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I N D E X

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G.S PAPER II

1. POLITY

1.1 Updated NRC for Assam

Why in news?

The first draft of an updated National Register of Citizens (NRC) for Assam was published recently by the Assam government.

What is the significance?

- Assam is the only State in the country that prepared an NRC in 1951 following the census of that year.

- It has also now become the first State to get the first draft of its own updated NRC.

- The Register is meant to establish the credentials of a bona fide citizen as distinguished from a foreigner.

- This is to detect Bangladeshi migrants who may have illegally entered Assam after the midnight of March 24, 1971.

- This cut-off date was originally agreed to in the 1985 Assam Accord.

What is the Assam Accord?

- Assam witnessed a range of law and order problems and political turbulence driven by the anti-foreigners movement, in the early 1980s.

- Responding to this, the Assam Accord (1985) was signed by the Centre and the All Assam Students' Union (AASU).

- Accordingly, those foreigners who had entered Assam between 1951 and 1961 were to be given full citizenship, including the right to vote.

- The entrants between 1961 and 1971 were to be denied voting rights for ten years but would enjoy all other rights of citizenship.

- Anyone who entered the state without documents after March 24, 1971 will be declared a foreigner and were to be deported.

- Besides, the Accord had a package for the economic development of Assam.

- And assurance to provide safeguards to protect the cultural, social, and linguistic identity and heritage of the Assamese people.

What happened thereafter?

- The successive governments in the State failed to effectively detect and deport foreigners as set out in the Assam Accord.

- In 2005, another agreement was signed between the Centre, the Assam government and the AASU.

- Accordingly, it was decided to update the NRC that was first published after the Census data of 1951 in post-Partition India.

- The NRC update though started as a pilot project in some districts was stopped after violence broke out in some parts of the State.

- In 2009, Assam Public Works (APW), an NGO filed a petition in the Supreme Court.

- It called for identification of Bangladeshi foreigners in the State and deletion of their names from the voters' list.

- The recent publication of updated NRC comes as a result of the Supreme Court order to complete the exercise by December 31, 2017.

What challenges lie ahead?

- **Claims** - The list published is the first draft, and with verification of the remaining applicants subsequent draft would be published.

- However, if a citizen's name is missing, he/she can file an objection (with requisite documents) and request that the name be included.

- A security challenge could possibly emerge when the process of updating the NRC gets completed, given the further claims.

- **Post marriage migration** - Nearly 29 lakh women, who have migrated after marriage, have claimed for residency status.

- Their claim is supported by certificates issued by gram panchayat secretaries and executive magistrates.

- The Supreme Court has clarified that while these documents could be allowed, it could by no means taken as proof of citizenship.

- The challenge lies in verifying the authenticity of the certificates for establishing the link between the claimant and the legacy person (who has to be a citizen).

- **Citizenship Bill** - The Centre is pushing for the Citizenship (Amendment) Bill, 2016.

- It seeks to grant citizenship to Hindu Bangladeshis, who have entered Assam illegally post-1971.

- Various groups have opposed identification of illegal migrants on the basis of religion.

- This unresolved citizenship related issue could pose a challenge for the positive outcome of the NRC, even if completed.

- **Humanitarian concerns** - Nearly five decades have elapsed since the cut-off date of March 25, 1971.

- Certainly, individuals who have sneaked in illegally would have made settlements in India for generations.

- Expecting them to leave after such a long period has some serious humanitarian issues.

- **Deportation** - The list of aliens is only expected to increase with further applications and scrutiny.

- This is especially worrying given the absence of a deportation treaty with Bangladesh.

- There is a possibility that the issue could evolve as that of the Rohingyas of Myanmar's Rakhine province.

1.2 Internal Rift in Judiciary

Why in news?

Four senior judges of the Supreme Court held a press conference and publicly accused the Chief Justice of India for his biased decisions.

What is the convention?

- The Chief Justice is indeed the master of the roster, a well-settled law reflected in a Constitution Bench judgment in 1998.

- The convention of the court demands that important cases of public interest or sensitive matters should be first heard by the CJI.

- If the CJI is not willing for some reason to hear the case, it should be assigned to the next senior-most judge in the Supreme Court.

- Instead of that, such cases were assigned to certain Benches and eventually given a quiet burial.

What is the present allegation?

- The four senior-most judges after the CJI have alleged that the administration of the Supreme Court was not in order.

- Certain Supreme Court judges arrogated to themselves the "authority to deal with and pronounce upon" cases, over the past months.

- They also alleged the CJI, Dipak Misra of misusing administrative powers to selectively assign cases to judges of his choice.

- Notably, certain cases of far-reaching consequences to the nation have been assigned without any rational basis.

- The senior judges now only question the 'how' and not the 'who' in regards with the administrative power of assigning the cases.

How did the dissent erupt?

- **Judges Bribery Case** - The germ that led to the current conflict could be the controversial medical college bribery caseThe case raised charges of judicial corruption and possible conflict of interest if Justice Misra were to hear it.

- **Fake encounter case** - B.H. Loya was the CBI judge hearing the Sohrabuddin Sheikh encounter case.

- The senior judges had held a meeting with the CJI expressing their reservations about assignation of a related petition to a particular Bench.

- The petition was in regard with seeking an independent probe into the mysterious death of CBI judge Loya.

- The 'fake encounter' case involves the BJP president Amit Shah who was an accused but later discharged.

- The political sensitivity of the matter lead to doubts that judicial allocations could be influenced by external political hand.

- **Internal efforts for redressal** - The senior judges have earlier collectively addressed their concerns to the CJI through a letter.

- They have tried the procedural means to persuade the Chief Justice to take remedial measures.

- **Media** - Having exhausted of the internal options, the judges have now circulated the letter at the press meet and made it public.

Sohrabuddin Sheikh Encounter Case

- Sohrabuddin Sheikh is a petty criminal who was killed near Gujarat's Gandhinagar area in November 2005.

- He is suspected to have been involved in smuggling and a couple of murders as well.

- The suspected backing of political masters behind the crimes, lead to claims that the encounter was for political reasons.

- The case is going on.

Is it a breach?

- The judges have transcended the judicial protocol that sitting judges should not interact with the media.

- However, this comes as an effort to protect the democracy and the independence of judiciary which are allegedly at stake.

- The internal rift poses the risk of diminishing the image of the judiciary and thus needs unconventional remedies.

What is the way forward?

- The government must stay away from the internal conflict in the judiciary.

- However, it could disclose its position on the Memorandum of Procedure for judicial appointments and communicate it to the Supreme CourtThe Chief Justice could convene a meeting of the full court and pay heed to the concerns to try internally resolving the conflict.

- The unprecedented internal dissension in judiciary is a moment for collective introspection for the nation on democratic institutions.

1.3 Paradigm Shift in SC's stand on section 377

Why in news?

Supreme Court is likely to re-examine the Section 377 of IPC.

What is Section 377?

- Section 377 under Indian Penal Code (IPC) of colonial era criminalises homosexuality.

- It is an archaic law that was introduced during the British era in 1860s and makes gay sex a crime for which the punishment can be a life term.

- Under this section whoever voluntarily has carnal intercourse against the order of nature with any man, woman shall be punished with imprisonment for life, and shall also be liable to fine.

What are the earlier stands of SC on this issue?

- In 2009 Delhi high court gave a historic and globally accepted verdict by decriminalised gay sex, but this order was kept aside by the SC in 2013.

- In December 2013 Supreme Court dismissed the LGBT community as a negligible part of the population while virtually denying them the right of choice and sexual orientation.

- A Review Bench of the Supreme Court, in January 2014, had also refused to strike down Section 377 IPC.

What is recent stand of the Supreme Court?

- Recently SC clearly stated that the determination of order of nature is not a common phenomenon.

- Individual autonomy and individual natural inclination cannot be atrophied unless the restrictions are determined as reasonable.
- The court observed that what is natural for one may not be natural for the other, but the confines of law cannot trample on or curtail the inherent rights embedded with an individual under Article 21 (right to life) of the Constitution.
- A right to sexuality, sexual autonomy and freedom to choose a sexual partner forms the cornerstone of human dignity which is protected under Article 21.
- It also proposed that societal morality changes with time and law should change pace with life.
- Thus the order reveals a paradigm shift in the apex court's views.

1.4 Death by Hanging

Why in news?

The Centre had told the Supreme Court that executing a death row convict by hanging was the most viable method.

What was the petition?

- A PIL had sought quashing of section 354(5) of the Criminal Procedure Code which specifies execution by hanging.
- The plea had referred to a Report of the Law Commission advocating removal of the present mode of execution from the statute.
- It has also referred to Article 21 and stressed that it included the right of a condemned prisoner to have a dignified mode of execution so that death becomes less painful.
- This means the right to a dignified life up to the point of death including a dignified procedure of death.
- The PIL had also listed intravenous lethal injection, shooting, electrocution or gas chamber as other viable options in which death is just a matter of minutes.
- It noted that the present practice of executing a death row convict by hanging involves prolonged pain and suffering.
- Notably, in hanging, the entire execution process takes over 40 minutes to declare a prisoner dead.

What was the SC's directive?

- The Supreme Court had earlier adjourned the plea seeking abolition of executing a death row convict by hanging.
- The SC had further urged the parliament to consider amending the Criminal Procedure Code to change the mode of execution to make death less painful.
- It also asked the Centre to appraise it about the various modes of executing death row prisoners prevalent in other countries.
- The court also made it clear that it is not questioning the constitutionality of death penalty but only the mode of execution.

What is the Centre's response?

- The Centre has said that there is no viable method at present other than hanging to execute condemned prisoners.
- It noted that they had tested lethal injections, but it was not workable as there are instances of it failing.

1.5 National Anthem in Cinema Halls

Why in news?

The Supreme Court has modified its earlier order regarding mandatory playing of national anthem in cinema halls.

What is the court's observation?

- In its earlier order, the court ordered all cinema halls to play the anthem before screening a film.
- The Supreme Court has modified this and has now made it optional for cinema halls to play the national anthem before every show.
- The court observed that playing of the anthem was directive, but showing respect was mandatory.

- Accordingly, if the anthem is played, patrons in the hall are bound to show respect by standing up.
- The court clarified that the exception granted to disabled persons from standing up during the anthem shall remain in force on all occasions.

What lies before the Centre?

- The current modification will be in place till the Union government takes a final decision.
- This will be based on the recommendations of a 12-member high-profile inter-ministerial committee.
- The committee was set up, following the court's earlier order.
- It will specify the occasions, circumstances and events for the solemn rendering of the anthem.
- The ministerial panel will also examine whether any amendments are necessary to the Prevention of Insult to National Honour Act of 1971.
- The 1971 Act deals with national anthem, related mandates and punishments thereof for any violations.
- But the petitioner calls for the SC to intervene and interpret the 1971 Act in the light of Article 51A on fundamental duties.
- The Supreme Court disposed of the petitions, and directed to make the representations before the inter-ministerial committee.

Why is the modification so significant?

- Making it mandatory to play national anthem by a judicial rule in the absence of any statutory provision to this effect seemed as a **judicial over-reach.**
- The court's earlier order also had some unintended consequences like reports of **vigilantism**, with people criticized or beaten up for not standing up.
- The need for visibly demonstrating one's patriotism was felt as a case of **moral policing**.
- The rationale behind **singling out cinema houses** leaving out other types of meeting and assemblies was also questionable.
- Above all, the mandatory demonstration of patriotism is not a healthy signature of a **mature democracy** like that India.
- The court's modification to the order has thus removed the coercive element.
- Even if rules are needed for the purpose, it is for the Parliament to prescribe them by law.

1.6 EC's Disqualification of AAP MLAs

Why in news?

Election Commission (EC) has recommended to the President that 20 of Aam Aadmi Party's (AAP) MLAs be disqualified for holding offices of profit.

How did the issue evolve?

- The Arvind Kejriwal-led Delhi government passed an order back in 2015, **appointing** 21 MLAs as parliamentary secretaries.
- The appointment of MLAs was **challenged** by an advocate arguing that these MLAs were holding 'office of profit'.
- There was also a petition before the then President seeking their disqualification.
- In response, the Delhi Assembly passed the Delhi Member of Legislative Assembly (Removal of Disqualification) (Amendment **Bill**), 2015.
- The bill excluded the parliamentary secretaries from 'Office of Profit' with retrospective effect.
- However, **President declined assent** to the Bill.
- Later on, the Election Commission (EC) held a **personal hearing** for 21 AAP MLAs.
- Subsequently, the Delhi High Court set aside a government order that appointed 21 of the party's MLAs as parliamentary secretaries.
- Very recently, the Election Commission has recommended the President for **disqualification** of the 20 AAP MLAs (one resigned).

Who is a Parliamentary Secretary?

- A Parliament Secretary often holds the rank of Minister of State and has the same entitlements.
- He/she is appointed to assist the ministers and is assigned to a government department.
- Many states in the Indian Union have instituted the post of Parliamentary Secretary and have also appointed MLAs to the post.

What is an 'Office of Profit'?

- 'Office of profit' (OoP) is not clearly defined in the Constitution.
- But deriving from the past judicial pronouncements, five tests have been laid down to check if an office is an OoP or not.
- They are:
    i. whether the government makes the appointment
    ii. whether the government has the right to remove or dismiss the holder
    iii. whether the government pays remuneration
    iv. what the functions of the holder are
    v. does the government exercise any control over the performance of these functions
- In all, the word 'profit' has always been treated equivalent to or a substitute for the term 'pecuniary gain' (financial gain).

What are the legal concerns?

- **Office of Profit** - MPs and MLAs are supposed to hold the government accountable for its work.
- Logically, holding an "Office of Profit" under the government may make them susceptible to government influence.
- They may fall short of discharging their constitutional mandate.
- **Number of members** - Article 164(1A) specifies that the number of ministers including the Chief Minister has to be within 15% of the total strength of the Assembly.
- In the case of Delhi, which is not a 'full' state, the number of Cabinet Ministers cannot exceed 10% of the total 70 seats.
- This is as per Article 239AA of Constitution which deals with Special provisions with respect to Delhi.
- As a Parliament Secretary often holds the rank of Minister of State, their numbers should also be considered in meeting this limitation.
- On violation of this, various High Courts have earlier struck down the appointment of Parliamentary Secretaries as unconstitutional.

What's next?

- The constitutional procedure is that if there is any petition pertaining to an office of profit, it goes to the President.
- She/he checks Article 102 and 91 of the constitution and Section 15 of the National Capital Territory of Delhi Act 1991 and takes the EC's opinion.
- After the presidential sign and seal is placed on the EC's recommendation, the 20 MLAs will stand disqualified.
- Notably, the remedial measures for the AAP in court are limited.
- This is because the Delhi High Court has already heard the matter and quashed the appointments.
- Moreover, the Election Commission, mandated by the Constitution to deal with such matters, has already dealt the issue at length.

What the law says

Article 102 (1)(a) says a person shall be disqualified from being a member of either House of Parliament if he holds any office of profit, among other grounds

Article 103 says if a question arises whether a member has incurred such disqualification, it will be referred to the President's decision. The President shall obtain the Election Commission's opinion and act accordingly

Article 191(1) contains a similar provision for MLAs and MLCs in the States. Legislators in Delhi are covered by corresponding provisions in the Government of National Capital Territory Act, 1991
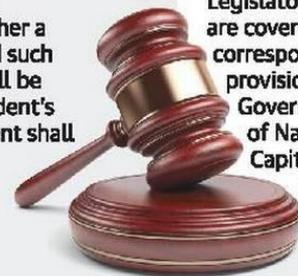
1.7 2nd Fodder Scam Case

Why in news?

A special CBI court sentenced former Bihar CM Lalu Prasad to 3.5 years imprisonment in the 2nd fodder scam case.

How did the case evolve?

- The 900-crore fodder scam cases first cropped up in 1996 and charge-sheet was filed against Mr. Lalu by CBI in 1997.
- Trial began in 2002 in the special CBI court at Ranchi.
- In 2013, Mr. Lalu was convicted in the 1st fodder scam case and sentenced to 5 years imprisonment along with Rs25 lakh fine.
- Recently, the CBI court had convicted Mr. Lalu and 15 others and the current one is for the 2nd of six fodder scam cases.
- The 2nd case pertains to embezzling of about Rs89 lakh from the Deoghar Treasury in the 1991-94 period.
- Significantly, Mr.Lalu and 7 others were sentenced with 3.5 years imprisonment along with a fine of 5 lakhs each.
- After the verdict, Mr. Lalu was taken into custody and taken to the Birsa Munda Prison in Ranchi.

What were the implications?

- After spending 2 months in jail in the 1st conviction, Mr. Lalu was granted bail and the case is now pending before the HC.
- However, it did cost him his Lok Sabha seat as any conviction would mean automatic disqualification.

How has the political reactions been?

- Mr. Lalu's RJD is expected to appeal against the verdict in Higher Courts.
- The NDA allies have welcomed the judgement and have stressed that their view on Lalu has been vindicated by the courts.
- The verdict is bound to have long term political ramifications in Bihar and beyond.

2. GOVERNMENT ACTS, POLICIES AND INTERVENTIONS

2.1 National Medical Commission (NMC) Bill 2017

What is the issue?

- There is nationwide opposition to the proposed National Medical Commission (NMC) Bill 2017.
- With Lok Sabha sending it to the Parliamentary standing committee on health, the provisions need a serious rethink.

What are the key provisions?

- **Commission** - The NMC bill seeks to replace the Medical Council of India with National Medical Commission as the top regulator of medical education.
- The 20 members **National Medical Commission** will be at the top of a four-tier structure for regulation.
- NMC will comprise of a Chairperson, a member secretary, eight ex-officio members and 10 part-time members.
- Out of the 8 ex-officio members, four shall be presidents of the boards constituted under the act.
- The remaining four shall be nominees from three ministries viz. Health, Pharmaceuticals, HRD and one from Director General of Health Services.
- **Autonomous Boards** - The Bill sets up under the supervision of the NMC certain autonomous boards which are:
    i. the Under-Graduate Medical Education Board (UGMEB) and the Post-Graduate Medical Education Board (PGMEB)
    ii. the Medical Assessment and Rating Board (MARB)
    iii. the Ethics and Medical Registration Board

- Each board will consist of a President and two members, appointed by the central government.
- **Medical Advisory Council** - It will be a platform for the states/union territories to put forth their views and concerns before the NMC.
- Essentially, the Council will advise/make recommendations to and oversee the functions of the NMC.
- **Exam** - Students have to clear the common entrance exam NEET for MBBS.
- Besides, the **National Licentiate Examination** will be mandatory for medical graduates before practising/pursuing PG.
- Under specified regulations, the NMC can also permit a medical professional to perform surgery or practise medicine without qualifying the licentiate (exit) exam.
- **AYUSH practitioners** - On completion of a **bridge course**, practitioners of Indian systems of medicine, including Ayurveda and homoeopathy would be allowed to practise allopathy.
- The rationale is to address the shortfall of rural doctors by creating a new cadre of practitioners.
- **Private college** - The government, under the NMC, can dictate guidelines for fees up to 40% of seats in private medical colleges.
- This is aimed at giving students relief from the exorbitant fees charged by these colleges and is a standout feature of the bill.

What are the contentions?

- **Registry** - Graduates of Bachelor of Ayurvedic Medicine and Surgery, and Bachelor of Homeopathic Medicine and Surgery are already registered with their respective councils.
- The NMC registry, in addition to this, could result in dual registration, which is neither open nor permissible.
- **Corruption** - The bill aims to overhaul the corrupt and inefficient Medical Council of India.
- This is sought to be accomplished through an independent Medical Advisory Council.
- However all members of the Council are members of the NMC as well, thereby undermining the council's independence and its very purpose.
- **Bridge Course** - The provision has created widespread resentment among allopathy doctors.

What could be done?

- The government could empower existing doctors before integrating alternative-medicine practitioners into modern medicine.
- Notably, MCI regulations prevent even experienced MBBS doctors from carrying out procedures like caesarians and ultrasound tests.
- Also, nurses are barred from administering anaesthesia.
- An alternative would be to have a three-year diploma for rural medical-care providers, as earlier practised in Chhattisgarh.
- Graduates from such diploma courses could be allowed to provide basic care in under-served regions, to meet out the shortfall.

2.2 Facilitating Inter-State Mobility

What is the issue?

- Despite the absence of any explicit barriers to mobility, India's inter-state mobility is relatively lower.
- Analysing the reasons behind and making necessary policy alterations are essential to facilitate mobility to seek opportunities.

How is the internal migration pattern in India?

- Internal migration rates across states are **relatively lower in India** than in other many other countries.
- Roughly, **internal migrants** represented 30% of India's population as per 2001 Census.
- However, two-thirds of these were **migrants within districts.**
- There is a higher rate of migration from faraway districts of the same state than from nearby districts of a different state.

- Moreover, more than half of them were **women** migrating after marriage.
- Notably, states with higher rates of access to higher education and public employment have relatively less student and skilled migrants moving out.
- The **rate of migration** has almost **doubled** between 2001 and 2011 relative to the previous decade.
- However, labour migrant flows within states are much larger than flows across states.
- Evidently, state borders remain impediments to mobility though there are no explicit barriers to inter-state mobility in India.

What are the reasons?

- Barriers to internal mobility include **physical distance and linguistic differences.**
- Differences in **economic and social features** among different states are also among notable reasons.
- Despite these, there are a range of other factors that works as disincentives to inter-state migration.
- **Social Benefits** - A majority of social entitlement programmes are administered by state governments, even when they are centrally funded.
- In essence, many of the social benefits and entitlements are not portable across state boundaries.
- Access to subsidised food through the public distribution system (PDS) is a major reason.
- Evidently, in states where the PDS offers higher levels of coverage, unskilled migrants are less likely to move out-of-state.
- Even admissions to public hospitals, schools, etc are administered through ration cards issued and accepted only by the home state government.
- **Education** - Many universities and technical institutes are administered by state governments.
- Notably, state residents get preferential admission in these through "state quota seats".
- The "domicile certificates" necessary for this require continuous residence in the state, ranging from 3 to 10 years in different states.
- **Employment** - Though accounting for only about 5% of total employment, public sector employs more than half of the higher-skilled.
- However, in most states, more than three-fourths of government jobs are with the state rather than the central government.
- Here again, state domicile is a common requirement for jobs in state government entities.
- Moreover, states are increasingly expanding and promoting the "jobs for natives" policies in the recent period.
- E.g. Karnataka recently directed both public and private sector firms to reserve 70% of their jobs for state residents or would lose access to state government industrial policy benefits.

What could be done?

- India's "fragmented entitlements" should be integrated to offer citizens access to social benefits irrespective of the residing state.
- This is essential to boost growth and check poverty, by facilitating access to productive opportunities available across the country.
- A nationally portable identity could prove to be an important step.
- States should rationalise the discriminatory policies and become more inclusive in offering employment and education.

2.3 Streamlining Our Tobacco Policy

What is the issue?

- India is the second largest consumer and producer of tobacco-based products.
- We hence need a more targeted taxation and retail policy on tobacco products to effectively curb their use.

How are the current policies oriented?

- Thus far, a mix of pricing and taxation regimes, awareness campaigns, regulatory laws was used by governments to dissuade tobacco use.
- Despite multiple contradictory court rulings regarding the pictorial warnings on packs, the SC has presently retained the mandate for 85% space for them.

- The judgement recognized that such pictorial warning were one of the approaches for bringing about behavioural changes towards tobacco use,

- Additionally, it also stressed the lack of sufficient coherent pricing policies and taxation measures to aid the cause.

Is the taxation pattern skewed?

- World Health Organisation's (WHO) "Global Adult Tobacco Survey" highlights India's distinct pattern of tobacco consumption.

- The product variant structure of tobacco is complex in India as it is consumed in multiple forms like - cigarettes, bidis, chewables and khaini (smokeless).

- Notably, while cigarettes form the primary source of tobacco consumption worldwide, it accounts for only 11% of the domestic consumption.

- A key reason for this is the variable pricing dynamics for multiple forms of tobacco, which is skewed against cigarettes.

- The average unit price of a bidi or smokeless tobacco is significantly lower than of a cigarette, which makes the former popular among the poorer segments.

Has GST improved the situation?

- Under GST, all tobacco-related products have been placed in the 28% tax slab.

- Additionally, a National Calamity Contingent Duty (NCCD) and a cess charge have been imposed on cigarettes and smokeless tobacco.

- These have resulted in a considerable price increase for cigarettes, with the highest rise seen in economy packs.

- In contrast, GST has in fact precipitated a marginal price drop for small bidi and Pan Masala packs, and only a marginal rise for other sizes.

- For smokeless tobacco, the maximum price increase has been in the smallest pouch size category and marginal increase was seen in other sizes.

- Hence, it can be concluded that a rational, consistent and impactful taxation regime for tobacco hasn't taken shape under GST, which needs pondering.

What is the way forward?

- Removal of all excise and other tax exemptions irrespective of the size of the unit and restrictions on sales of loose cigarette sticks is needed.

- As 89% consumption is non-cigarette category, taxing it further won't produce any positive results towards reducing consumption.

- A significant rise in the taxes on bidis and smokeless tobacco is needed to narrow the gap between cigarettes and other tobacco products.

- While this will be opposed by the large number labourers involved in bidi making, safeguarding the health poor consumers should hold primacy.

- Also, nudging the workforce dependent on tobacco businesses to other sectors should be taken up with vigour.

- The Supreme Court has stayed an earlier order of the Karnataka High Court striking down the central Rules on tobacco packaging.

2.4 Pictorial Warning on Tobacco Products

Why in news?

The Supreme Court has stayed an earlier order of the Karnataka High Court which struck down the central Rules on tobacco packaging.

What do the rules specify?

- In 2014, the Ministry of Health notified amendments to The Cigarettes and Other Tobacco Products (Packaging and Labelling) Rules, 2008.

- It was mandated that the specified health warning shall cover at least 85% of the principal display area of the package.

- Of this, **60%** shall cover **pictorial** health warning and **25%** shall cover **textual** health warning.

- This shall be positioned on the top edge of the package and in the same direction as the information on the principal display area.

How was the implementation?

- The Rules were to come into effect from April 1, 2015.

- However, there were cries of outrage from the tobacco industry.

- Subsequently, the Lok Sabha Committee on Subordinate Legislation (CoSL) examined the government's 2014 notification.

- After debates and delays, the rules finally came into effect from April 1, 2016, with the government stipulated 85% warning itself.

- Resultantly, India now has some of the world's most stringent rules on pictorial warnings on tobacco packets.

> **GATS**
>
> - Global Adult Tobacco Survey (GATS) was conducted by the Tata Institute of Social Sciences.
>
> - It was in association with the Ministry of Health and Family Welfare, Government of India and the World Health Organisation.
>
> - It is a national representative survey helping countries fulfil the obligations under WHO's Framework Convention on Tobacco Control.

How effective are pictorial warnings?

- Health advocates have long argued for prominently displayed pictures of the impacts of tobacco consumption.

- These, sometimes grotesque depictions of tumours, are more effective than smaller pictures or written warnings.

- The Global Adult Tobacco Survey (GATS) 2016-17, released by the Ministry of Health and Family Welfare adds validity to this.

- The study has found that the warnings play a role in motivating more than half the number of smokers who quit.

- It highlighted that around 60% of cigarette smokers and around 50% of bidi smokers had thought of quitting.

- Another 46% of smokeless tobacco users had also thought of quitting because of the warnings on smokeless tobacco products.

- The new rules have effectively controlled tobacco and saved around 80 lakh lives in India.

What is the recent petition?

- A study on the economic burden of tobacco-related diseases in India said that the estimated total cost attributable to tobacco use was around Rs 1 lack crore in 2011.

- This is 12% more than the combined state and central government expenditure on healthcare in that year, and 1.16% of India's GDP.

- **HC** - However, the tobacco industry approached the Karnataka High Court.

- It argued that no correlation had been established between tobacco and the diseases depicted on the packs.

- It said the industry's right to conduct business was being unfairly affected because of the warnings.

- Accepting the contention, the court ruled that India should go back to the 40% warnings that existed before the notification of the 85% Rules.

- **SC** - However the Supreme Court has stayed the Karnataka High Court's order.

- It held that health of a citizen has primacy and he/she should be aware of that which can deteriorate the condition of health.

2.5 The Bane of Differentiated Passports

What is the issue?

- The government recently announced the introduction of differentiated passports for persons requiring "Emigration Checks" and the rest.

- While administrative convenience was said to have drove the move, many see it as an instance of institutionalising discrimination.

What is the proposal about?

- In what is a first of its kind in differentiation, new "Orange cover Passports" to citizens whose passports carry the "Emigration Check Required" stamp.
- For the rest, it is proposed to retain the current dark blue passports.
- ECR passport-holders are those who haven't passed their matriculation examination and aren't income tax assesses.
- ECR stamping is done to enable better tracking in order to prevent the exploitation of such people, when they go to work abroad as labourers.
- Notably, a majority in this category are likely to belong to a minority or marginalised communities.

What are the problems involved?

- The move stems from the belief that different jacketing colours would enable easier recognition and improve airport efficiency.
- This is but an admission to the failure to develop technology-based solutions to identify ECR passport-holders quickly.
- Also, by issuing orange passports to the marginalised migrant workers, the administration would be highlighting its failure to educate people.
- This will also create a citizenship document that will visibly identify some as members of economically and socially marginalised communities.

What does history tell us?

- The current move has a striking parallel with the South African "Domas Stamp", that declared its emigrants eligible for specific jobs.
- It proved to be stigmatising, serves as a reminder for our government to seriously reconsider this inherently bad move.
- Notably, the "Bold J" that was stamped on passports held by German Jews in the 1940s, was also another instance where differentiation was used.

3. SOCIAL ISSUES

3.1 Addressing Issues Faced by Old Age Population

What is the issue?

- India has a serious problem of growing elderly population.
- But it lags in policy measures to address the problems of elderly.

What is the status of elderly population in India?

- According to the 2011 Census, there are 104 million elderly persons (aged 60 years or above) in India.
- The proportion of elderly was 8.6% in 2011 and is rising.
- Also, the average Indian can expect to live at least 18 years beyond the age of 60, which means the dependency ratio is also rising.

What are the problems faced by the elderly population?

- The joint family system, which sustained the elderly, is virtually a thing of the past.
- This leaves a rising number of the elderly even those who were at least middle class in their working years in awful straits.
- There is no institutional support for the elderly, the cost of both living and Medicare is rising, eroding their savings, and the old-age pension.
- Due to steadily falling interest rates on bank deposits, most middle class elderly depend on pension money to sustain themselves.

What are the issues with existing government mechanisms?

- Indira Gandhi National Old Age Pension Scheme has been paying Rs. 200 a month as old-age pension.

- A sum which has remained unchanged since 2006, when it was introduced.

- Due to inflation the value of this has depreciated to under Rs. 100 over the past 11 years, less than a day's notified minimum wage.

- Union government passed a law in 2007 (the Maintenance and Welfare of Parents and Senior Citizens Act) to make maintenance of parents/senior citizens by children/relatives obligatory and justiciable through tribunals.

- The Act also provides for revocation of transfer of property by senior citizens in case of negligence by relatives, penal provision for abandonment, etc.

- But this Act has miserably failed to serve its purpose.

- The Ministry of Social Justice, the nodal ministry for the elderly, also has a grand plan called the Integrated Programme for Older Persons, which has been operational since 1992.

- But this is underfunded and languidly administered, the programme managed to reach just 23,095 beneficiaries in 2015-2016.

What measures can be taken?

- A minimum universal monthly pension of Rs. 2,000 for the elderly is quite doable for a $2 trillion economy like India.

- Housing for the aged, particularly the aged poor, must be a priority and be made a subset of the Pradhan Mantri Awas Yojana.

- Assisted living facilities for indigent elderly, particularly those with age-related issues like dementia, needs policy focus.

- Finance ministry can give more tax breaks, or at least removing tax on deposit interest for seniors.

What are the problems with Indian pension industry?

- India spends only 1.45 per cent of its GDP on social protection, among the lowest in Asia, far lower than China, Sri Lanka, Thailand, and even Nepal.

- India has an immature pension industry and a mere 7.4 per cent of the total Indian population is covered under any form of pension plans, which is alarming.

- Almost 85 per cent of Indian labour is still deployed in the informal sector, mostly as daily wage workers.

- It is extremely difficult to cover informal sector employees under a national pension scheme.

- People are also reluctant towards investing any part of their income over a large period of time.

How a micro-pension can address this concerns?

- Micro-pension is a personal retirement savings plan, in which People save a small part of their income individually during their working life that is invested collectively to generate periodical returns.

- When people retire their accumulated capital is paid out in monthly amounts.

- Such a scheme would balance between economic viability and generation of adequate returns for the participants

- Government for its part can offer a degree of financial flexibility to the low-income communities for low or no minimum contribution requirements in order to encourage membership to such micro pension schemes.

- In order to facilitate frequent deposits by the low- income groups, convenient door-to-door deposit collection can be organised by the government.

3.2 Existing Schemes for Old Age Population

- **Pradhan Mantri Vaya Vandana Yojana** –PMVVY is a Pension Scheme for the senior citizens aged 60 years and above.

- Scheme provides an assured return of 8% p.a. payable monthly for 10 years which is payable at the end of each period,as per the frequency chosen by the pensioner at the time of purchase.

- The scheme is exempted from Service Tax/ GST.

- Loan upto 75% of Purchase Price shall be allowed after 3 policy years to meet the liquidity needs.

- Loan interest shall be recovered from the pension instalments and loan to be recovered from claim proceeds.

- There shall be no exclusion on count of suicide and full Purchase Price shall be payable

- **New Pension Scheme (NPS)** - It was aimed for giving people a route to avail a pension after they are retired or as a senior citizen.

- Government employees already enjoy pension, and this new scheme was introduced to enable the people from unorganised sectors to enjoy the benefits of pension.

- A contribution of a certain amount is made every month during the years when an individual is actively working.

- The money can then be withdrawn at a minimum age of 60 years.

- The NPS is slowly gaining popularity and expects huge enrolment from the informal labour segment.

- This scheme is not to be confused with National Pension System (NPS).

- **Rashtriya Vayoshri Yojana -** It is a scheme for providing Physical Aids and Assisted-living Devices for Senior citizens belonging to BPL category.

- The devices will help the Senior Citizens to overcome their age related physical impairment and to lead a dignified and productive life with minimal dependence on care givers or other members of the family.

- This is a Central Sector Scheme, fully funded by the Central Government, The expenditure for implementation of the scheme will be met from the "Senior Citizens' Welfare Fund".

3.3 Annual Status of Education Report

Why in news?

Annual Status of Education Report (ASER), 2017 has been brought out by NGO Pratham.

What is the report on?

- Previous ASERs focused on 6-14 year olds and have reached almost all rural districts to make estimates representative at district, State, and national levels.

- However, ASER 2017 focuses on an older age group i.e. youth who are 14 to 18 years old.

- Also, it was conducted in 28 districts spread across 24 States and generated only district level estimates.

- The survey looks 'Beyond Basics', exploring a wider set of domains beyond foundational reading and arithmetic abilities of youth.

What are the highlights?

- **Enrolment** - In 14-18 age group, around 14% are not currently enrolled in school or college.

- However, this number varies a lot with age, ranging from around 5% at age 14 to around 30% at age 18.

- The low 5% at age 14 is a positive outcome of the compulsory education for 6-14 years under the RTE.

- The enrolment ratios for boys and girls are almost the same at 14 years.

- However, at 18 years 32% of girls are not enrolled, as against 28% for boys.

- There are also discrete differences among States on the number of youth who are not enrolled in appropriate levels of schooling.

- **Knowledge** - 14% of rural youth in the age group of 14-18 failed to identify the map of India.

- A worrying 36% of those surveyed did not know that Delhi is the capital of India.

- 60-80% of them cannot even tell the time correctly.

- About 25% of this age group still cannot read basic texts fluently in their own language.

- 53% of all 14 year-olds in the sample can read English sentences.

- More than half in the age group struggle with simple division (3 digit by 1 digit) problems.

- **Besides,** the report points to a massive digital divide, with poor access to facilities.

- In this again, girls were worse off in terms of access to computers and the Internet.

What does it imply?

- Almost 10% of India's population falls in the 14-18 group.

- Thus the 14% of the **un-enrolled** population in this translates to a total of 125 million young Indians out of formal education system.

- The enrolment scenario highlights **gender discrimination**, with the number of girls falling sharply with age.

- India's predominantly youth population is seen as a **demographic dividend.**

- But the education scenario fall short of capitalising on this factor and deriving an economic dividend.

- As, a large number of Indian youths **lack even basic employability**.

- Successive studies point to progress in raw enrolment of children in school, with **poor achievement on learning outcomes**.

What should be done?

- Policy makers must acknowledge that all expenditure on good education is bound to have a multiplier effect on productivity.

- The right to free and compulsory education must be extended to the 14-18 age group as well, beyond the 6 to 14 at present.

- Guaranteed inclusion will empower those in the 14-18 age group and help them acquire finishing education.

- This is so vital for their participation in the workforce, as India lacks trained manpower to boost its manufacturing capabilities.

- Equipping them with the skills, especially job-oriented vocational capabilities is essential.

- Learning deficits highlight the need for pedagogic tools that synchronise knowledge with lived realities.

- Scaling up access to digital facilities by bringing all children under the umbrella of a school, college or training institution is desirable.

3.4 Trends in Primary Education

What is the issue?

- Primary education has been universalised with more than 95% of the children below 14 in schools, but the quality of schooling is abysmal.

- The recent ASER report of the Union HRD ministry reiterates the same.

What are the trends in primary enrolment?

- While the "Right to Education Act" came into force in 2010, the current trend towards universal elementary education was well in place before that.

- As early as 2005, primary enrolment levels were as high as 90%, according to the Union HRD Ministry's "Annual Status of Education Report" (ASER).

- For the first time in India, we are beginning to see cohorts of children almost all of whom have completed eight years of schooling.

- While over a little over 11 million were enrolled in Class 8 in 2005-06, the number has almost doubled to around 22 million in 2014-15.

- Also, the gender divide seems to have narrowed over the years in the upper primary level, with more girls getting retained in school.

- While in 2006, 10% of 13-year-old girls and 21% of 15-year-old girls were not enrolled in school, the numbers for 2016 stands at 4.2% and 14% respectively.

What shows the poor learning levels?

- For over a decade, the ASER reports have been pointing out that foundational skills like reading and basic arithmetic are worryingly low for kids in school.

- About a quarter of all children in Class 8 struggle with reading simple texts and more than half are still unable to do basic arithmetic operations.

- ASER data also suggests a declining trend over time, which means that successive cohorts are doing worse than their previous counterparts.
- A hint of this decline was also visible in the analyses done on past rounds of the government's National Achievement Survey data.

What lies ahead?

- Every year we will be "graduating" a cohort of close to 25 million young and hopeful boys and girls from elementary school.
- While aspirations run high, learning levels are worryingly insufficient, and are far lower than they should be even based on curricular expectations of Class 8.
- While moves to universalise secondary schooling and expand skilling are underway, we also need to prioritise quality enhancement in the primary level.

3.5 State of Education in Rural India

What is the issue?

Despite the improvements in the educational condition, there are problems that still persist, especially in rural India.

What is the current scenario?

- As late as 2001, only a little over 25% of all rural 18-year-olds were attending schools.
- The rest dropped out earlier.
- By 2016, the share of 18-year-olds in schools and colleges had gone up to 70%.
- Girls have closed the gap with boys in rural areas.
- At age 14, 94% of girls and 95% of boys are enrolled in school.
- By age 18, 68% of girls and 72% of boys are still in school.

What are the downsides?

- The quality of education in rural schools is dismal.
- Among 14-18-year-olds, only 43% could solve a class IV mathematics problem.
- This proportion was roughly the same among 14-year-olds as among 18-year-olds.
- This shows that the problem of low learning outcomes was not resolved by remaining in school.
- Only 40% of 18-year-olds could take 10% off a given number.
- Most could not locate their state on a map of India.
- 27% of 14-year-olds, and 21% of 18-year-olds could not read a class II textbook in the regional language, and more than 40% in each age group could not read a simple sentence in English.

How will this affect the society?

- The belief has gained ground in rural India that education will be the road out their livelihood.
- Most of the students are first-generation learners.
- Soon this younger generation will be graduating from high schools and colleges and then they will find that there are very few good jobs.
- This might kindle reaction against education.

What should be done?

- Raising the quality of education in rural schools is essential.
- Privatizing the government system is not a viable solution.
- The market for education performs poorly in situations where information flows are sparse and competition is limited or non-existent.
- The essential problem is one of a broken governance system.

- There are few rewards for being a good teacher and few punishments for being a careless one.
- A system should be put in place, where teachers are innovative in the classroom and parents are involved as co-decision-makers.

4. HEALTH

4.1 Concerns of Clinical trials

What is the issue?

- Clinical trials are widely used for gathering data from bioequivalence studies.
- In India for such clinical trials volunteers from poor and vulnerable sections of the society are used.

What is a bioequivalence study?

- Bioequivalence is a term used to assess the expected comparison between biological equivalence of two proprietary preparations of a drug.
- Bioequivalence studies, test the metabolism of generics in healthy subjects.
- If two products are said to be bioequivalent it means that they would be expected to be, for all intents and purposes, the same.
- For example if a X company produces a brand name generic drug A1 and Y company produces the same drug it need to prove its bioequivalence with the brand name drug for market standards.
- The target of such study is to evaluate the therapeutic compatibility of tested drugs i.e. pharmaceutical equivalents or pharmaceutical alternatives.
- The importance of bioequivalence studies is increasing due to the large growth of the production and consumption of generic products.

Why are clinical trials used?

- For finding out bioequivalence data volunteer subjects, generally healthy individuals but occasionally in patients are used.
- For testing a drug usually Serum/plasma samples are obtained at regular intervals and assayed for parent drug concentration.
- But these alone neither feasible nor possible to compare the two products of various means of use for instance if drug is to be consumed by inhaling etc.
- Thus testing will be conducted to clinical trials at several different doses to derive expected results.

What are the concerns with clinical trials in India?

- The big problem plaguing clinical research is an over-representation of low-income groups among trial subjects.
- Sometimes Clinical research organisations CROs recruit them selectively, exploiting financial need and medical ignorance.
- Because these subjects are well-paid, and get no therapeutic benefit, their only reward from the trial is financial.
- Such deception is a risk not only to volunteer health but also to society, because it can throw off the trial's results.
- Due to this unethical practises unsafe drugs can make their way into the market and safe drugs can get rejected.
- Selectiveness in recruiting subjects for clinical trials leads to human rights violations and to bad science.

What measures need to be taken?

- One potential solution is a national registry of trial volunteers, which will alert a CRO when someone signs up for two studies simultaneously.
- So that regulators can create a system that anonymises each participant's data.

- Another option is to pay volunteers less, taking away the financial incentive to fudge their participation history.

- Encouraging a wider cross-section of society to participate in research on human subjects will ensure that the burden not fall completely on the vulnerable groups.

- Landmark amendments to the Drugs and Cosmetics Act in 2013 led to better protection of vulnerable groups such as illiterate people, but more regulation is needed to ensure truly ethical research.

4.2 Addressing Healthcare Issues

What is the issue?

- India has a young and growing workforce, which lacks universal access to health care and financial assistance.

- Government need to take measures to address such health care concerns of the citizens.

What are the concerns in Indian health care?

- India ranks 131st in the Human Development Index (HDI) and at 141st rank in global gender gap out of 144 countries in its health and survival index.

- Almost one-third of the Indians do not have access to primary healthcare facilities and about 63 million fall back into poverty due to spending on illnesses.

- Health insurance currently covers only about one-sixth of the population, there is also lack of focus on prevention of diseases.

What are measures taken by the government?

- The National Health Policy was introduced in 2017, to raise the level of public expenditure in the sector from the current 1.5% to 2.5% over three years.

- The policy also aims to provide free primary care and all public hospitals would ensure free drugs, diagnostics and emergency care services.

- Union government is working to set a target of reaching 50 in the HDI in a specified period.

- NITI Aayog is working on an innovative strategy of public-private partnerships in three non-communicable diseases of cardiology, pulmonology and oncology.

- State governments are being encouraged to set up joint ventures with private sector institutions to provide services at certain district hospitals.

What are the further measures needs to be taken?

- Non-communicable diseases, malnutrition and lack of timely and affordable healthcare are the key issues need to be addressed.

- For better healthcare infrastructure land should be identified for specialty hospitals in small towns under the Smart Cities and AMRUT schemes.

- Schemes by public sector insurance companies should be offered to low-income households at varying subsidies to provide assistance for illnesses.

- To address the healthcare workforce gap more teaching hospitals needs to be set up with seats for specialisation at the post-graduation level.

- The government must accord high priority to preventive and curative programmes and ensure universal access to medical facilities in the shortest time.

HDI

- The Human Development Index (HDI) was developed by the United Nations as a metric to assess the social and economic development levels of countries.

- Four principal areas of examination are used to rank countries:

  1. Mean years of schooling.

  2. Expected years of schooling.

  3. Life expectancy at birth.

  4. Gross national income per capita.

- This index makes it possible to follow changes in development levels over time and to compare the development levels of different countries.

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5. GOVERNANCE

5.1 Mediations for Settling Corporate Disputes

What is the issue?

- Insolvency proceeding can be tough due to the imminent financial strain involved.

- An inclusive mediation process would help in democratising insolvency proceedings and also create a space that benefits all parties

What is the current case?

- Recently, Supreme Court used its special powers under Article 142, to mediate a conciliatory discourse in a creditor-debtor dispute.

- The case involved filings by some companies before the National Company Law Tribunal (NCLT) under the Insolvency and Bankruptcy Code (IBC).

- The collective nature of the impact of insolvency, which looks to settle debts of all the creditors, was what mainly drove the conciliatory approach.

- It is to be noted that only financial creditors are allowed to participation in IBC proceeding and non-financial operating creditors are not allowed.

- Operating creditors include workers, employees, buyers and suppliers who've their money at stake with the liquidating company.

- The only protection for them is the clause that their share of compensation can't be lesser than what financial creditors have got.

- This highlights that despite the IBC's streamlined processes, there is enough room for a mediation and can be done during the initial stages.

Why mediation matters?

- Two things are vital to any insolvency proceedings - the smallest acceptable compensatory amount for the creditor and constrains of the debtor.

- **The Concept -** Mediated discussions with creditors can help put together a resolution plan that is the least resistive for everybody's interests.

- Notably, there are several enactments that safeguard interests of special constituencies of operational creditors that the debtor has to address —

    o Housing allottees under - Real Estate Act, 2016

    o Workers and employees under - Employees Provident Fund Act, 1952

    o Startups, Micro and Small Industries under - MSME Act, 2006

- While the formal process of insolvency resolution disregards these special interests, mediation creates the space for discussing these legal obligations.

- Another aspect where mediation is important, is in dealing with receipts from debtors of the company (those who've borrowed from the insolvent company).

- Hence, in the ultimate resolution plan, mediated settlements are also more effective in terms of compliance, since the resolution is consensual.

- **Structural Advantages -** As trained neutral peace brokers are involved, the responsibility of structuring discussions is eased on the contesting parties.

- Also, in direct bilateral negotiation, parties are reluctant to share information and their interests, for fear of being exploited.

- Hence, those discussions are limited to their demands and expectations on how an issue should be resolved.

- Significantly, skilled mediators can potentially take advantage of dissimilar interests and needs amongst groups of creditors to tailor a suitable settlement.

What is the way ahead?

- The IBC gives extensive powers to the committee of creditors in the insolvency resolution process, including veto against resolution plans.

- Mediation should therefore be under the initiative of the committee of creditors and the insolvency resolution professional.

- Notably, mediation can be a time bound process, which fits into the strict timelines for insolvency resolution under the Code.

5.2 Big Data for Better Governance

What is the issue?

- Collaborative federalism with focus on balanced regional development is a prime objective of the Niti Aayog.
- Effective use of big data analytics is called for, for making this developmental objective more meaningful.

What is the need?

- There is a notable information asymmetry at various administrative levels.
- This is evidently hampering the targeting of various government measures and keeps the outcomes largely undermined.
- There are entities that have outlived their utility and others that use outdated systems and processes.
- This has to be eliminated and existing legacy systems need to be analysed with clear data points.
- The UN, by a resolution on official statistics, expects India to produce quality statistics.
- The purpose is to shed enough light on the true picture of material and human resources and the needs and demands of the societies.

What should be done?

- **Data** - Statistics must be offered as a public good for the government, enterprises and the general public.
- The big data analytic centres do have micro data, geo-coded, along with tools for extraction of relevant information.
- There has to be a quantitative analysis on all these.
- There is also the need for devising a formula for aggregation of data to enforce a code of practice.
- **Area of focus** - Health, education and demography are the significant and demanding areas in this regard.
- Web-based reporting for timely collection, collation and dissemination should be taken up.
- Segregating the data under different socio-economic heads would facilitate making appropriate response for concerns in each of them.
- **Localisation** - Data at the district level would enable understanding the true picture at the ground level.
- The impact of developmental schemes gets captured at the smallest administrative level.
- This would be supportive for better implementation of policy initiatves and making course corrections.
- **Organisation** - Establishing such a massive data pipeline is indeed highly challenging.
- It should thus be ensured that data once captured are handled in an organised fashion.
- These are essential for making the developmental initiatives meaningful.

6. INDIA AND ITS NEIGHBOURHOOD

6.1 Meeting of NSAs - India and Pakistan

Why in news?

National Security Advisers (NSAs) meeting between of India and Pakistan was recently held in Bangkok.

What are the ongoing tensions between India and Pakistan?

- Ceasefire violations on the Line of Control (LoC) spiked sharply more than 825 incidents in 2017, compared to 228 in 2016. Pakistan arrested retired naval officer Kulbhushan Jadhav alleging that he was an R&AW agent in Baluchistan and denied consular access.
- After India went to the International Court of Justice, the death penalty awarded to him by a Pak military court was kept in abeyance.
- Public pronouncements by ministers and officials about Pakistan have been aggressive in recent days fuelling the turmoil.
- People-to-people engagement between the two countries has been limited, except for some medical cases of Pakistani nationals.

- The tensions in the Middle East and the role of Saudi Arabia in Pakistani domestic politics further complicates the situation.
- Apart from this Pakistan's hostile relations with Afghanistan, and its parliamentary elections this year also makes bilateral Initiatives with India more complex.

What are the implications of the recent talks?

- It ended without any decisive conclusions.
- India demanded a Director General of Military Operations (DGMO) level talk.
- DGMOs of the two nations last met in December 2013, after a gap of 14 years.
- But Pak army has refused to offer such talks, probably fearing that it would be perceived as a sign of weakness.
- It is also yet to declare its causalities in LoC tensions.

What are the other channels of negotiations?

- India-Pakistan armies usually engage through weekly telephone calls between the two Military Operations (MO) directorates.
- A Brigadier from the Indian MO directorate and a Colonel from the Pakistani MO directorate usually talk on Tuesday mornings.
- The two DGMOs would also talk by telephone, if there is an urgent requirement.
- The two sides have used the emergency hotline mechanism in recent months to complain about particular incidents on the LoC.
- Apart from armies the DGs of Border security forces of both nations meet annually alternately in the two countries. '
- Track-2 engagement, mainly involving retired diplomats, military officials and commentators, mostly takes place in third countries.
- But these meetings have limited value and scope, unless blessed by the respective governments.

6.2 Multiplicity of Challenges in Myanmar

What is the issue?

Besides the infamous Rohingya crisis, Myanmar also saw multiple challenges on the fronts like press freedom and the "Panglong peace process" in 2017.

What are the events that defined Myanmar of 2017?

- Both the civilian government and the military establishment of Myanmar (which is politically powerful), had a rough 2017.
- The issues of - Threats to press freedom, Rohingya refugee crisis, and peace process with the country's armed ethnic groups got international attention.
- The civilian government of Ms.Suu Kyi's NLD, attracted severe criticism for its failure to act on these issues more effectively.
- **Press Freedom -** At least 11 journalists of (both Myanmarese and foreigners) have been arrested in the past year on trivial charges.
- Notably, two Reuters reporters were arrested on the charges under the colonial-era "Official Secrets Act" for 'illegally acquiring information'.
- It is speculated that they were collecting documents regarding the conduct of security forces in Rakhine state, the duo could possibly get long prison terms.
- **Rohingya Crisis -** The UN has called the militaristic crackdown in Rakhine as "ethnic cleansing", and media has been blacked out in the region.
- Up until now, the gruesome horrors unleashed by the security forces are primarily coming from the Rohingya refugees who have fled to Bangladesh.
- But despite serious international condemnation, Myanmar has denied any wrongdoing and claims that its offensives are only targeted against ARSA (Rohingyan rebel militia), which is officially a terrorist outfit in Myanmar.

How is the 'Panglong Peace Conference' progressing?

- Besides the Rohingyas, there are multiple armed ethnic rebels in Myanmar and Ms. Suu Kyi has been prioritising peace with them.
- Consequently, the 2nd session of "Panglong Peace Conference" was convened in May 2017, to discuss on a 41 point agenda.
- **Positives -** This brought together the government, military and ethnic rebel leaders and agreement was reached on 37 issues.
- The rebel groups agreed to recognize a democracy union with federalist polity that gives considerable rights for ethnic self-determination.
- On its part, the government agreed to treat all ethnicities equally and privileged the provinces to write their own sub-constitutions within Myanmar.
- **Challenges -** However, the calls for dissolution of rebel armies to pave the way for the constitution of a single national army haven't been agreed.
- Contrarily, the rebels vouch for a federal army to enable them retain independent command structures.
- Also, there have been some hiccups with the technicality of whether to specifically iterate the clause for "non-secession" in the peace accord.
- Also, another major concern is that out of the more than 20 armed groups, only 8 have signed the current "Nationwide Ceasefire Agreement" thus far.
- While the 3rd round of the Panglong Conference has been scheduled for late January, the future looks uncertain.

6.3 India and Maldives - Recent Developments

What is the issue?

- Maldives Foreign Minister and its President's special envoy to India, Mohamed Asim visited India.
- The visit gains significance amidst the recently strained relationship between India and Maldives.

What was the recent tussle?

- Maldives recently signed its **Free Trade Agreement with China**.
- This is Maldives's first FTA with any country and China's second FTA with any country in South Asia after Pakistan.
- The trade pact would open Maldives to Chinese goods and tourists in unprecedented numbers.
- India was certainly concerned with this, due to the possible increased Chinese military presence in the island nation.
- The Maldivian President had earlier promised that Maldives would be an integral link in China's Belt and Road Initiative
- Besides, the Maldives government recently **suspended three members of a local body.**
- This was notably on charges of meeting the Indian Ambassador without seeking prior approval.
- However, responding to these, India articulated its hope that as a friendly neighbour, Maldives would be sensitive to India's concerns in keeping with its "India first policy".

What are the outcomes of the visit?

- The visit was aimed at overcoming the "trust deficit" between the two countries and reset the strained relations.
- Maldives foreign minister reiterated Maldives' **"India first" policy**.
- The emphasis is an attempt to allay India's concerns over Maldives' growing proximity towards Beijing.
- It was conveyed that Maldives would stay **sensitive to India's concerns** over peace and security in the Indian Ocean region.
- The talks also involved strengthening the bilateral relationship keeping in mind its 'India first' policy and our 'Neighbourhood first' policy.

What are the implications?

- The visit by a foreign minister may have cleared some of the bitterness between the two countries.
- However, India can certainly not continue to take its predominant power in South Asia for granted.
- It cannot be indifferent to the developments in the smaller neighbours, as they have wider geopolitical ramifications.
- Both countries have to learn to deal with each others proximity and acknowledge that there are no alternative but to make amends in ties.

7. BILATERAL RELATIONS

7.1 Israel - India Bilateral Relations

Why in news?

- Israeli PM Benjamin Netanyahu's concluded his visit recently.
- This marks the full normalisation of bilateral ties between India and Israel.

How has the ties been historically?

- After much reluctance due to the internal and external pressure, India officially recognized Israel only in 1950 (3 years after its creation).
- From 1950 to the early 1990s, the relationship remained informal in nature, with no scope for collaboration and engagement.
- Also, India's Non-Aligned Foreign policy outlook proved to be a major impediment as the NAM took a consistent pro–Palestine stand.
- Official diplomatic ties were established only in 1992, and a decade later, in 2003 India hosted Israeli PM "Ariel Sharon" in a first of its kind bilateral.
- Lately, President Pranab Mukherjee visited Israel in 2015, which was followed by PM Modi's visit in 2017 and current 6 day visit of Mr. Netanyahu.

What were the contours of the visit?

- The joint statement made to the press drew on a futuristic 25-year timeline to realise the full potential of Indo-Israel strategic partnership.
- Mr. Netanyahu visited the Taj Mahal, and Chabad House, which was one of the sites of the 26/11 terror attacks where many Israeli citizens were killed.
- On business, it was noted that "size and scale" of India and the "sharpness and edge" of Israel has immense potential for collaboration in industry.
- Also, the joint statement reaffirmed commitment for early resumption of peace talks between Israelis and Palestinians.
- This is indicative of India's preparedness to have more open and honest conversations on the peace process.

How does the future look?

- Mr. Modi is expected to visit Palestine shortly.
- Also, Jordan's King Abdullah II, who is recognised in the Arab world as the official custodian of the holy sites in Jerusalem is scheduled to visit Delhi soon.
- India's willingness to further the peace process should also be seen in the backdrop of its recent vote against Israel in the Jerusalem resolution.
- Importantly, any real success in this domain will require challenging the Israeli political belief in hard power and its "survival of the fittest" philosophy.
- While Mr. Netanyahu openly asserted in Delhi that one makes peace and aligns with the strong, India needs to show that building friendships beyond mere strategic calculation is vital.

7.2 US India Proposal on Defence Ties

Why in news?

US has proposed to have reciprocal military liaison officers at India- US combatant commands.

What is the proposed plan about?

- The US, currently, has arrangements for military liaison officers with some of its NATO allies and close defence partners.
- Which includes Australia, Canada, Japan, Republic of Korea, Philippines, New Zealand and Great Britain.
- In the same lines US has proposed to have ties with India,this will place India in the orbit of America's closest allies.
- According this plan liaison officers will be commissioned by Pacific Command of the US defence forces in Indian military headquarters.

What is the significance of this proposal?

- India-US signed the foundational military agreement, Logistics Exchange Memorandum of Agreement (LEMOA) in 2016.
- Earlier US administration designated India a Major Defence Partner, current administration is also taking the same stand.
- As a component of taking bilateral strategic relationship, to a new level US promised to take the element of military cooperation between the two countries.
- To deal with an assertive Chinese transgressions into Indian Territory, US ties would help India for geo-political manoeuvre to secure its interests.

What is the stand of India over this proposal?

- India is not averse to a strong partnership with any country, it remains rightly opposed to any military alliance which could impinge on its strategic flexibility.
- Present US administration's unpredictable pronouncements have adversely affected perceptions of America's reliability as a partner and makes Indian government more cautious.
- India is yet to see any benefits of being designated a Major Defence Partner, with no transfer of American defence technology for making major military platforms in India actually taking place.
- India also seeks greater clarity over the role and charter of liaison officers to understand the value and quality of information that will be shared between the two militaries.
- Due to some hard experiences from the US, India seeks greater economic concessions from US rather considering any military arrangements in first place.

7.3 New US legislation on H1B visa

Why in news?

The Immigration Innovation (I-Squared) Act-2018 was introduced recently in the US Senate.

What is the Act about?

- The H1B is a common work visa granted to high-skilled foreigners to work at companies in the US.
- Its validity is three years and can be renewed for three more years.
- The present Act seeks to increase the annual H1B visa quota.

What are the key provisions?

- The Act advocates **increasing the number of base H1B visas** from 65,000 to 85,000 a year.
- This is to encourage the migration of talented engineers to the United States.
- It also puts forth the creation of a plan that allows the issuance of these visas based on market demand.
- The new Bill seeks to **prevent the H1B visa programme from being used for outsourcing jobs or undercutting American wages**.
- It allows the US government to raise as much as $ 1 billion from increased visa fees.
- This is to fund science, technology, engineering, and mathematics (STEM) education as well as train workers in the country.
- The act provides work authorisation for spouses and dependent children of H-1B visa holders.
- It also establishes a grace period during which H-1B visa holders can change jobs without losing legal status.

What would the impact be?

- The top American IT companies would have the world's best and brightest to fill jobs in highly technical, specialised fields.

- Notably there is a shortage of American labour in this front.

- Logically, the major beneficiaries of this would be companies like Google, Microsoft, Facebook, etc.

- On the other hand, if the Bill was approved, it could be a big setback for Indian IT services companies.

- This is in the context of higher salary norm and the threat of increased brain drain.

- The minimum salary would be increased to $100,000 and so top companies can attract talent.

- However, due to a higher minimum salary, the number of people going to the US from other smaller Indian firms would come down.

- Notably, many IT firms have once been the biggest beneficiaries of the H1B visa regime.

- But with stricter norms, dependency on such visas has consistently been reduced and local hiring in the US increased.

- In all, the measure would mean a trend away from offshoring and outsourcing to India.

How does the future look?

- India's National Association of Software and Services Companies (Nasscom) has advocated a more liberal visa regime.

- The demand is to allow better labour movement from India to overcome the shortage of over one million engineers in the US.

- The fact is that US technology companies need IT talent but the US politics is so divided.

- The so-called I-Squared Act have been introduced in earlier sessions too; but unsuccessfully.

- However, with Trump's protectionist and anti-immigration focus, it is to be seen whether the Bill would be passed.

7.4 Need for Speeding RCEP Negotiations

What is the issue?

- India has raised several issues which are proving a stumbling block for RCEP negotiations to move ahead.

- But in the backdrop of progress made in the reviving TPP, there is a need for urgency, as opportunities could be lost.

What is "Regional Comprehensive Economic Partnership (RCEP)"?

- **East Asia Summit (EAS) -** was established in 2005 with 16 countries.

- Its primary objective of creating an "Asian Economic Community (AEC)".

- Its founding members were the 10 countries of the ASEAN block and - Japan, South Korea, China, India, Australia, and New Zealand.

- EAS has since expanded with the joining of "Russia and USA" as members in 2011 and has also significantly broadened its working agenda.

- **RCEP -** ASEAN has "Free Trade Agreements (FTA)" individually with other founding members of EAS, but there is no comprehensive deal.

- Hence, for furthering the cause, RCEP was envisioned between the 16 founding members of the EAS.

- In 2012, the ASEAN and its six FTA partners launched negotiations for establishing RCEP as a means to achieve deeper economic integration.

- The RCEP was expected to be finalised, first in 2015 and then in 2017, but after 20 rounds, the negotiations are yet to be concluded.

- **Reasons for Delay -** India's resistance to offer tariff concessions to the extent desired by other members is touted to be the main bottleneck.

- India has also been conservative about the time schedule for progressive tariff relaxation and has been proposing differential tariffs for different countires.

- Recently, India has shown willingness to drop some of its reservations in exchange for concessions in the form of certain services liberalisation.
- But this will only further slowdown negotiations as even at the intra-ASEAN level, trade liberalisation in services is limited to traditional sectors.
- Notably, only sectors like "transport, tourism and, to some extent, the financial services" are liberated across ASEAN.

What are the external compulsions?

- Trans Pacific Partnership (TPP), lost considerable significance after the US pull out in early 2017.
- But recently, "Comprehensive and Progressive Agreement for TPP (CPTPP)" was successfully initiated (without USA), which has revived TPP negotiations.
- CPTPP membership is a subset of the "Asia-Pacific Economic Cooperation (APEC)", of which India is not a member but some ASEAN members are.
- Notably, India's application to join APEC is pending for long and future accession will also be hard as it requires the consensus of all members.
- In this backdrop, India needs to speed up RCEP negotiations for its own good as ASEAN members might otherwise prioritise CPTPP over RCEP.

What is the present state of ASEAN India trade?

- An FTA agreement in 2010 formalised business ties, but trade has increased from $45 billion to just about $71 in 8 years.
- Notably, ASEAN's share in India's total trade has been a constant 10-11% and while Indian exports have only marginally increase.
- Conversly, India's share in ASEAN's total trade is less than 3%.
- Also, the composition of the trade showed little increase in manufactured goods, with Palm oil import and meat product export dominating.
- Enhancing trade with Asean (increasing exports in particular), can happen only if India enhances its value chain integration with ASEAN.
- As RCEP has immense potential to facilitate this integration process, the current stalemate needs to be resolved on a priority basis.

What is the way forward?

- If India continues to remain inflexible in the negotiation process, other countries may choose to bring in more difficult provisions in the RCEP.
- Thrust for services liberalisation may open up demands for e-commerce and stricter intellectual property provisions, which will make India uncomfortable.
- Also, considering that ASEAN countries have the option of joining both RCEP and CPTPP, there is the inherent risk of de-prioritising Indian concerns.
- This beholds the risks of India losing opportunities for trade integration at both, the global and regional level.
- To overcome these challenges, India policymakers must show more flexibility and Indian industry has to be willing to face competition.

7.5 India-ASEAN Commemorative Summit - Delhi Declaration

Why in news?

- India-ASEAN Commemorative Summit was held recently, marking 25 years of India-ASEAN ties.
- The 'Delhi Declaration' was released after the summit.

What are the key mentions?

- **MARITIME** - ASEAN-India **cooperation in the maritime domain** was one of the key focus areas.
- Growth and development for the **Indo-Pacific region** was the prime objective behind this agenda.

- Shared vision for peace and prosperity through a **rules-based order for the oceans and seas** was emphasized.
- Respect for international law, notably **UNCLOS** (United Nations Convention on the Law of the Sea) was stressed as critical.
- The reference to **freedom of navigation** and UNCLOS came in the backdrop of China's position on the disputed South China Sea.
- Humanitarian and disaster relief, and security cooperation were also agreed as areas of cooperation.
- Support for the implementation of Declaration on the Conduct of the Parties in the **South China Sea** (DOC) was expressed.
- **TERRORISM** - Close cooperation among countries for combating terrorism, especially **cross border movement** of terrorists found mention.
- **ECONOMY** - The declaration called upon the states to intensify efforts towards finalising the Regional Comprehensive Economic Partnership.
- India proposed a framework to ASEAN for cooperation in the **blue economy** sector.
- It offered to set up **digital villages** in Cambodia, Laos, Myanmar and Vietnam.
- This would be by utilising the $1 billion line of credit for connectivity.
- **Besides**, 2019 will be marked as the **year of India-ASEAN tourism** by both the sides.

Why is India-ASEAN partnership so essential?

- **Economic** - The demand for goods in Western economies is coming down.
- Also, there could be alterations in employment structures and even loss of jobs in the coming future.
- Digital technologies and the impending Fourth Industrial Revolution could largely drive these changes.
- These call for the south-east Asian region to look deeper within, to develop markets and increase trade for mutual benefits.
- **China** - Maritime rivalry with China is another challenge which calls for India to develop a strong regional cooperation.
- It includes its territorial claim on the resource-rich South China Sea, OBOR initiative and power struggle in the Indian Ocean.
- **Terrorism** - ASEAN countries have, in the past few years, been victims of terrorist attacks; Indonesia and Thailand in particular.
- The mention of cross-border terrorism also assumes significance with India's concerns in regards with Pakistan.
- Other non-traditional challenges such as human trafficking, cybercrime and piracy also demands regional cooperation.
- **Besides** these, India's cultural and trade ties with Southeast Asia go back 2,000 years.
- India and ASEAN also have a unique opportunity to reap the potential of geographic proximity.
- The presence of the **Indian diaspora** in almost all ASEAN nations is another factor requiring partnerships.
- Given all these, India-ASEAN partnership is more an economic and strategic necessity than a choice.

What is the way forward?

- Several commitments to trade and maritime security made in earlier summits remain unfulfilled.
- Some of them are:
    i. Regional Comprehensive Economic Partnership
    ii. connectivity between ASEAN countries and India
    iii. India's connectivity through its Northeast to Myanmar and beyond
    iv. extension of the India-Myanmar-Thailand Trilateral Highway
    v. Kaladan multimodal highway
    vi. Tamu-Kalay rail link to Myanmar

- Speeding up efforts on these fronts is essential to make 'Act East Policy' meaningful.
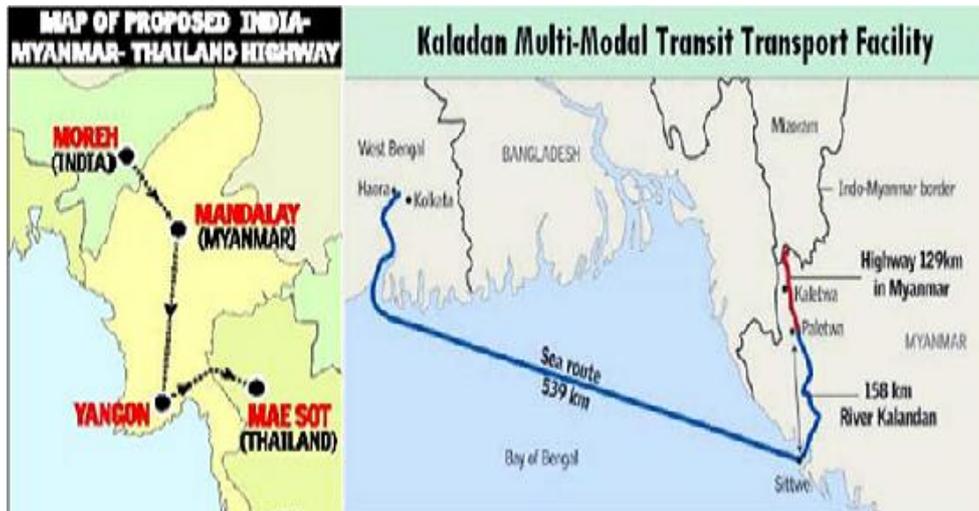
7.6 Indo-EU Ties: A Shared Future

What is the issue?

- 2018 has started with a growth uptick in the Euro-zone and the lowest unemployment rates for the decade.

- This is a positive for India as EU has been a major business and trading partner to India for long.

What is the significance of 2018?

- The Franco-German motor has been instrumental in accelerating the EU forward since the times of the Elysée Treaty of 1963 (friendship treaty).

- Currently, there is considerable optimism as both with Ms. Merkel in Germany and Mr. Macron in France, have strong pro-EU views.

- They've have expressed renewed ambitions for Europe to adapt it to today's challenges in a rapidly-evolving world like "climate change and terrorism".

- Much has been done over the last few years to consolidate the Euro-zone, protect our borders, fight against terrorism and build European defences.

How has Indo-EU bonhomie been?

- While there are multiple global challenges shared across the world, India and Europe share a lot more basic principles and values in common.

- **Shared Ideals -** Both believe in multilateralism, cooperation and a rules-based international order rather than the unilateral use of force and coercion.

- Both believe democracy, human rights and the rule of law to be the best means to secure freedom and prosperity for our peoples.

- This lays the ground for a natural partnership and thereby the Indo-EU relationship is as old as the EU itself.

- **Current Partnerships -** Today, the EU is India's largest trading partner and investor, and will remain so even after Brexit.

- European companies are actively involved in India in creating jobs, sharing technical know-how, and promoting research and innovation here.

- Reciprocally, highly-qualified Indian workers have been contributing to the European economy for decades.

- Notably, Indian investment flows towards Europe is also strong and EU remains open to Indian talent and enterprise even during disruptive times.

- Together, we are formulating innovative solutions for the 21st century in the fields of smart cities, renewable energy and clean transportation.

- **Strategic Significance -** While there is lesser visibility for this, there is a very important growing EU-India security partnership.

- For France and Germany, India has been a trusted security partner for many years, which is steadily building into a greater partnership with EU as a whole.
- Regular exchanges of views are already taking place between Indian and European officials on a large number of foreign policy and security issues.
- This further build into a concrete cooperation in areas such as counter-terrorism, and cyber-security.

8. INTERNATIONAL ISSUES

8.1 US Threat to Pakistan

Why in news?

The U.S. President has recently made an announcement, threatening to stop financial assistance to Pakistan.

What is US's stance?

- The US has accused Pakistan of providing safe havens to the terrorists that US is striving to root out in Afghanistan.
- There was significant scaling down of U.S assistance to Pakistan in the later years of the Obama administration.
- The U.S has also made disbursement of Pentagon's Coalition Support Funds (CSF) more stringent.
- CSF is the reimbursement to Pakistan for logistical and operational support of U.S-led military operations.
- A decision by the Trump administration on CSF for 2017 is pending.
- Notably, US was insisting Pakistan to hand over a Haqqani Network operative who kidnapped an American-Canadian couple and held them hostage.
- It was also "contemplating withholding" aid if Pakistan's response to the demand was not satisfactory.
- Besides shutting down terror havens, the US wants Pakistan to use its influence on those terror organisations in negotiations with the Afghan government to hold peaceful elections.

What are the implications?

- **Pakistan** - Pakistan has maintained that it would officially respond to Trump's allegations.
- With Pakistan already caught up in a civil-military crisis in recent months, Trump's move has caused new disruptions.
- The real catastrophe in Pakistan is the cynical use of Islamist extremism by the security establishment to hold democracy hostage.
- Until this changes, there is scant hope Pakistan will take control of terrorism.
- **China** - It is possible that Pakistan will reach out to China to alleviate the potential economic hardship due to US's decision.
- Notably, China holds that Pakistan had made enormous efforts and sacrificed for the fight against terrorism.
- It defended Pakistan, saying the world community should acknowledge Pak's "outstanding contribution" to counter terrorism.
- China has reasserted Pakistan as its all-weather partner and expressed its readiness to promote and deepen all-round cooperation.
- Notably, China is currently investing heavily in Pakistan as part of China Pakistan Economic Corridor (CPEC).
- Roping in Afghanistan, Beijing announced plans to extend the CPEC to Afghanistan as well.
- But, Afghanistan accuses Pakistan of sheltering Taliban militants.
- However, China is seeking to mediate between the two neighbours through the trilateral mechanism.

8.2 Suspension of Security Assistance to Pakistan

Why in news?

U.S. recently said that it will be suspending most of its security assistance to Pakistan until it "takes decisive action" against terror groups.

What is significance?

- The total amount in question could exceed $1 billion dollars.

- The decision will delay, and perhaps eventually deny, pending payments to Islamabad.

- This includes both payments under the State Department's Foreign Military Financing and under the Coalition Support Fund, which involves reimbursement for Pakistan's logistical support in the Afghanistan war.

- However, civilian assistance programmes are not included.

- $255 million of foreign military financing (FMF) has already been withheld for a few months.

Can this be a true leverage?

- Some believe that it can only be a minimal coercive leverage

- This is because

  o The US continues to rely on Pakistan for the ground and air supply routes to Afghanistan, and

  o Any financial harm that the US inflicts on Pakistan will be cushioned by CPEC.

- But it is to be noted that the security aid is not the only leverage the US has.

- US also has is its influential role in international financial institutions like the International Monetary Fund (IMF) and the World Bank.

- The Pakistani army is prone to seeking bailout packages from the IMF.

- Widening trade deficit, high public debt and low foreign exchange reserves may also push Pakistani government in this year towards these institutions.

- The US also has tools like visa denial and freezing of assets of senior officers in the Pakistan army and the Inter-Services Intelligence (ISI) involved with terrorist outfits.

- In the past, the fear of sanctions by the inter-governmental Financial Action Task Force (FATF) has forced Pakistan to ban fund-raising by organizations proscribed by the UN.

- A concerted set of moves under a tighter, overarching sanctions regime might asphyxiate Pakistan's illicit activities.

- As far as Cpec is concerned, it is yet to be seen whether it will kick-start the virtuous cycle of high investment and greater productivity or push Pakistan into a debt trap.

8.3 Fiscal Shutdown in the U.S

What is the issue?

- Democrats have successfully obstructed the "spending Bill" in the US senate.

- This was done to force the Trump administration to protect undocumented child immigration from deportation.

What is the status of the current spending bill?

- USA's "Spending Bill" is an agglomerated "Appropriation Bill" for drawing money for various budgetary allocations.

- Unlike in parliamentary democracies, the failure of an Appropriation Bill doesn't lead to the fall of the government in presidential systems such as US.

- To become a law, any bill in the US will have to pass through both houses of the Congress namely – "Senate" and the "House of Representatives" and then get the assent of the president.

- While the current Spending Bill sailed through the Congress with a 230-197 vote, it was blocked in the senate due to Democrat Senators.

- Notably, congress has been struggling since October to pass this spending Bill, which is being held hostage due to the child immigration issue.

How does the U.S. senate work?

- The US senate has 100 seats and any bill needs a majority (which is 50% + 1) of the total votes casted to get passed.

- The "Republican Party" (Trump's party) currently holds 51 seats in the senate, while the "Democrat Party" holds 47 and 2 is held by independents.
- But unlike in India, there is no anti-defection law in the US and also as long as senators are engaged in debates, the bill can't be put to vote.
- Since Senate has only a limited number of working days, many a times some senators have resorted to obstructionist debates to block bills.
- This practice of blocking bills is called "fillibustery" and to break this jinx a guillotine motion was commissioned.
- To guillotine a debate, a three-fifth majority of those present and voting is needed, which accounts to 60 if the house votes in full attendance.
- If guillotine doesn't succeed, then a bill eventually lapses with the Senate session, which is what happened to the current spending bill.

What are the implications?

- The government was till recently being funded by temporary arrangements since the new fiscal year began in October.
- The current stalemate means that the government will now face a complete shutdown due to lack of funds, which has happened only thrice since 1995.
- This means most "non-essential" federal workers will be put on leave, and only those dealing with public safety and national security, would continue work.
- Nearly 1 million people would not receive regular pay checks, and businesses involved with the government would also stand to lose revenue.
- Also, due to reduced taxes, the exchequer stands to lose $6.5bn a week, and also potentially devastating ramifications for the national economy looms.
- Despite this pressing situation, Mr. Trump seems to be continuing his aggressive posture against the Democrats on the immigration issue.

8.4 Anti-Government Protests in Iran

What is the issue?

- Iran is witnessing large scale anti-government protests.
- Being a significant regional power, the unrest is making vibes in larger international relations.

What are the recent developments?

- The protests began in Mashhad, Iranian city.
- They were initially focussed on deteriorating economic situation, official corruption and lack of social freedoms.
- However, it gradually turned into political rallies and expanded to several cities.
- Notably many were killed and hundreds of people have been arrested.
- On the other hand, tens of thousands of people took part in counter-demonstrations backing the clerically overseen government.
- Notably, President Hassan Rouhani acknowledged the public's anger over the deteriorating economy.
- However, he strongly condemned the resort to violence and showed tough resistance through the security forces.

What was the US role in Iran?

- Then US President Obama, to counter the Bashar al-Assad regime in Syria, encouraged Gulf rulers to fund the Sunni groups in Syria.
- This had only worsened the chaos and ultimately led to the emergence of the more dangerous ISIS.
- Subsequently, the US believed in Iran as a force with the will and ability to counter this radical Islamist force, though Iran was not its traditional ally.
- It thus committed air assets and some military advisers to Iran.
- The 2015 Iran-P5 nuclear deal was also an attempt to empower Iran.
- The deal eventually emboldened Iran to gather Shia allies extending west from Iran to the Mediterranean.

- Eventually, Russia joined as well, to grab an opportunity to regain influence in West Asia.

What did these lead to?

- The US backing of Iran, certainly strained the relations with its traditional allies Saudi Arabia and the Gulf Cooperation Council (GCC).

- Iranian ascendancy has also made Israel nervous, as it perceives an existential threat from Iranian ally Hezbollah in Lebanon.

- Obama was thus keeping many banking sanctions operational to balance these concerns.

- This was on the pretext that they are related to Iran's support to terrorist groups like Hezbollah.

- President Rouhani managed the internal consensus for the nuclear deal by convincing that foreign investment and technology would flow.

- Unfortunately, that never happened, as the residual US sanctions still scared investors and the cash-rich GCC members.

> **Mashhad**
>
> - Mashhad is also the second-largest city of Iran.
>
> - It is considerably the holiest, the resting place of Imam Reza, the only one of the 10 Imams of Shias buried in Iran.
>
> - The 12 Imams are the spiritual and political successors to the Islamic prophet Muhammad in the Shia belief.

What are the international implications of the recent protest?

- **US** - Since becoming the US President, Trump had been critical of the Iran nuclear deal.

- He had recently declined to certify that Iran was complying with the nuclear deal.

- The President and Vice-President of the United States, in their tweets, have recently incited Iranians to engage in disruptive acts.

- Iran has thus charged US of crossing limits in international relations by supporting anti-government protesters.

- Top officials within Iran are also attributing the protests to foreign money, intelligence and foreign forces.

- **Russia** - Russia has urged the United States to not interfere in what it calls Iran's "domestic affairs".

- Russia also firmly expressed that the Iran nuclear deal was not to be corrected and be continued.

- The recent protest, in all, is reflective of the earlier Arab Spring for rooting out the governments in many West Asian countries.

- It is also brewing as a potential focal point for world countries for alliances and counter-alliances.

8.5 Dialogue between the Koreas

Why in news?

Despite multiple challenges, resumption of dialogue between the North and South Korea has reignited hopes of a possible ease in tensions.

What drove the talks?

- North Korea's latest ballistic missile launches and nuclear explosions have raised global alarm over the region's safety for travel and tourism.

- South Korea wants to reduce tensions immediately, to ensure the safe conduct of the approaching winter Olympic Games that it is hosting next month.

- Hence, Seoul sees the confirmation of North Korean participation in the games and parallel peace talks as vital for the successful conduct of the games.

- Simultaneously, North eyes an opportunity to get de-facto recognition as a nuclear state, which is a vantage point for negotiating for lifting sanctions.

- Hence, talks between Seoul and Pyongyang has resumed after two years.

What were some significant compromises?

- South Korean President Mr.Moon, has been a staunch advocate of a negotiated resolution of the North Korean nuclear stand-off.

- On that note, the U.S. and South Korea had agreed for delaying their joint military exercises in exchange for a freeze in North Korea's nuclear program.
- Notably, the joint military exercise was an irritant for both Pyongyang and Beijing, as both saw them as interference in their backyard.
- China even imposed an unofficial blockade on South Korean trade and tourism for a while after the installation of US's THAAD missiles in its territory.
- While denuclearisation on the Peninsula is still far off, as talks have resumed after two years, it has created considerable hope.

8.6 Missile Panic in Hawaii

What is the issue?

- Hawaii has re-introduced Cold War-era sirens and also has text and email warning systems for ensuring the safety of its residents.
- But recently, Hawaii residents received a text message, which falsely stated a ballistic missile threat and asked them to seek shelter immediately.
- This erratic mistake could prove costly and requires scrutiny.

What just happened?

- The text declaring emergency was apparently sent by mistake by an employee at Hawaii's "Emergency Management Agency".
- While the incorrect alert was corrected by email 18 minutes later, for the next 38 minutes, there was no follow-up phone text correction.
- Notably, Hawaii is only 4,661 miles from North Korea, which is well within the 6,000 miles range of the Korea's Hwasong 14 missile.
- While after trigger, the missile will take 20 minutes to reach Hawaii, the pacific command would take 5 minutes to react.
- This effectively leaves residents with just 15 minutes to seek shelter and hence the emergency call caused immense panic.
- Also, as many felt that it was the end of their lives, they tried calling their loved ones, and telephone services too got jammed briefly.
- Most rushed to basement shelters but some decided they'd rather die looking at Hawaii's famed sea beaches.

What was the official response?

- **Government -** Across ranks, government officials apologised for the mess-up and even a federal investigation was commissioned.
- Officials have also started working on a 'cancellation template' for sending corrections faster to mobile phones.
- Notably, Since the Japanese attack on Pearl Harbour during the WW-II, Hawaii feels impending attacks sharply.
- **Nuclear experts** – They've stressed that a mistaken message could possibly start an unintended nuclear war.
- This is because the enemy could perceive that the fuss is a cover-up for an offensive strike and hence triggers his "first-strike stability" for deterrence.
- They've hence called for a strong calculated review of the current mess up.

8.7 Unrest in Tunisia

What is the issue?

At a time when Tunisia must be cherishing the 7th anniversary of the "Jasmine Revolution", the country has crept back to turmoil.

What is Tunisia's story?

- Tunisia is a small country in northern Africa, along the southern Mediterranean coast.

- The country saw intense civil unrest in 2011, which lead to the ousting of the 23 year old authoritarian regime of president "Zine El Abidine Ben Ali".

- The demonstrations were caused by high unemployment, food inflation, corruption, a lack of political freedoms and poor living conditions.

- This (jasmine revolution) subsequently inspired similar demonstrations around the Arab world, which came to be known as Arab Spring.

- While many died in the protests and police action, unlike rest of the Arab world, Tunisia managed to make a fairly comfortable transition to democracy.

- While the country was stable thus far, recent austerity budget cuts and the economic situation have led to some unrest, which could spell danger.

What has led to the current wave?

- IMF had set stringent pre-conditions regarding austerity bud get cuts, for offering a loan of $2.9 billion, which the government has concurred to.

- This implies lower petrol subsidies and higher taxes on cars and utilities, for the reducing fiscal deficit from the currently at 6% of GDP, to 4.9% in 1 year.

- Further, 25% youth unemployment rate, and persisting disparities among regions has also contributed to current unrest.

- Notably, the crumbling of the Tourism industry due to the poor security scenario has affected the economy significantly.

- While the government has promised $70 million in aid to support the poorer communities in a bid to quell the protests, it has failed to cut ice.

- Notably, PM Youssef Chahed has been cautious in criticising only the violence behind the opposition rather than the dissent against the fiscal reforms.

G.S PAPER III

9. ECONOMY

9.1 Advance Estimates by CSO

Why in news?

- The first Advance Estimate for India's GDP growth was released by the Central Statistics Office (CSO).

What are the highlights?

- **GDP growth** in 2017-18 is estimated to be **6.5%** as against 7.1% in 2016-17.

- **Growth in GVA** (gross value added) is projected to fall to **6.1%** in FY18, much lower than the RBI's forecast of 6.7%.

- **Manufacturing** is projected to have decelerated growth at **4.6%** as against 7.9 % in the previous year.

- **Agriculture** sector is estimated to grow at **2.1%**.

- The estimate highlighted that the pace of agricultural expansion is expected to fall by more than half than the previous year.

- This is largely due to decline in kharif output year-on-year.

- **Net taxes** are projected to grow only **10.9%** in the current financial year against 12.8% in the previous year.

- **Public expenditure**, which was the driver of economic growth in the previous year, is likely to slow.

- **Private consumption** is projected to record a slow growth in FY18.

Bad, But Getting Better

GDP GROWTH AT 4-YEAR LOW

% ANNUAL RATE

FY13 — 5.5
FY14 — 6.4
FY15 — 7.5
FY16 — 8
FY17 — 7.1
FY18* — 6.5 (Forecast)

THE BAD NEWS

Manufacturing and consumption yet to recover

Slower farm sector growth amidst agrarian discontent

THE GOOD NEWS

GST and DeMo effect fading out; second half growth back at **7%**

Investments showing some spark, up **4.5%**

Services, jobs-intensive construction have shown higher growth this Year

What are the positive projections?

- **GDP growth** is projected to accelerate to **7% in the second half** of the current financial year from 6% in the first half.

- Taking this forward, GDP growth is expected to become more robust in 2018-19.

- It is significant in the context of the fact that higher second-half growth has come despite a waning of public sector expenditures.

- **Services** are projected to go **higher**.

- This is despite the anticipated fall in growth in government-backed public administration, defence and others.

- This means the government is controlling its expenditure to mange fiscal deficit, which has crossed the Budget Estimates by November itself.

- Evidently, **government final consumption expenditure** is projected to fall by more than half.

- **Investment** seems to be reviving a bit with **gross fixed capital formation** forecast to rise by 4.5% against previous 2.4%.

- **Electricity and trade & hotels** sectors are expected to grow at a faster pace in FY18 compared with the previous financial year.

What is the significance?

- **Growth** - This will be the lowest growth rate in the last four years.

- It is largely attributed to the adverse impact of the goods and services tax (GST) and the lingering effects of demonetisation.

- With this, India might possibly lose the tag of being the fastest-growing large economy to China.

- **Deficit** - The government has increased its spending through supplementary demands for grants.

- It has also indicated that it would borrow Rs 50,000 crore more by 31 March.

- Given this and the lower-than-anticipated nominal GDP growth, there might certainly be a slippage in the fiscal deficit target.

- It could pose a serious challenge to the government's fiscal consolidation roadmap of bringing down the fiscal deficit to 3% of GDP by 2018-19.

- **Data** - The first advance estimates of GDP are based on data for only seven to eight months.

- Thus it has factored in only limited data for different sectors.

- Given this limitation, a better picture of the health of the economy is expected with the second advance estimates by February.

9.2 World Economic Forum (WEF)

India at World Economic Forum

Why in news?

Indian PM addressed the plenary session of the 48th World Economic Forum (WEF) in Davos.

What are the highlights?

- Climate change, terrorism and growing protectionism were highlighted as three big challenges facing the world.

- Firm statements were made criticising the rising protectionism in the world, equating it with the dangers of terrorism.

- It comes at a time when US President Trump is increasingly pushing the America First agenda.

- Also, protectionism is leading to new types of tariff and non-tariff-based barriers hampering the bilateral and multilateral trade negotiations.

- He recorded that the unreadiness of the rich world in helping developing economies with new technology is slowing the carbon reduction efforts.

- He also reiterated India's willingness to keep up its agreed commitments on cutting carbon emissions.

- Reforms and policies that India has undertaken to make India more open were highlighted as well.

- Abolition of many archaic laws and allowing FDI in more than 90% of the sectors through the automatic route were mentioned among them.

How (in)equal is India?

- Credit Suisse Global Wealth data for India in 2017 highlights that 73% of the increase in wealth in India went to the top 1%.

- India now has around 100 billionaires, the number having gone up from nine in 2000.

- Notably, 37% of India's billionaires have inherited wealth.

- There are only 4 women billionaires and 3 of them inherited family wealth.

- India is currently shining for its top 1% and arguably also for its top 10%.

- It needs to spread this to the middle 40% and most of all to its bottom 50%.

- Notably, these bottom proportions comprise largely of the Dalits, Muslims, tribals, and women, making it a social inequality as well.

How serious is inequality?

- Global inequality is rising to unprecedented levels, at rates not seen during the last 100 years.

- It is worrying because it makes economic growth unsustainable, corrodes politics and undermines democracy.

- It is also leading to a breakdown of the social contract, as people end up in violence, crime and corruption as ways to get rich.

- In this context, this year's agenda for WEF includes "sustainable and inclusive economic development".

- Indian Prime Minister's keynote address at the forum is on "Creating a Shared Future in A Fractured World".

- To make it meaningful, India should devise means for sharing the wealth of its top 1% with its underprivileged bottom sections.

What should the government do?

- **Jobs** - The government should formulate measures to promote inclusive growth.

- It must be ensured that the income of the bottom 40% grow faster than that of the top 10%, to narrow the current income gap.

- Some of the ways for achieving this include:

    i. promoting labour-intensive sectors to create more jobs

    ii. increasing investment in agriculture

    iii. implementing fully the social protection schemes

- **Tax**- Government must take stringent measures against tax evasion and avoidance.

- The super-rich could be taxed by re-introducing inheritance tax and increasing the wealth tax.

- Corporate tax breaks could be reduced and eventually done away with.

- **Data** - Lack of availability data has allowed inequality to creep up to such high levels in India, going unnoticed by the policymakers.

- It thus calls for the government to collect and make available, regular and high quality data on income and wealth.

9.3 IMF Growth Forecast

Why in news?

IMF has released the latest update of the World Economic Outlook ahead of the World Economic Forum.

What are highlights?

- **India** - India is projected to grow at 7.4% in FY19 as against 6.7% this year.

- This is projected to gain pace to grow at 7.8% in FY20.

- India has slipped behind China this year in tax collections owing to disruption caused by demonetisation and GST.

World Ahead

Global Growth To Pick Up Pace In 2018, India To Lead Big Economies Again

(% ANNUAL GROWTH ESTIMATES)
FY18   FY19   FY20

INDIA   US   CHINA   WORLD

OPPORTUNITIES FOR THE WORLD

Room to implement structural & governance reforms

Boost potential output

Make growth more inclusive

KEY RISKS

1. Rich asset valuations
2. Higher inflation & interest rates
3. Inward-looking policies
4. Geopolitical tensions
5. Political uncertainty in some countries

- The forecast will help India regain the tag of fastest-growing major economy, backing the government's economic revival theme.

- Notably, stock markets have been surging recently, hitting successive records.

- This is encouraged by the economic revival prospects and corporate earnings optimism, apart from other factors.

- **Other countries** - In the current year, China will grow 6.8%, just ahead of India but will slip to 6.6% next year.

- The US is forecast to grow 2.7% and 2.5% in 2018 and 2019, respectively, slightly higher than earlier estimates.

- **Global** - The IMF noted that 2017 saw the best global growth in seven years.

- The global economy is expected to grow 3.9% this year, faster than 3.7% forecast earlier in October.

- The revision in global growth forecasts reflects increased global growth momentum and positive impact of US tax policy changes.

- Shared priorities across all economies include implementing structural reforms to boost potential output and making growth more inclusive.

9.4 Assessing Ease of Doing Business Ranking

What is the issue?

World Bank's chief economist recently claimed that the bank's flagship "Ease of Doing Business" ranking might have been unfairly manipulated.

What is the Ease of Doing Business ranking?

- 'Ease of Doing Business' ranking is a rank list published by the World Bank.

- It rates various countries on the basis of their pro-business policies.
- The rankings maps regulations in a country on parameters such as the ease of "starting a business, enforcing contracts and securing construction permits".

What are the shortfalls?

- Introduced in 2003, the report is premised only on the legal setup.
- It falls short of reflecting the practical aspects of how things move on the ground.
- Moreover, the methodology has not remained the same and now doubts have been expressed from within the bank.
- Notably, the question raised is not about the technicality of continuously changing methodology but about the very integrity behind it.
- Besides, over the years, several national governments have made making good ranks a top priority.
- The governments, at times, are merely tailoring their policies to secure a better rank based on WB's parameters.
- Genuinely framed pro-business policy frameworks are thus not happening.

What is Chile's case?

- The immediate case in point was Chile, which saw its ranking sway massively over the years, from 25 (2006) to 49 (2010) to 34 (2014) to 55 (2017).
- The apprehension that Chile's rankings were manipulated based on 'which political faction ruled the country', has taken root.
- Researchers from the "Centre for Global Development (CGDev)" have shown how changes in the methodology were employed to obtain such rankings.
- It is possible that certain regimes make it easier to do business than others.
- However, repeated revision in methodology clearly seems to have nudged results to attain desired rankings.

What is the case with India?

- Analysing the trend of rankings bring out huge illogical variations in rankings of many countries.
- Notably, India's rank has risen from 142 to 100 between 2014 and 2018.
- Even though the World Bank has clarified that it stands by India's ranking, questions on the authenticity of the country's achievements continue.
- Significantly, India's ranking was already under criticism, as the WB ranking had limited its assessment to only the cities of Delhi and Mumbai.
- World Bank has to address the shortfalls and integrity questions, to restore its credibility.

9.5 Inclusive Development Index

Why in news?

Inclusive Development Index was released recently by the World Economic Forum.

What is the Inclusive Development Index?

- The IDI has been developed by the WEF as a new metric of national economic performance.
- It is seen as an alternative to GDP.
- The Index on inclusiveness reflects more closely the criteria by which the people evaluate their countries' economic progress.
- The index has three pillars of growth for global economies namely:
    1. growth and development
    2. inclusion
    3. intergenerational equity and sustainability
- Accordingly, the parameters focus on the living standards of people and future-proofing of economies by the WEF.
- In the recent index, Norway tops the chart followed by Iceland and Luxemburg in advanced economies.

- Lithuania, Hungary, and Azerbaijan are the toppers among the emerging economies.

How is India's inclusivity?

- **India** has been ranked **62 out of 74** emerging economies.
- There has roughly been 2.3% improvement in the overall five-year trend of the IDI for India.
- However, despite this, India is **ranked below** the **neighbouring countries** of Pakistan, Sri Lanka and Nepal.
- Evidently, Pakistan has been ranked 47, Sri Lanka 40, and Nepal 22.
- **Among G20** economies, India ranks second last.
- This is ahead of only South Africa and trails behind Russia (19), China (26) and Brazil (37).
- Other **South Asian economies** such as Malaysia, Thailand, Indonesia and Philippines also ranked far better than India.

What are the other key findings?

- India performs best (44th) in terms of **Intergenerational Equity and Sustainability.**
- This is primarily a result of low dependency ratio, with higher young population.
- Both **labour productivity and GDP per capita** posted strong growth rates over the past five years.
- However, **employment** growth has slowed.
- It is highlighted that the incidence of **poverty** had declined in India over the past five years.
- However, six out of 10 Indians still live on less than $3.20 per day.
- Healthy **life expectancy** also increased by approximately three years to 59.6.

9.6 Easing of FDI Norms

Why in news?

The Centre has recently eased several foreign direct investment norms.

What are the highlights?

- **Approval** - In the single-brand retail, the Centre has allowed 100% FDI through the automatic route, from the 49% at present.
- 100% FDI is allowed in construction development relating to building townships, housing and infrastructure and real estate broking services.
- **Local Sourcing** - The mandatory 30% requirement could be relaxed for companies with 'state-of-the-art' or 'cutting edge' products, for which local sourcing was not possible.
- However, the absence of a definition for 'state-of-the-art' or 'cutting edge' technology has stalled the applications of global companies.
- The mandatory local sourcing is now relaxed for the first five years.
- Thereafter, single-brand retailers will be required to meet the 30 per cent local sourcing norm.
- **Power sector -** The government has removed the restrictions on investment in power exchanges through the primary market.
- This applies to foreign institutional investors and portfolio investors.
- Till now they could do so only through the secondary market.
- **Air India** - Importantly, the Centre has allowed foreign airlines to invest up to 49% under the approval route in Air India.
- These are subject to the conditions that -

> **Local Sourcing**
>
> - Local sourcing requirement mandates that a global company contract the goods or services delivered or manufactured within the domestic country.
>
> - Companies, under the new norms, will be allowed to set off purchases of goods from the country for their global business against the 30% requirement for the first five years.
>
> - The offset amount will be equal to the annual increase in the value of goods purchased from India for global operations in rupee terms.
>
> - The relaxed time frame for local sourcing is conducive for global companies to develop good suppliers as partners.

i. foreign investment(s) in Air India, including that of foreign airline(s), shall not exceed 49% either directly or indirectly

ii. substantial ownership and effective control of Air India shall continue to be vested in an Indian national

What is the rationale for Air India decision?

- The move comes in the backdrop of Singapore Airlines and Tata Group evincing interest in bidding for the debt-laden national carrier.

- As per the present policy, foreign airlines are allowed to invest under the government approval route up to the limit of 49% of their paid-up capital.

- The investments are made in the capital of Indian companies operating scheduled and non-scheduled air transport services.

- However, this provision was not applicable to Air India, and the government has now decided to do away with this restriction.

- The move is aimed at bringing Air India on par with other Indian airline operators with respect to FDI norms.

What is the significance?

- The move regarding airlines was much needed in light of the proposed privatization of Air India.

- The changes to the FDI norms would trigger significant interest in Air India from foreign airlines and thus increase the number of interested bidders and the valuation.

- However, the actual terms of the offer and conditions attached would determine the level of participation in the bids.

- The possible divestment would help spur more jobs and growth in Air India.

- The amended norms, in general, have cut the red tape and ensured a more predictable and easier policy structure.

- The automatic approval will save companies from the delaying procedures with the Department of Industrial Policy and Promotion.

- The changes gains significance with India's goal of making it to the top 50 countries in the World Bank's ease of doing business ranking.

9.7 Safeguard Duty on Solar Cells

Why in news?

The Directorate General of Safeguards (DGS) has proposed a 70% safeguard duty on solar cells and modules imported from China and Malaysia.

What is a safeguard duty?

- The provision is facilitated in GATT (General Agreement on Tariffs and Trade), 1994.

- It allows a WTO member to restrict temporarily, imports of a product if its domestic industry is affected by a surge in imports.

- In contrast to antidumping duties and countervailing duties, safeguard measures are, in principle, applied regardless of the exporting country.

- The Central Government after conducting an enquiry, if satisfied of a potential impact, may by notification impose a safeguard duty.

What is the rationale for DGS proposal?

- While solar cells are imported from Malaysia, Singapore and Taiwan as well, a major quantity is being imported from China.

- China's huge production and excess capacities of solar cells faced with hindrances in exports to the EU and USA recently.

- It naturally had to find an alternative outlet and thus shifted its export focus towards India.

- The DGS move thus comes after a plea was filed by Indian Solar Manufacturers Association (ISMA) before the DGS.

- It claimed that the surge in imports in solar cells had led to many domestic production facilities lying idle and incurring heavy loss.

What are the concerns?

- **Cost** - There are apprehensions that the duty, if levied, would shoot up the project cost by about 40%.

- The Indian solar industry is thus concerned about the project costs and solar tariffs going up on account of the proposed duty.

- Notably, the burden on account of the above would fall on solar original equipment manufacturers (OEMs).

- Sadly, the ultimate burden gets passed on to the end consumer.

- **Solar Mission** - The Indian government has set a target of installing 175 GW of renewable energy capacity by 2022.

- Notably, an ambitious 100 GW of this is to come from solar projects.

- There are fears that the proposed safeguard duty on imported solar cells would thwart India's solar mission.

- **Domestic players** - India recently lost a case in the WTO brought on by a US complaint against the domestic content requirement programme.

- The requirement mandated that only locally manufactured cells and modules could be used to build solar projects.

- The ability of the local players to compete has already been weakened by losing in WTO.

- Given this, while the proposed duty may help the domestic manufacturers in the short term, its sustained benefits are uncertain.

- Also, for domestic manufacturers situated on special economic zones, the safeguard duty would yield counterproductive results.

> **DGS**
>
> - The Directorate General of Safeguards works under the Ministry of Finance, Department of Revenue.
>
> - It has been created to conduct investigations for imposition of Safeguard Duty, Specific Safeguard Duty as specified under the Customs Tariff Act, 1975.

- Notably, solar cell makers in special economic zones account for about 60% of the installed capacity.

- **Discoms** - Chinese imports have played a vital role in enabling bidders to quote progressively lower tariffs.

- If the proposed duty is levied, the Discoms will be further dissuaded from signing power purchase agreements on account of the resultant tariffs rise.

What is the way forward?

- The decisions on duty should consider the country's manufacturing capacity and the prevailing energy requirements.

- The government has to ensure that the duty is prospective in nature and not impact the ongoing solar projects.

- The government should thus be aware of the possibility of a policy paralysis leading to slow down in new investments.

- Chinese imports are a threat to Indian manufacturers, but a lasting solution lies in reassessing domestic duty structures and addressing other impediments to the sector.

9.8 GST Council Meet Highlights

Why in news?

The GST Council, in its 25th meeting held recently, recommended many relief measures and clarifications on issues relating to GST.

What are the highlights?

- **Simplification of return filing** - The Council made serious discussions on moving towards one return form but a final decision in this regard is pending.

- The plan seeks to do away with three forms — GSTR1, GSTR2 and GSTR3.

- It would be replaced with GSTR3B initially along with the uploading of a supply invoice.

- Accordingly, the monthly self-declaration on details of outward and inward supplies filed by a registered dealer will continue.

- The filing of a return would be annually or whatever frequency is decided upon.

- Taxes can be deposited on the basis of the invoice.

- However, if there is any mismatch between the buyer and seller invoices, an explanation can be sought.

- It will work as a deterrent against evasion that the invoices must match the return filings.

- **E-way bill** - With the trial run of the e-way bill system taking off recently, the government committed to the Feb 1 rollout across the country.

- With sole reliance on unilateral declarations and the resultant low GST collections, E-way bill is expected to be a significant anti-evasion measure.

- **Tax rates** - The Council cut rates on 83 employment-oriented goods and services.

- This was based on recommendations of the fitment committee.

> **Fitment Committee**
>
> - The rate fitment committee comprises of tax officials of the central and state governments.
>
> - Its task is to evolve a principle and an appropriate methodology to determine rates for various supplies under GST.

- The new rate cuts are assessed to hit the exchequer by Rs 10-12 billion annually.

- **Composition Scheme** - The low proportion of collections under the scheme indicates poor response as well as large evasions.

- Most of the people who have registered have a declared income of less than Rs. 20 lakh a year, suspectedly under-declarations.

- To plug the loopholes, the Council is thinking of reverse-charge mechanism (RCM) under the composition scheme.

- Unlike the usual practice of sellers depositing the tax to the government, the buyer does so under the RCM.

- The reverse-charge levy on purchase from unregistered businesses could come back for composition dealers, in turn plugging possible tax leakage.

- **IGST** - The council took note of large amount of Integrated GST (IGST) credit lying unclaimed in the form of IGST collections.

- To ease the flow of funds for both the Centre and states, the Council decided to distribute IGST of Rs. 35,000 crore equally between the Centre and states.

- This will ease the indirect tax position of the centre and the states which is reportedly very weak.

- **Handicrafts** - The council approved a definition for handicrafts and the designation of 40 items as handicrafts.

- These would now be examined by the fitment committee.

- The council also rationalised the rates on 29 handicrafts items to zero percent.

- This will certainly increase the exports and competitiveness in international markets which in turn will boost the economy.

- This will have a minor impact on revenues, but is potential of boosting job growth.

- **GST revenue** - The figures on falling GST revenue so far are on voluntary compliance without any anti evasion measures.

- It was thus expressed that with the anti evasion measures coming into place, the revenue will pick up.

- While GST collections have been coming down, the growth in direct tax collection which is ahead of target is encouraging.

9.9 PSBs Recapitalisation Plan

Why in news?

The government recently announced the details of the earlier said Rs. 2.1 lakh crore recapitalisation plan for public sector banks.

What are the provisions?

- **Package** - The recapitalisation package will be spread across current financial year 2017-18 and the next year 2018-19.

- The government will infuse around Rs 88,000 crore into 20 public sector banks.

- These banks account for more than 80% of the bad loans.

- **Themes** - The plan includes a reforms package across six themes.

- They are:
    1. customer responsiveness
    2. responsible banking
    3. credit offtake
    4. PSBs as Udyami Mitra (friends of entrepreneurs)
    5. deepening financial inclusion and digitalisation
    6. developing personnel for brand PSB

- The whole-time directors of the PSBs would be assigned theme-wise reforms to oversee.

- Their performance on the themes would be evaluated by the boards of the banks.

- **Differential approach** - The recapitalisation package would follow a differentiated approach for banks.

- The capital infusion for the PSBs would be dependent on banks' performance.

- Accordingly, the government will give more money to the weakest ones.

- These are the 11 lenders under the Reserve Bank of India's *Prompt Corrective Action* (PCA).

- In financial year 2017-18, PCA banks would get around Rs. 50, 000 crore.

- The comparatively healthier non-PCA banks would get around Rs. 35,000 crore.

- **Recapitalisation bonds** - The capital infusion will be done partly by *recapitalisation bonds* and partly by budgetary support.

- The bonds are to have a maturity period of 10-15 years and would be issued in six different slots.

- They will not have a statutory liquidity ratio (SLR) requirement and would be non-tradeable.

- The government has set strict terms for issuing the recapitalisation bonds to PSBs.

- The terms include :
    i. creating a stressed asset management vertical
    ii. tying up with agencies for specialised monitoring of loans above Rs 2.5 billion

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Prompt Corrective Action (PCA)

- PCA is primarily to take appropriate corrective action on weak and troubled banks.

- The RBI has put in place some trigger points to assess, monitor and control banks.

- The trigger points are on the basis of CRAR (a metric to measure balance sheet strength), NPA and ROA (return on assets).

- Based on each trigger point, the banks have to follow a mandatory action plan.

- RBI could take discretionary action plans too apart from these.

- RBI has initiated prompt corrective action (PCA) in as many as 11 PSBs.

- It prohibits them from undertaking fresh business activities such as opening branches, recruiting talent or lending to risky companies.

Recapitalisation bonds

- The idea is to borrow from the banks themselves and boost the weaker banks' capital, without immediate demand for direct government budgetary support.

- Banks will subscribe to these bonds as part of their investment portfolio.

- They will use the excess deposits they acquired from the recent demonetisation drive to invest in the bonds.

- The money raised by the government will then be used to infuse fresh equity into weaker banks.

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iii. strict surveillance on big loan defaulters

iv. appointing a whole-time director for monitoring reforms every quarter

Will there be a fiscal impact?

- There are apprehensions that the recapitalisation bonds would affect the fiscal consolidation efforts by the government.
- The government however assured that it would not have any substantial impact on the fiscal deficit.
- This is because the recapitalisation bonds would be "cash neutral" (does not need net cash for a transaction).
- The fiscal deficit will be impacted only by the interest cost on the bonds that the government pays every year.

What are the benefits?

- The recapitalisation package will create an incremental **lending capacity** with the banks.
- This is expected to catalyze the revival of the capital investment cycle in the economy.
- Banks will now be sufficiently capitalised to maintain **regulatory capital requirements** and also to lead growth.
- Banks would have to subject themselves to reform, become more professional, and do prudent and clean lending.
- The government would bring out a report card on compliance of these measures.

9.10 Minimum Public Shareholding Rule

Why in news?

SEBI allowed its listed companies to use new methods of share sales through MPS rule.

What is MPS rule?

- The Minimum Public Shareholding (MPS) rule requires all listed companies in India to ensure that at least 25% of their equity shares are held by non-promoters (public).
- This rule was implemented after the amendment of Securities Contracts Regulation Rules by SEBI in 2010.
- Under this rule promoters with a strangle-hold on listed companies were asked to compulsorily sell down their stake by placing shares with institutions or issuing rights or bonus shares.

What is the significance of the rule?

- India has 5000 listed companies but the market depth is very low.
- Thus stocks beyond the top 150/200 are less traded.
- Due to this, high promoter holdings prevail and the float available for trading by the public is very limited.
- SEBI is hoping to improve market depth and liquidity by unlocking this free float.
- Forcing promoter to relax their grip on listed companies can improve corporate governance by giving public shareholders and institutions greater say in corporate actions.
- There is very few investment opportunities in the stock market and so forcing promoters to sell shares would improve the supply of shares.
- MPS rule ensures better liquidity, price discovery and governance in the stock market.

What are the challenges with this rule?

- Initially PSUs were allowed a 10% MPS, but have recently been asked to comply with a 25% MPS by August 2018.
- Review by SEBI in June 2013 also found that over 105 private sector firms hadn't fallen in line and it issued notices to them.
- Instead of addressing the compliance issues SEBI is keen to further expand the mandatory MPS to 30 per cent or even 35 per cent.
- SEBI also imposes penalties to the company which is non-complaint by freezing the promoter shares and barring promoters from any directorships.
- This threatens new players in the market.

9.11   Universal Exchanges

Why in news?

SEBI has finalised norms for universal exchanges.

What is difference between equity and commodity trading?

- **Equity trade -**The market in which shares are issued and traded, mostly through exchanges, this is also known as stock market.

- This gives companies access to capital and investors a slice of ownership in a company with the potential to realize gains based on its future performance.

- The securities traded in the equity market can be either public stocks, which are those listed on the stock exchange, or privately traded stocks.

- **Commodity trade -** This market is mostly related to food, energy or metals, are an important part of everyday life.

- Commodities traditionally move in opposition to stocks, so they are used as a significant way to diversify a portfolio beyond traditional securities.

- Types of commodities in this market includes Metals like gold, silver, etc., Energy like crude oil, gasoline etc.

What are universal exchanges?

- Usually security exchanges and commodity trading are regulated by separate entities.

- By creating universal exchange SEBI has allowed the same exchange to offer products in the equity, commodity derivatives, and debt and currency segments.

- By this stock exchanges need not to set up different entities to offer commodity trading.

- Detailed guidelines are yet to be issued, but new products will only be introduced with SEBI approval.

What is the significance of this move?

- The NSE and the BSE offer equity and equity derivatives, while the MCX and the NCDEX specialise in commodity derivatives.

- This clearance will enable the BSE and the National Stock Exchange (NSE) to launch commodity derivatives trading.

- It will also enable Multi Commodity Exchange of India (MCX) and the National Commodity and Derivatives Exchange (NCDEX) to move into the equity segments.

What are prospects of Universal exchanges?

- Universal exchanges will enhance competition across all categories, thus creating deeper markets with lower spreads and exchange fees.

- It would offer greater convenience, in that traders will be able to trade all asset categories from a single account.

- It may also lead to consolidation, cross-holding norms will have to be reviewed in case mergers between exchanges appear attractive.

- Long trading hours of NSE and BSE enables traders to respond instantly to events at odd hours.

- Indian exchanges will find it easier to compete with their global counterparts and they can also present in multiple segments.

What are the challenges involved?

- Given the significant differences between commodities and equities risk management across asset classes will be a challenge and it might face implementation challenges.

- Commodity futures can involve physical delivery which require the holder to either produce the commodity or take delivery from the exchange.

- But most Indian commodity futures are cash-settled, with delivery only in gold and silver.

- Commodity exchanges will remain open for very long hours, since many commodities track global prices but stock markets are time bounded.

- If the NSE and the BSE do start offering commodity derivatives segments, they will have to keep those segments open for longer hours which needs regulation.

9.12 Challenges in Taxing Bitcoins

Why in news?

Union government is working on the complexities in taxing bitcoins.

What are complexities in taxing cryptocurrencies?

- **Taxing as a currency -**According to the Foreign Exchange Management (FEMA) Act, 1999, includes currency notes, postal notes, postal orders, money orders, cheques, drafts, traveller's cheques, letters of credit, bills of exchange and promissory notes, credit cards and other such instruments, as notified by the RBI.

- As various entities accept bitcoin as a mode of payment, it appears that it is a currency.

- But it has not been termed as a currency under the FEMA Act, or as legal tender by the RBI, so it may not qualify as currency.

- **Taxing as a capital asset -** According to Section 2 (14) of the Income Tax Act, 1961, a capital asset means a property of any kind held by a person, whether or not connected with his business or profession.

- The term 'property' has no statutory meaning, yet it signifies every possible interest that a person can acquire, hold or enjoy.

- Still now there is no clear view in considering bitcoin as a capital asset.

- **Taxing as capital gains from sale -**If gains arising from transfer of bitcoins are treated as capital gains, their further classification into short-term or long-term gain will depend on the period of holding of bitcoins.

- If a bitcoin is held for more than 36 months, it will be considered a long-term capital asset.

- If the period of holding is lower, it will be treated as a short-term capital asset, thus bitcoins need to be taxed accordingly which is again making the process lengthy

- **Taxing bitcoins earned through mining -** If profits earned from bitcoins are taxable as business income, then the bitcoins earned in the 'mining' process would also be taxable as business profits.

- If bitcoins are classified as capital assets, the virtual currency earned from bitcoin mining may not be taxed.

- Since bitcoins generated through mining process are classifiable as self-generated capital assets and the cost of acquisition of such bitcoins may not be available.

- **Taxing sale of bitcoin by NRI** - If Bitcoin is an intangible asset, income accruing or arising from its transfer outside India by a person who is not a resident in India cannot be taxed in India.

- Hence, sale of bitcoin by an NRI through an Indian bitcoin exchange may not be taxed in India.

- **Taxing under GST -**If bitcoin gets classified as a currency, it will be considered as 'money' in the CGST Act and no GST can be charged on its trading.

- However, exchanging bitcoin to rupees might be considered a service for the purpose of levy of GST under the category of 'financial services'.

- Therefore, the supplier (who is selling the bitcoin) may be required to pay 18 per cent GST on the total value charged by him from the buyer.

What measures needs to be considered in bitcoin taxation?

- RBI need to clears its stand on considering bitcoin as a currency, If RBI declares it to be a currency, any trading in it will be subject to FEMA regulations.

- Bitcoins could be deemed a capital asset if they are purchased for investment and any gain arising on transfer of a bitcoin shall be taxable as capital gain.

- If the transactions in bitcoins are substantial and frequent, it could be held that the taxpayer is trading in bitcoins, and the income would be taxable as business income.

- Foreign transactions in bitcoin shall be treated as capital account transactions and any dealing in bitcoin could be mandated by the RBI.

9.13 'Towards a Payroll Reporting in India' Report

What is the issue?

- A report titled "Towards a Payroll Reporting in India" was released recently, to have a better payroll reporting system in India.
- The overt claims made by the study on the country's job creation scenario call for a relook.

What was the report on?

- The study was authored by SBI group Chief Economic Advisor and a professor with the Indian Institute of Management, Bangalore.
- It calculated the number of jobs in enterprises from the membership of:
    i. Employees' Provident Fund Organisation (EPFO)
    ii. Employees' State Insurance Corporation
    iii. General Provident Fund
    iv. National Pension System (NPS)
- This is notably the first study to estimate job creation using these kinds of data sets.

What are the key findings?

- **Job Creation** - As per EPFO data, 55 lakh new jobs would be created in 2017-18.
- It has found that around 600,000 jobs were being created a month in formal sector in FY18.
- The study found that there were around 90 million employed people in the formal sector as of March 2017.
- The top 10 sectors of the economy contribute about 75% of total employment in the formal sector in India.
- **Labour Force** - The study estimated that around 15 million are added to the labour force every year.
- It says by 2040 or so, it is expected that India's demographic dividend will be conclusively over.
- Evidently, the total fertility rate is already down to 2.2 children for every woman and expected to reach the replacement fertility rate of 2.1 by 2025. (Refer Quick Fact below for explanation)

What are the suggestions made?

- The study suggests the government to undertake a trend analysis of EPFO data across 190 industries and across geographies.
- This is to reorient the country's skill development programmes towards such industries.
- Also, a detailed analysis of labour on contract under the contract labour Act should be done to estimate the total number of people on contract.
- The other suggestions include:
- Mandating professional bodies, hospitals, nursing homes, etc to submit details of new joinees every 3 months to the local government offices
- Making every GST filer to provide total number of permanent employees and total number of contract employees
- Giving some tax deduction (per person) for domestic help, if the employing households register the details with tax authorities
- Continuing with NPS subscriber extra tax deductions and providing new incentives to encourage people to join NPS

What are the flaws in the study?

- **EPFO data** - The study took into account the 18-25-year-old who registered with the EPFO to arrive at the 55 lakh new jobs number.

Fertility Rate and Demographic dividend

- FR is the average number of children per woman if she lives to the end of her child-bearing years.
- The replacement fertility rate is the birth rate at which the population level remains constant, taking into account the mortality rate and other factors.
- With fewer births each year, a country's young dependent population grows smaller in relation to working-age population.
- This offers opportunities for rapid economic growth with more earning people and fewer dependent people to support for.
- However, a fall in fertility below replacement levels signals moving towards the closure of demographic dividend phase.
- In India, for another 25-plus years falling death rates will compensate for falling birth rates.
- However, as per the study, by 2040 or so, it is expected that India's demographic dividend will be conclusively over.

- This however does not automatically mean net new jobs.
- Also, EPFO only registers employees from the formal sector for provident fund benefits.
- Moreover, EPFO does not make deletions if a person loses his/her job and only makes additions on new registrations.
- This highlights that the EPFO data reflects the gross jobs picture and not the supposed to be net new jobs in the economy.
- **DeMo/GST** - The Indian economy underwent large-scale formalisation forced by the twin forces of demonetisation and GST.
- The fund crunch doe to demonetisation and tax credits claimable only by registered business entities under GST were the reasons.
- It coerced many small and medium businesses to transition at least a part of their workforce from informal to formal employment.
- This formalisation led to a massive drive in EPFO registrations.
- However, it is to be noted that an informal job that turns formal with an EPFO registration does not mean it is a new job.
- The costs of formalisation may have resulted in many firms cutting costs or even shutting down, actually leading to some job loss.
- However, the EPFO-based study fails to capture these costs of forced formalisation and projects only the new formal employees.
- In all, the selective projections of 'EPFO' data for the selective period of 'FY-2017 and FY-2018', bearing many effects of the structural changes in the economy, seem to be misleading.
- India's jobs situation is a grim challenge that must be acknowledged by understanding the true picture, for formulating appropriate policies.

9.14 Comparing PMI and IIP

What is the issue?

- The PMI for December 2017 is a highly encouraging 54.7, which along with a 6.8% growth in the "core sector" also indicates a big positive for IIP.
- While PMI and IIP have both been used for gauging the health of the economy, it is prudent to understand what they actually stand for.

What is "Purchasing Managers Index" (PMI)?

- PMI is calculated on the basis of information received on a monthly basis from companies on various factors that represent demand conditions.
- A standard questionnaire is administered to 500 private companies (PSUs are excluded) and the comprehensive score is arrived at.
- 5 parameters in PMI are - new orders (30% weightage), output (25%), employment (20%), supplier's delivery (15%) and stock of purchases (10%).
- The respondents can either give a "Positive, Neutral or Negative" response and each resposponse is marked as "1, 0.5 or 0" on the score card respectively.
- Hence, if there is unanimous positivity across all parameters, then the PMI score would be 100 (percentage) and an unanimous negative would mean 0.
- While an absolute score of 50 would mean neutrality, anything above it is perceieved as an improvement and less than it would mean detoritation.
- Intuitively, it can be seen that the purpose of the PMI is to indicate some degree of confidence level in manufacturing based company perspectives.
- Notably, as PMI is a market sentiment tracker that compares the current month with the previous, it is season sensitive.

What is "Index of Industrial Production" IIP?

- IIP measures actual production output across the industrial sector.

- Significantly, IIP for December 2017 would be reckoned with the same month in 2016, unlike PMI, which is monthly comparision.

- As it is a comparison over the previous year, it is season neutral.

- Therefore, as the basis of IIP and PMI are different, a comparison between the two is really not appropriate.

- However, as the PMI is released on the 1st of every month and the IIP is known on the 12th, the PMI score is assumed to be a precursor to the IIP.

- But the correlation between PMI and IIP isn't strong and the relationship between the two variables is quite low and insignificant.

What is the reason for the lack of correlation?

- A sample of 500 companies for PMI is too small to be representative of what is happening at the aggregate level.

- Also, as these companies tend to be the bigger ones, SMEs are under-represented in PMI, whereas IIP is more comprehensive.

- The responses in PMI are of an 'either or' variety and is not graded to any number, which inherently marks 2% positivity and 20% positivity as same.

- Also, PMI has only one component, namely "output" (with a weight of 25%) which can be directly related with IIP.

- Also, even with the PMI new orders increasing, it would not necessarily mean that output would increase in a subsequent period.

- Exclusion of the PSUs is another significant aspect as there is a very high contribution by this segment, especially in capital goods and infra areas.

What is preferable?

- Hence, it may be said that the PMI is not a leading indicator of the state of industry which is better represented by IIP growth.

- While the IIP growth calculation has its challenges, it is to be noted that the number is used for GDP calculations to account for the unorganised sector.

- But nonetheless, there is room for both concepts in the set of economic indicators that have to be tracked continuously.

10. INFRASTRUCTURE

10.1   Concerns in Power Sector

What is the issue?

Concerns in discoms and power prices call for the government to make the right intervention to regulate the market and production pattern.

What are the concerns to be addressed?

- **Debt** - The much publicised UDAY programme called for a reduction of debts in the discom balance sheets.

- However, in many ways, this only meant a transfer of debt from discoms to the state treasury.

- This has thus resulted in a superficial reduction in the cost of power at the discom level.

- Despite giving the impression of a new lease of life for discoms, there is little change in their tariff structure and losses continue to pile up.

- **Cost** - Discoms pay pre-agreed fixed cost to generating companies.

- However, this is based on the plant availability criteria and even if they do not take off the contracted capacity, the pre agreed cost is paid.

- This results in discoms far fewer units to purchase and lead to pushing up the power purchase cost per unit.

- Hence, the average cost of supply for discoms is higher.

- **Oversupply** - The Electricity Act 2003 opened up the power sector to a number of players for offering choices and boosting competition.

- Henceforth, industrial and commercial consumers could buy cheap power from the open market, rather than being limited to buy from the local utility monopoly.

- Open Access has led to the entry of many new private players.

- The resultant increased installed capacity is leading to oversupply in open market capacities.

- This forces the generators to supply power at near-variable costs which are just enough to keep the plant running.

- As prices fall, plants shut down, causing stranded assets and creating NPAs in the banking system.

What are the possible solutions?

- India should focus on

    i.   maximising capacity utilisation of existing thermal assets

    ii. promoting renewables and hydros

    iii. lowering power generation costs

    iv. gradual retirement of inefficient plants

    v.   addressing existing excess capacities

- The issues of shortage of water and fuel for under-used plant capacities should be addressed by the government.

- The Government should also work towards creating a level playing field for discoms and generators.

- Equitable clauses in the model Power Purchase Agreement should be created for securing the interests of both.

- Government regulation of State-owned discoms should be reduced to let them have control over the power pricing and market play.

- Prioritising the interventions, to adopt renewables and to suspend thermals at the right time, should be the government's mandate.

10.2   Fund Crunch for UDAN

What is the issue?

- The government's flagship "UDAN aviation scheme" is facing a fund crisis.

- This is largely because the number of participating airlines has increased manifold.

What is the UDAN Scheme?

- UDAN -"Ude Desh Ki Aam Nagrik" literally translates to a call for the common man to fly.

- It is an aviation scheme to enhance air connectivity to smaller towns.

- It focuses on previously "un-served or sub-served" destinations, and provides operating subsidies for airlines interested in operations.

- The government gives "Viability Gap Funding" (VGF) support for three years.

- This is to attract airlines to fly even to remote areas which may be commercially unviable.

- Besides, other concessions like that on parking charges at airports and exempting these operations from the GST net are provided.

- While the general central and state contributions for VGF are 80:20, it is 90:10 for the north-eastern states and union territories.

What is the concern?

- Two bidding rounds have been completed and the government received bid proposals in substantial numbers.

- But the Ministry of Civil Aviation has not awarded the routes for the 2nd round.

- This is because of lack of funds to pay the "viability gap funding" (VGF) to the operators.

- Notably, the initial assessment for the scheme was Rs 3 billion, but the cost has escalated to over Rs 12 billion currently.

- The paucity of funds is said to be due to the increase in the number of airlines that had bid for the routes and the criticality of VGF for the operations.

How does the future look?

- The aviation ministry has asked the finance ministry for more funds but the sufficient budgetary support is uncertain.
- Considering the present fiscal constraints of the government, the sustainability of the scheme may need resources from within the sector.
- There may hence be a requirement to increase the regional connectivity levy; but this has been contested by the airline operators.

10.3 Public Transport - Tamil Nadu Case Study

What is the issue?

- After nearly seven years, bus fares were recently hiked steeply in Tamil Nadu.
- At this juncture, an analysis if our public transport policies are consistent with good economics and the concept of green mobility is necessary.

How significant is Public Bus Network in Tamil Nadu?

- As one of the most urbanised States, Tamil Nadu provides reliable access to its remotest towns by government-run buses.
- Significantly, out of the 1.5 lakh state owned buses that ply for public transport all over India, Tamil Nadu alone operates a network of around 22,500 buses.
- There are concerns about a lack lustre safety record.
- However, the sheer number of busses talks for its significance, especially in the State's economy.
- It is also a major employer with more than 1.5 lakh employees.

What are the concerns?

- Lack of expansion, modernisation and acquisition of new technologies to adapt to a changing market has plagued the system.
- More strikingly, Tamil Nadu government has no organised feeder service for many local train stations, which affects both bus and train revenues.
- Additionally, erratic managerial practices and the massive political interference in the affairs of the bus corporations are major concerns.
- Notably, rest of India's bus system also has been falling apart for the same reasons although their extent of coverage has been far lower in comparision.

What are the challenges?

- **Commuter Preference** - Personal cars and two-wheelers have kept pace with global trends, adding features of comfort and convenience.
- This has ushered in a commuter migration away from buses towards more comfortable personal modes.
- This notably has come with pressures to address a plethora of traffic related woes, necessitating investment in better roads and flyovers.
- The result of the above is huge losses in State transport corporations.
- The government primarily finance it through fare hikes.
- **Financial** - The difficulty in creating modern bus networks is often attributed to weak revenue streams from low fares.
- If finances are the only trouble, the "carbon emissions mitigation route" could have been used to raise funds, especially since the Paris climate accord.
- Also, to enhance finances, National Urban Transport Policy was formulated in 2006, which talks about differential pricing for buses.
- This should have ideally led to a rapid expansion of differentiated bus systems, by opening up services like WiFi and air-conditioning in select buses.
- But rather than mere finances, traditional state transport systems seem to find differentiated fleets and other innovative business practices too challenging.

What is desired?

- **Technology** - App-based aggregator taxi companies have usurped considerable ground in the transport sector in India.

- Bus networks should start adopting options like GPS tagging for enabling commuter tracking and other smart ticketing facilities.

- GPS tagging will enable commuters to track buses, thereby reducing waiting time, which will consequently enhance bus reliability and patronage.

- A validated real-time passenger information (RTPI) technology for public transport has already been developed.

- Incorporating such initiatives, for ushering in operable models for schemes like Smart Card Ticketing, are needed.

- **Augmentation -** A severe supply shortage in buses calls for further augmentation.

- It is forecasted that an additional 4.6 lakh buses were needed to achieve 50% of all urban transport trips by public modes by 2031.

- This is crucial to meet the national commitments on climate change and controlling air pollution.

- **Policy Changes -** A law mandating the expansion of bus fleets in major cities by using tax funds and a congestion charge on cars could help.

- Also, schemes for regulated small-bus/share-auto type entreprices to develop should be formulated to enhance shared commuting.

- In all, public transport should be viewed beyond profitability, as a public good with an optimum operating tariff.

10.4   ONGC - HPCL Merger

What is the issue?

- The government is prodding ONGC to buy HPCL (both are PSUs) to improve efficiency in the oil and gas sector.

- But the move seems to lack logical thinking and a vision.

What are the issues with this integration?

- Many of the world's oil majors are integrated companies that are involved in extraction as well as refining.

- While integration does offer advantages, merely merging PSUs isn't going to significantly change anything.

- Large mergers are always tricky and many have failed.

- Also, merger would've made sense if either ONGC or HPCL was more efficient than that of their private sector rivals, which isn't the case.

- Significantly, they are bound by various rules and procedures that restrict their performance, just like all other PSUs.

What are the contradictions?

- **Disinvestment -** There is very little competition in the oil marketing space and hence, privatising HPCL would have been a much better idea.

- But the government hasn't considered it, as ONGC's buying program will itself help to meet the disinvestment targets without actual privatisation.

- **HPCL's Valuation -** Significantly, ONGC has done an internal evaluation of HPCL that values it at 45% more than what its market capitalisation is.

- This effectively means that ONGC's valuation experts think that HPCL is more valuable than Reliance Refineries, which is odd.

- Notably, apart from its more modern refineries that have better processing capabilities, Reliance also has a robust crude sourcing profile.

- **ONGC's Profile -** While the government is asking ONGC to acquire HPCL, it is taking away some of ONGC's oil/gas fields and giving them to private firms.

- Thus, while the government thinks that an ONGC takeover will increase HPCL's profitability, it also feels that ONGC isn't doing its current job well.

11. AGRICULTURE

11.1 Need for a Pesticide Management

Why in news?

Union government is working with Pesticide management bill 2017 to replace archaic Insecticides Act, 1968.

What are the impacts of unregulated pesticide usage in India?

- Recently within a few weeks, about 50 farmers have died due to use of pesticides in Maharashtra and over 1,000 have suffered critical ailments.
- The use of imported, untested pesticides and unregistered technical procedures could be a reason for the deaths.
- Farmers continue to commit suicide in large numbers and one primary cause is the sale of misbranded (substandard, spurious, expired) pesticides which disappoints them during harvests.
- Along with pesticide misuse the inordinate use of antibiotics in the poultry and dairy industry is a major reason for human diseases, monumental species loss and environmental damage.

What are the flaws with existing regulations mechanisms?

- The larger pesticide companies (brand owners and marketing agents) generally outsource production to smaller manufacturers.
- Thequality degradation happens in the outsourcing stage and the smaller manufacturers can't be prosecuted because the Central law only stipulates prosecution of the manufacturer.
- When the licence to sell pesticides is issued, applicants declare a "responsible person" to be held accountable for violations.
- The person is usually a low-paid employee, who over time becomes unreachable, even serving the prosecution notice becomes difficult.
- Most pesticide samples simply don't fail the test, this is because of conniving officers who don't follow procedures and for a "sample failure" to be legally valid, samples have to fail consecutively.
- The cumbersome documentation procedure allows the second sample to expire before it's tested, rendering the process invalid which makes the crime intractable.

What measures need to be encompassed in new regulation?

- The declaration of responsible person, therefore, has to be among the top five financial beneficiaries of the firm and the fine should be computed as a percentage of the total sales in the state.
- Mandatory e-documentation (as per the IT Act, 2000) for agriculture departments will expedite the process and increase transparency.
- Currently, only a magistrate can order suspension of pesticide sales over an evident violation, these powers need to be delegated to a pesticide inspector.
- The Central Insecticide Board and Registration Authority should be restructured and many of its powers be transferred to the states.
- All agriculture-input packaging must mandatorily have a bar code giving product information such that the bar code will sync with the GST and the e-way bill.
- States should make retailers log all agriculture input sales onto state government servers, allowing for traceability from the factory floor to farmer's field and for regulation enforcement.
- Such digitisation at the ground-level will facilitate a farmer grievance redressal mechanism to make the system accountable.

11.2 Reforming the Sugar Industry

What is the issue?

- The sugar sector is faring well in terms of production, prices and other factors in recent years.

- It thus calls for taking forward the reforms based on recommendations of the Rangarajan committee on sugar deregulation.

What are the problems and recommendations?

- **Sugarcane Price** - The Centre fixes a minimum price, the FRP (fair and remunerative price) paid by mills to farmers.

- States can also intervene in sugarcane pricing with an SAP (state advised prices) to strengthen farmer's interests.

- Notably, some States such as UP and TN have set SAPs higher than FRPs.

- The Committee thus recommended that states should not declare an SAP as it imposes an additional cost on mills.

- It thus suggested a uniform FRP for farmers.

- And also suggested determining cane prices according to scientifically sound and economically fair principles.

- **Levy sugar** - Levy sugar is the 10% of production that every sugar mill mandatorily surrenders to the centre, at a price lower than the market price.

- This enables the central government to get access to low cost sugar stocks for distribution through the Public Distribution System.

- The centre saves a huge sum on account of this policy, the burden of which is borne by the sugar sector.

- The Committee recommended doing away with levy sugar.

- States wanting to provide sugar under PDS would have to procure it directly from the market.

- **Regulated release of non-levy sugar** - Sugar is produced over the four-six-month sugar season.

- The Centre allows the release of non-levy sugar into the market on a quarterly basis, to ensure distribution evenly across the year.

- Mills can neither take advantage of high prices to sell the maximum possible stock, nor dispose it to raise cash in need.

- It also impacts the ability of mills to pay farmers and thus regulated release imposes costs on both mills and farmers.

- The Committee recommended removing the regulations on release of non-levy sugar to address these problems.

- **Trade policy** - The government has set controls on both export and import of sugar in line with availability, demand and price.

- Even though India contributes 17% to global sugar production (second largest), its share in the world trade of sugar is meagre.

- It is thus recommended to removing the existing restrictions on trade in sugar and converting them into tariffs.

- **Revenue Sharing Mechanism** - It stipulates 70-75% of the total revenue earned by sugar mills to be shared with farmers.

- The revenue may accrue from the sale of sugar and its by-products such as molasses, bagasse and co-generated power.

- Being fair to both cane growers and sugar producers, this can also balance sugarcane and sugar output with demand.

- As returns depend on the sugar recovery from cane, it spurs farmers to grow better varieties and improve efficiency of cane cultivation.

- However, a fair and transparent assessment of sugar recovery and revenues of sugar mills is essential.

- **Cane area reservation** - It mandates cane farmers to supply their sugarcane to the specific sugar mill.

- It is recommended that cane area reservation be phased out.

- Contracting between farmers and mills should be allowed for enabling a competitive market for assured supply of cane.

- On discontinuing area reservation, the Centre should <u>remove</u> the stipulation of <u>minimum distance criteria between two mills</u>.

What lies ahead?

- Barring a few financially distressed mills, most sugar companies have been in profit.
- More than 99% of the cane price dues based on FRP have been cleared by the Centre.
- There is, therefore, little reason for delaying the completion of the reforms process recommended by the Rangarajan panel.
- In particular, some proposals that were left to the states to carry out have not made much headway.
- The other pending or partially done reforms need to be executed.

11.3   Rationalising Cane Pricing Policy

What is the issue?

The mismatch between price of sugarcane and that of sugar calls for implementing the suggestions of CACP.

What is the anomaly in price support?

- The Cabinet Committee on Economic Affairs approves the Fair and Remunerative price (FRP) for sugarcane.
- FRP is the minimum price that the sugar mills have to pay to farmers.
- FRP does protect the farmers by deciding the price of **sugarcane**.
- But on the other hand, **sugar** prices are determined by market sentiments and market forces, causing unfavourable effects.

How does it impact?

- **Farmers** - The high FRP of sugarcane results in over-production of cane and ultimately surplus sugar.
- This could, in turn, cause sugar prices to fall below cost levels.
- The resultant burden of the loss falls on the sugar mills.
- This eventually leads to delays or defaults in making payments to the farmers.
- **Export** - Too high a price for cane makes Indian sugar uncompetitive globally.
- E.g. Indian cane prices are 70-80% higher than that in Brazil.
- Thus, exporting the surplus from India too becomes harder.

What is desired?

- The government's protection with a remunerative cane price and assured buyer is unquestionable.
- However, the anomalies call for rationalisation of the cane-pricing policies in tune with global practices.
- This is especially to facilitate Indian sugar industry to export the surplus favourably.
- The governments (including states) should take roles beyond cane-price fixing.
- The government will have to offer interest-free loans, subsidies and incentives, etc for production.
- Special efforts would also be needed to dispose off the surplus sugar.
- This is essential to keep sugar prices at adequate levels and ensure cane-price payments on time.

What are the recommendations of the CACP?

- Some of the suggestions made by the Commission for Agricultural Costs and Prices (CACP) in this regard include the following:
- Farmers should be guaranteed a minimum cane price at the level of FRP.
- In addition, the liability of sugar mills will be restricted as per a revenue sharing formula (RSF).
- Accordingly, 75% of revenue realised from sugar will be the cane price payable by mills.
- If the cane-price, as per RSF, is more than FRP, the farmers get a second instalment over and above the FRP.
- When sugar prices are depressed, the price as per RSF may work out to below FRP.

- The gap would then be paid directly to the farmers from a fund created by the government (government is yet to approve it).
- **Benefits** - The sugar mills will pay farmers as per their revenue realisation and pay on time.
- Farmers get cane price at least at the level of FRP, or more with better sugar prices, instead of the current system of giving farmers only FRP.
- It will also keep cost of production reasonable, ensuring that Indian sugar is competitive globally to allow exporting the surplus.

11.4 Need for Structural Reforms in Agri-Marketing

What is the issue?

- Although food production has increased tremendously, farmer incomes have not been impacted positively.
- This calls for massive structural reforms on the lines proposed by Niti Aayog.

What is the proposal?

- The central government is pitch for restructuring agricultural marketing to double farm income by 2022.
- NITI Aayog member Ramesh Chand recently said that bringing agriculture marketing into the Concurrent or Union list is imperative to benefit farmers.
- While many states too have welcomed this, some are sternly opposed to it and argue that it would be a disaster for agriculture and co-operative federalism.
- Significantly, the "Committee on Doubling Farmer's Income" (Dalwai Committee) has supported the Niti Aayog's stand.
- Besides this, the committee has also recommended rolling out the model Agriculture Produce Marketing Committee (APMC) Act 2017.
- This, it believes is needed to facilitate pan-India operations, through single-point levy of taxes.
- These are touted to promote direct interface between farmers and end-users, and give farmers greater freedom to sell their produce for better prices.

Why is focus on markets needed?

- The country's food production has increased tremendously from just 51 million tonnes in 1950-51 to about 252 million tonnes in 2014-15.
- However, farm income did not grow much, which was also highlighted by the National Commission on Farmers (NCF) headed by MS Swaminathan.
- On an average, the income realised from cultivation at current prices worked out to be only about Rs.101 a day during 2012-13.
- Significantly, as early as 1976, the "National Commission on Agriculture" had noted that higher output alone will not provide higher income to farmers.
- This anomaly is due to the lack of proper marketability for agro-produce, and becomes amply clear in the usual distresses that follows bumber harvests.
- Had the markets been integrated, the surplus produce would have been transferred to deficit regions to help easy the "Pleanty Paradox".

What is the current situation?

- Farmer's participation in agri-markets is equally worrisome and their share as a percentage of the Consumer Price is a merely in the range of 15- 40%.
- Middlemen dominance is primarily responsible for farmers not getting a reasonable price for their produce, which lowers farm income and profitability.
- Significantly, The Committee of State Ministers, in charge of Agricultural Marketing, has noted that of the regulated markets only:
    1. two-thirds have covered and open auction platforms
    2. one-fourth have common drying yards
    3. less than one-tenth have Cold storage units

4. less than one-third grading facilities

5. Very few have electronic weigh-bridges

- The committee also noted that the post-harvest losses of various commodities ranged from 6 to 18%.

- All these conditions therefore, leaves the farmers with no choice but to demand higher minimum support price (MSP) and procurement.

What is the way ahead?

- The country will achieve sustained food security only when the farmer incomes are secured and "production and marketing" to achieve the same.

- While farmers need to be empowered with greater autonomy for marketing, the intermediary culture needs to be systematically scrapped.

- Also, the seasonal spike in prices of perishable commodities that pushes up the food inflation cannot be addressed without improving the supply chain.

- Significantly, almost 40% of all fruits and vegetables are lost annually in India between the grower and the consumer.

- This is mainly due to lack of storage facilities, a weak transportation system, and bad roads, which needs to be addressed by inviting massive investments.

- Also, as climate change is expected to pose more challenges, states alone can't handle these effectively due to technological shortcomings.

11.5 Targeted Agricultural Lending

What is the issue?

- There is a trend of actual loan disbursements to the farm sector outstripping the liberally hiked annual targets year after year.

- Yet agrarian distress and farmers' dependence on moneylenders are showing no signs of easing.

What is the concern?

- The total credit flow has surged over 10-fold since the early 2000s.

- Institutional credit to the farm sector is set to exceed the target of Rs 10 trillion for the current year.

- However, nearly 40% of rural credit demand is still met by the informal sector, including commission agents and moneylenders.

- Clearly, the purpose for which institutional credit to the farm sector was stepped up steadily has not been served adequately.

- Interest subvention by the government has resulted in cheaper bank credit.

- However, it is not reaching the small and marginal farmers due to poor targeting and large-scale diversion to other destinations.

How is the credit distribution scenario?

- **Credit scale** - The proportion of loans of less than Rs 200,000 which normally go to genuine farmers has been over 90% in the 1990s.

- This proportion has now shrunk sharply to less than half.

- Contradictorily, the share of larger loans of up to Rs 10 million and more has surged.

- **Time** - Besides, roughly about half of the total farm credit is disbursed between January and March.

- But this is when farmers' loan requirements are the least with rabi sowing already over and kharif planting being months away.

- **Farmers** - Nearly a fourth of direct agricultural lending is accounted for by banks located in semi-urban, urban and metro towns.

- Frequent farm loan waivers have marred the loan repayment culture in rural areas.

- Evidently, banks find it much safer and convenient to lend to agri-related enterprises rather than to the more risk-prone farmer.

- Highly subsidised agricultural loans are thus largely reaching only the non-farmers or the same set of farmers with good repayment record.
- **Cooperative credit sector** - Non-performing assets of the primary cooperatives and the agricultural and rural development banks have risen to 37% by the end of 2015-16.
- Political interference in the day-to-day functioning of these bodies is adding to their woes.
- Also, many of the CEOs in these have non-banking background which is contributing to the overall failures of cooperative banks.

What lies ahead?

- The finance ministry has sought a fresh assessment on the health of the cooperative credit institutions.
- The report, ahead of the forthcoming Union Budget, from the National Bank for Agricultural and Rural Development (NABARD) should help the Centre reorient its strategy.
- The issues confronting the cooperative and the commercial banking sectors need to be addressed.
- This is essential to ensure better targeting of agricultural lending to make meaningful the quantitative increase in farm credit.

12. SCIENCE & TECHNOLOGY

12.1 ISRO's Path to 100th Satellite Launch

Why in news?

With the recent launch of ISRO's 100th satellite, it is imperative to know the strengths and track its progress over the years.

Institution building is a key to great power making

What is the recent launch?

- ISRO recently launched its 100th satellite Cartosat-2, a weather observation satellite.
- The PSLV carried along with this, 30 other satellites from its spaceport of Sriharikota in Andhra Pradesh.
- They include two satellites from India and 28 satellites from six countries - Canada, Finland, France, Korea, the UK and the US.

How has ISRO evolved?

- The Indian National Committee on Space Research was constituted by the Indian government in 1962, with Vikram Sarabhai as its chairman.
- This was mandated to look into the possibility of having a national space programme.
- ISRO started with the launch of Nike-Apache Sounding rockets from Thumba way back in 1963.
- The "leapfrogging" for India came with the famous SITE (Satellite Instructional Television Experiment) launch in 1975.
- This was an experimental satellite communication project to provide educational television programmes on agriculture and farming.
- Jointly developed by ISRO and NASA's cooperation, it helped both farmers and Indian space scientists to gain technical expertise.

Thumba

- Thumba is a suburb of Thiruvananthapuram, the capital of Kerala.
- The Thumba Equatorial Rocket Launching Station (TERLS) is an Indian spaceport operated by the ISRO.
- Thumba is located very close to the *magnetic equator* of the Earth, making it the ideal location to conduct atmospheric research.
- It is ideal for low-altitude, upper atmosphere and ionosphere studies.
- It is currently used by ISRO for launching sounding rockets/research rocket (an instrument-carrying rocket to take measurements and perform scientific experiments during its sub-orbital flight).
- The magnetic equator is defined as the line around the earth where the magnetic field is horizontal, or parallel to the earth's surface.
- It does not circle the earth as a smooth line like the geographic equator, but instead it meanders north and south.

- Thereafter ISRO has made strides with many of its successes and is now a major player in the field of outer space.

What are its strengths?

- **Personnel** - ISRO has always believed in the "homegrown" talent and has provided them enough chances and platform.
- Most of its engineers and scientists come from departments of basic sciences from India's universities.
- **Objective** - When Soviets launched the Sputnik-1 in the late 1950s, a cold war of space rivalry began between them and the Americans.
- Being a newly independent nation and facing resource scarcity, India never saw outer space as a battleground for supremacy.
- The primary idea with ISRO was to use space technology for developmental purposes.
- The Indian space programme, since its inception, has primarily been a "civilian" space programme.
- **Institution** - ISRO, as an institution, started functioning only from August 15, 1969.
- As an institution, it has been a standing proof for the age-old proverb - "institution building is a key to great power making".
- It started delivering successfully almost every time and even after some failures, ISRO has come out stronger every time.

What were the challenges?

- The National Committee on Space Research was constituted in 1962, the same year when India lost a costly war to China.
- The then condition of India's finance was not conducive for any space goals and determinations.
- Thus, engineers and scientists in Indian space programme were always under a burden of lot of expectations to prove the purpose.
- There were critics arguing against spending on "elite" things like outer space when millions were toiling hard under poverty.
- However, the resolve of ISRO and political will of the ruling dispensation in the 1960s made India take forward its space dreams.
- ISRO still works within very low budgets, as compared to the huge budgets of NASA and other space programmes.
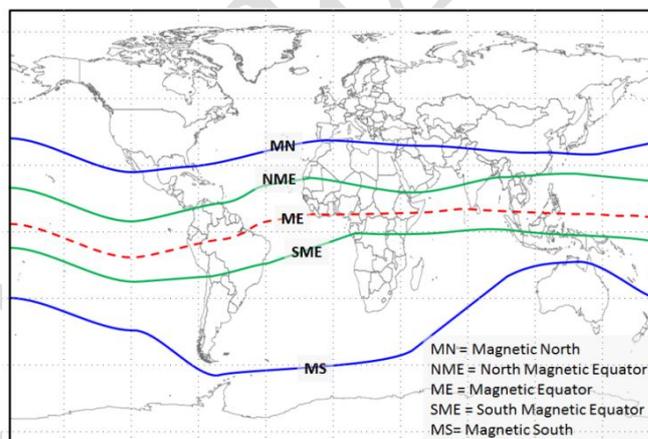
12.2 Genome technology and prospects for India

What is the issue?

- Genome technology is revolutionising the medical industry.
- India need to use of its scientific resources for genetic research to leverage them.

What is a genome?

- A genome is an organism's complete set of DNA, including all of its genes.
- Each genome contains all of the information needed to build and maintain that organism.
- In humans, a copy of the entire genome more than 3 billion DNA base pairs is contained in all cells that have a nucleus.

What are recent developments in this technology?

- DNA stores a person's hereditary information and gets transmitted from parents to children over generations.
- Recent developments in genome technology has led to Personalised medicine by extracting particular information from one's DNA.
- This technology helps in building individualised medicine based on the precise information stored in each human's DNA (their genome).
- At present the cost of building such treatments are very affordable due to well reformed gene editing techniques and the age of genomics-informed medicine is now within sight. Click here to know more about gene editing

How India can make use of these developments?

- The fact is that both genetic data and biological samples are easily transported across borders and if Indian regulation on this technology is short-sighted, it will cause Indian genomics to move abroad.
- Thus India need to collect information about the genetics of its population and train manpower capable of interpreting it.
- The information can be gathered from a large and sustained collection of data fully sequenced individual genomes along with medical histories for the individuals.
- A data bank needs to be established which can collects and store kind of information on Indian genomes.
- Government need to push academic institutions, the existing health-care industry, the IT industry and the nascent biotechnology industry to explore these avenues.

What are the prospects for India?

- India is more genetically diverse with something like 5,000 ethno-linguistic and religious groups all of which probably have some degree of genetic distinctiveness.
- The genetic implication of this is that there are likely to be many recessive diseases stemming from single genes specific to individual groups that can be identified.
- This knowledge could then also be quickly applied to the task of managing diseases in these groups as well as be used for genetic counselling that could reduce their incidence in future generations.
- With large samples genomes genetic risk factors related to common diseases (such as heart disease that stem from many genes) that affect the health of many more individuals can be understood and cured.
- The data collected as part of these efforts will also help to uncover the basic biological function of genes and their interactions, which are not yet fully understood.
- This knowledge will be useful to humanity worldwide and also offer India a chance to claim a piece of the global medical and scientific frontier.

13. ENVIRONMENT

13.1 New Technology for Namami Gange

What is the issue?

- The high cost of refining units slows down the progress of Namami Gange project with continued inflow of untreated wastewater.
- A new technology by the Water Technology Centre (WTC) of the Indian Agricultural Research Institute needs consideration for adoption.

What is the new WTC technology?

- It is a novel biological water purification technique that uses plants and micro-organisms to sequester impurities and decontaminate wastewater.
- The perennial plant used in this system is Typha latifolia which naturally absorbs pollutants.
- The plant boosts oxygen content of the watery medium around its roots to cleanse the dirty water.
- Besides, it also encourages proliferation of water decontaminating micro-organisms.
- And thus averts the need for using chemicals and aerators to improve water quality as is usually done in the conventional methods.

What are the relative advantages?

- **Effective** - The system requires no chemicals, no energy, no skilled manpower and no inputs, barring seeding the plants.
- It removes even the metallic residues to the extent of 80 to 99%, something that the conventional methods are unable to do.
- **Economic** - The cost of refining the untreated sewage released into the Ganga would come down roughly by 8 times as against the conventional methods.
- It also generates revenue to make sewage treatment a profitable activity.
- The economic returns from the treatment plants can be enhanced further by incorporating fisheries into these ventures.

- Notably, planktons and zooplanktons, which serve as nutritious feed for fish, thrive well in the water ponds of these units.
- The fish output of such integrated sewage treatment enterprises is relatively high and of good quality, being free of toxic residues.
- Also, these units can be transformed into environment-friendly eco-parks, boosting tourism by attracting migratory birds.
- **Biomass** - Instead of producing sludge, the Typha-based treatment units produce biomass.
- This can further be converted into good quality particle boards or energy briquettes and pellets for use as clean fuel.
- The upper parts of Typha can be cut every 4 months or so for this purpose and the plant regenerates again.
- **Land** - The land requirement for setting up the WTC treatment units is comparatively far meagre than conventional plants.
- **Odour** - Unlike the normal sewage treatment plants, the WTC treatment units do not emit any unpleasant odour.
- This is because the decontamination process occurs under the soil surface without the use of chemicals which generate smelly gases.

13.2 Soils to Sequester Carbon

What is the issue?

The ability of soils to sequester carbon should be given a serious focus by policymakers in the context of climate change actions.

What is carbon sequestration?

- It is the process by which carbon dioxide is removed from the Earth's atmosphere and then stored in liquid or solid form.
- It could involve both natural and artificial processes to remove and store carbon.
- Significant carbon pools on earth are found in the earth's crust, oceans, atmosphere and land-based ecosystems.
- The prime purpose of artificially doing this is to mitigate or delay global warming and avoid extreme climate change.
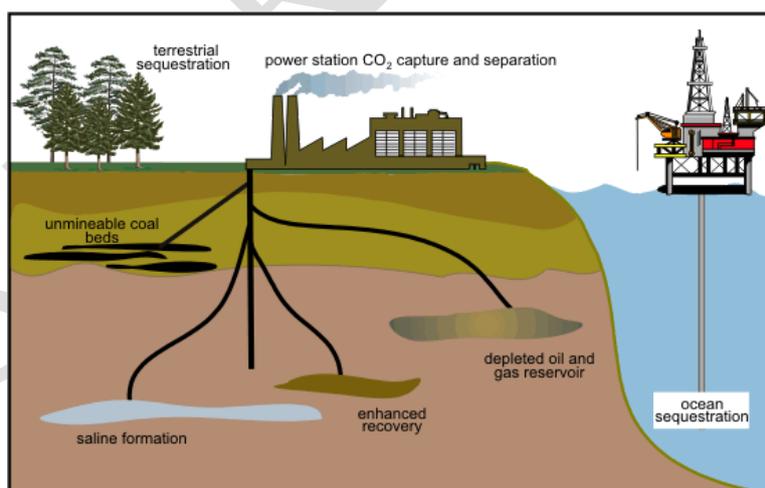
What is the need for focussing on soils?

- **Agricultural Practices** - After the changes undertaken as part of the Green Revolution, crop yields increased for several decades.
- But parallelly there has also been a dramatic increase in the use of chemicals as pesticides, herbicides and fertilizers.
- The resultant degraded soils are getting to be a prime reason for undermined agricultural yields in many places now.

- **Industrial changes** to agriculture have led to a range of adverse effects including:
    1. loss of biodiversity
    2. elimination of beneficial microbes and insects
    3. reduction in yield
    4. contamination of water bodies and soils
    5. increasing toxicity, etc
- **Global Warming** - Currently, the world is on a path to be about 3°C warmer than pre-Industrial times.
- This is despite adhering to 2015 Paris climate deal commitments.
- Atmospheric concentrations of carbon dioxide have crossed limits and oceans are already turning acidic.
- But, policies are largely focussed on reducing greenhouse gas (GHG) emissions from electricity sector, transport and industry.
- The policy shortfalls call for a renewed focus in understanding how soils can serve as carbon sinks to address the increasing pressures.

## How effective are soils as carbon sinks?

- **SOC** - Soil organic carbon (SOC) comes from plants, animals, microbes, leaves and wood, mostly found in the first metre or so.
- Soils contain around 2,300 Gt (1 gigatonne = 1 billion tonnes) of organic carbon, making this the largest terrestrial carbon pool.
- **Benefits** - Increasing SOC through various methods can improve soil health.
- It can contribute to agricultural yield, food security, water quality, and also reduce the need for chemicals.
- It helps address carbon mitigation and also improve conditions of fresh water, biodiversity, land use and nitrogen use.
- Moreover, carbon sequestration in soils has the potential to offset GHG emissions from fossil fuels by up to 15% annually.
- Utilising this option would thus offer the breathing time before other technologies can help transiting to a zero-carbon lifestyle.

How is it achieved?

- There are many conditions and processes that determine changes to SOC content.
- These include temperature, rainfall, vegetation, soil management and land-use change.
- Thus, increasing Soil Organic Carbon involves adopting sustainable agricultural practices to keep these factors in balance.
- The approaches to increase SOC include:
    i. reducing soil erosion
    ii. no-till-farming
    iii. use of cover crops
    iv. nutrient management
    v. applying manure and sludge
    vi. water harvesting and conservation
    vii. agroforestry practices, etc

Factors controlling soil C sequestration

C INPUT
Residues, Mulch, Compost, Amendment, Deposition

C OUTPUT
Erosion Decomposition Leaching Harvest

Soil carbon

f [Climate, Altitude, Soil properties (texture, mineralogy, mineral reserve), Landscape position]

What should the government do?

- India does have a large number of successful **sustainable agricultural practices.**
- The **knowledge of farmers** who have successfully experimented with these methods must be considered in research and policy.
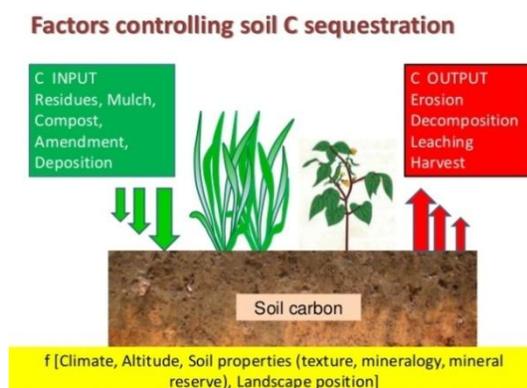
- State-level policy makers should identify the **kinds of support** needed by farmers with small holdings to transition from existing practices.
- There is also a need for revising the existing **fertiliser subsidy policy** and promoting organic fertilizers.
- The ability of soils to sequester carbon is thus a win-win strategy for farmers, people and for climate change.

13.3 The Case for Dis-incentivizing Parking Spaces

What is the issue?

- Delhi's administrators have conveniently stated that the only solution to the air pollution lies in curtailing stubble burning in the neighboring states.
- This narrative has deflected attention from what Delhi can potentially do.

How menacing are private cars?

- Our urban planning guidelines have been incentivizing private car ownership at the expense of congestion and deteriorating environmental quality.
- Notably, at the present congestion levels, Delhi wastes around $1.6 million worth of fuel every day, while air pollution results in eight deaths per day.
- The Capital currently has more than 157 cars per 1,000 residents, and is expected to go up to 380 cars per 1,000 people by 2025.
- Since car owners gain from these but the costs are borne by everyone, our urban policies are essentially hurting those who rely on public transport.
- As more vehicles would among other issues, add to the pressure on our roads, it is imperative for urban policy in India to dis-incentivize car ownership

What can be done?

- **Parking Spaces –** Low-cost public parking and housing policies that mandate for minimum parking lots in residential buildings need to be done away with.
- Even in residencies where people can't afford their own vehicle, parking spaces are mandated, which drives up housing costs considerably in cities.
- Also, access to parking was found to induce residents to drive more in private cars, even for trips to areas which are well served by public transport.
- As detrimental effects of treating parking as a public good are being realized, many cities across the world have already recalibrating their policies.
- Notably, National Urban Transport Policy (NUTP) of 2006, had argued for a fee based parking model for Indian metros, but hasn't found favour with authorities.
- **The Future -** In order to make owners internalize the costs of driving private vehicles, cities need to charge at least the basic market price for parking spaces.
- This requires more effective enforcement of parking rules by cities in addition to more transparent and effective collection mechanisms for parking fees.
- For a brighter future, it is time for urban policies to be driven less by the priorities of the influential elite, and more for the welfare of everyone.

13.4 Fire in Bellandur Lake

What is the issue?

- Bellandur Lake in Bengaluru again saw a major fire.
- The lake exemplifies the larger woes that plague our urban clusters.

What is the status of Bellandur Lake?

- Spread over 906 acres in south-eastern Bengaluru, Bellandur Lake is the city's largest lake with a catchment area of nearly 279 sq km.
- It is one of the 70 lakes that survived from the 272 lakes that existed in and around Bengaluru four decades ago.

- Until the Eighties, the lake was a vibrant ecosystem that nurtured a variety of birds, fish and insects, and a popular picnicking, boating and fishing site.

- The dramatic growth of Bengaluru over the last two decades has led to massive amounts of domestic and industrial waste flowing into the lake.

- Encroachments of over 90% of its catchment area by settlements, and the dumping of garbage on its shores, have throttled the flow of water into it.

- All this has rendered the lake highly polluted and killed its biodiversity over time due the insane levels of toxicity.

- The lake's water is currently unusable even for irrigation, and the lake's surface is infamous for gigantic froth clouds that cover its entire surface.

- Often, froth also spills over into the many busy roads that skirt its shores.

What caused the current fire?

- Recently there was a massive fire that ranged over a 5 acre area of the lake for several hours and required over 5000 fire-fighters to extinguish.

- The "Pollution Control Board (PCB)" suspects mischief in triggering the fire.

- But some experts have asserted that chemicals and large amounts of methane in the lake may have resulted in an accidental spreading over a vast area.

- Notably, the Lake has witnessed small occasional fires in the past too.

- Inflammable higher hydrocarbons and organic polymers from nearby industries is the main culprit in fuelling the fires.

- Additionally, the large-scale frothing and vegetation (which causes methane formation) is due to phosphorus from detergents used domestically.

What has caused this pathetic situation?

- Bellandur Lake's degradation is merely a pointer to the larger malice, which is the absence of any real accountability for the death of Bengaluru's lakes.

- Notably, "Varthur Lake", which is the second major lake in the city, is in an almost equally bad state.

- Also, the Vrishabhavati River, which like Bellandur was once a drinking water source for the city is now recognised only as an open sewer.

- Civic agencies failure to address the unplanned growth of the city has resulted in the unregulated flow of sewage and industrial pollutants into water bodies.

- The political will to act has been lacking, as the builder-politician nexus has rendered agencies like the state PCB largely ineffectual over the decades.

- More significantly, of the 200-odd lakes that Bengaluru has lost, the government itself has reclaimed several to create infrastructure.

- Notably, many bus stands, sports stadiums, housing complexes and even campuses of government undertakings like ISRO lie on erstwhile lakes.

What is the way forward?

- Regulation of phosphorus levels in detergents is needed to avoid further frothing and disrupting methane formation (primary cause for fire).

- Mandating decentralised sewage treatment, and strictly enforcing "polluter pays principle" for industries dumping untreated waste is needed.

- Protection of the catchment area from further deterioration due to real estate projects, garbage dumping and encroachments also needs to be done.

13.5 Environmental Performance Index, 2018

What is the issue?

- India ranks 177 among 180 countries in the Environmental Performance Index 2018.

- A drop in the index from previous year calls for a relook at the country's environmental policy.

What is the Environmental Performance Index?

- EPI is a biennial report by Yale and Columbia Universities along with the World Economic Forum.
- The report ranks 180 countries on 24 performance indicators.
- It is spread across 10 categories covering environmental health and ecosystem vitality.
- Switzerland leads the world in sustainability, followed by France, Denmark, Malta and Sweden in the recent EPI.

What is India's status?

- India is among the bottom 5 countries on the index, at 177th place.
- This is a drop of 36 points from 141 in 2016.
- Emerging peer economies, Brazil and China, ranks 69 and 120, respectively.
- In the environmental health category, India is at the bottom of the list.
- And in terms of air quality it is placed third last.
- The overall drop is attributed to poor performance in the environment health policy and high pollution related deaths.
- Pollution from solid fuels, coal and crop residue burning, and emissions from motor vehicles are the major causes.
- Population growth, industrial production and automotive transportation continue to increasingly degrade the air quality.

Why is environmental degradation a serious concern?

- Environmental degradation is beyond being seen as just a cost of development.
- **Health** - The report highlights air quality as the leading environmental threat to public health.
- In India, deaths attributed to ultra-fine PM2.5 pollutants have largely risen over the past decade.
- Air pollution is causing an estimated 1.4 million premature deaths in India.
- **Economy** - The above rate translates to a welfare loss equivalent to around 8% of India's GDP in 2013.
- In addition, the cost of lost labour productivity was nearly 0.8% of GDP.
- Even these estimates do not reflect a true picture of the impact.
- This is because the lack of scientific understanding of several other key ecological impacts limits the impact assessment.
- Sadly, the poor are affected disproportionately because of environmental degradation.

What are the measures in this regard?

- The government has set some ambitious targets for environmental protection in the recent years.
- It includes:
  - i. strict environmental standards for coal-fired power plants
  - ii. target to implement Bharat Stage VI emission norms from April 1, 2020
  - iii. efforts to produce and sell electric vehicles in the country by 2030
  - iv. revision of National Solar Mission, accelerating transition to renewable sources of power
  - v. accordingly, revising the target for setting up solar capacity from 20 GW to 100 GW by 2021-22
  - vi. assurance to clean up highly polluted Ganga by 2018

What are the shortfalls?

- Unfortunately, there appears to be a big gap between policy goals and action.
- India seems to be moving in the right direction on solar targets.
- However, balancing it with other goals is seriously lacking.

- Evidently, the promise of implementing strict power plant emission norms by December 2017 has been relaxed.
- Annual electronic waste collection target for electronics manufacturers was set at 30% of the products sold in the market.
- However, this has now been relaxed to 10%.
- The automobile industry has stated that full conversion to electric vehicles was realistically possible only by 2047.
- This is in contrast to the government's targets.
- CAG, in a recent report, highlighted the lag in developing an action plan and poor fund utilisation in the clean-up of the Ganga.

What should be done?

- The environmental costs of development should be duly recognised in addressing environmental problems.
- Transition to renewables, especially solar energy, should be accelerated by offering subsidies.
- On the other hand, the more polluting fuels should be priced higher.
- Strict environmental standards for coal plants should be put in place.
- Similarly, the transition to electric vehicle use should be aided by higher pricing of petrol and diesel.
- Existing environmental laws and regulations should be implemented properly with more political will.
- The country's poor environmental performance calls for taking forward the environmental targets more seriously.
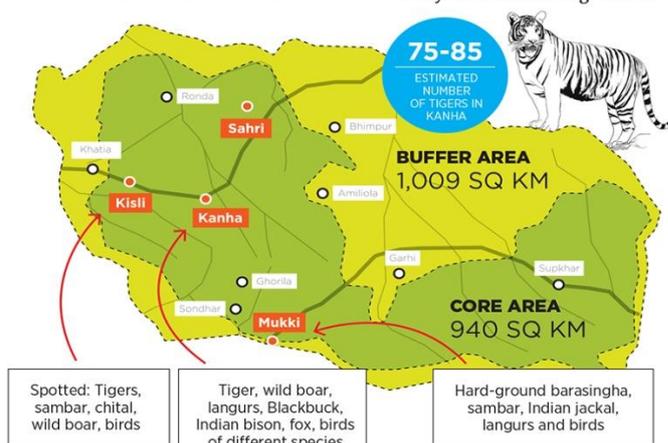
13.6 Human Animal Conflict - Highway Tiger killings

What is the issue?

Wildlife Institute of India estimates that tigers in Indian reserves face destructive impact of roads and traffic.

What is the recent incident?

- Bajirao, one of India's breeding tigers from the Bor reserve, was killed in a highway hit and run accident recently.
- Bor Tiger Reserve is a wildlife sanctuary located in Wardha District of Maharashtra.
- Bor Tiger Reserve is one among the 'Satellite core area', which gives special focus on tiger protection.
- This incident highlights the absence of scientific advice to keep highways out of wildlife corridors.
- Recent study in Kanha-Pench tiger reserve corridor in Maharashtra also found that a national highway could block flow of genes between regions.

PARADISE FOR ENTHUSIASTS | Lovers of wildlife have a field day at the Kanha Tiger Reserve

75-85 ESTIMATED NUMBER OF TIGERS IN KANHA

BUFFER AREA 1,009 SQ KM

CORE AREA 940 SQ KM

Spotted: Tigers, sambar, chital, wild boar, birds

Tiger, wild boar, langurs, Blackbuck, Indian bison, fox, birds of different species

Hard-ground barasingha, sambar, Indian jackal, langurs and birds

Kanha National Park is listed in the bestseller *1,000 Places To See Before You Die: A Traveller's Life List* by Patricia Schultz. It's one of the most visited national parks in India

Habitat
A mix of sal and bamboo forests, grasslands

BIG CAT SPECIES SUCH AS TIGERS AND LEOPARDS ARE FOUND IN KANHA
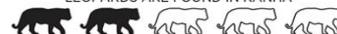
What are the possible measures?

- The Centre and the National Highways Authority of India have been repeatedly advised to realign or modify sensitive roads.
- The National Tiger Conservation Authority should insist on modification of existing roads to provide under tunnel crossings for animals.
- Users can be asked to pay a small price for the protection of vital environmental features.
- This would ensure that tigers and other animals are not isolated, and can disperse strong genetic traits to other populations.
- Curbs could be imposed on traffic on existing roads passing through sanctuaries.

- There could also be speed restraints and limitations like allowing only escorted convoys, with a ban on private vehicular movement at night.

14. INTERNAL SECURITY

14.1 The Undercurrents along LoC and LAC

What is the issue?

- Despite clearer border arrangements with Pakistan, the Indo-China border has been more peaceful.
- This calls for a nuanced analysis of the tactical differences involved.

How does the disputed Indo-Pak border fare?

- **Ceasefire Line Era -** India and Pakistan have unsettled border disputes in the Jammu & Kashmir sector, which is a legacy of the 1948 war.
- When peace was agreed, a ceasefire line (CFL) was also demarcated mutually, which was marked on the maps and jointly surveyed by both the armies.
- This CFL, with minor variations, became the Line of Control (LoC) after the Shimla Agreement, which followed the 1971 war for Bangladeshi liberation.
- The new nomenclature was meant to show that J&K was a bilateral dispute between the Pakistani and Indian, which would have to be resolved mutually.
- **Line of Control Era -** LoC remained largely peaceful since Shimla, until the worsening of internal security situation in J&K in the 90s changed it.
- While the J&K crisis itself was largely attributed to Pakistan, Kargil and the subsequent cross border aggressions opened up direct confrontations.
- While things became peaceful again with the 2003 ceasefire, by late 2015, the LoC started heating up again.
- Notably, 2017 was particularly bad with as much as 860 ceasefire violations and 32 soldier deaths.

How did India evolve its border arrangement with China?

- Border disputes between Indian and China culminated in the 1962 Sino-Indian war, and no border arrangement was agreed upon in the subsequent peace.
- Notably, China was able to assert its control over disputed territories, particularly in Ladakh (Aksai Chin).
- While the concept of "Line of Actual Control" (LAC) came about in a bilateral agreement in 1993, there was no concrete settlement on ground positions.
- Significantly, India and China have differing views on where the LAC lies and even its total perceived length by both sides are at a glaring variance.
- Despite these confusing ground realities, the last ever violent clash recorded was in 1975, when an Assam Rifles patrol was ambushed and killed.
- But notably, besides minor clashes between patrols, tense border standoffs have occurred in "Sumdorong Chu in 1987, Depsang in 2013, Chumar in 2014 and Doklam in 2017".

What is causing this LoC - LAC anomaly?

- While there is no clear LAC demarcation, military commanders concede that both sides understand and agree on the other's perception for 95% of the LAC.
- Also, the mechanisms for border management between India and China, has been well defined and formalised, which include ceremonial border gatherings.
- Moreover, a lot of quiet informal strategic meetings, coordinated humanitarian assistance and disaster relief training exercises also happen regularly.
- Contrarily, such structures haven't evolved in the Indo-Pak LoC, mainly due to the mutual deep-rooted hostility between India and Pakistan.
- Both armies perceive each other as cultural and historic enemies, which has been reinforced through current political narratives.
- The fact that Pakistan is actively aiding militancy in Kashmir and the speculation that it is covertly sponsoring terrorism elsewhere in India only reinforces hatred.

What needs to be done?

- Each incident stokes anger on either side, and an unending cycle of retributive violence is set in motion, which can have dangerous consequences.
- While the border ranks view stand-offs with the Chinese as a professional call of duty, the Pakistan case is seen through an emotional and personal prism.
- Reducing emotional rhetoric is indeed difficult but is crucial in easing tensions at the border, which both sides must realise.

14.2 Flaws in our Defence Procurement Policies

What is the issue?

- The government has scrapped a 13-year-long procurement process for the 12 minesweepers warships, which are of critical importance.
- This is in line with the multiple such unplanned high profile cancellation in the defence sector, and is increasingly rendering the security architecture weak.

What are some cancellations?

- **Minesweeper Warships -** These are vessels that are specialised to diffuse or safely remove explode underwater mines that target ships.
- For years, the navy has been adjusting its operations with just six outdated Soviet-era minesweepers, of which two retired last year.
- The current cancellation leaves a glaring hole in India's maritime security until a new vendor is contracted, which might even take more than a decade.
- **MMRCA Cancellation -** The cancellation of the tender for 126 "Medium multi-role combat aircraft" is another classical case.
- This culmination in the unplanned procurement of 36 highly expensive Rafale fighters in flyaway condition from France's "Dassault Aviation".
- **Spike Anti-Tank Missile -** The government recently cancelled the procurement of these missiles from the Israeli's "Rafael Defence Systems".
- **Black Shark Torpedoes –** India's first Scorpene submarine, INS Kalvari, was recently commissioned, but it didn't have torpedoes (its primary weapon).
- This was because of the cancellation of the contract for "Black Shark torpedoes" with Italian company "WASS".
- The cancellation was due to the corruption case involving "VVIP chopper" sales to India by Augusta Westland, which is a 'sister concern' of WASS.

Why do so many procurements fail?

- **Ambitious Requirements -** the primary one is the flawed framing of qualitative requirements (QRs) or the performance criteria the weapon.
- Too often, the user services (Army, Navy and Air force) tend to set very high standards in order to get the latest equipment.
- Also, this trend is partly due to the certainty of the slow pace of procurement, as equipments would arrive late and technologies would've advanced.
- Consequently, requirements become very technologically ambitious, that either just one or none of the potential suppliers would be able to meet them.
- Since bureaucrats desire at least two eligible contenders for "price discovery", this creates a stalemate situation.
- **Unrealistic Demands –** This was felt in the MMRCA cancellation, when "Dassault Aviation" wasn't willing to enter technology transfer arrangements.
- Also, the timelines for delivery and other accessory conditions became prohibitive for the deal to proceed.
- **The Missing Element -** Simplification of the procurement process has been repeatedly promised in the past but hasn't happened.
- Also, there is a lack of bureaucrats who know their subject and do not fear the possibility of subsequent investigation.

14.3 Need for a Defence Procurement Regulator

What is the issue?

- A Parliamentary standing committee report has highlighted contradiction between actual defence procurements and budget estimates.
- To resolve such claims union Budget 2018 is expected to announce a regulatory body for defence procurement.

How are defence procurements made in India?

- Defence spending is classified under Non-plan expenditure.
- The respective funds will be allocated by the finance ministry through budget estimates.
- Allocated funds will be utilized by
  i. Defence Research & Development Organisation (DRDO)
  ii. Ordinance factory board (OFB)
  iii. individual tri-defence forces under ministry of defence
- Defence procurements are typically conducted through a competitive two stage bidding process.
- It happens as per the guidelines contained in the Defence Procurement Procedure of India (DPP).
- Apart from this, defence procurement can also be made through inter-governmental agreements between friendly countries.

What are the concerns?

- The report highlights inadequate budget allocations made by the Ministry of Finance (MoF).
- There are perpetual delays in capital acquisitions.
- Also, there is constant miscommunication between the Ministry of Defence (MoD) and the Ministry of Finance (MoF).
- Persistent failure of the defence ministry to utilise the allocated funds has also contributed to reduction in budget allocations.
- Armed forces are sadly under-equipped and procurement planning is grossly inadequate.
- It is concluded that India is not combat ready.

How could a regulator help?

- The shortfalls can be resolved better by an independent regulator for defence acquisitions.
- Implementation of the procurement policy can better be overseen.
- The regulator could check whether the policies are in line with the current and future requirements of the armed forces.
- A regulator could ensure proper acquisition decisions by MoD, MoF, armed forces and Cabinet Committee on Security.

14.4 The Push for Police Reforms

Why in news?

- DGPs from all over the country have currently gathered for an annual conference in Gwalior, and significantly, the PM would be participating.
- Despite the importance given, significant police reforms hasn't caught up.

What is needed?

- There are about 24,000 police stations and outposts across the country, and the total strength of the state police forces is nearly 2.26 million.
- Manpower and infrastructure shortages and lack of functional autonomy are the major challenges, and calculated structural changes are needed.
- The force needs to modernize and become accommodative of the democratic aspirations of the people.
- The country's democratic structure and economic progress is largely reliant on neutrality and efficiency of the police forces, which needs to be preserved.

What is the current situation?

- After Supreme Court's directives, union government piloted the draft of a "Model Police Act" for reforming the force in 2006, but it was never legislated.

- While more than a decade has passed and SC's monitoing of the case has cooled off, the states continue to drag their feet in this issue.

- Due to the absence of a model law, most states issued directives that ensured status quo in violation of the spririt of Supreme Court's 2006 directives.

- This result is utter confusion at the ground level as most state governments had issued executive orders and passed laws that weren't very different.

- Resultantly, the internal security situation continues to be grim and the police performance leaves are also very low.

- While the current PM has been regularly engaging with police leaders, initiatives to reform the colonial police structure has been lacking.

- Notably, steps that are absolutely essential to strengthen the security apparatus are not being taken and only cosmetic improvements are made.

How has the recognition for policing been?

- Despite constrains, police forces had significant succeeses in the past.

- Notable among them is the crushing of multiple insurgencies on Andhra Pradesh, Punjab, Tripura and the Terai regions.

- While police duties is tough in any country, India is an exceptional case as more policemen die on the line of duty here than in the entire of Europe.

- Yet, there has been a lack of recognition for these efforts, which is demoralising and severely constrains their performance.

- If the police force is to meet expectations in upholding law and order, it must be insulated from external pressures and rewarded accordingly for its work.

What are the challenges?

- The failures of police reforms has largely been attributed to "law & order" falling under the state list.

- As tremendous changes has take place in the domain of internal security, a concurrent role for the Centre in police matters has arisen.

- Hence, a constitutional arrangement in this regard has to be pushed through for better centre-state coordination in policing.

PRELIM BITS

ART AND CULTURE

Classical Language Status

- Maharashtra government has sent a proposal to Ministry of Culture for granting classical language status to Marathi language.
- As of now, six languages i.e. Tamil, Telugu, Kannada, Malayalam, Odia and Sanskrit have been given the status of classical languages.
- The criteria adopted for the eligibility of a language for granting classical language status are
    i. High antiquity of its early texts/ recorded history over a period of 1500-2000 years;
    ii. A body of ancient literature/ texts, which is considered a valuable heritage by generations of speakers;
    iii. The literary tradition be original and not borrowed from another speech community;
    iv. The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

The benefits include-

- A one-time grant of Rs 100 crore for research and development of the language.

- Two major annual international awards for scholars of eminence in the concerned language.
- Setting up of a 'Centre of Excellence for Studies in Classical Languages' can be set up.
- The University Grants Commission can be requested to create, to start with at least in Central Universities, a certain number of professional chairs for classical languages, for scholars of eminence in the concerned language.

Mankidia Tribe

- Mankidia is one of the 13 Particularly Vulnerable Tribal Groups (PVTG) in Odisha.
- They critically depends on making rope with siali fibre that's richly available in Similipal Tiger Reserve (STR).
- They were denied habitat rights inside the STR under Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- So they would now be deprived of the non-timber forest produce.
- This is because the State Forest Department has objected on grounds that tribals could be attacked by wild animals.
- Had it been approved, the Mankidia would have been the first PVTG to have habitat rights.
- In Odisha, processes have been initiated for according habitat rights to PVTGs such as Bondas, Didai, Hill Khadia and Paudi Bhuyan.
- 'Habitat' as defined under the FRA includes the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling STs.

Sangeet Natak Akademi Awards

- Sangeet Natak Akademi's Fellowships (Akademi Ratna Sadsya) and Sangeet Natak Akademi Awards (Akademi Puraskar) are two awards presented annually.
- These awards are recognised as the most coveted national honours bestowed on performing artists as well as teachers and scholars of performing arts.
- The award will be given to the eminent persons from the field of tribal music, dance, theatre and traditional folk arts.

Sangeet Natak Academy

- The Sangeet Natak Akademi was set up in 1953 for the promotion of performing arts.
- It is an Autonomous Body under the Ministry of Culture.
- It acts at the national level for the:
    1. Promotion and growth of Indian music, dance and drama;
    2. Maintenance of standards of training in the performing arts;
    3. Revival, preservation, documentation and dissemination of materials as well as instruments relating to various forms of music, dance and drama.
    4. Recognition of outstanding artists.
- The Akademi is also responsible for the establishment and maintenance of institutions and projects of national importance in the field of performing arts.

Jain Maha Kumbh

- It is a ritual celebrated once in 12 years for Lord Bahubali in Shravanabelagola, Karnataka, (will be celebrated from Feb 17th to 26th 2018).
- 'Mahamastakabhisheka'(head atonement) will take place for the 57 ft-high statue of Lord Bahubali.
- During this celebration devotees bathe the magnificent statue atop the Vindhyagiri hillock in accordance with Jaina tradition.
- Lord Bahubali is the son of the first Jain tirthankara.
- The statue was carved under the order of Chamundaraya, who was the Ganga Dynasty's minister and commander in 981 AD.

Padma Awards

- Padma Awards is one of the highest civilian Awards of the country, it is conferred in three categories, viz.
    1. Padma Vibhushan - It is awarded for exceptional and distinguished service.
    2. Padma Bhushan - It is awarded for distinguished service of high order.
    3. Padma Shri - It is awarded for distinguished service in any field.
- The awards are announced on the occasion of Republic Day every year.

Guru Ravidas

- Guru Ravidas was a North Indian mystic poet saint of the bhakti movement believed to be born in Varanasi.
- He taught removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedoms.
- He founded 21st-century Ravidassia religion, by a group who previously were associated with Sikhism.
- He is devoted as guru in the regions of Punjab, Uttar Pradesh, Rajasthan and Maharashtra.

Bhima Koregaon Battle

- It is one of the last battles of 3rd Anglo-Maratha War in January 1818, between Maratha ruler Baji Rao Peshwa II and the British East India Company along with the local Mahar community.
- The battle brought an end to the domination of Peshwas.
- Historically, Mahars were considered as untouchables.
- Maratha King Shivaji, nevertheless, recruited large number of Mahars into the Maratha Army in the 17th century.
- However, relations between Mahars and Peshwas turned sour after Baji Rao II reportedly insulted the community by rejecting their offer to serve the army.
- This made them to side with the English against the Peshwa's numerically superior army.
- After the victory, British erected a commemorative victory pillar (Koregaon Ranstambh) in Bhima-Koregaon village in 1818.
- Dr BR Ambedkar visited the site.
- This year, the event commemorating the 200th anniversary of the battle had been met with protests.

GEOGRAPY

Ujh Multipurpose Project

- The Central Water Commission (CWC) has finalized a detailed report on Ujh multi-purpose project.
- The project is to come up in Kathua district, will store around 0.65 million acre feet (MAF) of water from Ujh (a tributary of Ravi).
- It will irrigate 30,000 hectares and produce over 200 MW of power.
- India has planned this project under the mandates of Indus water treat (IWT)
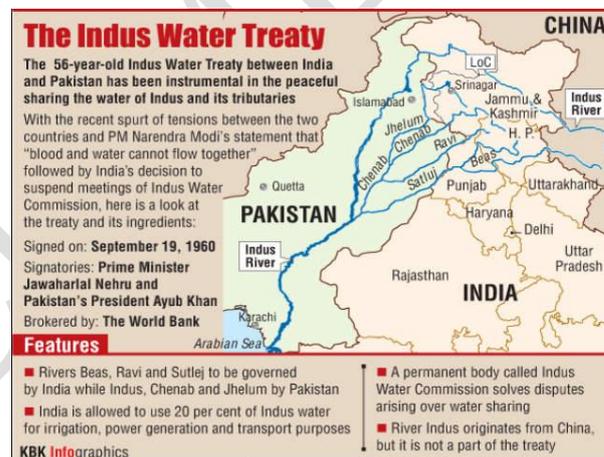
Cryosphere

- Cryosphere refers to the frozen part of the earth surface.
- It might be comprised of snow, river and lake ice, sea ice, glaciers, ice shelves and ice sheets, and frozen grounds.
- This region plays a major role in the Earth's climate system through its impact on the surface energy budget, the water cycle, and sea level.
- It is a fundamental control on the physical, biological and social environment over a large part of the Earth's surface.
- Cryosphere is a natural integrator of climate variability and provides one of the most visible signatures of climate change.
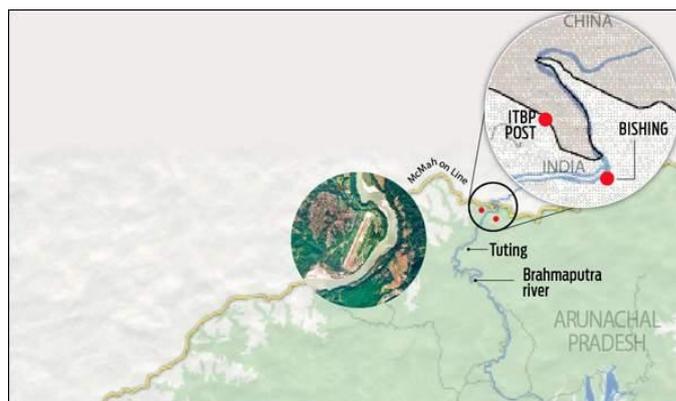
Bishing Stand-off

- Troops of Indian and Chinese security forces are locked in a standoff near Bishing in Arunachal Pradesh.
- The standoff is firmly within Indian Territory, about 4 km from the McMahon Line.
- The standoff began after Indian troops involving the Indo-Tibetan Border Police (ITBP) and the Indian Army were informed by local villagers that a Chinese road-building team had entered India with bulldozers.

Ionosphere

- The ionosphere is defined as the layer of the Earth's atmosphere that is ionized by solar and cosmic radiation.
- It lies 75-1000 km (46-621 miles) above the Earth, the thickness of the ionosphere is quite tiny compared with the size of Earth.

- Due to high energy from the Sun and from cosmic rays, the atoms in this area are "ionized," and are therefore positively charged.
- These are the layers of near-Earth space and are home to radio signals used to guide airplanes, ships and Global Positioning System satellites.

Zojila Tunnel

- It is an upcoming project in J&K which aims at providing all weather connectivity between Srinagar, Kargil and Leh.
- The construction of the tunnel has been approved recently by PM-led Cabinet Committee on Economic Affairs,
- The project has been approved on the Engineering, Procurement and Construction (EPC) mode.
- It holds strategic and socio-economic significance, given the fact that the region of Leh has limited connectivity due to threat of avalanches.
- The project will be executed by Ministry of Road Transport & Highways (MoRT&H).

Bomb Cyclone

- It's a weather term that applies to a massive winter storm that struck off the U.S. Southeast, the storm has dumped freak snow in this region.
- This storm will usually stay out to sea and blow with high winds gusts exceeding 100 kmph.
- Bomb cyclones draw air from Polar Regions after they leave it means extra cold Arctic air this is based on polar vortex.
- Storm intensity is measured by central pressure the lower the pressure, the stronger.
- A storm is considered a "bomb" when the pressure drops rapidly at least 24 millibars in 24 hours, Millibar is the unit of atmospheric air pressure.

Polar Vortex

- The polar vortex is a large area of low pressure and cold air surrounding both of the Earth's poles.
- It always exists near the poles, but weakens in summer and strengthens in winter.
- The term "vortex" refers to the counter-clockwise flow of air that helps keep the colder air near the Poles.
- Many times during winter in the northern hemisphere, the polar vortex will expand, sending cold air southward with the jet stream.
- This occurs fairly regularly during wintertime and is often associated with large outbreaks of Arctic air in the United States.
- Polar vortex is not a feature that exists at the Earth's surface and it is not confined to the U.S.
- Portions of Europe and Asia also experience cold surges connected to the polar vortex.
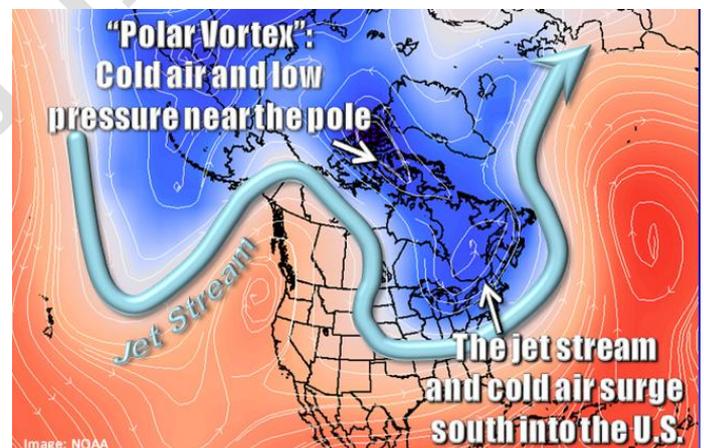
Mount Mayon

- It is an active **stratovolcano** in the Philippines region
- Stratocvolcano , also known as a composite volcano, is a conical volcano built up by many layers of hardened lava, tephra, pumice, and volcanic ash
- The volcano is the centre piece of the ALBAY biosphere reserve and Natural Park on its own.
- Mount Mayon lies in Pacific ring of fire region,major area in the basin of the Pacific Ocean where a large number of earthquakes and volcanic eruptions occur

Assumption Island - Seychelles

- Assumption Island is one of the 115 islands constituting Seychelles archipelago.
- India signed a pact to develop Assumption Island, during PM Modi's visit to Seychelles in 2015.
- Ironing out the earlier differences, India has now signed a revised agreement with Seychelles.
- Assumption Island is leased to India for the operation of a naval base and air strip by the Indian navy.
- The agreement will enable India to help Seychelles build military infrastructure for the Seychelles People's Defence Forces.
- Seychelles has said it would "suspend" the use of military facilities on Assumption Island in case if India is at war.
- This is because it is not a military base.
- Also, other "international partners" can also use the facilities being developed by India on the island.
- It is being financed entirely by India; but Seychelles retains full ownership of the facilities and sovereign rights over the island.
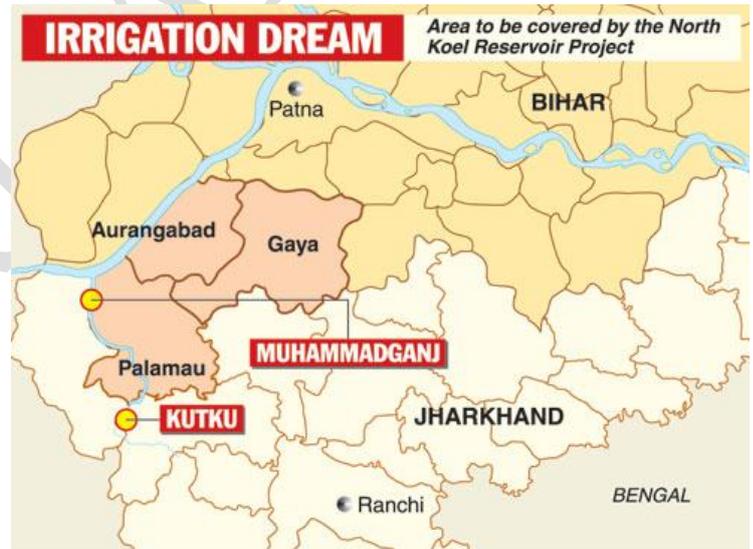
North Koel reservoir

- A Memorandum of Understanding has been signed by Ministry of Water Resources, River Development and Ganga Rejuvenation for completion of North Koel reservoir project.
- Part of a fund for this project is derived under PMKSY's LTIF- Long term Irrigation Fund and rest from state governments contribution
- The project situated on North Koel River, a tributary of Sone River.
- It will provide irrigation to most backward and drought prone districts in Jharkhand and Bihar.

NW-1

- The National Waterway -1 or Ganga-Bhagirathi-Hooghly river system runs from Allahabad to Haldia which is about 1,620 km (longest in India).
- It passes through West Bengal, Jharkhand, Bihar and Uttar Pradesh and serves major cities and their industrial hinterlands.
- It is an important constituent of the Eastern Transport Corridor of India.

- This corridor along with NH-2 connects the National Capital Region (NCR) with the eastern and north-eastern states.
- It will also be an important link to Bangladesh, Myanmar, Thailand, Nepal and other east and south-east Asian countries through the Kolkata Port.

POLITY

SC direction on Mullaperiyar Dam

- Supreme Court directed union government to constitute a special committee to prepare for disaster management in Mullaperiyar dam.
- SC also ordered Tamil Nadu and Kerala Governments to prepare their disaster management plan on the dam.
- Concerns pertaining to the dam's stability and lifespan would continue to be examined by an existing committee set up in 2014.
- The dam situated at the confluence of the Mullayar and Periyar rivers is located entirely in Kerala.
- The dam is operated by the Tamil Nadu government for its irrigation and power generation needs.

Reservations for Differently Abled

- Recently union government has opened government jobs to differently abled with learning disabilities, Down syndrome, intellectual disabilities, autism and victims of acid attacks.
- The department of personnel and training (DoPT) has framed rules for reserving, advertising and filling up of government vacancies across all ministries to follow them from 2018.
- The employment rules also specify a procedure to exempt a cadre or establishment from reservation for differently abled.

Nuclear Command Authority (NCA)

- It is responsible for command, control and operational decisions regarding India's nuclear weapons programme.
- Organisational structure of NCA includes Political Council and Executive Council.
- Executive Council is headed by National Security Advisor and Political Council is headed by Prime Minister.
- The Executive Council gives its opinion to the Political Council, which authorises a nuclear attack when deemed necessary.
- This kind of organisational structure is created to prevent the accidental or unauthorised use of nuclear weapons.
- Strategic Forces Command is a part of Nuclear Command Authority, responsible to operationalize the directives of NCA and for the management and administration of the country's tactical and strategic nuclear weapons stockpile.
- SFC is headed by Commander-in-chief of the rank of Air Marshal.
- It will have the sole responsibility of initiating the process of delivering nuclear weapons and warheads, after acquiring explicit approval from the NCA.

Cyber & Information Security (CIS) Division

- Union Ministry of Home Affairs has created Cyber & Information Security (CIS) division.
- Under this division Indian Cyber Crime Coordination Centre (I4C) and the Cyber Police Force will be set up.
- The CIS Division will have four Wings, namely Security Clearance, Cyber Crime Prevention, Cyber Security and Information Security Wings each headed by an Under Secretary level Officer.
- It is also proposed to appoint the Chief Information Security Officer (CISO) and Deputy CISO.

Members of Parliament Local Area Development Scheme (MPLADS)

- The Cabinet Committee on Economic Affairs has recently given its approval to continuation of MPLADS till the term of the 14th Finance Commission i.e. 31.03.2020.
- The MPLAD Scheme is an ongoing Central Sector Scheme which was launched in 1993-94.
- It enables the Members of Parliament to improve physical and institutional infrastructure in their constituencies.
- Lok Sabha MP chooses these villages from the constituency he/she represents and the Rajya Sabha MP chooses it from the state he/she represents.
- MPs cannot pick villages which belong to themselves or their spouses.
- Gram Panchayat would be the basic unit for development.
- The scheme requires MP to draft a village development plan, identify gaps in funding and mobilizing MPLAD funds to create additional resources specifically from CSR initiatives of various corporate houses.
- District Collectors will carry ground-level surveys along with monthly review meetings to monitor progress.

Orange Passports

- Ministry of External Affairs has decided to offer orange coloured passport to the travellers who require an emigration check.
- By this ECR status would be issued a passport with an orange-coloured, non-ECR status will continue to get blue passports.
- As per the Emigration Act, 1983, certain categories of Indian passport holders require obtaining an 'Emigration Clearance' for going to certain countries.
- Emigration, as per the Act, means the leaving of India by any Indian citizen with the intent of taking up employment in certain foreign countries.
- Persons who don't have a minimum educational qualification of 10th standard (SSC, Matriculation) will come under ECR category.
- The idea behind the 'ECR' is to ensure the safety of uneducated and unskilled Indian citizens, from the most deprived socio-economic strata, against prevailing legal conditions in certain foreign countries.

Types of passports issued in India

- **Regular Passport -** This has a navy blue cover; it is issued to citizens for ordinary travel like vacations and business trips.
- **Diplomatic Passport -** This has a maroon cover; it is issued to Indian diplomats, top-ranking government officials (joint secretary and above) and diplomatic couriers.
- **Official Passport -** This has a white cover; it is issued to individuals representing the Indian government on official business.

Objectionable Content

- The Ministry of Electronics and IT has highlighted that around 1300 social media URLs were blocked or removed in the last year.
- These were based on the recommendation of a government committee to deal with "objectionable content".
- The Information Technology (IT) Act 2000 and Indian Penal Code provides for dealing with "objectionable content" posted online.
- Blocking is a sovereign power that is given to the government by virtue of Section 69A of the IT Act.
- There are concerns with the parameters on deciding a particular content as 'inappropriate' or 'objectionable'.

Indian Cyber Crime Coordination Centre (I4C)

- The Union Home Ministry is planning to set up the Indian Cyber Crime Coordination Centre in Delhi.
- It would deal with cyber crimes such as financial frauds, circulation of communal and pornographic contents.
- The centre would maintain a list of suspects and the leads generated during investigations in cyber crime cases.
- This would be shared with law enforcement agencies through a "secured internal network".
- The ministry has asked states to establish a similar mechanism in every district.
- The ministry has also released a sum of Rs 83 crore in this regard.
- This would fund the setting up of a cyber forensic training laboratory-cum-training centre for police officials in each state.

Universal Immunization Programme

- Universal Immunization Programme was launched in 1985.
- The program now consists of vaccination for 12 diseases:
    1) tuberculosis
    2) diphtheria
    3) pertussis (whooping cough)
    4) tetanus
    5) poliomyelitis
    6) measles
    7) Hepatitis B
    8) diarrhoea
    9) Japanese Encephalitis
    10) Rubella
    11) Pneumonia(Heamophilus Influenza Type B)
    12) Pneumococcal diseases (Pneumococcal Pneumonia and Meningitis)
- The Indradhanush mission, launched in 2014, is to fast track the universal immunization programme.
- The mission aims at increasing the immunisation coverage to 90% by 2018.

CWC

- Central Water Commission is a premier Technical Organization of India in the field of Water Resources.

- It is presently functioning as an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation.
- The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development.
- It also undertakes the investigations, construction and execution of any such schemes as required.

First direct women SC Judge

- The Supreme Court Collegium led unanimously recommended the name of senior advocate Indu Malhotra for appointment as a judge of the Supreme Court.
- Indu Malhotra will be the first woman lawyer to be directly recommended from the Bar to Supreme Court judgeship.
- This is the first time in history that a woman advocate has been recommended for direct elevation from the Bar to a Supreme Court judgeship.
- If appointed, Ms. Malhotra would be only the seventh woman judge in the Supreme Court's 68-year-old history.

Appointment of SC judges

- The Chief Justice of India and the Judges of the Supreme Court are appointed by the President (on the recommendation of the collegium) under clause (2) of Article 124 of the Constitution. (Collegium has not been mention in the constitution).
- A person to be appointed as a judge of SC should have following qualifications
  1. He/She should have been judge of a high court (or high courts in succession) for five years.
  2. He/She should have been advocate of a High court (or High courts of succession) for ten years.
  3. He/She should be a distinguished jurist on the opinion of president who is recommended by the collegium.
- Constitution has not prescribed a minimum age for appointment as a judge of the SC, but he/she can hold office until the age of 65 years.
- Constitution has not fixed the tenure of SC judge.

Impeachment of a SC judge

- Recently four Supreme Court judges went public with charges against Chief Justice of India.
- According to constitution a judge of the SC can be removed from his office by an order of the president.
- The president can issue the removal order only after an address by parliament has been presented to him in the same session for such removal.
- The address must be supported by special majority of each house of the parliament (i.e. a majority of the total membership of that house and a majority of not less than 2/3rd of the members of that house present and voting).
- Article 124 (4) specifies the grounds of removal as proved misbehavior or incapacity.
- So far no SC judge has been impeached in India.

Ancient Monuments and Archaeological Sites

- Parliament has recently passed Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017.
- The Bill permits construction of public works in 'prohibited areas' for public purposes.
- The Act defines a 'prohibited area' as an area of 100 meters around a protected monument or area.

RTE amendment bill 2017

- The Right of Children to Free and Compulsory Education (Second Amendment) Bill, 2017 is yet to be passed.
- The Right to Education Act, 2009 prohibits detention of children till they complete elementary education i.e., class 8.
- The Bill amends this provision to state that a regular examination will be held in class 5 and class 8 at the end of every academic year.
- If a child fails the exam, he will be given additional instruction, and take a re-examination.
- If he fails in the re-examination, the relevant central or state government may decide to allow schools to detain the child.

National Tobacco Control Policy

- Union government is planning to propose a policy for enforcing various provisions of the Cigarettes and Other Tobacco Products.
- As of now Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution Act, 2003 (COTPA 2003), lies with the States/Union Territories.
- At present there is a National Tobacco Control Programme (NTCP) with one objective of ensuring effective implementation of the provisions under COTPA, 2003.
- There are State and District Level Coordination Committees under NTCP to oversee its implementation.

Labelling Organic Products

- The Food Safety and Standards Authority of India (FSSAI) had issued regulations that required food companies selling organic produce to get certified from either one authority.
- Certificate issuing authorities will be National Programme for Organic Production (NPOP) or the Participatory Guarantee System for India (PGS-India).
- Companies could also get a voluntary logo from the FSSAI that marked its produce as 'organic.'
- It will be implemented from July 2018, any company that claims to sell organic food and not sticking to standards can be prosecuted.

Prevention of Atrocities acts

- Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 is an act of parliament.
- It falls within the provisions of Article 17 of the constitution, enacted for preventing atrocities against members of SC/ST
- It also provide special courts for the trial of such offences as well as relief and rehabilitation of the victims of atrocities.
- The PoA Act extends to the whole of India except Jammu & Kashmir, and responsibility for its implementation rests with State Governments.

GOVERNMENT INITIATIVES

NARI

- NARI is an online portal developed by the Ministry of Women and Child Development.
- The portal will provide women citizens with easy access to information on government schemes and initiatives for women.
- It provides links to the Ministries, Departments and autonomous bodies offering the schemes as well as easy access to online applications and grievance redressal.

Star Rating for Garbage Free Cities

- Swachh Bharat Mission-Urban has Launched Smart Star-Rating for Garbage Free Cities
- The star-rating initiative will be rating cities on a 7-star rating system based on multiple cleanliness indicators for solid waste management.
- The rating will include Door to Door Collection, source segregation, scientific processing of waste, plastic waste management, dump citizen grievance redressal system etc.
- Further city should be ODF (Open Defecation Free) before it could be given rating of 3 star or above.
- Cities will need to get recertified themselves every year to retain their star-status.

Bharat ke Veer

- Bharat ke Veer" is an online portal in which any person can make fiscal contributions to assist the families of martyrs of the Central Armed Police Forces (CAPF).
- CAPF includes Assam rifles (AR), Border security force (BSF), National security guards(NSG), Central industrial security force (CISF), Central reserve police force (CRPF) , Indo-Tibetan border police force (ITBT), National disaster response force (NDRF), Sashastra Seema Bal (SSB).
- Through this portal one can donate directly to individual Martyrs account (up to max of Rs 15 lakhs) or may donate to the Bharat Ke Veer corpus fund.
- Bharat Ke Veer corpus would be managed by a committee made up of eminent persons of repute and senior government officials, in equal number, who would decide to disburse the fund equitably to the brave hearts family on need basis.

Institutions of Eminence

- To improve performance of Indian higher educational institutions in the world rankings union government has proposed "Institutions of Eminence".
- Educational institutes which wish to become a part of Institutes of Eminence need to submit a proposal providing their tangible action plan and milestones that they would work to achieve in a period of 5 years as well as 15 years.
- The Institution of Eminence will be ranked under National Institutional Ranking Framework and International Ranking index of repute.

National Institutional Ranking Framework

- The National Institutional Ranking Framework (NIRF) was approved by the MHRD and launched in 2015.
- This framework outlines a methodology to rank institutions across the country.
- The methodology involves various parameters for ranking universities and institutions such as
  1. Teaching, Learning and Resources.
  2. Research and Professional Practices.
  3. Graduation Outcomes.
  4. Outreach and Inclusivity.
  5. Perception.

Maitreyi Yatra

- It is an exclusive student exchange programme for J&K organized by Ministry of Human Resource development.
- It provides a good opportunity for the youth of J&K to be acquainted with culture, language and development story of different parts of the country.

Jal Marg Vikas Project (JMVP)

- JMVP was announced by union government to enable commercial navigation of at least 1500 tonne vessels on the Ganga River.
- The project envisages the development of waterway between Allahabad and Haldia (NW-1) on the Ganga River.
- It includes the development of fairway, multi-modal terminals, strengthening of open river navigation technique, conservancy works, and modern river information system.
- The project is funded by the World Bank.
- It is carried out by the Union Ministries of Road Transport & Highways, Shipping and Water Resources, River Development & Ganga Rejuvenation.

Saksham

- Saksham is a capacity building program under the Ministry of Rural development.
- It is a training module which focuses on the use of Remote Sensing and GIS tools for project planning and monitoring components like watershed, groundwater and geohydrology.
- It is not to be confused with project Saksham of the Railway Ministry.

Project Saksham

- It is the nation's largest time-bound "Upskilling" exercise for its employees to boost their efficiency.
- Under Project Saksham, all employees in each zone will be put through a week's training in skills and knowledge relevant to their work area.

Geo-MGNREGA

- Ministry of rural development has implemented Geo-MGNREGA.
- It is a GIS based solution to visualize, analyse and explore MGNREGS asset related data.
- Under this program, geo-tagging is being carried out in three stages viz. Before start of the work, During the work and On completion of work.

SECURE

- The Ministry of rural development has adopted the Software for Estimate Calculation Using Rural Rates for Employment (SECURE).
- It aims to improve quality of works through detailing of technical specifications, tasks and workflows.

- All estimates under MGNREGS will be generated with the use of SECURE (software) from the Programme's Management Information System with effect from 1st April, 2018.

Accessible India Campaign (AIC)

- It is a nationwide flagship campaign of the Department of Empowerment of Persons with Disabilities (DEPwD) under Ministry of Social Justice and Empowerment.
- The aim of the Campaign is to make a barrier free and conducive environment for differently abled all over the country.
- For creating universal accessibility for differently abled persons the campaign has been divided into three verticals:
  1. Built Environment.
  2. Transport.
  3. Information & Communication Technology (ICT) ecosystem.
- This campaign is in line with UNCRPD (UN Convention on the Rights of Persons with Disabilities) to which India is a signatory.

Nirman Samvaad

- A one-day Mega Conclave called 'Nirman Samvaad', a first ever interaction between the Ministry of Railways and the Construction Industry concluded recently.
- It was a major event aimed at taking measures to ensure expeditious implementation of ambitious Railway Infrastructure Development Plans.
- The Conclave was organized by Rail Vikas Nigam Ltd. (RVNL), a dedicated arm of Ministry of Railways for fast track implementation of railway projects.

e-Samvad

- **e-Samvad** is an online portal to provide a platform for NGOs and Civil Societies to interact with the Ministry of Women & Child Development.
- Through e-Samvad, NGOs and civil society can provide their feedback, suggestions, put up grievances, share best practices which will help in formulation of effective policies.

Operation Digital board

- The Central Advisory Board of Education (CABE) recently passed a resolution to take steps towards Operation Digital Board.
- The idea of Operation Digital Board is aimed at providing better digital education in all schools.
- These steps will be on the lines of Operation Blackboard of 1987, which was started with the purpose of providing minimum basic facilities to all primary schools.
- This will offer new opportunities and ways of teaching and learning in schools.
- CABE is an advisory body under the Ministry of Human resource Development.

Swayam Prabha

- The Swayam Prabha is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.
- The channels cover higher education, school education and assist the students (class 11th & 12th) prepare for competitive exams.
- The contents are provided by IITs, UGC, IGNOU, NCERT and NIOS.
- Information and Library Network (INFLIBNET), an autonomous Inter-University Centre (IUC) of UGC maintains the web portal.
- INFLIBNET is involved in creating infrastructure for sharing of library and information resources and services among Academic and Research Institutions.
- It allows students to choose the time of their convenience for learning.
- It widens the scope of SWAYAM, an online education platform which covers teachers training, graduate and post graduate courses.

Rashtriya Rail Sanraksha Kosh

- In the Budget 2017-18, an exclusive fund called "Rashtriya Rail Sanraksha Kosh" (RRSK) has been made.
- The fund has a corpus of ₹1 lakh crore over a period of 5 years.
- This fund will be used for giving a major boost to safety related works for improving safety of tracks, rolling stock and proliferation of other safety technologies and training of staff.

Highest ranked SMART city

- Surat has emerged as India's highest ranked smart city with the largest number of projects implemented and completed under the Smart City Mission.
- Surat is closely followed by Pune at number two, Visakhapatnam, Udaipur, Bhubaneswar, Ahmedabad, Bhopal, Coimbatore, Jaipur and Indore.
- Almost all these cities have planned command and control centres to control urban services like city-wide Wi-Fi network, safety and security, citizen feedback management, integrated traffic management, parking and other citizen services.

UMANG App

- UMANG (Unified Mobile Application for New-age Governance) is envisaged to make e-governance.
- It is developed by Ministry of Electronics and Information Technology (MeitY) to drive Mobile Governance in India.
- It provides a unified approach where citizens can install one application to avail multiple government services.
- The app services include Aadhaar, DigiLocker, and Bharat Bill Payment System (BBPS). Etc.

Hunar Haat

- 5th "Hunar Haat" trade fair was organised at Mumbai by Minority Affairs Ministry.
- This Expo is organised under "USTTAD" scheme in different parts of the country.
- "Hunar Haat" have become a successful mission to provide employment and opportunities for artisans, craftsmen and culinary experts in national, as well international markets.

Jal Mahotsav

- Third Jal Mahotsav has been celebrated in Hanuwantiya Island in Khandwa district of Madhya Pradesh under the aegis of Indira Sagar Dam project (that forms the largest reservoir in India).
- It is India's biggest water carnival through which is organised every year in Hanuwantiya.
- Jal Mahotsav promotes rural economies, and transforms hinterlands towards local economic development.

Sankalp Programme

- Pre-Retirement Counselling (PRC) Workshop 'Sankalp' for the retiring employees of Ministries/Departments was organised by the Department of Pensions & Pensioners' Welfare (DOP&PW).
- The aim of this program is to counsel retiring employees for joining into advisory bodies of their respective offices and also to dispose of grievances.
- DOP&PW has so far conducted Pre-Retirement Counselling for more than 3000 employees under the Sankalp project.
- A web portal for "Sankalp' programme has also been launched, for Pensioners, Pensioner Associations and NGOs to avail the services.
- This programme is not to be confused with "Sankalp Se Siddhi" Scheme.

Sankalp Se Siddhi

- Sankalp Se Siddhi (Attainment through Resolve) programme is a new initiative launched by union government for a New India movement from 2017 to 2022.
- It was launched on the 75th anniversary of Quit India movement.
- New India movement 2017-2022 aims to free up the country from many social evils such as poverty, corruption, terrorism, filth and others by creating awareness among the people.

Stree Swabhiman

- Stree Swabhiman is an initiative under Ministry of Electronics and Information Technology for women's health and hygiene.
- It aims to create a sustainable model for providing adolescent girls and women an access to affordable sanitary products by leveraging Common Service Centres (CSCs) established under digital India.
- The initiative is driven by awareness and personalised outreach by women entrepreneurs who produce and market sanitary napkins themselves.

Project Sunrise

- Project Sunrise was launched in 2015, by union government to tackle the increasing HIV prevalence in the North-Eastern states.
- It aims to provide treatment and care facilities free of cost for people living with HIV/AIDS and create more awareness about the disease in these N-E states.

- The project is a five-year programme (2015-2020) aimed at complementing the ongoing National AIDS Control Programme (NACP).
- The project has been sponsored by US based Centre for Disease Control.

Cyber Surakshit Bharat

- Ministry of Electronics and Information Technology (MeitY), announced the Cyber Surakshit Bharat initiative.
- It aims to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
- Cyber Surakshit Bharat is the first public-private partnership of its kind and will leverage the expertise of the IT industry in cybersecurity.
- Cyber Surakshit Bharat aims to conduct a series of training programs for departments in State and Union governments, Public Sector Banks, and technical arms of the Air Force, Army and Navy.

DHARMA App

- Dam Health and Rehabilitation Monitoring Application (DHARMA) will be launched during the international dam safety conference.
- The app will serve as a web tool to digitize all dam related data effectively.
- It will help to document authentic asset and health information pertaining to the large dams in the country, enabling appropriate actions to ensure need based rehabilitation.

DRIP

- Dam Rehabilitation and Improvement Project (DRIP) was implemented by Ministry of Water Resources (MoWR) with assistance from the World Bank.
- The Central Dam Safety Organisation of Central Water Commission is coordinating and supervising the Project implementation.
- The main objectives of DRIP are
  1. To improve the safety and performance of selected (223 dams across 7 different states) existing dams in a sustainable manner.
  2. To strengthen the dam safety institutional setup in participating states as well as at central level.
- The Seven DRIP States includes Jharkhand, Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu, and Uttarakhand.

Schemes to Promote Milk Production

- Government of India is implementing Rashtriya Gokul Mission, National Dairy Plan- I to supplement the efforts of States in promoting milk production.
- Rashtriya Gokul Mission has been initiated with the aim of development and conservation of indigenous bovine breeds thereby enhancing milk production and productivity.
- National Dairy Plan-I has focus on development and conservation of indigenous breeds of cattle and buffalo through implementation of progeny testing and pedigree selection programme.
  i. 6 indigenous breeds of cattle (Gir, Sahiwal, Rathi, Kankrej, Tharparkar and Hariana)
  ii. 6 buffalo breeds (Murrah, Mehsani, Jaffarabadi, Nili Ravi, Pandharpuri and Banni)

Margdarshan

- Margadarshan scheme is under the purview of All India Council for Technical Education (AICTE), a national level apex advisory body under Ministry of Human Resource and Development.
- The scheme aims to provide mentoring to institutes by a well performing Institute.
- Institutions of repute will act as a mentor with its existing facilities to serve as the hub to guide and disperse knowledge to 10 technical institutions.
- It will allow for information sharing, such as technical education, research and sharing of resources to encourage best practices.
- Mentor institute also provide services to faculty for self improvement.
- Government owned, aided and self financed institutes and universities approved by AICTE can participate.
- Duration of the project shall be of 3 years.
- The fund dispersed by AICTE shall be utilized to conduct programmes for technical up liftment of the faculty members and shall not be used for purchase of equipment like computer, laptop etc.

USTTAD Scheme

- Upgrading the Skills and Training in Traditional Arts/Crafts for Development (USTTAD) is a scheme of Ministry of Minority Affairs.
- It aims at preserving and promoting the rich heritage of traditional arts & crafts of the Minority communities.

- It also envisages at boosting skill of craftsmen, weavers and artisans who are already engaged in traditional ancestral work.

Pradhan Mantri Urja Ganga

- Jagdishpur-Haldia & Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) project is also known as Pradhan Mantri Urja Ganga.
- The 2,655 km project aims to connect the eastern states to the national gas grid.
- Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal are the beneficiary states.
- The project will usher Industrial development in East India by supplying environmentally clean natural gas to fertiliser and power plant, refineries, steel plants and other industries.
- It also provides clean energy to households and transportation in the cities en-route the pipeline.
- State-run gas utility GAIL India has recently placed orders for 400-km of pipeline.
- With these awards, pipe supply orders for 2,100 km of the project have been placed.

INSPIRE

- Innovation in Science Pursuit for Inspired Research (INSPIRE) is sponsored and managed by Ministry of Science & Technology.
- The basic objective of INSPIRE is to attract young talents to the study of science and build the required critical human resource pool for strengthening R & D base.
- The programme does not conduct any competitive exams for identification of talent at any level.
- It relies on the existing educational structure for identification of talent.
- The programme has three components:
    1. Scheme for Early Attraction of Talent- (SEATS)
    2. Scholarship for Higher Education- (SHE)
    3. Assured Opportunity for Research Careers - (AORC)

Pradhan Mantri Krishi Sinchai Yojana (PMKSY)

- This scheme has been formulated with the vision of extending the coverage of irrigation and improving water use efficiency in a focused manner.
- It focuses on end to end solution on source creation, distribution, management, field application and extension activities.
- The scheme now comes under Ministry of Agriculture and farmer's Welfare.
- PMKSY has been formulated amalgamating schemes of
    1. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR),
    2. Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR).
    3. On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC).

Atal Pension Yojana

- Recently the subscriber's base under the Atal Pension Yojana (APY) has reached more than 8 million.
- APY is available to all citizens of India in the age group of 18-40 years.
- Under the scheme, a subscriber would receive a minimum guaranteed pension of Rs.1000 to Rs.5000 per month, depending upon his contribution, from the age of 60 years.
- The same pension would be paid to the spouse of the subscriber and on the demise of both the subscriber and spouse, the accumulated pension wealth is returned to the nominee.
- The APY Scheme follows the same investment pattern as applicable to the NPS contribution of Central Govt employees.
- APY can be opened through banks, Postal departmentand also through a complete digital channel through eNPS platform.

INTERNATIONAL ISSUES AND EVENTS

1stPIO Parliamentarian Conference

- The 1st Persons of Indian Origin (PIO) Parliamentarian Conference was held in New Delhi.
- This conference was hosted by the Ministry of External affairs.
- PIOs are honoured through this conference as have an important position in the Action Agenda till 2020, drafted by the NITI Aayog.
- Parliamentarians of Indian Origin from over 20 Democracies of the World gathered to share Parliamentary best practices and mutually enrich each other with their experiences.

US Special Watch list

- US places Pakistan on 'Special Watch List' for 'severe violations' of religious freedom, by this Pakistan was the first country to be put under the newly-formed list.
- US has a separate list for the countries which violates International religious freedom act known as 'Countries of Particular Concern' (CPC).
- The Special Watch List is for countries that engage in or tolerate severe violations of religious freedom but may not rise to the level of the CPC.
- The Special Watch List designation is being seen as a step below designating it as Country of Particular Concern, which would have automatically kicked in economic and political sanctions.

Delhi declaration

- It was adopted at the recently concluded ASEAN-India Commemorative Summit.
- ASEAN-India Commemorative Summit was held to celebrate the 25th anniversary of the establishment of sectoral dialogue between two sides.
- The declaration urges countries to strengthen cooperation and collaboration in combating transnational crimes, including people smuggling, trafficking in persons, illicit drug trafficking, cybercrime.

SAREX – 18

- It is a joint search and rescue exercise between India and Japan to help increase mutual understanding in Anti-Piracy operations.
- During the exercise, helicopters of the Japan and Indian Coast Guard will perform cross landing operations to improve compatibility between the two forces.
- This year, it will be held in Chennai.
- Japanese coast guard ship "Tsugaru", a patrol vessel with helicopters will participate in this exercise.

World Future Energy Summit

- The World Future Energy Summit (WFES) is an annual event, dedicated to advancing future energy, energy efficiency and clean technologies.
- It will be held in Abu Dhabi every year and it includes a summit, an exhibition, Round Table Discussions, the Young Future Energy Leaders program, corporate meetings and social events.
- International policy makers, industry leaders, investors, experts, academia, intellectuals and journalists will be participating the summit.
- International Solar Alliance participated in the recently held WFES.

International Solar Alliance (ISA)

- In accordance with CoP21 Paris Declaration ISA was established as a treaty based international inter-governmental alliance.
- It is alliance of 121 solar resource rich countries lying fully or partially between the Tropics of Cancer and Capricorn.
- The Headquarters is in India with its Interim Secretariat being set up in Gurgaon.
- The agreement will become operational after at least 15 countries have ratified it.
- So far 19 countries have ratified and 48 countries have signed the ISA Framework Agreement.
- International Solar Alliance (ISA) Framework Agreement entered into force thereby making ISA a de jure treaty based international intergovernmental organisation.

Bharat Parv

- The 'Bharat Parv' is an event organized annually at Red Fort, Delhi from 26th to 31st January to commemorate Republic day.
- The prime objective of organizing the event is to generate a patriotic mood, promote the rich cultural diversity of the country and to ensure wider participation of the general public.
- The Ministry of Tourism has been designated as the nodal ministry for this event.

Equal Pay at Workplace

- Iceland becomes the first country to legalise equal pay at workplace

- Iceland imposed a new law under which all kinds of firms will have to prove that they pay equally to all their employees, irrespective of gender

Australia Group

- Recently the Australia Group decided to admit India as its 43rd participant.
- India's entry would contribute to international security and non-proliferation objectives.
- The Australia Group (AG) is an informal forum of countries which, seeks to ensure export controls over development of chemical or biological weapons.
- By this AG nations would fulfil their obligations under the Chemical Weapons Convention and the Biological and Toxin Weapons Convention to the fullest extent possible.
- The other grouping like Australia group are MTCR, Wassenaar arrangement and NSG.

Mission Innovation

- The initiative was launched in the Cop21 UNFCCC in 2015
- India is member nation of the global initiative
- The objectives of initiative are,
  1. To accelerate public and private clean energy innovation
  2. To address climate change,
  3. Make clean energy affordable to consumers, and
  4. Create green jobs and commercial opportunities
- It will help in achieving India's INDC of increasing the share of clean and renewable energy in the energy basket

ECONOMY

Milk under Price Stabilisation Fund

- To create additional domestic demand for milk the agriculture ministry has sought inclusion of the milk under the Price Stabilisation Fund scheme.
- If milk is included in the Price Stabilisation Fund, it would enable states to distribute milk through the public distribution system.
- The Price Stabilization Fund (PSF) was set upunder the Department of Agriculture, Cooperation & Famers Welfare (DAC&FW) and later transferred to Department of Consumer Affairs (DOCA).
- It aims to help regulate the price volatility of important agri-horticultural commodities like onion, potatoes and pulses were also added subsequently.

Sin Cess

- A sin cess is added to products or services that are seen as vices, such as alcohol, tobacco and gambling.
- These types of taxes are levied by governments to discourage individuals from partaking in such activities without making the use of the products illegal.
- General public usually accepts sin taxes because they are indirect taxes that only affect those who use the products.
- Under the GST regime, a cess is levied on luxury, demerit and sin goods to make good the loss suffered by the states on account of roll out of the new indirect tax regime.
- Sin cess in India is levied on top of the highest tax rate of 28% on these goods.

NABARD

- The Parliament has recently passed the National Bank for Agriculture and Rural Development (Amendment) Bill, 2017.
- The Bill seeks to amend the NABARD Act, 1981 which establishes NABARD by transferring the agricultural credit functions of RBI and refinance functions of the then Agricultural Refinance and Development Corporation (ARDC).
- The amendment bill seeks to increase the authorized capital of the Bank to 30,000 crore rupees from 5,000 crore rupees.
- Currently the Central government is holding 99.60% share of the bank and the rest is with RBI (0.40%).
- The capital can be increased further by the government in consultation with the RBI.

- NABARD is responsible for providing and regulating facilities like credit for agricultural and industrial development in the rural areas.
- It provides both direct finance (lending directly to customers) and refinance (lending to financial institutions to provide loans to customers)

Direct Finance	Refinance
i. Loans for Food Parks and Food Processing Units in Designated Food Parks ii. Loans to Warehouses, Cold Storage and Cold Chain Infrastructure iii. Rural Infrastructure Development Fund iv. Long Term Irrigation Fund v. Alternative Investment Fund	i. State Cooperative Banks and Regional Rural Banks for providing short term agricultural loans ii. Cooperative Banks - State, District, Primary Urban; RRB, Commercial Banks, Agriculture Development Finance Companies, NBFC for providing credit for investment activities in agriculture and allied activities.

The Negotiable Instruments (Amendment) Bill, 2017

- The Bill was introduced in Lok Sabha recently.
- It seeks to amend the Negotiable Instruments Act, 1881.
- A negotiable instrument is a document that promises payment to a specified person. E.g Cheque
- The Act defines promissory notes, bills of exchange, and cheques.
- It also specifies penalties for bouncing of cheques, and other violations with respect to such negotiable instruments.

New Savings Bonds

- The Centre recently announced the introduction of 7.75% savings bonds.
- It will have a maturity of seven years carrying interest at 7.75% per annum payable half-yearly.
- There will be no maximum limit for investment in the bonds.
- At the same time, these bonds are not tradeable in the secondary market and are not eligible as collateral for loans from banking institutions/non-banking financial companies.
- Interest on the bonds will be taxable under the Income-tax Act, 1961.
- The bonds will, however, be exempt from wealth tax under the Wealth Tax Act, 1957.
- The bonds are open to investment by individuals, including joint holdings and Hindu Undivided Families (HUFs).
- NRIs are not eligible to invest in these bonds.

Credit Scores

- A credit score determines how creditworthy a person is and helps banks and financial institutions decide on loans.
- In India, the scores are issued by credit reporting agencies such as CIBIL, Equifax, Experian, Etc.
- These agencies are regulated by the RBI and collect data from banks on their loans and come up with credit scores through use of algorithms.
- The data is updated frequently. Credit scores in India range from 300-900.
- A credit report may be obtained for free once a year from every credit reporting agency.

ENVIRONMENT

National Clean Air Programme

- Ministry of Environment, Forest and Climate Change has formulated National Clean Air Programme (NCAP) as a medium term national level strategy to tackle the increasing air pollution problem across the country.
- The overall objective is to ensure a comprehensive management plan for prevention, control and abatement of air pollution.
- The NCAP focuses on collaborative and participatory approach covering all sources of pollution and coordination between relevant Central Ministries, State Governments, local bodies and other stakeholders.
- A separate component on 'Technology Assessment Cell' has been envisaged under NCAP to evaluate the technologies for prevention, control and abatement of air pollution.

Ant Species in Andaman

- Scientists have discovered the new species Tetramorium krishnani and Tetramorium jarawa in Havelock Island, a part of the Andaman archipelago.
- The ant species are endemic to the Andaman Islands.
- They dwell in leaf litter in the evergreen forests of the Island.
- The species are named in honour of late scientist K.S. Krishnan, and after the Jarawas, an indigenous people of the islands, who are inhabited the islands.

Night Frogs

- Frogs belongs to the genus Nyctibatrachus are commonly known as night frogs.
- They are found only in the Western Ghats mountain range.
- Scientists have recently discovered new night frog "Mewasinghi", belonging to Nyctibatrachus from Malabar Wildlife Sanctuary, Kozhikode.
- It is found in a small stream running along the Peruvannamuzhi dam.
- It is closely relative to Athirappilly night frog (found south of the Palakkad Gap in Thrissur and Idukki) and the Kempholey night frog (found in the northern Western Ghats of Kerala and Karnataka).

New Ginger Species

- Scientists have discovered two new species of Ginger in Manipur and Nagaland.
- They were found in easternmost districts bordering Myanmar.
- Both the plants are from the family of Zingiberaceae, to which the commonly found Ginger (Zingiber officinale) belongs.
- The species discovered in Nagaland, is an epiphytic plant and grows on tall trees.
- The species from Manipur was found growing in rock crevices, boulders and humus rich soil in the Shirui Hills.

Humpback Whale

- The humpback whale is one of the four species of baleen whales occurring in Indian waters.
- Characteristic baleen plates and paired blowholes help distinguish baleen whales from toothed whales.
- These whales strain huge volumes of ocean water through their baleen plates to capture food
- Humpback Whales migrate annually from the summer feeding grounds near the poles to warmer winter breeding waters closer to the Equator.
- They are found near coastlines, feeding on tiny shrimp-like krill, plankton, and small fish.
- The Arabian Sea humpback whales are the only sedentary whales in the world, feeding and breeding in the same area.
- Researchers from Environment Society of Oman have tagged a female humpback whale named as "Luban" to track its movement via satellite.
- It started its journey from Oman, heading towards east and reached off the coast of Goa after two months.
- Even though the IUCN Red List categorises humpback whale as of 'least concern', it recognised the distinct Arabian Sea population as 'endangered' in 2008.

CFC and Ozone Depletion

- Chlorofluorocarbons(CFCs) are long-lived man- made chemical compounds that eventually rise into the stratosphere.
- There they are broken apart by the Sun's ultraviolet radiation, releasing chlorine atoms that go on to destroy ozone molecules.
- Recent findings proved an international ban on CFCs, has resulted in about 20% less ozone depletion.
- The Montreal Protocol and its amendments have banned the use of ozone destroying chemicals and the rate of ozone depletion seems to have slowed.
- Scientists used data from the Aura satellite to determine how ozone and other chemicals have changed year to year.
- Aura is a NASA mission to study Earth's ozone, air quality, and climate and conduct research on the composition, chemistry, and dynamics of Earth's atmosphere.

Nayachar Islands

- Nayachar is a newly emerged island with mangrove ecosystem in the middle estuary of the Hooghly River in West Bengal.
- This land mass was created in the Indian Sunderbans by river silt deposits, and remained largely submerged, rising occasionally above the water level.
- Till 1990 it was completely barren, with hardly any plant or animal species, at present there are 151 animal species on the island, making it a rare case in ecology.
- The natural succession of species on the island has been aided by the inundation of water during tides, and the soil brought from other places by fishermen.

India's State Action plan on Climate Change

- India's State Action Plan on Climate Change is implemented by Ministry of Environment, Forest and Climate change.
- It supports the integration of national climate change goals into subnational policies.
- India has committed to meet its current target of 33% reduction in emission intensity of the 2005 level by 2030, by generating 40% of its energy from renewables.
- States are important for the realisation of this goal and they are considered as Sub national modules.
- The Under2Coalition, a MoU by subnational governments to reduce their greenhouse gas (GHG) emissions towards net-zero by 2050, is generating a unique precedent for bold climate leadership, with its member states and regions surpassing 200 in number.
- Currently, Telangana and Chhattisgarh are signatories to this pact from India.

Keoladeo National Park

- It is Located in Bharatpur district, the eastern part of Rajasthan.
- The park is spread over nearly 30 sq.km which comprises many artificial and seasonal lagoons.
- Keoladeo attracts several migratory birds that make the region their breeding and wintering grounds.
- It is an UNESCO World Heritage and also a Ramsar site.
- The Siberian crane is one of the rare species that was spotted here till about the turn of the century.
- It habitat for nearly 365 species of birds, including raptors and waterfowls.
- Animal such as Jackals, Sambar, Nilgai, wild cats, hyenas, wild boar, porcupine and mongoose can be found in the region.

No Development Zone

- The River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 provides that the bank of River Ganga, its tributaries or the active flood area of them shall be construction free zone.
- It also prohibits construction of any structure for residential or commercial or industrial or any other purposes.
- The National Green Tribunal has directed to identity and demarcate the flood plains of river Ganga from Haridwar to Unnao.
- Once the demarcation of flood plain is completed, 100 metres from the edge of the river would be designated as no development/construction zone.
- Further, Ministry of Environment Forests & Climate Change also circulated draft notification on "River Conservation Zones" in 2015 to all States.
- Ministry of Water Resources, River Development & Ganga Rejuvenation has taken up the matter with all the states. Only Uttarakhand, Rajasthan and Manipur have enacted the Legislation.

Intergovernmental Panel on Climate Change (IPCC)

- The IPCC is an international body for the assessment of climate change, it was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO).
- The IPCC reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.
- It does not conduct any research nor does it monitor climate related data or parameters.

Reduction in Ozone Depletion

- The scientists have observed for the first time that levels of ozone-destroying chlorine are declining, resulting in less ozone depletion.
- There has been an international ban on chlorine-containing human made chemicals called chlorofluorocarbons (CFCs).

- Measurement show that this has resulted in about 20% less ozone depletion during the Antarctic winter than there was in 2005.
- Stratospheric ozone protects life on the planet by absorbing potentially harmful ultraviolet radiation that can cause skin cancer and cataracts,
- CFCs are long-lived chemical compounds that eventually rise into the stratosphere.
- In the long months of polar winter, chemical reactions take place in Polar Stratospheric Clouds that could not take place anywhere else in the atmosphere.
- These reactions convert the inactive chlorine in CFCs into more active forms, especially chlorine gas (Cl_2).
- When the sunlight returns to the South Pole in October, UV light rapidly breaks the bond between the two chlorine atoms, releasing free chlorine.
- Chlorine atoms go on to destroy ozone molecules, resulting in Antarctic ozone hole.
- The measurements are made by Microwave Limb Sounder (MLS) aboard the Aura satellite, which has been monitoring continuously since 2004.

Chiru Goat

- Chiru goat is also known as the Tibetrean antelope.
- It is native of China (Tibet, Xinjiang region) and India (North Eastern Ladakh region) and regionally extinct in Nepal.
- Its numbers and distribution have decreased sharply as a result of commercial hunting for the underfur for making of shawls.
- In India, it is killed for making of the famous Shahtoosh shawls, which is renowned for its quality from Srinagar.
- In 2017, it has been included in "Near Threatened" category by IUCN.
- The parliamentary standing committee on science & technology, environment & forests had recommended to the ministry of environment, to conserve and breed the Chiru goat, which can then be given to the shawl makers.
- The motive behind such recommendation is to provide a sustainable livelihood opportunity to the people of Jammu and Kashmir.
- However, Ministry of Environment has ruled out the possibility of conservation breeding citing that it may lead to decline in its population due to commercial poaching.

Nilgiri Marten

- It is a vulnerable and little known carnivorous animal which is endemic to the Western Ghats.
- Nilgiri Marten looks like a civet or a mongoose and it most prefers higher altitudes.
- The present global population of the Nilgiri Marten is estimated below 1000.
- The animal is placed in schedule 2 of the part 2 of the Indian Wildlife (Protection) Act 1972.
- Recent studies shows that Nilgiri marten is thriving in the Pampadum Shola National Park located on the southern portion of Western Ghats.

Shola forests

- 'Sholas' are patches of evergreen tropical and subtropical moist broadleaf forests.
- It is found in Southern India, particularly in the regions of Nilgiri, Palani Hills and Annamalai Hills.
- The Western Ghats and associated ranges in the states of Karnataka, Kerala and Tamil Nadu.
- The main varieties of Trees in this type of forest are Zenker, bishop wood, Indian mahogany, gular fig tree etc.

ITEWS

- Indian Tsunami Early Warning System (ITEWS) is established by Indian National Centre for Ocean Information Services (INCOIS), under ministry of earth sciences.
- The ITEWS comprises a real-time network of seismic stations, tsunami buoys and tide gauges to detect tsunami genic earthquakes and to monitor tsunamis.
- It detects globally occurring earthquakes of 5 magnitude and above within 5-10 minutes of the event.
- The system is capable of displaying ticket messages related to tsunami events and triggering of a built-in siren alert system audible for up to 1 km.

UN Environment Management Group (EMG)

- The EMG is a UN system-wide coordination body on environment and human settlements.
- Its members include the secretariats of the multilateral environmental agreements (MEAs) and other specialized agencies, programmes and organs of the UN.
- Representatives of intergovernmental bodies, civil society and international non-governmental organizations can be invited to contribute.
- The EMG works through technical meetings, Issue Management Groups and task forces.

Automated Ocean Pollution Observation System

- Union government has planned to setup an automated ocean pollution observation system.
- These systems will be installed in coastal areas of West Bengal, Goa, Mumbai, Kochi, Vishakhapatnam and Chennai.
- It will help keep a tab on ocean pollution levels apart and provides insights on how the marine system is changing.
- It is an initiative under National Centre for Ocean Information Services (INCOIS), an autonomous body under the Ministry of Earth Sciences.

Sea Turtles in India

- There are five species of seas turtles in Indian waters — **Leatherback, Loggerhead, Hawksbill, Green and Olive Ridley**.
- IUCN Status of these turtles are
    1. Hawksbill- Critically endangered
    2. Green turtle- Endangered
    3. Leatherback- Vulnerable
    4. Loggerhead- Vulnerable
    5. Olive Ridley- Vulnerable
- Mostly these turtles are found in the eastern coast of the Country.
- Often turtle are confused with tortoises. The major difference between the tortoise and sea turtles is that tortoises dwell on land, while turtles live in the water for some or nearly all of the time.

Ban on Peat Coke

- Union environment ministry has placed restrictions on the use and trading of imported petroleum coke in the Delhi and its surrounding region.
- This measure is taken to curb rising air pollution.
- Peat coke is a dark solid carbon material that emits 11 percent more greenhouse gases than coal.

SCIENCE & TECHNOLOGY

SPACE

SOFIA

SOFIA infrared image (5.4, 24, and 37 μm)

Visible light image

- SOFIA, the Stratospheric Observatory for Infrared Astronomy, is the largest airborne observatory in the world.
- It consists of an extensively modified Boeing aircraft carrying a reflecting telescope with an effective diameter of 2.5 meters.
- The observatory is based at NASA's Armstrong Flight Research Center in Palmdale, California.
- The project is implemented by NASA and German Aerospace Center (DLR).
- Many objects in space emit almost all their energy at infrared wavelengths. Often, they are invisible when observed in ordinary visible light.
- Thus SOFIA observes universe in infrared wavelengths to get the expanded views.
- It is preparing for its 2018 campaign for observing Saturn's giant moon Titan.
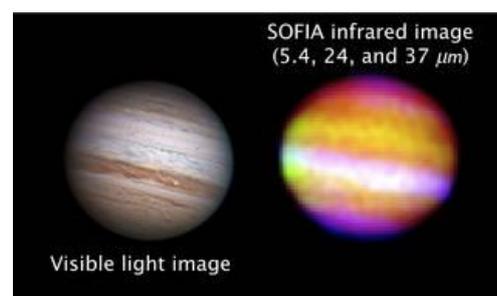
Speed Breeding Technique

- Australian scientists have developed the world's first 'speed breeding' technique that can boost the production of the crop by up to 3 times.
- The technique is inspired by the NASA's experiments to grow wheat in space.
- It involved the use of continuous light on wheat to trigger early reproduction in the plants.
- It has largely been used for research but now is being adopted by industry.

Tabby's Star

- Tabby's star is the "most mysterious star in the universe" as it kept dimming and brightening irregularly, following no pattern.
- Officially called KIC 8462852, the star is 1,000 light years away from the Earth and 1,000 degrees hotter than the Sun.
- There was a 20% decrease in brightness and the dip lasted from five to 80 days.
- A recent report showed that the dimming is caused by ordinary dust particles, the majority of them at a size less than one micrometre.

NASA's Mission to Explore Ionosphere

- NASA has announced two missions to explore the little-understood area of 96 km above Earth's surface.
- The two missions Global-scale Observations of the Limb and Disk (GOLD) and Ionospheric Connection Explorer(ICON) will team up to explore the ionosphere.
- ICON will be in low-Earth orbit, at 560 km above Earth, like a close-up camera while GOLD will be in a geostationary orbit over the Western Hemisphere, about 35,398 km above the planet's surface.
- It will help in full-disk view of the ionosphere and the upper atmosphere beneath it every half hour.

Farthest known Galaxy

- NASA has spotted the farthest known galaxy in the universe, a primitive cluster of stars just 500 million years old.
- The galaxy was named SPT0615-JD.
- Preliminary analysis suggests that the galaxy is less than 2,500 light-years across.

NASA's Kilopower Project

- NASA has invented a small nuclear reactor Kilopower, It can generate a reliable power supply by using uranium-235 reactor core.
- This power system could provide up to 10 kilowatts of electrical power enough to run two average households continuously for at least 10 years.
- This reactor will be used for electronic propulsion systems and for providing safe and plentiful energy for future robotic and human missions for Mars and beyond.

DEFENCE

INS Arihant

- INS Arihant is India's only operational ship submersible ballistic nuclear (SSBN) asset.
- It is its most dependable platform for a second-strike.
- This is because the other options, land-based and air-launched, are easier to detect.
- Arihant has been immobilised after 'accident' 10 months ago
- It can stay undetected deep underwater for long periods and ranges far and wide.
- INS Arihant and other nuclear launch platforms are operationally handled by the Strategic Forces Command.
- They report to the Nuclear Command Authority chaired by the Prime Minister.
- However, over 100 nuclear warheads are not mated with missiles or bombs and remain in civilian custody of the Atomic Energy Department and the DRDO.
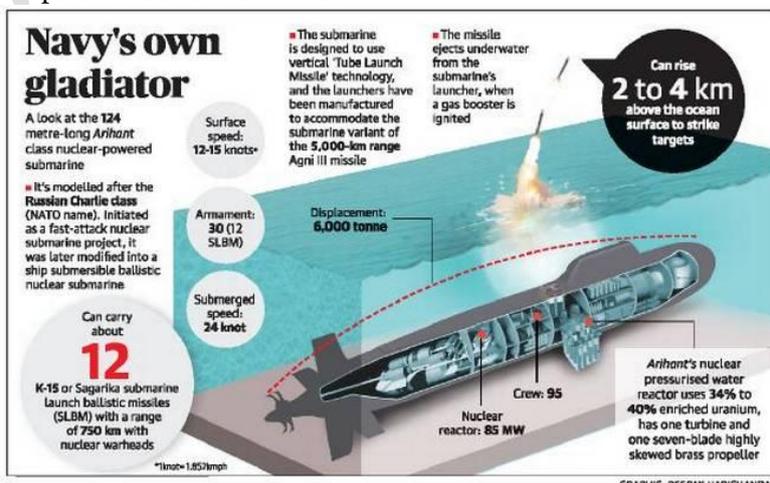
Spike Missile

- India has cancelled a $ 500 million deal to buy 1,600 Spike anti-tank guided missiles from Israel.
- This is because of decision of defence ministry to procure world-class missile from state owned Defence Research and Development Organisation (DRDO) by 2021.
- Spike is a man-portable "fire and forget' missile built by Israel's state-run firm, Rafael Advanced Defence Systems, which can hit moving targets such as a tank.
- It allows the soldier who fires the missile to quickly move for cover.

Barak Missile

- India is now planning a deal for 131 Barak surface-to-air missiles from the Israeli firm coasting around $70 million.
- These missiles are surface to air missiles designed to be used as a ship-borne anti-missile defence system against anti-ship missiles.
- Barak also known as LR-SAM or as MR-SAMis an Indian-Israeli surface-to-air missile (SAM), both maritime and land-based versions of the Barak exist.
- Barak 8 was jointly developed by Israel Aerospace Industries (IAI), India's Defence Research &Development Organisation (DRDO).

KAB-1500 bombs

- India has announced its first proposal for procurement of 240 KAB-1500 bombs,from Russia.
- It is a precision guided weapon which uses laser for precision guidance.
- It will be used in IAF's Sukhoi Su-30MKI fighter jets.
- It is designed to destroy ground targets such as railway lines, ammunition depots, bridges, military facilities and ships.
- The bomb has folding fins that allow it to manoeuvre while being guided to the target.

Akash Missile

- Recently Indian army planned to procure Akash Missiles.
- Akash was developed by the Defence Research and Development Organisation (DRDO) as part of the Integrated Guided Missile Development Programme.
- It is indigenously developed short-range surface-to-air missile (SR SAM) with a range of 25 km.
- It can simultaneously engage multiple targets in all weather conditions and has a large operational envelope from a low altitude of 30 metres to a maximum of up to 20 km.

AGNI- V

- Recently India test-fired Agni-V, an Inter-Continental Ballistic Missile in its final operational configuration.
- Agni V is a nuclear capable missile, which can reach the northern-most parts of China with its strike range of over 5,000-km.
- The missile is over 50-tonne and designed to carry a 1.5-tonne nuclear warhead.
- It is considered to be a credible strategic deterrent against India's aggressive foes.
- It is part of the Agni series surface to surface missiles indigenously developed by DRDO under the Integrated Guided Missile Development Program (IGMDP).

INS Karanj

- The Indian Navy has launched the third Scorpène class submarine Karanj.
- It has been constructed by shipbuilder Mazagon Dock Limited (MDL) with collaboration of French shipbuilding major Naval Group (formerly DCNS).
- The submarine will undergo rigorous tests for the next one year before it is commissioned.

OTHERS

5G technology

- Union telecom ministry had announced 5G technology will be rolled out from 2020.
- 5G promises ultra-reliable, very fast speeds and high bandwidth mobile connectivity and supports massive interconnected devices spread across wide areas like Internet of things (IoT).
- 5G provides peak speeds of 20 times, compared with 4G.
- This would entail accelerating the BharatNet programme for deploying connectivity infrastructures.

Largest prime number

- A very big number over 23 million digits long has discovered to be the "largest known prime number".
- This number was discovered using a software called GIMPS.
- A prime number is a number that can only be divided by itself and by 1. For example: 2, 3, 5, 7, 11, and so on.
- Prime number are used in Cryptography (the study of secret messaging, involves sharing information via secret codes), credit cards, cell phones, all depend on cryptography.

Pratyush

- Pratyush is an array of computers recently unveiled in India.
- It can deliver a peak power of 6.8 petaflops.
- One petaflop is a million billion floating point operations per second and is a reflection of the computing capacity of a system.
- The machines will be installed at two government institutes: 4.0 petaflops HPC facility at Indian Institute of Tropical Meteorology (IITM), Pune & 2.8 petaflops facility at the National Centre for Medium Range Weather Forecast, Noida
- Pratyush is also the fourth fastest supercomputer in the world dedicated for weather and climate research.
- A key function of the machine's computing power would be monsoon forecasting using a dynamical model.
- With the new system, it would be possible to map regions in India at a resolution of 3 km and the globe at 12 km.

Mihir

- Mihir' (meaning 'Sun') a High Performance Computer (HPC) System has been installed at the National Centre for Medium Range Weather Forecasting (NCMRWF).
- This HPC facility will be India's largest HPC facility in terms of peak capacity and performance.
- The new HPC facility is expected to improve the following services:

  1. Weather forecasts for predicting extreme weather events.
  2. High resolution seasonal/extended range forecasts of active/break spells of Monsoon.
  3. Very high resolution prediction of cyclones with more accuracy and lead time.
  4. Ocean state forecasts like marine water quality forecasts and Tsunami forecasts.
  5. Air quality forecasts for various cities.

International Termination Charges (ITC)

- The Telecom Regulatory Authority of India (TRAI) cut termination charges for international incoming calls to Land line and wireless connections.
- International termination charges (ITC) are payable by an international long-distance operator (ILDO), which carries calls from outside the country, to an access provider in the country in whose network the call terminates.
- ITC is one of the source of foreign earnings for the country.

Kala Azar

- India has missed the 2017 deadline for elimination of Kala Azar.

- Elimination is defined as reducing the annual incidence of Kala Azar to less than 1 case per 10,000 people at the sub-district level.
- Visceral leishmaniasis (VL), also known as kala-azar, is caused by the protozoan Leishmania parasites.
- It is transmitted to humans through infected sandflies.
- It is characterized by irregular bouts of fever, weight loss, enlargement of the spleen and liver, and anaemia.
- The parasite migrates to the internal organs such as the liver, spleen, and bone marrow, and, if left untreated, may result in the death.
- It is endemic to the Indian subcontinent in 119 districts in four countries (Bangladesh, Bhutan, India and Nepal).
- India itself accounts for half the global burden of the disease.
- Further, a little-known skin condition called Post Kala Azar Dermal Leishmaniasis (PKDL), a red flag for transmission of Kala Azar has been growing steadily over the past few years.

Li-Fi

- Light-fidelity (LiFi) is a technology used for free-space communication using visible and near-visible light.
- It is similar to Wireless Fidelity (WiFi), a technology for wireless local area network communication using microwaves.
- Microwaves can pass through walls while transmitting signals whereas visible and near-visible light cannot pass through walls.
- Thus it makes LiFi signal network more secure.
- Scientists have recently added a new layer of security to LiFi.
- Light bounces off from walls and falls on the receiver.
- So wall boundaries can be used effectively for reflecting signals so that communication is maintained even without line-of-sight communication between the signal source and receiver.
- Receiving detectors can receive both direct and reflected signals.
- Walls painted with fluorescent and phosphorescent paints absorb and then emit light with marginal loss.
- The paints continue to emit light even several hours after the original source of light has been switched off.
- This makes the communication signal more effective and secure.

Funaria Hygrometrica

- Scientists have identified a type of moss that can efficiently absorb a large amount of lead, providing a green alternative for decontaminating polluted water and soil.
- Funaria hygrometrica is the moss which uses phytoremediation, it is known to grow well in sites contaminated with metals like copper, zinc, and lead.
- Phytoremediation is a method that uses photosynthesising organisms to clean up soil or water contamination.
- The Moss cells can absorbed lead up to 74 per cent of their dry weight.

Rotavac

- Bharat Biotech's diarrhea vaccine ROTAVAC gets WHO pre-qualification
- The WHO pre-qualification paves the way for health and humanitarian organizations such as UNICEF to procure it for public health vaccination programs across the world.
- Rotavirus is the most common cause of severe diarrhea and kills more than 200,000 children every year.
- ROTAVC is also included in the Universal Immunization Program

Pulse Polio Immunisation (PPI)

- As part of the National Immunization Day observed on 28 January, PPI programmed for 2018 was launched.
- More than 17 crore children of less than 5 years across the country will be given polio drops.
- The polio virus causes paralysis, known as an acute flaccid paralysis (AFP).
- This is characterized by sudden muscle weakness, and fever in one or more limbs.
- India reported its last polio case in 2011 and is also declared polio-free by WHO in 2014.

- However, the immunization drive continues as polio virus is still circulating in other parts of the world.
- The injectable Inactivated Polio Vaccine (IPV) has also been introduced recently into the Universal ImmunizationProgrammed.
- IPV is an injectable form of polio vaccine administered alone or in combination with other vaccines including the OPV (oral polio vaccine).

INDEX AND REPORT

LEADS Index

- Logistics Ease Across Different States (LEADS) index is a composite indicator to assess international trade logistics across states and Union territories.
- It is based on a stakeholders' survey conducted by Deloitte for the **Ministry of commerce and industry**.
- Gujarat topped the first-of-its-kind index, Punjab and Andhra Pradesh took the second and third positions, respectively.
- The index is loosely based on the World Bank's biannual Logistics Performance Index (LPI).
- India was ranked 35 among 160 countries in LPI in 2016, up from 54 in 2014.
- LEADS is based on eight parameters such as infrastructure, services, timeliness, track and trace, competitiveness of pricing, safety of cargo, operating environment and regulatory process.

U5MR

- India registered a significant decline in under-five child mortality.
- It is calculated per 1000 live births, in India it is 39 out of 1000 births.
- India with the current rate of decline of U5MR is on track to meet the SDG target for under-five child mortality of 25 by 2030.

AEFI

- Union Health Ministry has released a report on deaths due to Adverse Events Following Immunization (AEFI).
- It is estimated that for every 1,00,000 children immunized, there would be at least 10 serious adverse events (including deaths and hospitalization).
- India's AEFI data is compiled by district officers, and the Union Health Ministry's national AEFI committee follows up on reports, sifting out deaths that may have a link with vaccine administration.
- The WHO has recommended the use of performance indicators for AEFI functionality assessment.

Environmental Performance Index 2018

- The EPI report ranks 180 countries on 24 performance indicators across 10 categories covering environmental health and ecosystem vitality.
- EPI is a biennial report released by Yale and Columbia Universities along with the World Economic Forum (WEF).
- India is at 177th place out of 180 nations, where as china at 120th position.
- India's rank is attributed to poor performance in the environment health policy and deaths due to air pollution.

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