decades the loss of forest cover has resulted in environmental degradation and costs of inputs such as fertiliser, labour wages, pesticides and fuel has drastically increased.
- There are also stagnation in bulk coffee prices which has pushed the small growers who constitute 98% of coffee production to other avenues like, coffee resorts, inter-cropping with pepper, etc.

What measures needs to be taken?

- Crop quality needs to be improved through quality hubs for superior processing, whereby even cherries will yield higher returns.
- Small coffee growers needs to be supported with minimum support prices and subsidies as they face bigger challenges like global currency fluctuations.

11.2 A2 Milk and Indian Native Cattle

What is the issue?

Across the globe there is a growing interest in consuming A2 milk which has created an unnecessary hype in India.

What is the difference between A1 and A2 milk?

- Milk contains two major groups of proteins namely, caseins and whey proteins.
- The A1/A2 status of cattle is determined by the two alleles for beta-casein gene i.e. A1 and A2.
- Cattle may be homozygous for one type of protein (A1A1 or A2A2), or heterozygous (A1A2).
- A1A1 cattle would produce only A1 milk, A2A2 would produce only A2 milk and A1A2 cattle would produce milk with both A1 and A2 beta - caseins.

What are the speculations around A1 & A2 milk?

- Some reports indicate that A1 protein has negative health effects like heart disease, Type 1 diabetes, autism, inflammatory response and digestive discomfort etc.

- Researches to find the "cause and effect" relationship between A1 proteins and the reported non-communicable diseases have been inconclusive.
- Gastrointestinal effects of A1 in animals are positive but evidence from human experiments remain limited.
- Symptoms of digestive discomfort could also be due to lactose intolerance, which is different from allergy due to milk protein.
- Despite the lack of conclusive scientific evidence from human studies, several players have started marketing A2 milk with claims that it is natural, better, and free from negative effects.

What are the concerns for native breeds in India?

- National Bureau of Animal Genetic Resources (NBAGR), have confirmed that Indian indigenous cows and buffaloes produce A2 milk.
- The high-yielding native milk breeds of India produced around 94%-100% of A2 milk.
- But recent studies reported exotic breeds which were the source of A1 milk are being used for cross breeding of cattle

What measures are being taken to conserve native cattle?

- It should be understood that shift to A2 milk is unnecessary in India as native cattle breed naturally produces A2 milk.
- NBAGR is currently implementing a project entitled "Delineating Beta Casein Variants in Indian Cows and Potential Health Implications of A1A2 Milk".
- The bureau and few private companies are offering a service for genotyping of A1/A2 allele from milk or blood samples in cattle species at nominal cost.
- The government is also taking steps to conserve native breeds of every region with help from local people and private players.
- Private dairies are also working on improving the productivity of desi breeds by better breeding, better farm and feed management and better animal health.

11.3 Challenges in the Indian Dairy Sector

What is the issue?

- India has rapidly emerged as one of the largest producers of milk over the last three decades, accounting for 18.5% of global milk production.
- But inefficiencies in our dairy supply chain pose a serious health risk, which needs to be addressed immediately.

What is the market scenario in the India dairy sector?

- Increasing preference for a healthy lifestyle is expected to nudge the Indian dairy industry to grow at a compounded 15% annually till 2020.
- The sector is touted to emerge as a Rs. 9.4-lakh crore industry – which presents a immense opportunity for businesses.
- Significantly, over the last few years, several well established Indian companies and multinationals have made efforts to move in into the sector.
- This has resulted in a slew of new and innovative products being launched at the upper-end of the spectrum.
- However, the dynamics of the Indian dairy industry is very different from that of more developed countries.
- Hence, amidst the growing output, a serious health issue is also looming large, which is primarily due to our supply chain inefficiencies.

What are the problems?

- In developed markets, dairy aggregator companies depend on large corporate dairy farms, whereas in India, dairy farming is largely a subsistence activity.
- India's major milk supply comes from millions of small producers who have an average of one or two milch animals comprising cows and/or buffaloes.
- Additionally, only about 20% of the milk produce is channelled for organised marketing, and the rest remains in the ambit of unorganised supply chains.
- A large cadre of small time vendors are involved in collecting milk from local producers and selling it in both urban and rural areas.
- This kind of supply chains imply glaring inefficiencies, where a large portion of the milk produced does not adhere to the basic standards of hygiene.

- The issue is aggravated as over 80% of milk consumption in India is liquid milk, which can pose serious health risks.
- Un-chilled and unpasteurised milk can produce disease-causing germs and bacteria – surveys iterate that as much as 68.5% of supplies are contaminated.
- FSSAI (Food Safety and Standards Authority of India) pointed out in a 2012 survey that 70% of the Urban and 31% of rural supplies don't meet standards.

What is the way ahead?

- To ensure that the Indian dairy industry continues to grow in a healthy and sustainable manner it is important to reassess our supply chain.
- The focus needs to be on modernising milk logistics in order to create toxin free and antibiotic safe, high quality milk.
- At the start of the supply chain, attention needs to be paid for managing and rearing cattle, and providing farms with the right kind of cattle feed.
- Secondly, "processing and cold chain infrastructures" are in need of massive upgrades in a leapfrog manner like during "Operation Flood".
- Quality-friendly technologies such as the Bulk Milk Coolers (BMC) that brings down the time taken to collect milk to about '45 minutes' are needed.
- Notably, it takes about 2-3 hours for the currently prevalent central chilling/cold storage model - which enhances bacteria formation.
- Also, since transporting raw milk beyond 200 km is not feasible, we need to ensure a geographical distribution of sourcing and processing sites.
- While all these will enhance the quality and shelf-life of milk, improvements in the last mile connectivity will result in holistic betterment of the sector.

12. SCIENCE AND TECHNOLOGY

12.1 ODL - A New Class of Anti-biotic

What is the issue?

- Researchers have reported the discovery of a new class of antibiotics called ODLs, whose operational mechanism is very unique.
- This also offers hope for overcoming the menace of drug resistance.

How does the new drug function?

- This new class of anti-biotic is unique and promising on two fronts - its unconventional source and its distinct way of killing bacteria.
- Both of this suggests that the compound may be effective at treating drug-resistant or hard-to-treat infections.
- **The Study -** Odilorhabdin (or ODL) are antibiotics that are produced by special bacteria that are found inside the soil-dwelling "nematode worms".
- These bacteria live inside the said worms and are engaged in a symbiotic relationship with the insect for food.
- They are said to secrete antibiotics to keep competing bacteria away – of which, 80 cultured secretion strains were analysed by researches.
- Active compounds were also isolated and studied for engineering enhanced versions of the secretions for bettering their effectiveness.
- **The Mechanism -** ODLs were found to act on the ribosome of other bacteria, which is the molecular machine that makes the vital proteins.
- While many clinically useful antibiotics also target ribosome, ODLs are unique because they bind to a place on the ribosome that has never been used by other known antibiotics.
- When bound to the ribosome, ODL antibiotics disrupts the ribosome's ability to read, interpret and translate genetic code and thereby hinders reproduction.
- This leads to miscoding of proteins, which make newer bacterial off-springs to be born defective - thereby they die out soon and get annihilation.

How does its potency fare?

- Researchers tested ODL compounds against bacterial pathogens, including many known to develop resistance.

- ODL compounds were found to cure mice infected with several pathogenic bacteria and demonstrated very positive results.
- Many antibiotics can slow bacterial growth, but antibiotics like ODL that kill bacteria are rare - thereby making this discovery a major breakthrough.

12.2 Ayushman Bharat – The Challenges

What is the issue?

- The centre has introduced "Ayushman Bharat" as an ambitious mass health insurance scheme, that intends to cover about 50 crore people.
- But its implementation will be more challenging than other initiatives as it would involve huge funds and infrastructure creation.

What is the medi-care landscape in India?

- A nation's development and growth is gauged by the health of its population.
- But even after 70 years of independence, 80% of the Indian population is not covered under any health insurance scheme.
- Additionally, the cost of medi-care is very high in comparison with the average income of the population, which makes it unaffordable for many.
- Hence, the announcement of the 'National Health Protection Scheme' (NHPS) under 'Ayushman Bharat Programme', in the Union Budget 2018-19, is timely.
- While the government has intended to provide free care to about 40% of the population at one go, it is impossible to do this with the existing facilities.
- Notably, this has been touted as the world's largest government-funded healthcare program and the sheer scale of the proposal is intimidating.

What is the scale of infrastructure enhancement required?

- Worldwide, most governments have achieved near universal coverage by spending somewhere between 5-12% of their GDP.
- For countries with large population, it takes a minimum of 5-10 years to achieve 100% coverage as health cover can't be extended at a stretch.
- It has been estimated that to achieve universal health coverage by 2022, Indian government would need to allocate 3.7-4.5% of GDP for health.
- This is almost 4 times the present 1.4% and the also the bed-to-population ratio needs to be almost doubled from the current 0.9 (per 1000 people) to 1.7.
- It is to be noted that considerable improvements in primary care would also result in reduction of the hospitalisation rate.
- Also, we would need an additional 9 lakh graduate doctors for primary care and around 1.2 lakh specialist doctors for secondary and tertiary care services.

What are the challenges?

- **Profitability -** The hospital business, particularly the multi-speciality tertiary care business, is capital-intensive with a long gestation period.
- While infrastructure is already severely short (particularly in Tier II and Tier III cities), even existing operating assets aren't delivering the expected returns.
- Hence, the government should provide adequate finances for the sector's development and also provide incentives and tax benefits.
- **Financing -** Another challenge is that health is a state subject and hence requires states to contribute 40% of the expenditure for Ayushman Bharat.
- Notably, most states have a poor fiscal situation, and several operational state health schemes which will also have to be aligned with the central initiative.
- The model for empanelling providers would be critical to the success of NHPS and a shared space for both public and private care providers is ideal.
- **Implementation -** Even in the previous public health insurance schemes of some states, the private healthcare providers have been facing huge challenges.
- Particularly, improper procedure for empanelment, cost fixating mechanisms and inordinate delay in reimbursement to hospitals are some issues.
- Also, a proper mechanism for standardisation of services across the spectrum is absent and the current 'National Accreditation Board for Hospitals' (NABH) certification covers only some hospitals.

What needs to be done?

- **Standardisation -** NABH needs to categorise hospitals into Entry level, Progressive level and Accreditation level to cover all hospitals.
- To improve clinical and operational efficiencies, standardisation in clinical practice and other processes needs to be implemented.
- **Claims Disbursal -** National Costing Guidelines and a standard costing template should be used for calculating reimbursement packages.
- Framing of referral protocols, adoption of electronic health record standards and clinical audits in all hospitals are other aspects that need to be done.
- Successful medical claims management is also very important under any insurance programme and fraud control mechanisms should also be done.
- **Others -** Integration of technology at each level of the healthcare continuum such as tele-medicine, health call-centres, tele-radiology etc, is needed.
- For strengthening the healthcare professionals, skilling, re-skilling and up-skilling programmes for existing as well as additional workforce can be done.
- A Grievance Redressal Forum should be created to ensure timely resolution of complaints without intervention of civil or consumer courts.
- The government should also encourage and recognise transparency, self-regulation and third party ratings and reward clinical outcomes.

12.3 Tiangong-1 Downing and Space Debris

What is the issue?

- The recent downing of Tiangong-1 ended concerns about where the debris from the space station would fall.
- It has however reignited the larger debate about space debris itself.

What is Tiangong-1?

- Tiangong-1 is China's space station.
- Launched in 2011, it made China just the third country to launch a space station.
- The Chinese used it to demonstrate spacecraft docking capabilities.
- Six astronauts visited Tinangong-1 in 2012 and 2013 in two crews.
- It included China's first woman astronauts, Liu Yang and Wang Yaping.

What happened to it?

- Chinese lost control of the station in 2016.
- After losing control, China notified the United Nations Office for Outer Space Affairs and the Inter-Agency Space Debris Coordination Committee.
- Much of Tiangong burnt up in the atmosphere, until it finally splashed into the ocean.
- Weighing 8.5 tonnes, it dropped out of orbit and splashed into the South Pacific Ocean, just northwest of Tahiti.
- Tiangong-2 continues to be operational.
- This lab was launched the same year the Chinese lost control of the now-downed space station.

What are the concerns with space debris?

- At least 500,000 pieces of space debris, of various sizes, are orbiting the Earth.
- Nearly 7,500 tonnes of estimated amount of defunct, artificially created objects are currently in space.
- The speed up to which space junk travel is 28,000 kph.
- This is fast enough to destroy a spacecraft.
- Probability of an individual on Earth being hit by falling debris is 1 in 1 trillion.
- **ISRO** - PSLV-C19 had launched radar imaging satellite RISAT-1 in 2012.
- Recently, PSLV-C19's 4th stage burnt up over the Central Atlantic.

What is a spacecraft graveyard?

- There are larger space objects that may not entirely burn up before reaching the ground.
- Spacecraft operators can thus plan for the final destination of their old satellites to make sure that any debris falls into a remote area.
- A 1,500 sq km area in Southern Pacific Ocean is said to be the spacecraft graveyard or spacecraft cemetery.
- This is suitably far from any coast and human habitations thereby.

- Notably, more than 260 satellites were brought down there so far.
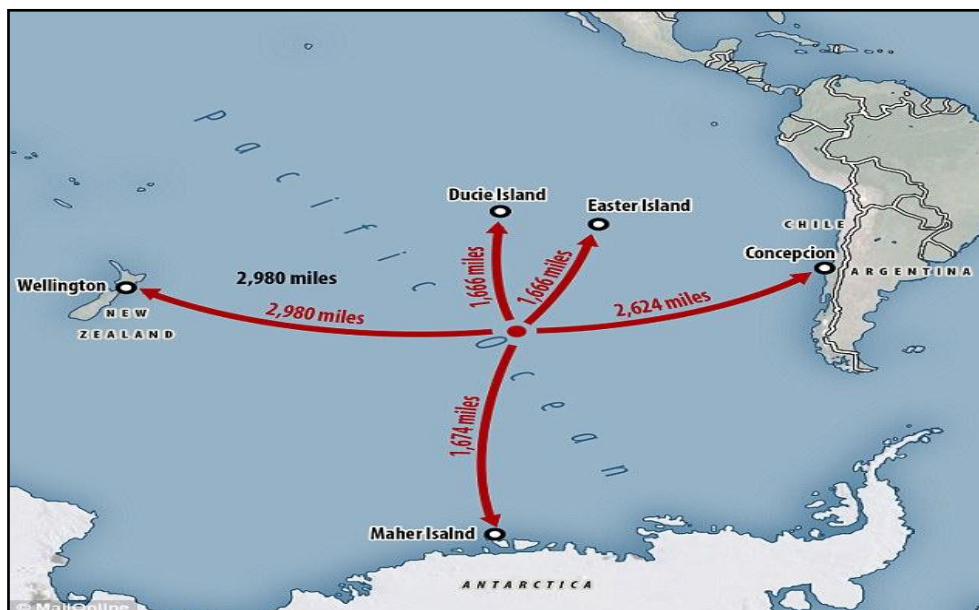
13. ENVIRONMENT

13.1 Rhino Population in Kaziranga National Park

What is the issue?

- The latest rhinoceros census in Kaziranga reported a gain of just 12 rhinos since 2015, a jump by barely half a percent.
- Though marginal, this increase is seen as a healthy trend.

What was the concern?

- Kaziranga lost over 500 rhinos in the last 2 decades of the twentieth century.
- The situation improved from the 2000s when an average annual loss to poaching came down to single digit.
- Kaziranga reported a population of 1,855 rhinos in 2006.
- But after 2006 it suffered a setback with poaching taking huge tolls.

What is the recent healthy trend?

- Even as poaching made a comeback after 2006, Kaziranga reported the biggest jump in rhino numbers.
- Rhino population had a gain of 193 rhinos in just 3 years from 2006 to 2009.
- It increased by 353 between 2009 and 2015 period, despite worrying numbers on poaching.
- But since 2017, Kaziranga brought down the numbers on poaching and thus claims a healthy population gain.
- Kaziranga National Park (KNP) has counted 2,413 one-horned rhinos in the latest triennial population estimation.
- It comes closer to the goal of hitting the 3,000-mark in the Asian one-horned rhino population in Assam by 2020.
- Moreover among the female population now counted, a majority are breeding.

What are the reasons for improvement?

- Poaching has been brought down considerably by concerted efforts.
- A group of **informers** earlier used by the civil administration, to get updates on poaching operations, started turning hostile.
- In tie up with their controllers, they were apparently protecting the poachers in return for big protection money.
- This group of hostile informers have now been identified and controlled.
- It has been a practice to offer **political patronage** to monetise Kaziranga's rhinos in exchange for varied electoral services.
- The ups and downs in poaching numbers, with peaks during the election times, clearly reflect this practice.
- This decade-long tradition which affected rhino population has now been done away with by the government.

What drives poaching?

- Kaziranga and its rhinos still remain very much in the grip of both commercial and political interests.
- Rhino is far easier to poach than, say, a tiger or an elephant, and far more valuable in that sense.
- A carton of horns fetches as much as a carload of tiger derivatives or tusks would.
- These factors perpetuate the interest in rhino poaching, posing a challenge for controlling them.
- This interest had in the past made it easy for local insurgent groups to strike cashless arms deals with operators in Myanmar.

What are the administrative and legal shortfalls?

- **Local Population** - The forest administration least consider as allies the local population, mostly tribals and Muslims.
- Violent eviction drives against encroachers are common and, at least once, led to deaths caused by police firing.
- **Killing Poachers** - Hundreds of alleged poachers have been gunned down and the number of poachers killed is on the rise.
- On the other hand, expressively, only two forest staffs have ever been killed by poachers since the late 1960s.
- In 2010, Assam extended legal protection against prosecution to staff who kill poachers.
- Resultantly, from a decadal count of just 17 between 2001 and 2010, the number of poachers killed raised to over 50 in the next 5 years.
- These figures clearly seem to give credibility to recurrent allegations of staged murders.
- **Neighbourhood** - The anti-migrant rhetoric against alleged Bangladeshis have alienated the minority population in villages around the park.
- Resultantly, rhino protection does not enjoy much goodwill in its neighbourhood.
- Winning their support over time can be the best insurance against poaching.

13.2 Draft National Forest Policy 2018

Why in news?

Ministry of Environment, Forest and Climate Change (MoEFCC) recently released the draft National Forest Policy 2018.

What are the highlights?

- **Objective** - The draft forest policy, 2018 will be an overarching policy for forest management.
- It aims at bringing a minimum of one-third of India's total geographical area under forest or tree cover.
- It seems to address the concern of decline in forest productivity.
- **Concepts** - The draft has introduced some new concepts such as:
    i. economic valuation of ecosystem services
    ii. forest certification
    iii. national forest ecosystem management information system
- **Approach** - The 1988 forest policy had a local community- and ecology-centric approach.
- From this, the new draft shifts the focus to timber and forest-based industries.
- It identifies "production forestry" and plantations as the new thrust area.
- **Tribal to Timber** - The importance offered to the rights of local, forest-dependent communities are being diluted.
- It is substituted by the demand for raw material from forest-based industries.
- The draft aims to use degraded land available with forest corporations to produce "quality timber".
- This goes against the emphasis on "fuelwood and fodder development" as in 1988 policy.

- **Production forestry** - The 1988 policy had sections called 'Rights and Concessions' and 'Tribal People and Forests'.
- These are replaced by ideas of 'Production Forestry', increasing the productivity of forest plantations and facilitating forest industry interface.
- **Industry** - The draft stresses the need to stimulate growth in the forest based industry sector.
- It encourages forest corporations and industrial units to step up growing of industrial plantations.
- **Livelihood** - The current draft mentions about the livelihoods of local communities -
    i. as passive recipients of benefits accruing from wildlife tourism
    ii. as labour for forest-based industries
    iii. in relation to non-timber forest produce (NTFP)
- **PPP** - The draft proposes a public-private partnership model for afforestation and reforestation activities.
- This will be in "degraded forest areas and forest areas available with Forest Development Corporations and outside forests".
- **Plantation choice** - The draft recommends 'commercially important species' like poplar and eucalyptus.
- Both of these are non-indigenous plantation species.
- **Protection measures** - The policy proposes to restrict schemes and projects which interfere with forests that cover steep slopes.
- Catchments of rivers, lakes, and reservoirs, geologically unstable terrain and such other ecologically sensitive areas are also covered.
- The ecologically sensitive catchment areas shall be stabilized with suitable soil and water conservation measures.
- Planting suitable trees and grass like bamboo in these areas is also suggested.
- **Mechanism** - It suggests setting up of two national-level bodies for better management of the country's forests.
- These are the National Community Forest Management (CFM) Mission and the National Board of Forestry (NBF).
- NBF will have to be headed by the central minister in charge of forests.
- The state boards of forestry will have to ensure inter-sectoral convergence, simplification of procedures, conflict resolution, etc.
- The state boards of forestry will have to be headed by state ministers in charge of forests.
- Besides, efforts will be made to achieve harmonization between policies and laws like Forest Rights Act (FRA) 2006.
- **Community participation** - Efforts to ensure synergy between gram sabha& JFMC (Joint Forest Management Committee) will be taken up.
- This is for ensuring successful community participation in forest management.
- The CFM mission will address participatory forest management.
- **Financing** - The compensatory afforestation fund which is being transferred to the states will provide for management of forests.
- It will source afforestation and rehabilitation works in degraded forest areas and for bringing new areas under forest and tree cover.
- Efforts for tapping funds from other national sectors will be taken up.
- This may include rural development, tribal affairs, national highways, railways, coal, mines, power, etc.
- **Forest fire** - The draft policy includes measures to safeguard ecosystems from forest fires, which include:
    i. mapping the vulnerable areas
    ii. developing and strengthening early warning systems
    iii. remote sensing technology to control fire
    iv. improved community participation
- **Climate change** - Forests are natural carbon sinks, assisting in climate change mitigation.
- Climate change concerns will be factored in all forest and wildlife areas working/management plans and Community Ecosystem Management Plans.
- Wildlife rich areas and corridors outside protected areas would be identified and maintained for ensuring ecological and genetic continuity.
- **Human-wildlife conflict** - Quick response, dedicated teams of well equipped and trained personnel would be developed.
- Health and veterinary services, rescue centres, speedy assessment of damage and quick payment of relief to the victims are other short term actions.

- Monitoring and management of population of wildlife would be adopted as part of long-term measures.

13.3 Draft Coastal Regulation Zone (CRZ), 2018

Why in news?

The draft Coastal Regulation Zone (CRZ), 2018 was recently released by the Ministry of Environment and Forests (MoEF).

What are the key features?

- **HTL** - The High Tide Line (HTL) shall be demarcated by the National Centre for Sustainable Coastal Management (NCSCM).
- This shall be reckoned as a universal standard for the HTL for all regulatory purposes under notification, 2018.
- **Hazard line** - Hazard line mapping will be carried out by Survey of India.
- However, the Hazard Line has been delinked from the CRZ regulatory regime.
- It shall be used only as a tool for Disaster Management and planning of adaptive and mitigation measures.
- **CRZ** - CRZ limits on land along the tidal influenced water bodies has been proposed to be reduced.
- It would be reduced from 100 meters or the width of the creek to 50 meters or the width of the creek, whichever is less
- **NDZ** - A No Development Zone (NDZ) of 20 meters has been proposed.
- This will be stipulated for all Islands close to the main land coast and for all Backwater Islands in the main land.
- **CRZ-III** - For CRZ-III areas, two separate categories have been proposed.
- These are CRZ-III A and CRZ-III B.
- CRZ-III A comprises areas that have population density of 2161 per sq km as per 2011 Census.
- These will have NDZ of 50 meters from the HTL as against 200 meters stipulated in the CRZ Notification, 2011.
- CRZ-III B comprises rural areas with population density of <u>below</u> 2161 per sq km as per 2011 Census.
- CRZ-III B areas shall continue to have an NDZ of 200 meters from the HTL.
- **Procedure** - The procedure for CRZ clearances has been simplified.
- Delegations for recommending/according CRZ clearances to the projects/activities have been made at various levels.
- Only such projects/activities, which are located in the CRZ-I & IV areas, shall be dealt with for clearance by the MoEFCC.
- For all other project activities in CRZ-II/III areas, clearance would be at the level of the CZMA (Coastal Zone Management Act).
- **Floor Space Index** - As per CRZ, 2011 Notification, for CRZ-II areas, Floor Space Index (FSI) had been frozen at 1991 Development Control Regulation (DCR) levels.
- In the Draft CRZ, 2018 Notification, it has been proposed to de-freeze this.
- Permitting FSI for construction projects, as prevailing on the date of the new Notification is proposed.
- **Tourism** - Temporary tourism facilities have been proposed in Beaches.
- These include shacks, toilet blocks, change rooms, drinking water facilities etc.
- Such temporary facilities are also proposed to be permissible in the No Development Zone (NDZ) of the CRZ-III areas.
- These will be taken up on the seaward site of the roads where there is a National or State Level Highway passing through the NDZ.
- On the landward side, Resorts/Hotels and other tourism facilities have been proposed to be permitted.
- These will however be subject to the extant regulations of the concerned State.
- **Mangroves** - The draft proposes some compensatory measures in cases where roads are constructed through mangroves.
- A minimum 3 times the mangrove area affected/ destroyed during the construction shall be taken up for compensatory plantation.
- **Mining** - Regulated limestone mining will be permitted.
- This will be subject to strict Environmental safeguards, in areas adequately above the height of HTL.

- This would be based on recommendations of reputed National Institutes in the Mining field.

When will it come into force?

- There are Coastal Zone Management Programmes (CZMP) framed to the CRZ Notification, 2011 by the respective States/UTs.
- These have to be revised now by the States/UTs as per the provisions of the CRZ, 2018 Notification.
- This has to be approved by the Ministry of Environment, Forest & Climate Change.
- Only after this process, the relaxations/amendment proposed in the CRZ Notification, 2018 shall come into force.

13.4 Internal Climate Migration

What is the issue?

- There is presently an increased internal migration across the world due to political and economic instability.
- Beyond this, the internal migration due to climate change is potential of getting to be a major concern for nations.

What is the looming danger?

- Some of the slow onset climate events would be droughts, effects from sea level rise and water shortages.
- These may certainly drive many more to leave their homes and move to safer places.
- Such migration may be a choice in the initial stages.
- However, as the stress becomes more severe, the decision to move may be forced.
- E.g. people are compelled to leave their island nations in the Pacific and Indian Oceans with gradual rise in sea levels
- These climate exiles are an ongoing process.
- Notably, it would likely increase out-migration over time.

Which regions are vulnerable?

- A recent report by the World Bank on internal climate migration highlights the possible migration reality.
- In Latin America, South Asia and Sub-Saharan Africa over 140 million people would be forced to move within borders by 2050.
- This would be as a result of slow onset climate events alone.
- In the worst-case scenario, about 40 million of these migrants would be in South Asia.
- This is the most populous of the regions studied, with a number of climate change effects anticipated.

How would South-Asia be affected?

- South Asia is characterised by **rain-fed farmland** in large parts of the region.
- Variability in the **monsoons** and **warmer temperatures** is sure to lead to **crop failures**.
- This will lead to **migration** from the Gangetic plains and from the rice-growing northeast of Bangladesh and the inundated coasts.
- The numbers on forced internal migration in South Asia could increase six-fold between 2020 and 2050.
- This will continue to rise beyond 2050 without appropriate climate action.
- But even with inclusive development and climate-friendly scenarios, tens of millions would still be forced to migrate.
- This normally makes people **migrate to big cities**.
- However, those along the coast such as Mumbai, Chennai, Chittagong and Dhaka will themselves be vulnerable.
- **Storm surges** and other effects from **sea levelrise** make these coastal cities unfavourable.

What are the concerns?

- The **poor** would be the worst affected by these slow onset events.
- Most of them would migrate out of rural areas to nearby urban settlements such as **cities and the peri-urban surroundings**.
- Such "**hotspots**" of in and out migration would be stressed for natural resources, public services and livelihoods.
- In India, the areas between Chennai and Bengaluru could be the potential spots.
- In India, there are already signs of **unplanned and frontier-led growth** in peri-urban areas.

- Planning that ignores the **ecosystem services** provided by local natural resources generates further problems for the vulnerable.
- The implications of internal migrations will significantly affect **development** in these areas and the lives of vulnerable people.

What should be done?

- **Policy** - Understanding migration patterns, getting socioeconomic data on migration and appropriate planning are essential.
- Current climate modelling methods are not accurate at high resolutions for local decision-making.
- Policies to reduce GHG emissions are of utmost urgency.
- **Cities** - The peri-urban areas, expected to be hotspots, already have many problems.
- These include water shortage, waste management, nutritional deficiency, limited services and poor infrastructure.
- Thus, integrating internal migration with ongoing development planning is vital.
- **Ecosystem** - Ecosystems, part of the natural resources in peri-urban areas, ought to be protected as "special ecological zones".
- This is crucial to ensure that as urban settlements expand, they don't spoil the ecosystem services.
- **Social** - Ignoring issues of social justice and equity in adaptation can lead to serious governance failure.
- Skill building, job training and education and job opportunities for locals and migrants thus have to become a focal point.
- Rights for those who are forced to migrate would be fundamental in these preparations.

13.5 Plantations are Forests – Says Forest Survey

What is the issue?

- The latest "Forest Survey of India" report has changed the calculation method for India's forest cover to include plantations on private lands.
- This is not just naive but also deceptive and runs the risk of seeing conservation funds being diverted to satiate private interests.

Why is the resent change in the classification problematic?

- It is common knowledge that private plantations of teak, eucalyptus and poplar are undertaken to earn incomes.
- Such plantations can't be substitutes for natural forests with their wildlife and immense biodiversity.
- Natural forests have multiple ecosystem functions, none of which can be provided by commercial plantations.
- Classifying tree plantations as forests is hence a fallacy that ignores the reams of research and evidence which show otherwise.
- Hence, there is suspicion that the move is intended to aid private profits by relaxing restrictions and siphoning off conservation funds.

How does the ecological conservation scenario look?

- Data shows that there is a clear increase in average global temperatures due to the rising levels of carbon dioxide in the atmosphere.
- Frequency of heat-waves, floods, droughts, and unseasonal rainfall is also increasing – all of which are thought to be the effects of global warming.
- Protecting and restoring natural forests (not plantations) is one of the best ways to mitigate climate change.
- Some argue that private funds can be mobilised by classifying plantations as forest, but they seem to be ignoring the ecological cost of such a move.
- Besides, more than $7 billion of public "Compensatory Afforestation Fund" (CAF) is lying unused currently – which needs to be used up effectively.

What is the way ahead?

- Multiple peasant and tribal communities have for long worked for the conservation of their neighbourhood forests.
- Tribal claims of ownership over the use of sustainable forest resources have now been legally recognized by under the "Forest Rights Act of 2006".
- Bettering the implementation of the act and strengthened cooperation with grassroots institutions are vital to further conservation efforts.

- Governments should consider devolving afforestation funds to the gram sabhas and build a sustained movement for conserving forests.

13.6 IMD - Monsoon Forecast

Why in news?

The Indian Meteorological Department has recently released the monsoon forecast for this year.

What are the key findings?

- The country would experience a normal monsoon for the third successive year.
- South-west monsoon at 97% of the long period average (LPA) is expected.
- Long Period Average (LPA) is the average annual rainfall for the period 1951-2000.
- The LPA comes to about 89 cm of rain.
- Monsoon is considered normal if average rainfall is between 96% and 104% of the LPA.
- Anything less than 90% of the LPA is considered a deficient monsoon.

What does it imply?

- The forecast of a normal monsoon enhanced the economic outlook.
- For farmers especially, this has given fresh expectations.
- This is the third year in a row to look forward to a high output for a variety of crops.
- However, it is not to be forgotten that fiscal realities have come in the way of realising higher farm incomes.
- The Centre has been supportive of higher returns through the Minimum Support Price mechanism.
- Moreover, additional bonuses have been announced by States such as Madhya Pradesh for procurement.

What is the need for caution?

- Government efforts have mainly helped only rice and wheat.
- This trend has led to a skew towards these crops.
- This is especially worrying from a water management perspective.
- As the above crops are heavily dependent on groundwater.
- With a normal monsoon, another year of good cropping is expected.
- But unremunerative prices will depress public sentiment.
- So it is vital for the Centre to arrive at a policy.
- Farmers should be given constructive advice on the ideal cropping mix.
- They should be helped to get the cost-plus-50% margin that the Centre has promised them.

Why is water management crucial for India?

- Rainfall ranges from a few hundred millimetres or less in the northwest to more than a few thousand millimetres elsewhere.
- The long-term challenge for India is to make the most of the rainfall it receives.
- India notably uses more water to grow crops comparing to, say, China.
- Combined with distortions in procurement subsidies, water stress due to exorbitant use is inevitable.

What should be done?

- The Master Plan for Artificial Recharge to Ground Water drawn up by the Centre should be pursued scientifically.
- This is to help States (with the most water-stressed blocks) get adequate funds to build artificial recharge structures.
- Moreover, for farmers choosing to continue with wheat and rice, transfer of expertise is crucial.
- Also, provision of equipment that enables efficient utilisation of water is vital.
- A good monsoon raises agriculture's contribution to GDP growth.
- So it is essential that the governments invest consistently to harvest the monsoon.

13.7 DISCOMs and Solar Rooftop Capacity

What is the issue?

- Despite the ambitious targets and incentives offered, the solar rooftop component remains below the potential.
- It calls for concerted measures from the DISCOMs, to tap this beneficial segment.

How is the solar rooftop scenario?

- **Capacity** - Capacity addition in rooftop solar stood at around 870 megawatt (MW) in 2017.
- Notably, the target was set as 5,000 MW for the FY 2017-18.
- As of 2017, the cumulative rooftop solar installed capacity was only 1.6 GW.
- **Target** - At this pace, rooftop solar installations are unlikely to cross even 10 GW by 2022.
- This is far short of the targeted 40 GW under India's National Solar Mission (100 GW of solar energy capacity by 2022).
- **Incentives** - Ministry of New and Renewable Energy (MNRE) offers incentives in the form of capital subsidies.
- There is also the net metering policy which allows consumers to sell excess power to distribution companies (DISCOMs).
- However, DISCOMs have failed to catalyse rapid deployment of rooftop component.

Why are the DISCOMS hesitant?
- **Business** - Rooftop deployment, especially in the commercial and industrial category could impact DISCOMs' businesses.
- The reduction in demand for grid electricity may lead to revenue losses.
- **Subsidies** - Cross subsidization is a strategy of setting higher prices for one set of consumers to subsidize to another set of consumers.
- Rooftop segment cross-subsidises residential and agricultural consumers.
- These revenue losses compound the financial burden on DISCOMs.

What is the recent scheme in this regard?
- MNRE recently proposed the Sustainable Rooftop Implementation for Solar Transfiguration of India (SRISTI) scheme.
- It incentivises the installation of roof top solar projects in India.
- A central financial assistance will be provided only for installation of roof top solar plants in residential sectors.
- It is an evolutionary step towards a DISCOM-driven model of rooftop solar adoption.
- The proposed ₹14,400-crore incentive fund would compensate DISCOMs for their revenue losses.

Why should DISCOMs take up rooftop component?
- **Economic benefits** - Solar generation close to the point of consumption lowers transmission and distribution losses.
- Further, targeted solar deployment in select geographies could minimise the problems of grid overloading.
- It thereby lowers the requirements of investment for upgradation of distribution infrastructure.
- **Jobs** - The deployment of rooftop solar is estimated to create 24.7 full-time equivalent jobs per MW.
- This is significantly higher than the corresponding figure of 3.5 jobs per MW for utility-scale solar (generated and fed into the grid).
- Thus, realising 40 GW target would provide employment to more than 2 lakh people.

What could the DISCOMs possibly do?
- **Awareness** - With limited penetration, solar PV systems are still an unfamiliar technology for many.
- Moreover, the cost benefit with solar tariffs dipping below ₹5 per kWh for small-scale projects is also unknown.
- DISCOMs could utilise their existing bill collection and payment networks to disseminate information.
- This is essential to create awareness on various incentive schemes as well as to create demand for rooftop solar.
- **RESCO model** - The Renewable Energy Service Company (RESCO) model of rooftop solar helps address high upfront cost of installations.
- Under this, the developer bears the upfront capital investment for the installation.
- The consumer hence only pays for the electricity consumed.
- So far, the implementation of the RESCO model has largely been driven by developers.
- This has favoured large-scale rooftop systems and commercial and industrial consumers with higher creditworthiness.

- The DISCOMs could play the role of demand aggregators to facilitate the implementation of the RESCO model.
- It could coordinate between developers, financiers, and consumers to take RESCO model across all consumer segments.
- **Certainty** - DISCOMs should provide greater certainty over cash flows for developers or financiers.
- E.g. the Bengaluru has a tripartite agreement between consumers, developers/financiers and the DISCOM to operationalize this.
- **Expansion** - The DISCOMs could enable developers to expand their service areas beyond their regional geographies.
- Given the widespread network of DISCOMs, they could provide certain additional services to developers.
- These may include bill collection and operations and maintenance.
- These services are prohibitively expensive for developers, in remote areas.
- Such facilities also offer opportunities for building new revenue streams to DISCOMs.
- All these in effect may make DISCOMs active participants in India's rooftop solar revolution.

14. INTERNAL SECURITY

14.1 Concerns with Cryptocurrencies

What is the issue?

In recent times cryptocurrencies are facing fundamental challenges, which ought to be resolved soon.

What are cryptocurrencies?

- Cryptocurrency is a digital or virtual currency designed to work as a medium of exchange.
- It uses cryptography to secure and verify transactions as well as to control the creation of new units of a particular cryptocurrency.
- Cryptocurrencies are limited entries in a database that no one can change unless specific conditions are fulfilled.
- Cryptocurrencies are not issued by any central authority therefore they are immune to government interference or manipulation.
- There are many cryptocurrencies in the market of which bitcoin is the most popular. Click here to more about bitcoins.

What are recent concerns with cryptocurrencies?

- The downward trend in the prices of cryptocurrencies after the peak is still continuing.
- This trend is increasing fears of a regulatory crackdown by the governments as there is no overall authority to help revive the investors trust over these cryptocurrencies.
- Also there is the hurdle of lack of intrinsic value in the cryptocurrencies which makes it difficult for people of to accept cryptocurrencies as a medium of exchange.
- Therefore, cryptocurrencies are mostly seen as a gamble and threat to the sovereignty of the government.

What are the possible causes behind the crash?

- The rise in cryptocurrencies experience increase in asset prices without any fundamental reason, these bubbles break over time and induce price crashes in the market.
- The cryptocurrencies lack intrinsic value that is required for survival of any commodity.
- This crash indicates that markets will eventually mark down the prices of assets that have no real value, to zero.

14.2 E.U's GDPR law

Why in news?

European Union has passed a General Data Protection Regulation (GDPR) Law.

What is General Data Protection Regulation about?

- The GDPR redefines the understanding of the individual's relationship with their personal data.

64

- It relates to an identifiable living individual and includes names, email IDs, ID card numbers, physical and IP addresses.
- This law grants the citizen substantial rights in his/her interaction with
  1. **Data controllers -** Those who determine why and how data is collected such as a government or private news website.
  2. **Data processors** - Those who process the data on behalf of controllers, such as an Indian IT firm to which an E.U. firm has outsourced its data analytics.

What is the significance of this law?

- Under the GDPR, a data controller will have to provide consent terms that are clearly distinguishable.
- The GDPR also requires data collectors to provide information on the 'who' and 'how.'
- Individuals will also have the right to have personal data deleted under certain conditions.
- The reporting obligations and enforcement are made stronger under the GDPR.
- By this, data breaches have to be reported within 72 hours and failure to comply with the new laws could result in a fine up to 4% of global turnover or maximum amount of fine 20 million Euros.

What will be the implications for India?

- The GDPR has global implications as it applies to those outside the E.U. who either monitor the behaviour of EU residents or sell goods and services to them.
- The E.U. bloc is India's largest trading partner, with bilateral trade in services alone running upwards of €28 billion (₹2.2 lakh crore).
- Therefore it will have a significant impact on Indian IT firms and other service providers with E.U. business.
- But only a third of Indian IT firms are making arrangements for the GDPR and a third unaware of such a law.
- This will likely mean fines, loss of business and missed opportunities, as well as diplomatic wrangling in trade talks between India and the E.U.

14.3 India's Role in Kashmir's Woes

What is the issue?

- The evolution of the Kashmir conflict is a complex one that successive governments have failed to address comprehensively.
- It needs to be recognized that Pakistan is not the only problem factor in Kashmir and that there is an internal crisis too.

How did Kashmir accede to India?

- While Pakistan was aggressive to get Kashmir to accede to it, kashimiri leadership wanted to retain their independence.
- Due to Paksitani aggression and the tribal invasion of 1947, the Kashmiris leadership was left with no option but to accede to India conditionally.
- Hence, Kashmir acceded to the Indian union under unique circumstances that defied the logic of religion based partition of the sub-continent.
- Because of this, article 370 was provided as a special protection in order to safeguard its cultural and ethnic composition.
- Notably, despite strong opposition, the charismatic Sheik Abdullah had convinced the Kashmiris that joining India was the best option for Kashmir.

What caused the alienation of Kashmiris?

- Hindu communal forces, led by the Jan Sangh, began agitating from 1950 for the removal of Article 370, which was seen as a threat to the Kashmiri identity.
- This had a major psychological impact on the Valley's population and on Sheikh Abdullah personally, which marked the beginning of internal strife.
- While Mr. Abdullah became Kashmiri Prime Minister in 1951 (the head of the Kashmiri state was called PM then), his government was dismissed in 1953.
- He was also imprisoned by the Nehruvian government on the suspicion lobbying internationally for creating an independent Kashmir.

- For two decades after that, New Delhi rigged elections and appointed its own proxies as Chief Ministers, eroding the valley's faith in Indian democracy.

How did militancy start?

- While the Indian state was engrossed with Pakistan's foray in Kashmir, it failed to rectify its meddling in the valley's polity, which strained its legitimacy.
- An agreement reached between PM Indira Gandhi and Sheikh Abdullah in 1975 granted some autonomy to the valley and did promise a new beginning.
- But with Abdullah's death and his son Farooq's rise, the India government under PM Rajeev Gandhi soon backtracked and the progress was stalled.
- These actions eroded the legitimacy of the Abdullah clan, which was the face of moderate Kashmiri sub-nationalism and provided impetus to extremists.
- The elections of 1987 were openly rigged in order to diminish the anticipated performance of the extremist party "Muslim United Front" (MUF).
- But this action contrarily increased the popularity of the MUF, and people came to the streets and subsequently took to arms from 1990 onwards.
- In the midst of this internal churn, Pakistan, unsurprisingly threw its weight behind the proponents of "Free Kashmir", although it was against its stand.

14.4   Decision on Red Corridor Region

Why in news?

Ministry of Home Affairs (MoHA) has redrawn the red corridor region which are affected by Left-wing extremism.
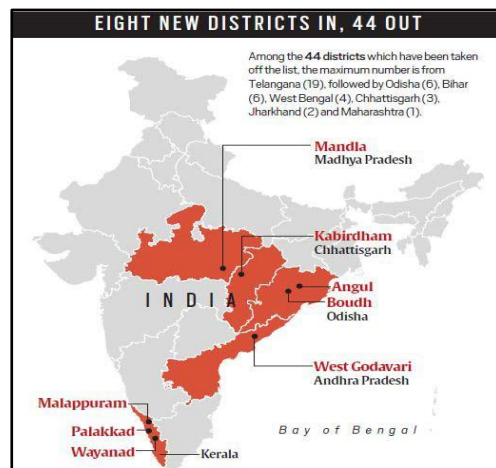
What is a red corridor region?

- Red corridor region is demarcated by the union government to notify the districts which are affected by left wing extremism.
- It is spanning across 106 districts in 10 States, namely Bihar, Jharkhand, Andhra Pradesh, Maharashtra, Odisha, Telangana, West Bengal, Madhya Pradesh, Uttar Pradesh and Chhattisgarh.

What is the recent decision on red corridor region?

- A recent report of MoHA classifies the red corridor region with respect to the severity of the Naxal influence.
- The three main categories are -
    1. **Severely affected -** Chhattisgarh, Jharkhand, Odisha and Bihar
    2. **Partially affected -**West Bengal, Maharashtra and Andhra Pradesh
    3. **Slightly affected -** Uttar Pradesh and Madhya Pradesh
- 44 districts have been removed from the list and eight new districts which could be slightly or partially affected has been added to the list.
- The recent decision is taken since only 30 worst affected districts account for 90% of the LWE violence.

What were the actions taken by government to tackle LWE?

- The National Policy & Action Plan constituted by the MoHA had been introduced to reduce the concentration of Naxal affected districts.
- All expenses incurred by the affected areas were covered under the Security Related Expenditure (SRE) Scheme.
- This provides funds for projects related to development such as infrastructure, transportation, communication, bridges and schools.
- Under which mobile towers, boarding schools and roads were installed in LWE affected areas.
- Government also aims for a multi-pronged strategy which primarily includes development and security aspects of affected districts.

EIGHT NEW DISTRICTS IN, 44 OUT

Among the **44 districts** which have been taken off the list, the maximum number is from Telangana (19), followed by Odisha (6), Bihar (6), West Bengal (4), Chhattisgarh (3), Jharkhand (2) and Maharashtra (1).

Mandla — Madhya Pradesh
Kabirdham — Chhattisgarh
Angul, Boudh — Odisha
West Godavari — Andhra Pradesh
Malappuram, Palakkad, Wayanad — Kerala

PRELIM BITS

HISTORY

Mahatma Phule

- Prime Minister paid tributes to Mahatma Phule on his birth anniversary recently.
- Phule was India's first Dalit reformer who offered a systematic theory of caste.
- In the 19th century, Jyotiba Phule was the most radical opponent of untouchability and the caste system as he called for the complete demolition of its oppressive structure.
- The Maharashtrian reformer and his wife Savitrirao Phule opened the **first-ever school for Dalit girls** in 1848 in Pune.
- **Gulamgiri (slavery)** is one of the 16 books written by him which was dedicated to the African-American movement to end slavery.
- Phule led the foundation of **Satyashodhak Samaj** ('Seekers of Truth') in 1848 in a bid to attain equal social and economic benefits for the lower castes in Maharashtra.

Khongjom battle day

- Manipur observed 'Khongjom Day' in commemoration of the Anglo-Manipur War of 1891 recently.
- The 1891 armed conflict was the last battle fought between the Kingdom of Manipur and the British Empire.
- Manipur lost the war and this marked the beginning of British rule in the then princely state.
- The Manipur government has been observing April 23 as 'Khongjom Day' every year.
- The battle was fought in Kheba Hill of Khongjom in Thoubal district.

POLITY

Particularly Vulnerable Tribal groups (PVTG)

- PVTGs are less developed groups with in Tribal groups who need special and focused attention.
- There are 75 Particularly Vulnerable Tribal Groups (PVTGs) notified as on date in the country.
- The criteria followed for determination of PVTGs are as under:
    1. A pre-agriculture level of technology
    2. A stagnant or declining population
    3. Extremely low literacy
    4. A subsistence level of economy
- The Ministry of Tribal Affairs is implementing a scheme namely "Development of PVTGs".
- The scheme covers the 75 identified PVTGs among Scheduled Tribes in 18 States/ UT of Andaman & Nicobar Islands.
- It is a flexible scheme and covers funding for activities like housing, land distribution, land development, agricultural development, animal husbandry,
- It also covers construction of link roads, installation of non-conventional sources of energy for lighting purpose, social security activity meant for the comprehensive socio-economic development of PVTGs.

Justice Rajesh Bindal Committee

- The Committee headed by Justice Rajesh Bindal submitted its report on legal issues related to **inter country removal & retention of children.**
- It recommended on addressing the problems of parents and children involved in such issues.
- The committee was appointed by Ministry of Women and Child Development.
- The Committee has recommended that the Government may establish an 'Inter Country Parental Child Removal Disputes Resolution Authority'.
- The authority has been envisaged to provide a one window solution in cases of inter country removal and retention of Children.
- the Authority may be chaired by a retired High Court Judge, with Members from Legal and Social sector background along with representatives from key Ministries.
- The Committee was also requested to study the draft of the International Child Abduction bill, prepared by the Law Commission.

ART AND CULTURE

Hampi

- Recently, Brahma Rathotsava (a twin car festival) was celebrated at Hampi.
- Hampi is a temple town in northern Karnataka that was once the capital of the historical Vijayanagara Dynasty.
- The magnificence of the ruins of temples and other structures of Vijayanagar in hampi is dating back to 1500 AD.
- It is located on the bank of the Tungabhadra River.
- Hampi houses the famous Virupaksha Temple, Vithala Temple and Nandi Statue.
- Group of Monuments at Hampi is a UNESCO World Heritage Site.
- They are Dravidian temples and palaces that won the admiration of travelers between the 14th and 16th centuries.
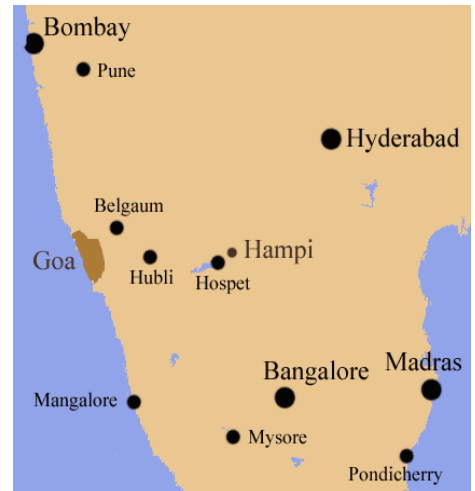
Kaniyan Koothu

- Kaniyan Koothu, a folk art with elements of classical music, is performed by the Kaniyan community.
- It is an invocation to Sudalai Madan, the Lord of the Graveyards.
- Kaniyans are a Scheduled Tribe whose population is less than 750 and only around 200 persons are currently performing the art.
- Magudam and mantham are the instruments used by the artists.
- The main singer of the troupe is called as 'Annavi'.
- The annavi is usually supported by a second singer.
- Two artists play the magudam - one plays the bass and the other the sharper version.
- Two men, dressed as women, dance to the tune with boundless energy.
- The art is facing a crisis not because of lack of patronage, but because not many come forward to take up it as a profession.
- Due to less people taking up it as profession many dancers of the Kaniyan koothu are from the families of paavai koothu (puppetry) artists.

Stepwells

- The Department of Post had released stamps featuring 16 step wells of India as a gesture of its concern for their steadily deteriorating state in January, 2018.
- Stepwells are indelible symbols of ancient water conservation techniques.
- Out of 16 featured step wells, 6 stepwells are in Rajasthan.
- They are
  1. Turji Ka Jhalra (Jodhpur)
  2. Panna Miyan Ki Baori (Jaipur)
  3. Chand Baori (Abhaneri)
  4. Raniji Ki Baori (Bundi)
  5. Nagar Sagar Kund (Bundi)
  6. Neemrana Baori (Alwar).

- Chand Baori in Abhaneri village of Rajasthan is one of the country's largest and deepest stepwells.
- It was built between the 9th and 10th century by King Chanda of Pratihara dynasty.
- This traditional water harvesting structure looks like an upside-down pyramid.
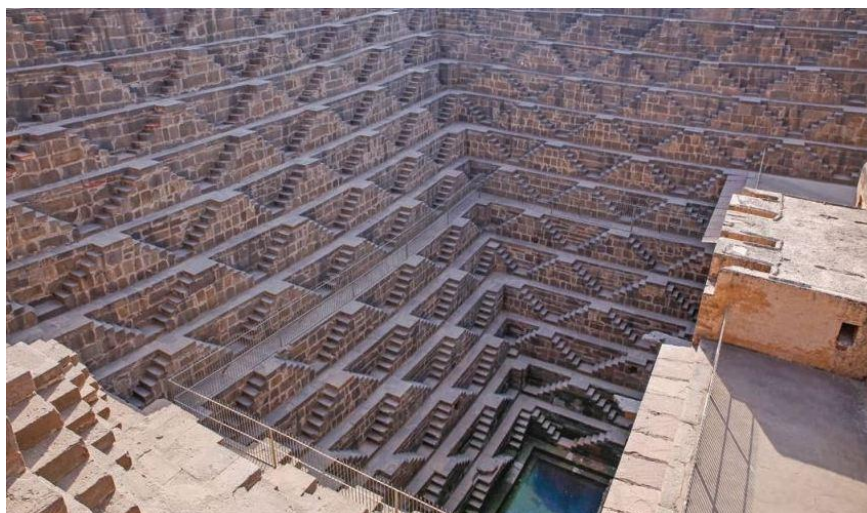
- As one descends 20m to the bottom of the well, the intense heat dips by 5-6 C.
- Though it is now managed by the Archaeological Survey of India, many others dotting the arid parts of the country remain neglected.

Protecting heritage along the Hoogly River

- IIT Kharagpur has initiated a pilot project to protect the rich cultural heritage of the cities and towns along the Hoogly River.
- The project would focus on five former trading posts and garrison settlements near Kolkata along the Hooghly river.
- The **five trading posts and garrison settlements** bear traces of Portugese (**Bandel**), Dutch (**Chinsurah**), British (**Barrackpore**), French (**Chandernagore**), and Danish (**Serampore**) presence, as well as India's own rich culture.
- Among the top priorities of the project is the conservation of centuries-old buildings, which are mainly private houses.
- The project is being jointly funded by the Arts and Humanities Research Council, UK, and the Indian Council for Historical Research.
- The project aims to draw up a Heritage Management Strategy and an hour-long documentary film among its other efforts to preserve the collective history.
- An annual Hoogly Heritage Day is also being planned.

Champaner-Pavagadh Archeological Park

- The park is located in the **Panchmahal district of Gujarat**.
- It was inscribed as the World Heritage Site in 2004.
- The city of Champaner was founded during the time of the **Rajput king Vanraj Chavda** of the **Chavda dynasty** in the 8th century.
- The archaeological park comprises Hindu and Jain temples and several mosques, along with citadels, a palace, military structures and stunning water installations.

- Most of the temples date back to 14-15th centuries, with the oldest from 10th century which is the Shaivite Lakulisa temple.
- The park may derive its name from the
    1. Pavagadh hill that is made of reddish-yellow coloured stones, one of the oldest rock formations found in the country.
    2. Pigmentation of the igneous rocks of the Pavagadh Hill is often compared to the 'champaka' flower or that resemble the flames of fire from which it derives the name Champaner for the town.
- The most interesting feature of the city is its water installation system which is why it is also called as the 'city of thousand wells'.

Stone Age surgery

- The Scientists say primitive humans may have been practicing their veterinary skills.
- The evidence lies in a hole in the skull of a Stone Age cow that was likely made by humans about 5,000 years ago.
- The puncture does seem to represent the earliest known example of veterinary "trepanation" — the boring of a hole into the skull.
- The cow skull comes from an archaeological site in western France, inhabited by a Stone Age community between 3,400 and 3,000 B.C.
- Whether the hole was an operation to save the cow or practice for surgery on humans, was not clear.

GEOGRAPHY

Earthquake

- Recently, a strong but deep earthquake struck Bolivia in South America.
- Earthquake is any sudden shaking of the ground caused by the passage of seismic waves through Earth's rocks.
- Seismic waves are produced when some form of energy stored in Earth's crust is suddenly released.
- The location below the earth's surface where the earthquake starts is called the **hypocenter**.
- The location directly above it on the surface of the earth is called the **epicenter**.
- Earthquakes are recorded by instruments called seismographs and the recording they make is called a seismogram.
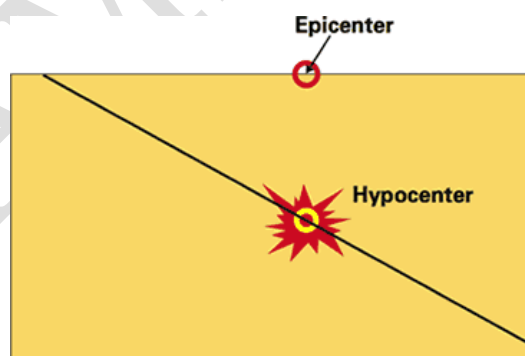
Kra canal

- China pushes plan for kra canal construction splitting Thailand into two and thereby reshaping the Indian Ocean.
- Kra canal also known as **Thai canal** or **Kra isthmus canal** is a proposed canal to connect **Gulf of Thailand** (formerly known as **Gulf of Siam**) with **Andaman Sea.**
- The Kra Canal could benefit India and the region by taking pressure off the overcrowded Malacca Straits.
- From China's point of view, the Kra Canal offers a means to secure its expanding demand for West Asia's hydrocarbons against overcrowding in the Malacca Straits.
- Strait of Malacca is the world's busiest maritime lane, through which an estimated 84,000 ships carrying around 30 per cent of global trade transit each year.
- Exiting the Kra Canal westwards, traffic would enter the Andaman Sea, transit past India's Andaman and Nicobar Islands, and then head south towards the Chinese-owned port at Hambantota, in Sri Lanka.
- Thailand's tourism industry and fisheries could, however, face damage from the project.
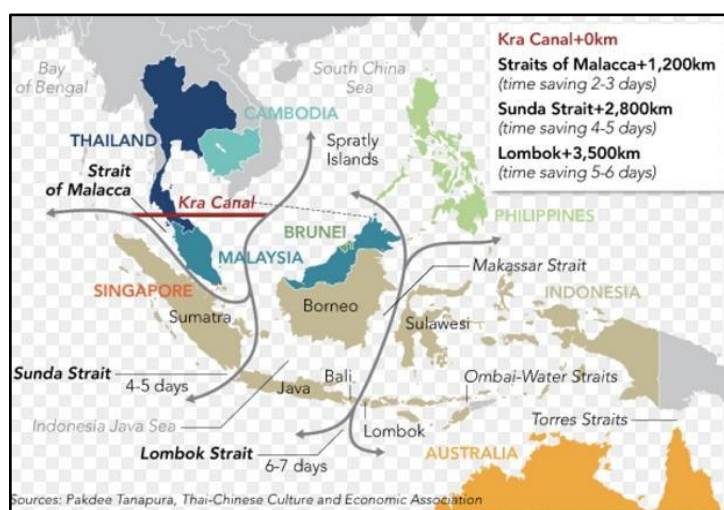
Swaziland

- The President of India became the **first visiting Head of State** to address the Parliament of the Swaziland.
- India and Swaziland signed two agreements — on health cooperation; and on visa waivers for those travelling on official and diplomatic passports.
- Swaziland is a small, **landlocked** kingdom in the southern Africa.
- It is the smallest country in the Southern hemisphere.
- It is a predominantly rural country surrounded by South Africa and Mozambique.
- Hlane Royal National Park and Mkhaya Game Reserve are the wildlife attractions in the country.
- Mkhaya is one of the best places on the continent to see both **black and white rhino** and Hlane is home to big cat – the lion.

Swell Waves

- National Disaster Management Agency (NDMA) issued a high energy swell wave alert along the Indian Coastline.
- High energy swell waves, with heights between 2 m and 3 m and periods between 17-22 seconds are likely to be experienced in the seas around India.
- Swell waves are massive ripples that form on the sea due to winds.
- In a way it is the collections of waves produced by storm winds raging hundreds of miles out to sea, rather than the product of local winds along beaches.
- The low-lying coasts of Kerala and West Bengal are particularly vulnerable.

HEALTH

Phthalates

- Phthalates are a group of chemicals used in food packaging and processing materials.
- Phthalates are used to soften and improve the flexibility and durability of plastics.
- They are known to disrupt hormones in humans and their exposure linked to breast cancer, developmental issues, decreased fertility, obesity and asthma.
- Pregnant women, children and teens are more vulnerable to the toxic effects of hormone-disrupting chemicals.
- Dining out more at restaurants, cafeterias and fast-food outlets may boost total levels of "phthalates" in the body.
- Adolescents who were high consumers of fast food and other food purchased outside the home had 55 per cent higher levels of phthalates compared to those who only consumed food at home.

Latent tuberculosis infection (LTBI)

- Mumbai is preparing a pilot project to target latent tuberculosis.
- Persons with LTBI are those who harbor the TB-causing bacteria within, where it can lie dormant.
- In other words, it is a state of persistent immune response to stimulation by Mycobacterium tuberculosis antigens without evidence of clinically manifested active TB.
- TB is caused by Mycobacterium tuberculosis, a species of pathogenic bacteria that is spread through air.
- The WHO lays emphasis on a specific strategy to tackle latent TB but only in high- and upper middle-income countries with a low incidence of the disease.
- According to a WHO report, approximately 10% of people with LTBI will develop TB, with the majority of them getting it within the first five years of infection.
- LTBI can often be tackled by maintaining good health and observing coughing and sneezing etiquette.

National Council on India's Nutrition Challenges

- The first meeting of National Council on India's Nutrition Challenges under POSHAN Abhiyaan held recently in New Delhi.
- The Council was set up under POSHAN Abhiyaan which is the apex body to formulate overall policies, guide and monitor all nutrition based schemes.
- The mandate of the Council is:
    1. To provide policy directions to address India's Nutrition Challenges through coordinated inter-sectoral action
    2. To coordinate and review convergence among ministries
    3. To review programs for nutrition on a quarterly basis
- The Council will submit its report to the Prime Minister every six months.
- The council was chaired by Vice Chairman, NITI Ayog.
- The annual targets set under POSHAN Abhiyaan beginning 2017-18 are as under

S.No	Objective	Target
1.	Prevent and reduce stunting in children (0-6years)	By 6% @ 2% p.a.
2	Prevent and reduce under-nutrition (underweight prevalence) in children (0-6 years)	By 6% @ 2% p.a.
3	Reduce the prevalence of anemia among young Children(6-59 months)	By 9% @ 3% p.a.
4	Reduce the prevalence of anemia among Women and Adolescent Girls in the age group of 15-49 years.	By 9% @ 3% p.a.
5	Reduce Low Birth Weight (LBW).	By 6% @ 2% p.a.

GOVERNMENT INITIATIVES

Surya Joyti

- Surya Joyti is a low cost and energy efficient Photo Voltaic (PV) intergrated Micro Solar Dome (MSD).
- It started as a pilot project to stream diffused sunlight into poorly-lit rooms through the roof in thatched, tiled or tin-roofed houses in the Sundarbans in West Bengal and in Tripura.
- The Department of Science & Technology along with Ministry of New and Renewable Energy (MNRE) has taken it up for larger distribution in bigger areas.
- The Science and Technology Ministry estimates that 'Surya Jyoti' can help some 10 million households.
- These are off-grid, and can supply urban and rural areas without reliable access to electricity.
- The domes provide light equivalent to a 60W bulb.
- It has been included as a product for off grid solar lighting applications by Ministry of New and Renewable Energy.

National Culture Fund scheme (NCFS)

- National Culture Fund (NCF) set up as a Trust under the Charitable Endowment Act, 1890 on 1996 by the Government.
- The Fund aims at inviting the participation of the corporate sector, non-government organizations, private/public sector as well as individuals in the task of promoting, protecting and preserving India's cultural heritage.
- It enables institutions and individuals to support arts and culture directly as partners with its government.
- It is managed and administered by a council headed by Culture Minister to decide the policies and an Executive Committee headed by Secretary, Culture to actualize those policies.

- The projects under NCF cover both tangible and non tangible heritages.
- Some of the successfully completed projects are Humayun Tomb, Shaniwarwada in Pune.

UTTAM App

- UTTAM stands for – Unlocking Transparency by Third Party Assessment of Mined Coal (uttam.coalindia.in).
- Ministry of Coal and Coal India Limited (CIL) developed the app.
- It aims to provide for all citizens and coal consumers to monitor the process of Third Party Sampling of coal across CIL subsidiaries.
- It provides a platform for monitoring of sampling and coal dispatches.
- It is an example of leveraging technology to facilitate a bidirectional channel between Coal India Limited and a common citizen.
- It ensures transparency and efficiency in the coal quality monitoring process and brings coal governance closer to people.
- The salient features of UTTAM APP are:
    1. Sampling Coverage
    2. Subsidiary wise quality parameters
    3. Complaints pertaining to quality of Coal
    4. Sampled Volume
    5. Imported Coal

Van Dhan Vikas Kendra

- The Ministry of Tribal affairs has approved establishment of the first multipurpose **"Van Dhan Vikas Kendra"** on pilot basis for establishment in Bijapur District of Chhattisgarh State.
- The Kendra will provide for **skill up-gradation** and capacity **building training** and setting up of primary processing and value addition facility.
- This Kendra to start with will have processing facility for Tamarind brick making, Mahua flower storage facility and chironjee cleaning and packaging.
- TRIFED has assigned the work for establishment of this pilot Vikas Kendra to Chhattisgarh Minor forest produce (CGMFP) Federation.
- The Collector, Bijapur will be the coordinating force.
- Minor Forest Produce (MFP) is a major source of livelihood for tribal living in forest areas.
- The Tribals derive 20-40% of their annual income from MFP on which they spend major portion of their time.

Project Dhoop

- The 'Project Dhoop' is launched by the Food Safety and Standards Authority (FSSAI) along with National Council of Educational Research and Training (NCERT), New Delhi Municipal Council (NDMC) as well as North MCD Schools.
- It is a unique initiative to encourage schools to shift their morning assembly to around noon-time to ensure maximum absorption of Vitamin D in students through natural sunlight.
- The move comes in the backdrop of rising incidence of Vitamin D deficiency in the country.
- Over 90 per cent of boys and girls in various Indian cities are deficient in Vitamin D despite most part of India receiving abundant sunshine all the year through.
- Vitamin D deficiency occurs due to overuse of sunscreen, wearing clothes that cover most of the skin, working all day in an air-conditioned atmosphere, and other factors.
- Vitamin D deficiency may also cause several problems including:
    1. Osteomalacia
    2. Osteoporosis
    3. Rickets
    4. Periodontitis

Pashu Chikitsak Mahasangh

- The secretary of Department of Animal Husbandry, Dairying and Fisheries (DADF) under Minsitry of Agriculture and Farmer's Welfare inaugurated the website of Pashu Chikitsak Mahasangh.
- The website was dedicated to **Veterinarians of the country**.

- It is to be developed as an effective platform for sharing of knowledge and developing a database in the field of veterinary sciences in the country.
- Pashu Chikitsak Mahasangh is a registered body formed as apex organization of State Veterinary Associations.
- It is to work for the welfare of the veterinarian's working in Government service sector.

Atal Tinkering Lab (ATL)

- Atal Innovation Mission is paying tribute to the late Dr. B.R. Ambedkar by hosting its nationwide Atal Community Day Initiative on 14th April, 2018.
- Atal Tinkering Labs, under the Atal Innovation Mission of the NITI Aayog, were envisioned as innovative marker spaces, setup across India, in every school, accessible to every child.
- The **ATL Community Day initiative** is an effort to spread awareness as well as engage the local communities in the neighborhood of an Atal Tinkering Lab.
- The Annual Community Day was held across India, over the course of April 13 – 16, with the larger theme of Ambedkar Jayanti.
- Atal Tinkering labs are equipped with modern technologies to help navigate and impart crucial skills in the age of the Fourth Industrial Revolution.

National Clean Air Program (NCAP)

- The Ministry of Environment, Forest and Climate Change (MoEF&CC) released a concept note on the National Clean Air Programme (NCAP) recently.
- The NCAP aspires to overcome the deficits of the ongoing government initiatives targeted towards air pollution control.
- The NCAP was conceived as a detailed strategy to ensure that cities across the country meet specified air quality norms.
- It lays down a comprehensive strategy framework for enhanced management of air quality.
- It also, for the first time, plans to set up pollution-monitoring stations in rural areas
- It envisions setting up 1,000 manual air-quality-monitoring stations and automatic stations.
- The document highlights lack of indigenous studies establishing the correlation between exposure to air pollution and human health.
- A high-level apex committee and working group has, therefore, been constituted under the Indian Council of Medical Research and the MoEF&CC to overcome this deficit.

Star rating of Garbage- Free Cities

- The 1st regional workshop on star rating of garbage- free cities, organized by the Ministry of Housing and Urban Affairs (MoHUA) in collaboration with the New Delhi Municipal Council (NDMC) was inaugurated recently.
- Along with the annual Swachh Survekshan activity, the star rating of garbage free cities will create a healthy competition among the cities across the countries to achieve the goals of cleanliness and 100% solid waste management.
- The 7-star rating is innovatively designed on a SMART (Single metric, Measurable, Achievable, Rigorous verification and Targeted towards outcomes) approach.
- It is the first-of-its kind rating tool for assessing cleanliness of cities and towns in India.
- The system, based on 12 parameters, builds on the spirit of healthy competition among cities and the aspirations of cities to progress towards higher standards of "Swachhata" and its sustainability.
- Strengths of star rating protocol
    1. Outcome-based tool rather than process based.
    2. Designed to enable cities to gradually evolve into a model (7-star) city
    3. At the 7-star level, 3R components of 3R (Reduce, Reuse, Recycle) incorporated

Gram Swaraj Abhiyan

- On the occasion of Ambedkar Jayanti, Prime Minister of India announced that a "Gram Swaraj Abhiyan" would be organised starting from 14th April to 05th May, 2018.
- The campaign, undertaken is under the name of "Sabka Sath, Sabka Gaon, Sabka Vikas".
- It is to promote social harmony, spread awareness about pro-poor initiatives of government, and reach out to poor households to enroll them as also to obtain their feedback on various welfare programs.

- As a special endeavour during the Gram Swaraj Abhiyan, saturation of eligible households or persons would be made under the seven flagship pro-poor programs in identified villages.
- The seven schemes are Pradhan Mantri Ujjwala Yojana, Saubhagya, Ujala scheme, Pradhan Mantri Jan Dhan Yojana, Pradhan Mantri Jeevan Jyoti Bima Yojana, Pradhan Mantri Suraksha Bima Yojana and Mission Indradhanush.

Diu Smart City

- Diu Smart City has become the first city in India that runs on 100% renewable energy during daytime.
- It had been importing 73% of its power from Gujarat until last year.
- It has achieved this by two pronged approach
    1. Developing a 9 MW solar park
    2. Installing solar panels on the roof tops on government buildings thereby generating 1.3 MW annually
- Diu offers its residents a subsidy of Rs 10, 000-50,000 for installing 1-5KW roof top solar panels.
- Due to low-cost solar energy, power tariffs have been cut in residential category by 10% last year and 15% this year.

Atal New India Challenge

- The Atal Innovation Mission (AIM) under the NITI Aayog will be launching the Atal New India Challenge.
- AIM will invite prospective innovators/MSMEs/start-ups to design market-ready products, using cutting edge technologies or prototypes across identified focus areas.
- Climate Smart Agriculture, Smart Mobility, Predictive Maintenance of Rolling Stock, Waste Management etc. are some of the 17 identified focus areas.
- The winning ideas will be granted up to Rs 1 crore and mentorship through the challenge.

GOVERNMENT SCHEMES

Rashtriya Avishkar Abhiyan

- Ministry of Human Resource Development has launched the Rashtriya Avishkar Abhiyan (RAA).
- It is a convergent framework across School Education and Higher Education aiming to encourage children towards learning Science and Mathematics.
- The objectives of the RAA are,
    1. To enable children to become motivated and engaged in Science, Mathematics and Technology (SMT).
    2. To create a culture of thinking, inventing, tinkering and doing to promote enquiry based learning in Schools.
    3. To encourage and nurture schools to be incubators of Innovation.
- It is planned to provide nourishing and nurturing support to and a platform for schools in a dual track approach.
- Rashtriya Avishkar Abhiyan will target students in the age group of 6 - 18 years.
- It will encourage the children to have an enduring interest both inside classroom and outside classroom activities.

National Social Assistance Program (NSAP)

- NSAP is a welfare program administered by the **Ministry of Rural Development**.
- Its launch represents a significant step towards the fulfillment of the Directive Principles in Article 41 of the Constitution.
- The program introduced a National Policy for Social Assistance for the poor.
- It aims at ensuring minimum national standard for social assistance in addition to the benefits that states are currently providing or might provide in future.
- This program is implemented in rural areas as well as urban areas.
- The NSAP scheme was brought within the umbrella of 'Core of Core' scheme in 2016.
- NSAP at present comprises of
    1. Indira Gandhi National Old Age Pension Scheme (IGNOAPS)
    2. Indira Gandhi National Widow Pension Scheme (IGNWPS)
    3. Indira Gandhi National Disability Pension Scheme (IGNDPS)

4. National Family Benefit Scheme (NFBS)
5. Annapurna

Unnat Bharat Abhiyan 2.0

- The second stage of the Unnat Bharat Abhiyan, a scheme of the Centre aimed at making higher education institutions provide solutions for problems of villages, was launched recently.
- It is a flagship program of the Ministry of Human Resources Development, with the intention to enrich Rural India.
- It also aims to create a vibrant relationship between the society and the higher educational institutes.
- The higher educational institutes providing the knowledge and technology support to improve the livelihoods in rural areas and to upgrade the capabilities of both the public and private organizations in the society.
- Both technical and non-technical institutions have been invited to build systems in villages as per their strengths.
- IIT Delhi has been designated to function as the National Coordinating Institute for this program.
- Each selected institute would adopt a cluster of villages / panchayats and gradually expand the outreach over a period of time.
- The key points include helping villages achieve 100% school results, creating 25 jobs each in four sectors in each village where work would take place, increasing rural incomes, providing drinking water and sanitation to villages, disposing village garbage, among other things.

NATIONAL INSTITUTES/BODIES IN NEWS

Competition Commission of India (CCI)

- The Union Cabinet approved a proposal to bring down the members of Competition Commission of India (CCI).
- Presently the CCI has seven members, including the chairperson.
- With this decision the change may be one chairperson and three members, totaling four members.
- CCI is a statutory body of the Government of India responsible for enforcing the Competition Act, 2002.
- It monitors the acquisition and mergers in the country.

BIS grants first license for Liquid Chlorine

- Bureau of Indian Standards (BIS) granted first license for Liquid Chlorine on all India basis.
- The product is in liquid form and stored in metal containers.
- It is usually used as a gas obtained by evaporating the liquid from the metal container.
- It is used mainly in paper, pulp, textile bleaching, water sterilization and manufacture of chemicals.
- BIS is the National Standard Body of India established under the BIS Act 1986
- The Bureau is a Body Corporate consisting of 25 members with Union Minister of Consumer Affairs, Food and Public Distribution as its President and with Minister of State for Consumer Affairs, Food and Public Distribution as its Vice-President.

CFTRI

- Central Food Technological Research Institute (CFTRI) has announced a program for training life science graduates to work in food and allied industries.
- The Mysore based institute is a constituent laboratory of Council of Scientific and Industrial Research, New Delhi.
- It came into existence during 1950.
- The Research focus of CSIR-CFTRI has been revolved around broadly into the following areas:
    1. Engineering Sciences
    2. Technology Development
    3. Translational Research
    4. Food Protection and Safety

INTERNATIONAL ISSUES AND EVENTS

International Energy Forum (IEF)

- Prime Minister of India will inaugurate the IEF Ministerial Meeting in India.
- International Energy Forum (IEF 16) is hosted by India and co-hosted by China and Korea.
- The theme of this event is 'The Future of Global Energy Security: Transition, Technology, Trade and Investment'.
- IEF16 is the largest gathering of Energy Ministers from across the globe, industry leaders and heads of key international organizations who will debate the future of global energy.
- It aims to focus on how global shifts, transition policies and new technologies influence market stability and future investment in the energy sector.

UN ECOSCO Elections

- India has won an election to a crucial non-governmental organization committee in the United Nations.
- The U.N's Economic and social council focuses on advancing the three dimensions of sustainable development — economic, social and environmental.
- The Committee on Non-Governmental Organizations is a standing committee of ECOSOC.
- Its main tasks include consideration of applications for consultative status and requests for reclassification submitted by NGOs and consideration of quadrennial reports submitted by NGOs in General and Special categories.
- India was also elected to the Commission on Population and Development, Commission for Social Development and Commission on Crime Prevention and Criminal Justice.
    1. **Commission on Population and Development**- the Commission is to assist the Council by arranging for studies and advising the Council on population issues and trends, integrating population and development strategies and population and related development policies and program.
    2. **Commission for Social Development**- the Commission's purpose was to advise ECOSOC on social policies of a general character and, in particular, on all matters in the social field not covered by the specialized inter-governmental agencies.
    3. **Commission on Crime Prevention and Criminal Justice** - The Commission acts as the principal policymaking body of the U.N. in the field of crime prevention and criminal justice.
- The other functional commissions of the ECOSCO are Statistical Commission, Commission on the Status of Women, Commission on Narcotic Drugs, Commission on Science and Technology for Development, United Nations Forum on Forests.
- India was also elected by the Council to the Executive Board of the United Nations Development Program (UNDP), United Nations Population Fund (UNFPA), and United Nations Office for Project Services (UNOPS).

World Heritage day

- Every year, 18th April is celebrated worldwide as World Heritage Day to create awareness about Heritage among communities.
- It is also called as International Monument and Sites Day.
- Theme 2018: Heritage for Generations.
- World Heritage Sites will celebrate World Heritage Day by undertaking various activities to foster fruitful dialogue between generations.
- In India, National Rail Museum, New Delhi is also celebrating World heritage day.
- Indian Railways are the proud owner of 04 UNESCO World Heritage Sites viz. Darjeeling Himalayan Railway, Nilgiri Mountain Railway, Kalka Shimla Railway and Chattrapati Shivaji Maharaj Terminus (CSMT), Mumbai.
- In 1982, the International Council on Monuments and Sites (ICOMOS) announced, 18 April as the International Monument and Sites Day approved by the General Assembly of UNESCO in 1983.

International SME Convention-2018

- The First Ever International SME Convention-2018 is to be held in New Delhi.
- It is a platform for intensive business discussion, progressive interaction and trade association between progressive entrepreneurs from all over the world.
- It also offers a special focus on business and trade opportunities in India for International Entrepreneurs.
- The theme is "Business beyond Borders".

- The platform facilitates exchange of relevant business partnerships and trade opportunities for India's Best Small and Medium Enterprises.
- It is organized by The Ministry of Micro, Small & Medium Enterprises and India SME Forum.
- India SME Forum is India's largest Small & Medium Business Movement which was founded in May 2011.
- Some of the focused sectors are Agro Based, Aviation, Biotechnology, Chemicals, Cold Chain, Construction, Consumer Electronics, Defense Manufacturing, Electrical Equipment & Machinery, Exploration & Mining, Food Processing, Gems & Jeweler, Leather & Footwear, Logistics, Machinery & General Mfg, and Tourism & Hospitality.
- Together the MSMEs constitute a single largest employer after the Agriculture sector in India.

International Monetary and finance Committee (IMFC)

- Governor of Reserve Bank of India attended the recent 37th meeting of IMFC.
- The IMFC advises and reports to the IMF Board of Governors on the supervision and management of the international monetary and financial system.
- It meets twice a year, during the spring and annual Meetings.
- The Committee discusses matters of common concern affecting the global economy and also advises the IMF on the direction its work.
- At the end of the Meetings, the Committee issues a joint communiqué summarizing its views.
- These communiqués provide guidance for the IMF's work program during the six months leading up to the next spring or annual Meetings.
- There is no formal voting at the IMFC, which operates by consensus.
- The IMFC has 24 members who are central bank governors, ministers, or others of comparable rank and who are usually drawn from the governors of the Fund's 189 member countries.

ECONOMY

Small Industries Development Bank of India (SIDBI)

- SIDBI celebrated its foundation day today as day of Sampark (connect), Sanwad (interaction), Suraksha (security) and Sampreshan (disseminate) recently.
- SIDBI was set up on 1990 under an Act of Indian Parliament,.
- It acts as the Principal Financial Institution for Promotion, Financing and Development of the MSME sector as well as for co-ordination of functions of institutions engaged in similar activities.
- SIDBI launched **Samridhhi**- the virtual assistant on banks revamped universal loan portal (www.udyamimitra.in) which will answer standard queries of aspirants 24*7.
- A '**Bankability Kit**' (brought in partnership with Bank of Baroda and IDBI Bank) was launched.
- It is a step to look beyond financial literacy and be a trusted guide for aspirants and existing entrepreneurs to know entrepreneurial self, know banker & know banking.
- Other Initiatives of SIDBI includes **MSME Pulse**-health tracker of MSME, **CRISIDEX**-to gauge the MSME aspirations and **SMILE LOANS.**

Small Savings Schemes

- According to data from the Reserve Bank of India (RBI), small savings schemes accounted for a little over a fifth (20.9 per cent) of all central government borrowing.

SMALL IS BIG
Central government borrowing from small savings
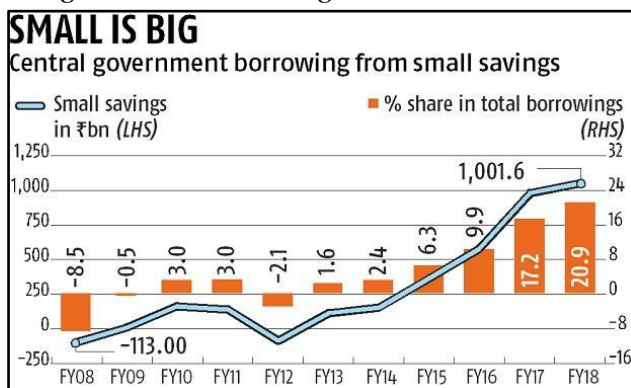
- Small savings scheme include post office deposits, National Savings Certificate (NSC), and Kisan Vikas Patras (KVP).
- The period (FY14-FY18) also saw a jump in government borrowing from the provident fund.
- In the same period, annual borrowing from the (bond) market declined by 27 per cent.
- Kisan Vikas Patra is a small savings instrument that will facilitate people to invest in a long term savings plans.
- National Savings Certificates are savings instrument that are eligible for tax rebate.
- Both KVP and NSC can be purchased from the Post offices.

Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)

- The CPTPP is a new free trade agreement between 11 Asia-Pacific countries.
- Its members—Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam—constitute 13.5% of the world economy.
- The economies of the CPTPP members will be made 1.7% larger than they would have been, on average, by 2030.
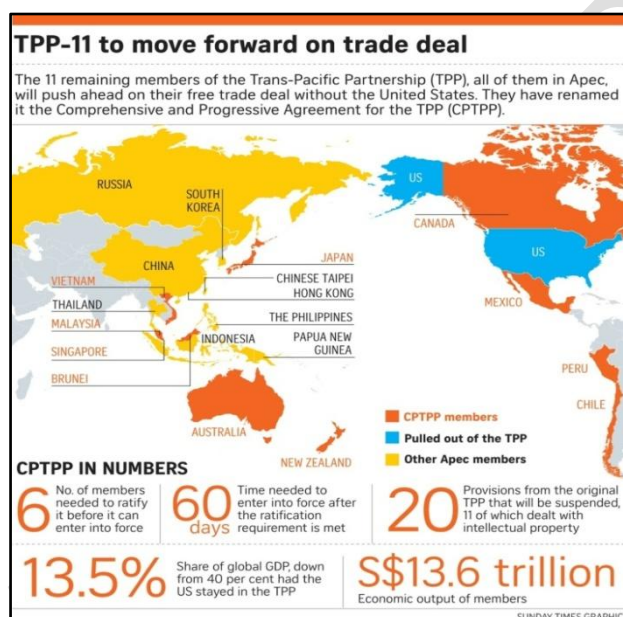
- It provides freer trade and investment access among its members.
- After USA withdrawing itself from Trans Pacific Partnership agreement, the other members of TPP planned to go ahead by signing the CPTPP agreement.
- All 11 TPP countries are members of the Asia-Pacific Economic Cooperation (APEC)

Grandfathering clause

- In the latest budget, a grandfathering clause attached to the new section on long-term capital gains.
- A grandfathering clause in any new tax law allows people who made their decisions under the old law to continue to enjoy a concession, until the original timeframe for it runs out.
- Frequent changes to tax laws, can weaken public faith in the Government's promises.
- Grandfathering provisions allow the Government to introduce changes to tax rules for the future, without reneging on its past promises.

Monthly Payroll Data

- India has, for the first time, introduced monthly payroll reporting for the formal sector to facilitate analysis of new and continuing employment.
- The Employees' Provident Fund Organization (EPFO), Employees' State Insurance Corporation (ESIC) and the Pension fund Regulatory and Development Authority (PFRDA) have released payroll data.
- Data released by EPFO shows that during September, 2017 to February, 2018, 31.10 lakh new additions across all age groups were made in the payroll.
- This data would provide a more firm basis for various analysis and studies of the economy, job creation, as also aid in policy making.

World debt hits $164 trillion

- The International Monetary Fund (IMF) in its **Fiscal Monitor Report** stated that the world debt has ballooned to a record $164 trillion.
- The Global public and private debt swelled to 225 percent of global gross domestic product in 2016.
- China China has accounted for almost three-quarters of the increase in private debt since the global financial crisis.
- Another observation is that more than one-third of advanced economies had debt-to-GDP levels above 85 percent, three times more nations than in 2000.

Global Debt Pile at a Record $164 Trillion

■ World ■ Advanced Economies □ U.S. ■ Emerging Markets ■ China

$200TLN

100

0

2001   2007   2015   2016

Data refer to the global gross debt (both public and nonfinancial private) for an unbalanced sample comprising 190 countries.
Sources: Global Debt Database; and IMF staff calculations

Bloomberg
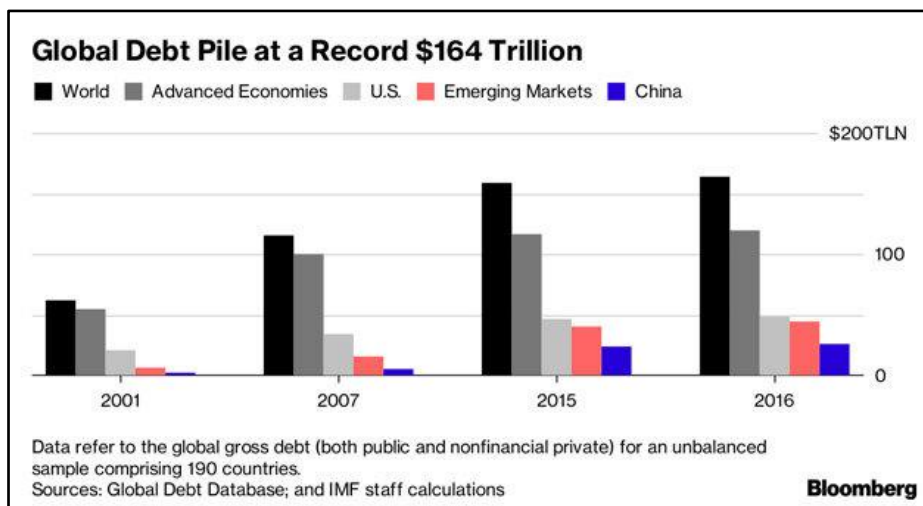
- A fifth of emerging markets and middle-income countries had debt levels above 70 percent of GDP.
- It was led by Brazil at 84 percent and India at 70.2 percent.
- Gross government debt in China stood at 47.8 percent last year.

ENVIRONMENT

CONSERVATION RESERVES IN NEWS

Waynad wildlife Sanctuary

- The Wayanad Wildlife Sanctuary IN Kerala was formed in 1973.
- The sanctuary was carved out of two territorial divisions- Wayanad and Kozhikode.
- The sanctuary is located on the southern part of Western Ghats.
- It is a part of the Nilgiri Biosphere Reserve and also an Elephant Reserve.
- The sanctuary is significant because of ecological and geographic continuity with other protected areas such as
    1. Bandipur Tiger Reserve and Nagarhole N.P., of Karnataka in north-eastern portion
    2. Mudumalai Tiger Reserve of Tamil Nadu in south-eastern side
- The vegetation comprises of tropical semi-evergreen forests, moist mixed deciduous forests, dry mixed deciduous forests, bamboo forests, and marshy grasslands.
- Last year, the first-ever vulture and raptor survey was conducted at the sanctuary.
- As many as 24 species of raptors and two species of vultures were recorded.

Bhimgad Wildlife Sanctuary

- The sanctuary is in Belgaum, Karnataka and is home to subtropical moist broadleaf and tropical forests.
- The rare **Wroughton's free-tailed bat** can only be found in two or three places on earth, one of them being the Bhimgad forest of Karnataka.

- This evergreen forest on the Western Ghats on the Goa-Karnataka border is the origin of Mahadayi River.
- There is a fort that stands atop a hill in the heart of the forest that was served by the descendants of Marathas, during Shivaji's time.
- The sanctuary gets its name from this former Maratha outpost which was known as Bhimgad Fort.
- The sanctuary also houses the tiger, the Malabar giant squirrel, the mouse deer, the King cobra and birds like the Great Indian pied hornbill, the Malabar trogon and the imperial pigeon.

Silent Valley Park

- Silent Valley Park in Kerala will soon reopen to visitors.
- It is located in the Northeast corner of Palakkad district.
- It is a beautiful representation of the last remaining rain forest of Kerala.
- Silent Valley was declared as National Park in 1984 and formally inaugurated in the year 1985.
- It constitutes the centerpiece of the Nilgiri Biosphere Reserve, an integral part of the Western Ghats.
- It was called 'Sairandhrivanam' as it was considered this was where Sairandhiri (the secret identity donned by Panchali, from the epic Mahabharata) hid along with her five husbands.
- A perennial river named Kunthipuzha is passing through the western side of the park, from north to south direction finally merging in to Bharathapuzha.
- Species like Elephants, Nilgiri Langur, Nilgiri Tahr, Tiger, Leopard, Sloth Bear, Gaur, etc. are found in this area.
- The endangered lion tailed macaque is found in this park
- The indigenous tribal groups that live within park boundaries include Irulas, Kurumbas, Mudugas and Kattunaikkars.

Bharatpur Bird sanctuary

- The Keoladeo National Park or Keoladeo Ghana National Park formerly known as the Bharatpur Bird Sanctuary is in Bharathpur District of Rajasthan.
- It is a famous avifauna sanctuary that sees thousands of rare and highly endangered birds such as the Siberian Crane come to the sanctuary during the winter season.
- It is an important wintering ground for migratory waterfowl from Eurasia, North Africa and Arabian Peninsula, as well as for resident birds.
- It is named after a Keoladeo (Shiva) temple within its boundaries.
- The park is in danger as a dam has been built on the upstream of the Gambhir River, considered lifeline of the sanctuary.
- The river now feeds the wetlands only when the dam reservoir is full and its sluice gates are opened.
- The park is recognized as a Ramsar Wetland Site as well as UNESCO World Heritage Site.

Tadoba Andhari Tiger Reserve

- The reserve spreads across the Vidarbha region in eastern Maharashtra.
- One of the most significant reserves in central India, the Reserve is said to be hosting more than 50 tigers.
- Andhari Wildlife Sanctuary is part of the reserve.
- The Tadobha National Park is Maharashtra's oldest and largest National Park.
- Tadoba Lake is the crucial perennial water source for the region.
- It represents Southern Tropical Dry Deciduous Teak Forests in the Tiger habitat.
- Teak is the prominent tree species in the forest region.
- It is a mega-biodiversity site with large surrounding forest area and thus has a long term conservation value and also a gene bank of wild relatives of the cultivated species for future use.

Agasthyamala

- The Agasthyamala Biosphere Reserve, established in 2001, is spread across the States of Kerala and Tamil Nadu.
- It is located in the southernmost end of the Western Ghats that hosts one of the most diverse ecosystems in peninsular India.
- It constitutes an important biogeographical hotspot within the Western Ghats.
- It includes three wildlife sanctuaries - Shendurney, Peppara and Nayar, as well as the Kalakad Mundanthurai Tiger Reserve.

81

- The Reserve contains moist forests, tropical wet evergreen and deciduous rainforests, plains and grasslands, nourished generously by several rivers.
- Slender loris is found in this region.
- It was included in the Man and the Biosphere program of UNESCO.
- The Agasthyamala Biosphere Reserve was brought under the Biodiversity Conservation and Rural Livelihood Improvement Project, a program assisted by World Bank.

Sunderbans

- The Sunderban Reserve Forest, with mangrove forests and creeks, is likely to be declared a Ramsar Site soon.
- The Indian Sunderbans comprise almost 43% of the mangrove cover in the country according to a 2017 Forest Survey of India report.
- Sunderbans is one of the ten biosphere reserves which are a part of the World Network of Biosphere Reserve (WNBR), based on the UNESCO Man and the Biosphere (MAB) Program list.
- It is also home to about 100 Royal Bengal tigers.
- It is already a World Heritage Site.
- Other than threats such as climate change, sea level rise, widespread construction and clearing of mangrove forests for fisheries is posing a danger to the sunderbans.

SPECIES IN NEWS

Sand Fish

- The sand fish is a small, robust lizard that prefers to stay under the sand rather than above it.
- The name sandfish originated because of its ability to move through sand as if it were swimming.
- A streamlined body and paddle like feet enable it to move through the sand as easily as a fish moves through water.
- The species is generally found in the North African desert and also in Arabian Desert.
- A species of sand fish is found in Rajasthan.
- The sandfish is an insectivore that can detect vibrations the insects in its vicinity create while moving.

Butterfly fish

- In order to survive, melon Butterfly fish changed their behavior to adapt to coral death caused by climate change.
- The bleaching event of 2010 killed patches of corals in several reefs off the Lakshadweep Islands.
- Despite these large differences in coral cover across the reefs in Lakshadweep, melon butterfly fish numbers were similar in the region.
- Butterfly fish relies on live coral for food and has been shown to decline substantially (67%) following climate-induced coral depletion.
- This species is widely distributed in the Indian Ocean, ranging from coastal East Africa to Raja Ampat (Indonesia), and Christmas Island (Australia).
- It is found in coral rich, protected areas in lagoons and on seaward reefs.
- It is found at depths of up to 20 m.
- The species has declined significantly in Seychelles where there has been coral loss and bleaching.

Elusor macrurus

- Elusor macrurus is popularly known as Mary River's turtle.
- It was added to the **"EDGE of Existence" list** of endangered species compiled by the **Zoological Society of London (ZSL)**.
- It is a native of Queensland of Australia and lives only in the Mary River from which it takes its name.
- They have specialized organs in their cloaca which process oxygen from the surrounding water.
- The turtle's most distinguishing feature is the bright green, spiky Mohawks sprouting on the heads of some.
- However they are not hair but algae that cover them as they are underwater for a long period of time.
- According to IUCN Red List they are endangered species.
- Destruction of the creatures' natural habitat through the building of dams, as well as the collection of its eggs for the pet trade, piled on the survival pressure

Totoaba macdonaldi

- The totoaba or totuava is a marine fish.
- This species is endemic to the Eastern Pacific, and is only found in the central and northern Gulf of California, Mexico.
- The totoaba is caught for its swim bladders which are smuggled to China for sale on the black market as traditional medicine and a delicacy.
- The swim bladders are called as Maws and dubbed as aquatic cocaine.
- It is listed as critically endangered according to IUCN red list.
- Mexican fishermen are using huge nets, called gill nets, to catch totoaba and those nets accidentally kill the **vaquita porpoises**.
- **Vaquita** Known as the **"panda of the sea"** for the distinctive black circles around its eyes which faces extinction is seriously impacted.
- Vaquita is 30 in total in this area which is also a critically endangered species.
- Vaquita is the world's most rare marine mammal, is on the edge of extinction.

Fin whale hunt

- Iceland resumes the controversial fin whale hunt after two-year pause.
- Iceland and Norway are the only nations that openly defy the **International Whaling Commission's 1986 moratorium** on hunting whales.
- Both the countries issue their own quotas.
- Iceland whaling season starts from June this year.
- The fin whale is the planet's second largest animal after the blue whale.
- They have a distinct ridge along their back behind the dorsal fin, which gives it the nickname "razorback."
- The International Union for Conservation of Nature declared it an endangered species in 1996.
- The most recent tallies date back to the early 2000s, putting their number at approximately 53,000.

Irrawaddy dolphin

- The population of Cambodia's river dolphin, Irrawaddy Dolphin, is growing for the first time in decades.
- The Irrawaddy dolphin lives in both salt- and freshwater, and is found in a few locations in South and Southeast Asia.
- Cambodia is home to the largest population of Irrawaddy dolphins, which can also be found in,

Myanmar	Ayeyarwady River
India	Chilka Lake
Laos	Mekong River
Thailand	Songkhla Lake
Indonesia	Mahakam River

- The Irrawaddy dolphins are known for their bulging foreheads and short beaks once swam through much of the Mekong River.
- However, in recent decades have been limited to a narrow stretch from central Cambodia to its northern border with Laos.
- The population was in steady decline since the first census was taken in 1997, dropping from 200 that year to 80 in 2015 due to habitat loss and destructive fishing practices.
- Now, the number of dolphins in the Mekong has increased from 80 to 92 in the past two years.
- It is listed in Appendix I of the Convention on International Trade in Endangered Species (CITES) as well as the Convention on Migratory Species (CMS).

Ophioglossum malviae

- Ophioglossum malviae is a tongue fern whose size is just one centimeter.
- Indian researchers have discovered this world's smallest land fern in the Ahwa forests of the Western Ghats in Gujarat's Dang district.
- The fingernail-sized fern belongs to a group known as the adder's-tongue ferns, named after their resemblance to a snake's tongue.

- The plant's minuscule seeds (called spores) under a powerful electron microscope revealed it had a unique thick outer layer.

POLLUTION

Arsenic pollution

- Researchers from the Central University of South Bihar, Patna, have isolated bacteria from the Ganges plains that can treat arsenic present in groundwater.
- AK1 and AK9 belonging to the genus Pseudomonas can break down arsenic-III, implicated in arsenic poisoning, to its benign form, arsenic-V by a process called **bioremediation**.
- Arsenic is an element widely distributed in earth's crust, and in groundwater in many countries.
- In India, the states of West Bengal, Jharkhand, Bihar, Uttar Pradesh, Assam, Manipur and Chhattisgarh are reported to be most affected by arsenic contamination of groundwater.
- Long-term intake of arsenic contaminated water leads to arsenic poisoning or arsenicosis.
- Drinking arsenic-rich water over a long period results in various health effects including skin problems, skin cancer, cancers of the bladder, kidney and lung, and diseases of the blood vessels of the legs and feet, high blood pressure and reproductive disorders.
- WHO's provisional guideline value for arsenic in drinking water - 0.01 mg/l (10 µg/l).
- Permissible limit of arsenic in India in absence of an alternative source - 0.05 mg/l (50 µg/l)

Plastic Waste Management (amendment) rules

- The Ministry of Environment, Forest and Climate Change has notified the Plastic Waste Management (Amendment) Rules 2018.
- The rules lay down the phasing out of Multilayered Plastic (MLP), which are "non-recyclable, or non-energy recoverable, or with no alternate use."
- Multi-layered plastics (MLP) are the shiny cover in which many ready-to-eat snacks and chips, as well as mouth-fresheners and tobacco products are sold.
- The amended Rules also prescribe a central registration system for the registration of the producer or importer or brand owner.
- The centralized registration system will be evolved by Central Pollution Control Board (CPCB) for the registration of the producer, importer and brand owner.

ENVIRONMENT MEETING AND CONVENTIONS

Hope spots

- In 2013 Andaman and Nicobar Islands and Lakshadweep islands were named as the "hope spots" by the International Union for Conservation of Nature (IUCN) and Mission Blue, an organization involved in the study of oceans.
- A Hope Spot is any special place that is critical to the health of the ocean—Earth's blue heart.
- It is an area of an ocean that needs special protection because of its wildlife and significant underwater habitats.
- The two groups of islands are the first places in India to have been added in the global 'hope spots list.

CLIMATE CHANGE

Cryosphere and NASA' mission

- The term "cryosphere" comes from the Greek word, "krios," which means cold.
- Ice and snow on land are one part of the cryosphere.
- This includes the largest parts of the cryosphere, the continental ice sheets found in Greenland and Antarctica, as well as ice caps, glaciers, and areas of snow and permafrost.
- The other part of the cryosphere is ice that is found in water.
- This includes frozen parts of the ocean, such as waters surrounding Antarctica and the Arctic.
- NASA and the German Research Centre for Geosciences are scheduled to launch the Gravity Recovery and Climate Experiment Follow—On (GRACE—FO) mission.
- It will track fluctuations in Earth's gravity field in order to detect changes in mass, including the mass of ice sheets and aquifers.
- NASA is also scheduled to launch the Ice, Cloud, and land Elevation Satellite-2 (ICESat—2).
- This satellite will use a highly advanced laser instrument to measure the changing elevation of ice around the world, providing a view of the height of Earth's ice with greater detail than previously possible.

Atlantic Ocean circulation

- Global warming is likely slowing the main Atlantic Ocean circulation, which has plunged to its weakest level on record.
- It could make for more extreme weather across the Northern Hemisphere, especially Europe.
- It could also increase sea level rise along the U.S. East Coast.
- Warmer water lessens the amount of cooling and makes it harder for the water to sink and turn over.
- Ice sheets and glaciers in Greenland are melting and the fresh water is pouring into the area where the water turns over, making it less salty, less dense and therefore less likely to sink.
- There's also more rain and snow in northern areas and more evaporation in southern areas, altering the flow.

Carbon mineralization

- In the arid vastness of Oman of the Arabian Peninsula rocks naturally react with carbon dioxide from the atmosphere and turning it into stone.
- This natural process is called as carbon mineralization.
- Carbonate surrounds pebbles and cobbles, turning ordinary gravel into natural mosaics.
- Scientists say that if carbon mineralization process could be harnessed, accelerated and applied inexpensively on a huge scale it could help fight climate change.
- Rocks could remove billions of tons of heat-trapping carbon dioxide.
- The carbon-capturing formations, consisting largely of a rock called **peridotite**, are in a slice of oceanic crust.
- Similar smaller amount of peridotite are found in Northern California, Papua New Guinea and Albania, among other places.

OTHERS

Bioluminscence

- In 2016, blue waves were spotted in the Juhu beach, Mumbai.
- Though popularly called blue waves, the rare natural phenomena are referred to as bio-luminescence.
- Bioluminescence is the emission of light by an organism or by a laboratory biochemical system derived from an organism.
- It results from a chemical reaction in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient.
- The biological light, or bioluminescence, in the waves is the product of marine microbes called phytoplankton.
- The presence of phytoplankton known as dinoflagellates in the water is the most common reason for marine bioluminescence.
- Dinoflagellates have a tail-like structure called flagella that produces light when disturbed, stressed or in high-pollution levels.

Eco-friendly aircrafts

- Air transportation's impact on global warming is estimated at around five percent through CO2 emissions and other substances, including nitrogen oxide and water vapor.
- The number of air passengers is expected to almost double by 2036 to 7.8 billion per year, according to the International Air Transport Association's (IATA) projections.
- Meanwhile, the airline industry aims to cut its CO2 emissions in half by 2050 from 2005 levels.
- Some airlines are beginning to look at electric-powered aircraft as a way to balance both the growth and environmental sustainability.
- Electric planes are cost-effective and much quieter.
- They don't need long runways & could be used at some smaller airports close to city centers.
- One of the biggest hurdles will be the battery storage technology.

Geomagnetic imprinting

- According to a new study, sea turtles use the Earth's magnetic fields to navigate back to the area where they were born decades earlier.
- The new study used loggerhead turtle genetics to investigate their travels.
- Geomagnetic imprinting is the **ability of turtles to learn their home beach's distinctive magnetic signature**.
- The turtles can perceive both the magnetic field's intensity and its inclination angle.

- Inclination angle is the angle that the magnetic field lines make with respect to the Earth's surface.
- The variation in Earth's magnetic field around the nesting area seems to really predict genetic differentiation much better than geographic distance.
- The current study is based on genetic data, not experimental evidence.

Forest fires in India

- India saw a 46 per cent increase in the number of forest fires in the last 16 years (2003-17).
- India witnessed a 125 per cent spike in such fires in just two years (2015 to 2017).
- In 2017, the maximum number of forest fires was reported in Madhya Pradesh followed by Odisha and Chhattisgarh.
- In fact, 23 out of 33 states and union territories reported an increase in forest fires.
- As much as 64.29 per cent of the Recorded Forest Area (RFA) is prone to fires, according to India State of Forest Report (ISFR) 2015 published by the Forest Survey of India.
- Most of the forest fires between 2003 and 2016 have occurred in open forests followed by moderately dense forests.
- India loses around Rs 550 crore every year owing to damages caused by forest fires.
- In August 2017, the National Green Tribunal had asked the Ministry of Environment and Forests (MoEF) to evolve a national policy to prevent and control forest fires.

Money allocated under the forest management schemes

	2016-17 (lakh)	2017-18 (lakh)
Money allocated under forest management scheme	₹5,000	₹4,940
Money released	₹1,756.37 released till June 2016	₹2,667

Plastic pact signed

- More than 40 British companies including major retailers and soft drinks companies pledged to eliminate unnecessary plastic packaging as part of an anti-pollution push.
- The 42 firms, responsible for 80% of plastic packaging sold in Britain, have signed up to a pact.
- It aims to tackle plastic pollution over the next seven years through a series of measures.
- It also include cutting down on single-use plastic packaging, making all plastic packaging reusable or recyclable.
- Corporate giants such as Coca-Cola, have all signed up the "U.K. Plastics Pact" amid growing concern over the problem of plastic pollution, particularly in the oceans.

SCIENCE AND TECHNOLOGY

DEFENCE

HARIMAU SHAKTI 2018

- Harimau Shakti is a joint training exercise conducted by India and Malaysia in dense forests Hulu Langat in Malaysia.
- The exercise is aimed at bolstering cooperation & coordination between armed forces of both the nations.
- It will share the expertise of both the contingents in conduct of counter insurgency operations in jungle terrain.
- Indian contingent is being represented by one of the oldest infantry battalions, Grenadiers.
- This is the first instance wherein a joint training exercise of this magnitude involving Indian and Malaysian soldiers is being organized on Malaysian soil.

Bhabha Kavach

- Bhabha Kavach is an armour panel which gives personal protection against bullets of different threat levels.
- It is developed by Bhabha Atomic Research Centre (BARC).
- The jacket was developed at BARC's Trombay centre in response to a request from the Central Reserve Police Force (CRPF) and the Ministry of Home Affairs.
- It was named after nuclear physicist Dr. Homi J. Bhabha.
- It is not only cheaper but also much lighter.
- It is made is made of boron carbide and carbon nanotube polymer composite.

- BARC has been using boron carbide in the control rods of its nuclear reactors.
- It weighs just 6.6 kg in comparison to the 17-kg jackets in use and use of boron carbide for jacket is the first in India.
- The imported jacket costs Rs 1.5 Lakhs whereas Bhabha Kavach will cost Rs 60,000-70,000.
- BARC has transferred the technology of Bhabha Kavach to Mishra Dhatu Nigam, Hyderabad, for its large-scale production.

Peace Mission

- India and Pakistan will participate together for the first time in a multi-nation counter-terrorism exercise in Russia later this year.
- The military exercise is being conducted by the Shanghai Cooperation Organization.
- The drill will also see the resumption of bilateral military exercise between India and China.
- It is termed as "Peace Mission", which will be held at the Ural Mountains of Russia.
- Its main aim will be to enhance counter-terror cooperation among the eight SCO member countries.
- India and Pakistan were admitted as full members of the bloc last year.
- At present, SCO represents over 40 per cent of humanity and nearly 20 per cent of the global GDP.

SPACE

Advanced Supersonic Parachute Inflation Research Experiment ASPIRE

- NASA successfully launched a supersonic parachute into the sky that will help missions to land on Mars.
- The test was meant to mimic the conditions that a spacecraft would experience during a Red Planet entry, descent and landing (EDL).
- An ambitious NASA Mars rover mission set to launch in 2020 will rely on a special parachute to slow the spacecraft down as it enters the Martian atmosphere.
- The payload that was launched is a bullet-nosed, cylindrical structure holding a supersonic parachute, the parachute's deployment mechanism, and the test's high-definition instrumentation -- including cameras -- to record data.
- The Mars rover which is scheduled to launch in two years (2020), on a mission to hunt for signs of ancient life on the Red Planet.
- The six-wheeled vehicle, whose body is based heavily on NASA's Curiosity Mars rover, will study rocks on site and cache samples for eventual return to Earth.

Indian Regional Navigation Satellite System 1I

- Navigation satellite IRNSS-1I was put in orbit by the Indian Space Research Organization's (ISRO) PSLV-C41 rocket.
- The navigation satellites are meant for giving precise information of position, navigation and time of objects or people.
- The satellites will form the fleets of NavIC (Navigation with Indian Constellation).
- NavIC is being dubbed as India's Own GPS.
- The satellites were built by a consortium of six Indian companies led by Alpha Design Technologies Ltd., Bengaluru.
- They have a civilian and a restricted military/security application.
- Like all other IRNSS satellites, IRNSS-1I will also carry two payloads
    1. Navigation payload former to transmit signals for determining position, velocity and time.
    2. Ranging payload for determining the frequency range of the satellite.
- Each satellite has a life span of 10 years.
- The system was planned to consist of 7 satellites (A,B,C,D,E,F,G) with 2 substitutes (H and I).
- Out of 7 satellites A, B, F, G will be in geosynchronous and C, D, E will be in geostationary orbit.
- IRNSS 1H, was unsuccessful as the satellite did not come out of its heat shield.
- While IRNSS 1I will replace IRNSS 1A as its three imported rubidium atomic clocks failed while in orbit.

Lyrid meteor shower

- The annual Lyrid meteor shower is set to reach a peak.
- The Lyrid meteor shower is one of the oldest known meteor showers

- They are caused by the Earth's annual trip through a cloud of dust and debris left behind by the comet C/1861 G1 Thatcher.
- It is classified as a medium-strength shower.
- A meteor shower happens when Earth passes through the path of a comet.
- When this happens, the bits of comet debris create streaks of light in the night sky as they burn up in Earth's atmosphere.
- Bits of debris which enter Earth's atmosphere are called meteors.
- A meteorite is a solid piece of debris from an object, such as a comet, asteroid, or meteoroid which survives its passage through the atmosphere to reach the surface of a planet or moon.

Gaia mission

- The latest data produced by the Gaia mission was released, which is the second of its kind.
- The Gaia mission's goal is to chart a three-dimensional map of the home galaxy, revealing in the process its composition, formation and evolution.
- The first data release was published in 2016, containing distances and motions of only two million stars.
- It is a European Space Agency's mission.
- Gaia will provide unprecedented positional measurements for about one billion stars – about 1 per cent of the Galactic stellar population – in our Galaxy and Local Group.
- Gaia originally stood for Global Astrometric Interferometer for Astrophysics.
- The mission name remained even though it no longer reflects the methods used to perform the science operations.
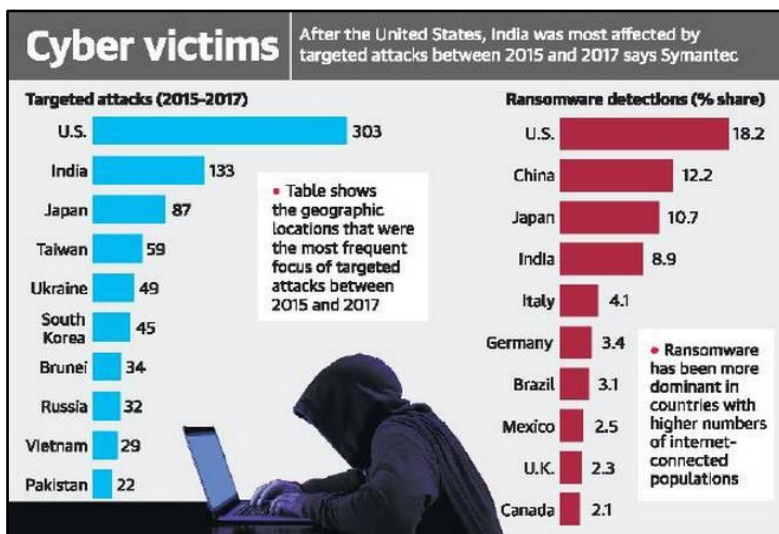
CYBER SECURITY

Dark Net

- In some registered cases, 'Dark Net' was used for sale and purchase of Narcotic Drugs and Psychotropic Substances as per the records of Narcotics Control Bureau.
- It is a computer network with restricted access that is used chiefly for illegal peer-to-peer file sharing.
- It also refers to networks that are not indexed by search engines such as Google, Yahoo or Bing.
- These are networks that are only available to a select group of people and not to the general internet public, and only accessible via authorization, specific software and configurations.
- In recent past ,Silk road ,an online dark market was busted which was used to sell drugs, weapons and stolen identities.

REPORTS AND INDICES

'Internet Security Threat Report'

- The 'Internet Security Threat Report' was recently released by security solutions provider Symantec.
- According to the report, India emerged as the third most vulnerable country in terms of risk of cyber threats, such as malware, spam and ransomware, in 2017.
- India continues to be 2nd most impacted by spam and bots, 3rd most impacted by network attacks, and 4th most impacted by ransomware.

Cyber victims — After the United States, India was most affected by targeted attacks between 2015 and 2017 says Symantec

Targeted attacks (2015–2017)

Country	Value
U.S.	303
India	133
Japan	87
Taiwan	59
Ukraine	49
South Korea	45
Brunei	34
Russia	32
Vietnam	29
Pakistan	22

- Table shows the geographic locations that were the most frequent focus of targeted attacks between 2015 and 2017

Ransomware detections (% share)

Country	Value
U.S.	18.2
China	12.2
Japan	10.7
India	8.9
Italy	4.1
Germany	3.4
Brazil	3.1
Mexico	2.5
U.K.	2.3
Canada	2.1

- Ransomware has been more dominant in countries with higher numbers of internet-connected populations

- Cyber criminals are rapidly adding "cryptojacking" to their arsenal as the ransomware market becomes overpriced and overcrowded.
- Cryptojacking is defined as the secret use of your computing device to mine cryptocurrency.
- The global threat ranking is based on eight metrics — malware, spam, phishing, bots, network attacks, web attacks, ransomware and cryptominers.

Women suffering from anemia

- A report that was based on a pan-India survey data of over 3 lakh men and women during 2015-2017 revealed the following findings.
- Owing to rapidly changing lifestyles, nearly 40% women in India suffer from anemia than men.
- Women aged 61 years onwards were more likely to suffer from anemia.
- While over 20% men suffer from abnormal sugar levels than women.
- Nearly 80% of people were either deficient or insufficient in Vitamin D levels.
- Women were more commonly Vitamin D insufficient while men were vitamin D deficient.
- Prevalence of abnormal levels of vitamin B12 was more commonly found in men (33.28%) than women (27.85%).

Index of Economic Freedom

- Index of Economic Freedom is published by the Heritage Foundation, an American think-tank.
- The Index covers 12 freedoms – from property rights to financial freedom – in 186 countries.
- The Index of Economic Freedom documents the positive relationship between economic freedom and a variety of positive social and economic goals.
- Economic freedom is measured based on 12 quantitative and qualitative factors, grouped into four broad categories of economic freedom:
    1. Rule of Law (property rights, government integrity, judicial effectiveness)
    2. Government Size (government spending, tax burden, fiscal health)
    3. Regulatory Efficiency (business freedom, labor freedom, monetary freedom)
    4. Open Markets (trade freedom, investment freedom, financial freedom)
- India moved up to the 130th spot, up from 143 in 2017.
- India's overall score increased by 1.9 points, led by improvements in judicial effectiveness, business freedom, government integrity, and fiscal health.
- Economic freedom is the fundamental right of every human to control his or her own labor and property.

World Bank Report

- The WB released its bi-annual **South Asia Economic Focus report** for 2018 titled 'Jobless Growth?' recently.
- In its previous South Asia economic focus reports, it had focused on backlash of globalization, tepid investment growth, and fading global tailwinds in the South Asian context.
- The WB report said there is an addition of 750,000 jobs in India per percentage point of GDP growth.

- Female employment rate dropped by 5 per cent per year in India in 2005-2015, whereas male employment rate decreased very little.
- Exports growth is the key to employment growth in India.
- Though India has grown faster than before past 2005, the report says that job growth has rather reduced in the reference period 2005-2015.
- The WB has put 2017-18 growth estimates for India at 6.7 %.

Air pollution chokes the world

- According to the annual State of Global Air Report long-term exposure to air pollution contributed to an estimated 6.1 million deaths across the globe in 2016.
- More than 95% of the world's population is breathing unhealthy air, with India and China jointly contributing to over 50% of global deaths attributed to pollution.
- India topped China for early deaths from outdoor air pollution with 1.1 million in 2016.
- Air pollution was the fourth-highest cause of death among all health risks globally, coming in below high blood pressure, diet and smoking.
- India, Pakistan and Bangladesh have experienced the steepest increases in air pollution levels since 2010.

Report on gender inequality

- According to the McKinsey Global Institute recent report Asia Pacific is not meeting its economic potential and one of the major reasons is gender inequality.
- $4.5 trillion could be added to the region's combined annual gross domestic product by 2025 if targeted policies are formulated to achieve more women's equality.
- The researchers estimate that 58 % of the Asia's growth would be from raising women's labour-force participation rate.
- Employing more women in higher-productivity sectors will contribute about 25% to the growth.
- By boosting women's work hours will contribute another 17 % to the growth.
- The report judged 18 economies in the region for gender equality in work and in society.
- On the work metrics, the Philippines was lauded for progress, followed by New Zealand and Singapore.
- India and Pakistan were judged furthest from gender parity in work.
- While there are fewer than four women globally in leadership roles to every 10 men, the ratio is only one in four in the Asia-Pacific region.
- On societal metrics, South and Southeast Asia offers a lot of potential for gender parity in digital and financial inclusion, while physical security and autonomy are considered greater worries.

Special 301 Report

- The Office of the U.S. Trade Representative has placed India on 'Priority Watch List' in its annual Special 301 Report.
- The report identifies USA's trading partners that do not adequately or effectively protect and enforce intellectual property (IP) rights.
- In other words, it identifies trade barriers to U.S. companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.
- It calls on U.S. trading partners to address IP-related challenges with a special focus on the countries identified on the Watch List and Priority Watch List.
- The report called India's implementation of the patent act as restrictive.

World Press Freedom Index 2018

- India's ranking in the Press Freedom Index has fallen two places to 138.
- In the annual report RSF blamed "physical violence" against journalists like Gauri Lankesh as the key reason behind the country's low ranking.
- The report also warned that hate crime is another issue plaguing India.
- Norway topped the list of having the world's freest press for the second year in a row.
- North Korea remained the most repressive country followed by Eritrea, Turkmenistan, Syria and then China.
- The index is compiled by Reporters without Borders (RSF) which reflects growing animosity towards journalists.
- It is published annually by RSF since 2002.

- The Index measures the level of media freedom in 180 countries, including the level of pluralism, media independence, the environment and self-censorship, the legal framework, transparency, and the quality of the infrastructure that supports the production of news and information.
- It does not evaluate government policy

MISCELLANEOUS

World Council on City Data (WCCD)

- Chennai Corporation has passed a resolution to implement the 'City Data for India Initiative' in partnership with Tata trusts and World Council on City Data.
- The initiative allows Indian cities to join a global network of cities that are committed to using data to improve the lives of their citizens.
- The WCCD ISO 37120 certification, an international standard, published for globally-comparable city data, provides a comprehensive set of indicators to measure the city's social, economic and environmental performance in relation to other cities.
- The certification is given to Indian cities after Tata Trusts partnered with WCCD and initiated City Data for India Initiative.
- The different certification levels are Platinum, Gold, Silver, Bronze and Aspirational.
- In India, Jamshedpur and Surat has the Gold Tag while Pune has the Platinum tag.
- It will help the city compete with global cities and ensure world-class amenities.
- The WCCD is a global hub for creative learning partnerships across cities, international organizations, corporate partners, and academia to further innovation, envision alternative futures, and build better and more livable cities.
- WCCD piloted the ISO certification in the foundation cities which is showed in the map below,

Predicament of Returning Mothers

- The report titled "Predicament of Returning Mothers" highlights the challenges faced by women who are at high risk of dropping out due to pregnancy and child care.
- The following are the key factors that help women return to work post their maternity leave:
    1. a strong sense of identity
    2. a precedence of women working in family
    3. presence of role models that they could relate to
    4. support from mothers-in-law, husbands and social circle
    5. financial instability at home that drives them to work and earn

- From the employer's perspective, managers validated that childcare and maternity are the key exit gates for women.
- Also, demotion of returning mothers often leads to dissatisfaction at work and eventually leading to resignations.

Calcium intake

- Adults in India consume on an average about half the amount of calcium than required for healthy bones.
- Low calcium intake has been linked to lower bone-mineral density, which increases the risk of osteoporosis and broken bones.
- In India, the average calcium intake is only 429 mg per day against the requirement of 800-1000 mg per day.
- Countries in Asia, Africa and South America mostly have low calcium intakes, ranging between about 400 and 700 mg/day.
- Calcium is a major component of bone, accounting for between 30-35 per cent of its mass and much of its strength.
- Calcium regulates muscle contraction, plays a key role in normal blood coagulation, and also a co-factor for many enzymes.
- Calcium is not easily absorbed without the presence of vitamin D.

* * * * *