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OCTOBER 2018

G.S PAPER II

1. POLITY

1.1 Abolishing Capital Punishment in India

What is the issue?

There are increasing views on abolishing capital punishment in India and it requires serious consideration.

How did it evolve?

- Until 1955, death penalty remained as the normal punishment for murder.
- In 1955, discretion was conferred on sessions judges to award capital punishment or life imprisonment for murder.
- In 1973, Cr. P.C. was amended, by which Parliament directed that special reasons should be quoted, if the Sessions Judge imposed death penalty.
- Later on in the Bachan Singh case, SC ruled that death penalty could be imposed only in rarest of rare cases in which the alternative sentence of life is unquestionably foreclosed.
- However, Machhi Singh Vs. State of Punjabcase provided exceptions to the rarest of rare rule and death penalty can be invoked when –
    1. Murder is committed in extremely brutal manner so as to arouse extreme indignation of the community
    2. Murder is committed by a motive which evinces total depravity and meanness
    3. The crime is enormous in proportion.

What are the protections guaranteed under the constitution?

- The Maneka Gandhi case held that Article_21 affords protection not only against executive actions but also against legislations.
- Thus, a person can be deprived of his life, even under capital punishment, only if there is a law which is just, fair and reasonable.
- Under Article 72 of the constitution, the President can pardon even death sentence, while the governor cannot under Article 161.
- However, even when the pardon was denied to a death row convict, there is scope for judicial review if the presidential decision is arbitrary, irrational and discriminatory.
- Also under Article 134, right of appeal was provided from the High Court verdict to Supreme Court in any case where capital punishment was imposed on an accused in reversal of acquittal order.
- Thus the treatment of death row prisoners has been humanised under the constitution itself.

Why should it be completely abolished?

- There are three main objectives for punishment -retribution, deterrence and reformation.
- There is no sufficient proof to show that the death penalty is as a greater deterrent than the life imprisonment.
- It is also unrectifiable if it is discovered later that the judgment was passed by a mistaken conclusion.
- Also, the theory of reformation is based on the obligation of the society to reform a convicted person.
- The object of reformation will be totally defeated if the offender does not continue to live.
- The Law Commission of 2015 said the constitutional regulation of capital punishment has failed to prevent death sentences from being arbitrarily and freakishly imposed.
- The Commission further asserted that there exists no principled method to remove such arbitrariness from capital sentencing.

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- Thus, if there still prevails a perception of arbitrariness in the way death sentences are awarded, the only lasting solution is their abolition.

1.2 Jammu & Kashmir Resettlement Law

Why in news?

The "Jammu & Kashmir resettlement law" was challenged and the Supreme Court is soon to hear it.

What is the law about?

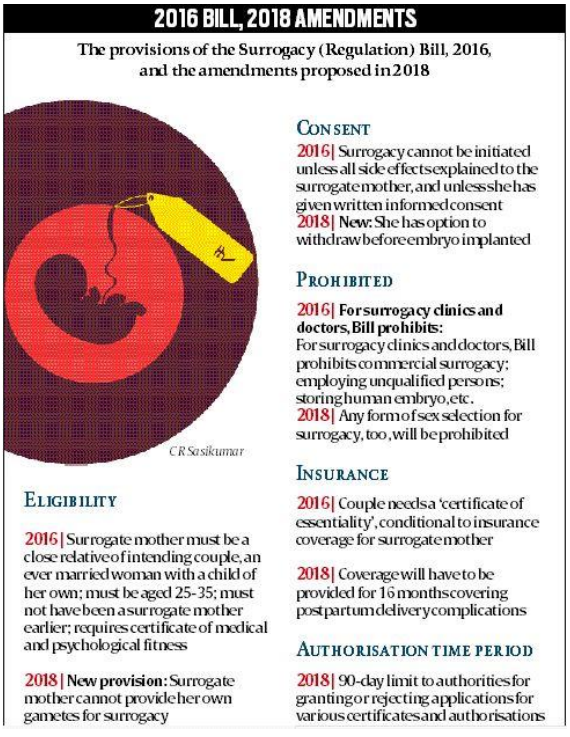
- It is known as the J&K Grant of Permit for Resettlement in (or Permanent Return to) the State Act, 1982.
- It was passed by the Assembly to provide for regulation of procedure for grant of permit for resettlement.
- Mass killing of Muslims in Jammu in 1947 and its ramifications are the main reason why the law was introduced.
- Muslims were said to have been systematically exterminated unless they escaped to Pakistan along the border.
- The State Government thus passed the Bill under the terms of Section 6 of the J&K Constitution.
- This has a provision for those who were stuck in areas that became Pakistan in 1947.
- Under the provision, these people can return and the Indian Constitution's Articles 5 and 7 too permit it.

What is the controversy?

- The Bill was introduced in March, 1980 by National Conference (NC) leader Abdul Rahim Rather and became law in October, 1982.
- Both Houses of the state legislature passed the Bill in April 1982 but Governor B K Nehru returned it for reconsideration.
- Amid the Congress's opposition, the Bill was again passed by both Houses, and this time the Governor gave assent.
- But then President Giani Zail Singh had already sent a presidential reference to the Supreme Court seeking its opinion on the law's constitutional validity (Article 142).
- The case remained pending for almost two decades until November, 2001.
- After this, a five-member Constitution Bench returned it unanswered.
- Later, Jammu-based Panthers Party challenged the law in the SC.

Why was it challenged?

- The party highlighted a security threat the state would face if the Bill is cleared.
- It noted that in Pakistan, it was mandatory for everybody to undergo two months' military training before taking up any job.
- So through this law, Jammu would be inviting trained Pakistani soldiers.
- Apart from this, those people on return will reclaim property including agricultural land allotted to refugees from Pakistan-occupied Kashmir.
- This is more likely to lead to law and order problems in the State.



1.3 All India Judicial Service

Why in news?

The NITI Aayog recently mooted the creation of an All India Judicial Service (AIJS).

What are the underlying constitutional provisions?

- Articles 233 and 234 of the Constitution vested all powers of recruitment and appointment (of judicial services of the state) with the State Public Service Commission and High Courts.
- Article 312 of the Constitution allows the Rajya Sabha to pass a resolution, by two-thirds majority, in order to kick-start the process of creating an all India service.
- Once the resolution is passed, Parliament can amend Articles 233 and 234 through a simple law (passed by a simple majority), which will strip States of their appointment powers.
- This is unlike a constitutional amendment under Article 368 that would have required ratification by State legislatures.

Can AIJS resolve the problem of judicial vacancies?

- The idea was mooted on the argument that a centralised judicial recruitment process will help the lower judiciary on timely recruitment and clearing vacancies.
- But the Supreme Court recently noted that many States are doing a very efficient job when it comes to recruiting lower court judges.
- In Maharashtra, of the 2,280 sanctioned posts, only 64 were vacant and in West Bengal, only 80 were vacant of the 1,013 sanctioned posts.
- Only in certain States such as Uttar Pradesh, the vacancies stand at 42%.
- Thus the solution is to pressure poorly performing States into performing more efficiently.
- Further, the argument that the centralisation of recruitment processes through the UPSC automatically leads to a more efficient recruitment process is flawed and not a guarantee of a solution.

Will it lead to more representation from marginalised communities and women?

- Several States already provide for reservations in their lower judicial service.
- e.g At least 12 States, which include Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Rajasthan and Kerala, provide for caste-based reservation in the direct recruitment examination for district judges from the bar.
- In addition, U.P., Karnataka, Rajasthan and Chhattisgarh provide women with special reservations.
- Karnataka also recognises two additional categories of reservation within caste-based reservation — for those from a rural background and those from Kannada medium backgrounds.
- Karnataka serves as an example of how States are best suited to assess the level of intersectional disadvantage of various communities residing in the State.
- Unlike States, the Centre almost never provides reservation for women in the all India services.
- On the issue of caste, an AIJS may provide for SC/ST reservation along with reservation for the Other Backward Classes (OBC).
- However, the Supreme Court recently held that SC/STs can avail the benefit of reservation in State government jobs only in their home States (domicile) and not when they have migrated.
- The same principle is usually followed even for OBC reservations.
- Thus, instituting an AIJS would mean that nationally dominant SC, ST and OBC groups would be at an advantage as they can compete for judicial posts across the country.

2. GOVERNMENT POLICIES

2.1 Surrogacy (Regulation) Bill, 2016

Why in news?

Lok Sabha recently passed the Surrogacy (Regulation) Bill, 2016.

What is the need?

- Surrogacy is the practice where a woman agrees to give birth to a baby (usually by artificial insemination or surgical implantation) on behalf of another couple.
- Annually, surrogacy is a $2.3 billion industry across India, fed by lack of regulation and poverty.

- Around 2,000-odd babies were born/year through commercial surrogacy.
- There have been several reports about the exploitation of surrogate mothers like being confined in hostels during pregnancy, not being allowed to meet their families, repeated surrogacy for money etc.
- The 228th report of the Law Commission had recommended prohibition of commercial surrogacy, which is allowed only in Russia, Ukraine and California.

What are the provisions in the Bill?

- It seeks to put an end to commercial surrogacy by making it punishable by upto 10 years imprisonment.
- It allows only altruistic surrogacy (by relatives) for intending legally married childless couples.
- Their ages should be 23-50 for female and 26-55 for male.
- The commissioning couples should have been trying for at least 5 years and cannot have a surviving child, either biological or adopted.
- This is except when they have a child who is mentally or physically challenged or suffers from a life-threatening disorder with no permanent cure.
- It has safeguards built in against sex selection of the baby.
- The Bill requires all surrogacy clinics to be registered.
- Clinics can charge for these services but the surrogate mother cannot be paid.
- The national and state surrogacy boards will be the regulating authorities.

What are the recent changes made?

- The Surrogacy Bill was cleared by the Cabinet in 2016 And subsequently referred to a Parliamentary Standing Committee (Health & Family Welfare).
- There are changes in the presently-passed Bill from the earlier version.
- The earlier version provided for a minimum jail term of 10 years for some offences; the present one sets a maximum of 10 years.
- The present Bill -
    1. forbids the surrogate mother to use her own gametes (eggs)
    2. gives her the option to withdraw before the embryo is implanted
    3. puts a condition for obtaining a “certificate of essentiality” by the intending couple
- The couple must also provide a 16-month insurance coverage for the surrogate mother including postpartum complications.
- The Supreme Court had recognised live-in relationships. Yet the Committee’s call for widening the ambit by including live-in couples, divorced women/widows etc were rejected.

2.2 Dam Safety Bill

Why in news?

Dam Safety Bill, 2018 was recently re-introduced in Lok Sabha.

What is its evolution?

- There have been 36 dam failures so far in the country.
- 75% of the dams out of 5254 large dams are over 25 years old.
- However, there has been a lack of a uniform law and an administrative regime for dam safety.
- Since water is listed as a state subject, Andhra Pradesh and West Bengal, had passed resolutions under Article 252(1) of the Constitution requesting Parliament to make a law on the matter.
- Accordingly, the Dam Safety Bill was first introduced in Lok Sabha in 2010.
- With recommendations of the Parliamentary Standing Committee, the Bill was re-introduced in Lok Sabha recently.

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What is the proposed regulatory structure?

- The Bill sought to mandate the Centre, state governments and individual owners of dams to establish a mechanism for safety.
- It provides for surveillance, inspection, operation and maintenance of specified dams for prevention of dam failure related disasters and to provide for institutional mechanism to ensure their safe functioning.
- It provides for a National Committee on Dam Safety, to be headed by the chairperson of Central Water Commission and with members nominated by the Centre.
- Also, there will be representatives of the Centre and states (through rotation) as well as dam safety experts in the committee.
- The committee will formulate policies and regulations, which are to be implemented by a centrally appointed National Dam Safety Authority, headed by an officer of at least Additional Secretary rank.
- The authority will also resolve issues between State Dam Safety Organisations (SDSOs).
- It will also lay down regulations for dam inspection and for accreditation to construction and designing agencies.
- It also provides for a safety unit in each dam to be set up by individual dam owners.
- For violation of directives under the Bill, punishment is imprisonment up to one year or a fine, or both.

What are the grounds of opposition?

- The Bill states that the National Dam Safety Authority will act as the SDSO when a dam -
    1. Owned by one state and located in another
    2. Extends over multiple states
    3. Owned by a central public sector undertaking
- This provision is the primary reason for opposition from the state of Tamil Nadu.
- Tamil Nadu's Mullaiperiyar, Parambikulam, Thunakkadavu and Peruvaripallam dams are owned, operated and maintained by the Government of Tamil Nadu by virtue of Inter-State Agreements, but are located in a neighbouring state (Kerala).
- The state argues that the Supreme Court in 2014 upheld the rights of Tamil Nadu on the Mullaperiyar dam in increasing its height to 142 feet and ultimately 152 feet.
- It also says that denying the right to be the Dam Safety Authority with regard to these four dams and vesting the powers to the National Dam Safety Authority would be tantamount to encroaching on the rights of the state, which is unconstitutional.

2.3 MHA Notification on Computer Surveillance

Why in news?

Ministry of Home Affairs (MHA) recently issued a notification authorising 10 central agencies to intercept information related to computer resource.

What does the notification say?

- The government authorised 10 central agencies to intercept, monitor and decrypt any information generated, transmitted, received or stored in any computer in the country.
- These agencies include Intelligence Bureau, Narcotics Control Bureau, Enforcement Directorate, Central Board of Direct Taxes, Directorate of Revenue Intelligence, CBI, NIA, Cabinet Secretariat (RAW), Directorate of Signal Intelligence and the Commissioner of Police, Delhi.
- The order is facilitated under sub-section 1 of the section 69 of the IT Act, read with rule 4 of the Information Technology Rules, 2009.
- The IT Act allows the authorities to decrypt information if it is in the interest of –
    1. The sovereignty or integrity of India
    2. The security of the State

3. Friendly relations with foreign States
4. Public order
5. Preventing incitement to the commission of any cognisable offence.

- The IT rules states that a competent authority can authorise a government agency to intercept, monitor or decrypt information generated, transmitted, received or stored in any computer resource.
- However, opposition leaders and experts have called it "unconstitutional" and "an assault on fundamental rights".

What is the clarification given by the Home Ministry?

- The notification is aimed at ensuring that any interception, monitoring or decryption of any information through any computer resource is done in accordance with due process of law.
- It is also aimed at preventing any unauthorized use of these powers by any agency, individual or intermediary.
- All agencies will have to take the approval of the Home Secretary before intercepting or monitoring data stored in computer.
- These powers are also available to the competent authority in the State governments as per IT Rules 2009.
- The order is in accordance with rules already framed in 2009 and hence no new power has been conferred to any of the security or law enforcement agencies.
- Also, similar provisions and procedures already exist in the Telegraph Act along with identical safeguards.
- The present notification is analogous to the authorisation issued under the Telegraph Act.

What are the concerns?

- Content streams are getting much richer, pervasive and personal.
- Hence the order is unconstitutional and in breach of the telephone tapping guidelines, the (Right to) Privacy judgment and the Aadhaar judgment.
- **Provisions** - Phrasing of "intercept" in the rules might include traffic diversion, which may permit code injections and malware attacks.
- The notification also permits decryption, which might require the service provider to break their encryption protocols.
- **Clearance** - The home ministry says that each case will continue to be approved by the Union home secretary.
- But a specific clearance on each case is obviously meaningless because the record shows about 100 clearances daily on average.
- The scrutiny is therefore remains only on paper, and there is no safeguard against misuse.
- Also, the rules provided that the home secretary's clearance should be obtained within a week.
- This could make the agencies to tap at will without clearance.
- **Safeguards** - There is a blanket authorisation being given to security agencies, without any safeguards regarding its misuse.
- This was given even to foreign-focused agencies that have no business on surveillance of Indian citizens such as the Research & Analysis Wing.
- **Control** - Many of the agencies named in the order from the home ministry are neither under parliamentary scrutiny nor are their actions subject to judicial control.

2.4 Deducting Prisoners' Salary for Victim Compensation

Why in news?

The Delhi High Court recently stayed the practice of deducting salary of prisoners for the victim compensation fund.

How does the compensation mechanism evolve?

- Convicted prisoners get paid for doing work inside the jail.

- Remuneration and wages differ from one state to another.
- As per 2015 prison statistics released by the National Crime Records Bureau (NCRB) in 2017, Puducherry provided the highest wages.
- It gives Rs 180, Rs 160 and Rs 150 per day to skilled convicts, semi-skilled convicts and unskilled convicts respectively.
- This was followed by Delhi's Tihar, which gave Rs 171, Rs 138 and Rs 107 respectively.
- In 1998, the Supreme Court in ***State of Gujarat & Anr vs Gujarat High Court*** case asked all states to devise a mechanism so that victims of the offence could be compensated.
- Prisons in various states made their own rules, with the amount of compensation varying from state to state.
- Delhi Prisons Rules were amended in 2006 with Rule 39A allowing for **25% of prisoners' wages** to be deducted and deposited in a **Victim Welfare Fund**.
- In 2008, the CrPC was amended with a new Section 357A, which stipulated that every state should prepare a scheme for compensating crime victims and their dependents.
- Accordingly, the state government notified the Delhi Victims' Compensation Scheme.
- Yet the deduction of 25% of prisoners' wages continues to be the practice in Delhi.

What are the concerns?

- More than Rs.15 crore that has been deposited into the Victim welfare fund from prisoners' salaries since 2006 is lying unutilised.
- The rates of wages of prisoners are already on the lower side, compared to the minimum wages that are payable in Delhi.
- A further deduction from the same may not be justified or proper.
- Also, since the Delhi government itself has created a compensation scheme for victims, it seems unreasonable to continue with victim welfare fund.

What does the recent court order say?

- It clarified that it was the government's obligation to set up such a corpus, through which compensation for the victims be provided.
- The director general of prisons of the Delhi government cannot do something which was not permissible under the law.
- Tihar authorities had assumed the power of a convicting court, which imposes fines on a convict, and gone against the Criminal Procedure Code.
- Hence the wages of convicts and prisoners shall not be deducted till the next date of hearing, on February 8, 2019.
- Also, the Delhi government have to file an affidavit about what powers enabled it to take such a decision.

2.5 Witness Protection Scheme, 2018

Why in news?

The Supreme Court has approved India's first Witness Protection Scheme.

What is the Witness Protection Scheme, 2018?

- The scheme was drawn up by
    i. the central government with inputs from 8 states/Union Territories
    ii. legal services authorities of five states
    iii. open sources including civil society, three high courts as well as from police personnel
- The scheme was finalised in consultation with the National Legal Services Authority (NALSA).
- **Features** - The important features include identifying categories of threat perceptions and preparation of a 'Threat Analysis Report' by the head of the police.

- Besides, other protective measures include -
    i. ensuring that the witness and accused do not come face to face during probe
    ii. protection of identity
    iii. change of identity
    iv. relocation of witness
    v. witnesses to be apprised of the scheme
    vi. confidentiality and preservation of records
    vii. recovery of expenses, etc
- Other features include in-camera trial, proximate physical protection and anonymising of testimony and references to witnesses in the records.
- **Threat perception** - The programme identifies "three categories of witnesses as per threat perception" as follows:
- **Procedure** - The application for protection will have to be filed before the "Competent Authority" along with supporting documents.
- The Authority will in turn seek a "Threat Analysis Report" from the ACP/DCP in charge of the police station.
- The Authority will be required to dispose an application within five days from the date of receipt of Threat Analysis Report.
- In its report, the police officer must categorise the threat perception and suggest protective measures.
- The Authority shall interact with the witness and other relevant persons (in person or through electronic means).
- The Witness Protection Order passed by the Competent Authority shall be implemented by the Witness Protection Cell of the state or UT.
- The "overall responsibility" for implementing the order lies with the head of the police of the state and Union Territory.
- If the order is for change of identity or relocation, it shall be implemented by the Home department concerned.
- The Witness Protection Cell will file a monthly follow-up report to the Authority.
- It also empowers the Authority to call for a fresh Threat Analysis Report if it feels the need to revise its order.
- **Fund** - The expenses for the programme will be met from a Witness Protection Fund to be established by the states and UTs.
- They should make annual budgetary allocation for the fund which will also be free to accept donations.

What is the Court's order?

- The court noted that one of the main reasons for witnesses turning hostile is the lack of appropriate protection by the State.
- Being unable to testify in courts due to threats or other pressures is a clear violation of Article 21 of the Constitution.
- The Court thus asked the Centre, states and Union Territories to "enforce" the scheme "in letter and spirit".
- It asked all states and UTs to set up vulnerable witness deposition complexes, as required by the Scheme, by the end of 2019.
- These rooms will be equipped with facilities to prevent the accused and witness coming face to face.
- The court said, "it shall be the 'law' under Article 141/142 of the Constitution, until the enactment of suitable Parliamentary and/or State Legislations on the subject".

How does it help?

- Witnesses turning hostile is a major reason for most acquittals.

- In the current system, there is little incentive for witnesses to turn up in court and testify against criminals.
- The judicial process seldom takes into account the distance they have travelled or the time they have lost in attending court.
- Thus, the need to protect witnesses has been emphasised by Law Commission reports and court judgments for years.

2.6 Habitual Offenders Act

What is the issue?

The continuing stigmatisation of the Denotified Tribes (DNT) in India calls for the repeal of the Habitual Offenders Act.

How were DNT dealt?

- The state-sanctioned stigmatisation of the DNTs in India under British rule was very evident.
- The CTA allowed for close supervision and control over the mobility of the tribes notified by the provincial governments.
- The Act was amended in 1897, 1908 and 1911 to give sweeping powers to the authorities.
- This included some draconian powers as allowing the state to remove any child of age six and above from its 'criminal' parents.
- By 1924, certain provisions were amended, and the Act was finally applicable to the whole of British India.
- Along with the introduction of laws such as Forest Acts and Salt Tax Act, the British placed stringent regulations on the DNTs.

Denotified Tribes

- The term, 'De-notified and Nomadic Tribes', can be traced to the Criminal Tribes Act (CTA) of 1871.
- The colonial government notified nearly 200 tribal communities to be hereditary criminals.
- This fixed their societal identity as outcasts and subjected them to constant harassment by the administration.
- After Independence, these tribes were 'de-notified' from the list of Criminal Tribes, and, hence, the term Denotified Tribes (DNT).

What is the Habitual Offenders Act?

- In independent India, the need was felt to shift the collective burden of criminality to the individual.
- This led to the CTA being repealed and the Habitual Offenders Act (HOA) being enacted in various States.
- Currently, a variant of the HOA Model Bill as proposed by the Union Government, stands enforced in 10 States.

How are the DNTs at present?

- The Habitual Offenders Act (HOA) functioned as a mere extension of the Criminal Tribes Act (CTA).
- Fifteen crore individuals, better known as the Denotified Tribes (DNT) of India, continue to be considered 'criminal by birth'.
- Certainly, the mere repeal of the CTA could not change the mindset of government officials or members of society.
- Nomadic and semi-nomadic communities continued to face harassment at the hands of law enforcement agencies and ostracisation by society at large.
- Given their centuries-old tradition of constant movement, they often do not possess any residential proof.
- This leaves them out of the majority of the government's developmental schemes.
- Those deemed eligible for such schemes were randomly grouped under the Scheduled Castes, Scheduled Tribes or Other Backward Classes categories.
- As a result, most members of the DNTs continue to be out of the orbit of steps being taken to end discrimination.

What were the measures taken?

- The first National Commission for Denotified, Nomadic and Semi-nomadic Tribes (NCDNT) was constituted in 2003.

- It was reconstituted two years later under the chairpersonship of Balkrishna Renke, which submitted its report in 2008.
- The NCDNT report clearly recommends repealing the various HOAs.
- The recommendations found an echo in the Idate Commission, constituted with the similar mandate in 2015.
- However, the Idate Commission Report lacks the scientific data necessary to introduce reforms to address the plight of DNTs.

2.7 Agusta Westland Helicopter Deal Case

Why in news?

British businessman Christian Michel, a key accused in the AgustaWestland deal case, was extradited to India.

What is the AgustaWestland deal case?

- **Deal** - The Congress-led UPA government had in February 2010 signed a contract with AgustaWestland, a UK-based helicopter manufacturing company.
- AgustaWestland is the British arm of Italian firm Finmeccanica.
- The contract was to purchase 12 AW101 helicopters for the Indian Air Force for Rs 3,600 crore.
- These helicopters were supposed to be used for ferrying the President of India, the Prime Minister, and other such VVIPs.
- **Allegation** - It was alleged that technical specifications of the required choppers were tweaked.
- This includes lowering of the service ceiling of the helicopter from 6,000 m to 4,500 m to help AgustaWestland qualify and win the bid.
- AgustaWestland's parent company Finmeccanica allegedly paid kickbacks to win the VVIP chopper deal with the Indian Air Force.
- The CBI has alleged there was an estimated loss of Euro 398.21 million (app. Rs 2,666 crore) to the exchequer in the deal.
- Michel is one of the three middlemen who brokered the deal, besides Guido Haschke and Carlo Gerosa.
- They are being probed in the case by the enforcement directorate (ED) and the Central Bureau of Investigation (CBI).
- He has, reportedly, paid bribes to officials and politicians to make the contract in favour of AgustaWestland.
- In January, 2014, India scrapped the contract over alleged breach of contractual obligations and charges of paying kickbacks for securing the deal.

How has extraditions been for India?

- India's track record with securing the extradition of fugitives from justice has been modest as only one third of all requests since 2002 have been accepted.
- Amongst the 44 countries India has extradition treaties with, the United Arab Emirates has been the most amenable.
- It has deported or extradited 19 of 66 fugitives to India in the past decade and a half.
- A reason for the low success rate in the past is the perception that India's criminal justice system delivers too slowly.
- E.g. the last high-profile case of the 1993 Mumbai blasts accused Abu Salem, who was extradited from Portugal in 2005
- His trial was finally completed in 2017, when he was sentenced to life.

Why is the present case unique?

- Christian Michel is a UK citizen living in Dubai, UAE.
- So being not an Indian national, extraditing to a third country, India was challenging.

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- Unlike similar cases in which extradition was granted, he is not wanted on serious criminal charges like murder.
- Also, his extradition comes at a time when several other cases of businessmen who have fled India are pending.

What is the need for caution?

- The extradition to India of Christian Michel is a diplomatic success for a number of reasons.
- The government must be aware that its actions in the Michel case are under close scrutiny.
- This is not just from the UAE, whose courts deliberated for some months on whether to send him to India, but other countries too.
- Notably, India has about 150 pending requests at present with other countries.

2.8 Restoring Oxytocin Sale

Why in news?

The Delhi High Court has quashed a government ban on the retail sale and private manufacture of oxytocin. Click here to know more on the ban.

Why was the ban challenged?

- Union Ministry of Health and Family Welfare earlier notified the ban of oxytocin.
- This was after widespread concerns with the misuse of the drug in dairy cattle, fruits and vegetables.
- But the ban was opposed as oxytocin is a life-saving drug used to stop post-partum bleeding among new mothers.
- Around 45,000 women die from post-partum complications in India each year, and in 38% of the cases, haemorrhaging is the reason.
- Without the easy availability of inexpensive oxytocin, addressing the maternal mortality epidemic could have been difficult.
- In fact, oxytocin had been listed by both the World Health Organization and the Health Ministry as an essential medicine.
- So the All India Drug Action Network (AIDAN), a patient-rights group, challenged the government ban in the Delhi High Court.

What is the Delhi High Court's rationale?

- The ban came despite the fact that all statutory bodies, including the Drugs Technical Advisory Board, had advised against a ban.
- There was no scientific basis to the conclusion that oxytocin's existing availability/manner of distribution posed a risk to human life.
- So in response to AIDAN's and drug manufacturers' petitions, the court struck down the ban, calling it "unreasonable and arbitrary".
- It thus restored the retail sale and private manufacture of a life-saving drug, oxytocin.
- The government failed to weigh the adverse effect, to the public in general and women in particular, of possible restricted supply if manufacture is confined to one unit.
- The scarcity or even a restricted availability can cause increase in maternal fatalities, during childbirth.
- Notably, the Karnataka Antibiotics & Pharmaceuticals Limited (the only authorised producer after the ban) did not have the capability to manufacture it until mid-2017.
- The Centre has put down licensed manufacturers with a proven track record, while roping in this state firm with no real experience.
- It had also failed to show that the drug was widely misused for veterinary purposes, the actual reason behind the ban.

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- Also, though the Centre claims to have made 25 illegal drug seizures across India in a 3-year period, 12 of them did not actually find oxytocin.
- Among those that did, none involved licensed drugmakers.

2.9 SC Verdict on Rafale Deal

Why in news?

The Supreme Court recently gave its verdict on the Rafale aircraft acquisition deal. Click here to know more

What is the court's stance?

- The controversy is triggered by a media interview of former French President and press coverage alleging "favouritism" by the Modi government.
- But individual perceptions cannot be the basis of a roving judicial review and so the Court declined to intervene.
- It said it cannot sit as an appellate authority over each and every aspect of the deal.
- It refused to employ its judicial review powers to intervene in the deal's decision-making process, pricing and the choice of Indian Offset Partner (IOP).
- It agreed with government that judicial review is limited in matters of defence procurements, Inter-Governmental Agreements (IGAs) that may be vital to national security.

What is the verdict?

- The judgment came on a batch of petitions for an independent court-monitored CBI/SIT investigation into the deal.
- There was no occasion to doubt the decision-making process which led to the IGA between the French and Indian governments.
- "Minor variations" in the decision-making process should not lead to the setting aside of the contract itself.
- The court, however, restrained itself from delving deeper into the issue.
- The Court said it could not use the mechanism of judicial review to compare the prices of aircraft between the old and the new deal.
- But the judgment repeated the government's claim that the contract was of "financial advantage to the nation".
- In all, the Court held that there was no substance to the allegation that the government showed any "commercial favouritism".
- It's because it acknowledged the government stand that the choice of IOP was not in its realm; the vendor, Dassault Aviation, chooses its own IOP.

What are the concerns?

- **Role** - The apex court went into issues that should have been left to the Comptroller and Auditor General (CAG), and after that to Parliament.
- Neither the report of the CAG on procuring Rafale aircraft nor the Parliamentary Accounts Committee (PAC) report on it has been completed.
- So in effect, the work that should have been done by the CAG has now been rendered virtually purposeless.
- The shortcomings, if any, to be highlighted by the CAG, may be pointless as the court has already determined that nothing was wrong.
- **Information** - Along the way, the court asked for information from the government in sealed covers.
- This is a practice it has resorted to in other cases as well.
- But it is fundamentally contrary to the normal and accepted practice of judges hearing cases in open court.
- **Contradictions** - There are contradictions, too, in the judgment.
- E.g. it says “it is certainly not the job of the court to carry out a comparison of the pricing details in matters like the present”.

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- But the judgement mentions on examining closely the price details and comparison of the prices.
- The correct course of action now would be for the government or the court to release the whole or at least the relevant part of what was communicated in secret.

3. SOCIAL JUSTICE

3.1 Towards an Inclusive Democracy

What is the issue?

- Numbering approximately 4,90,000 (2011), transgender people in India are perhaps one of the most visibly invisible population.
- Here is a brief look on the plight of transgenders over the years and the measures taken to address their marginalisation.

How have transgenders historically been?

- Historically, Indian society has been tolerant of diverse sexual identities and sexual behaviours.
- The "hijra" community evolved to form a unique subculture within the Indian society.
- They existed alongside the omnipresent heterosexual unit of the family.
- They had cultural and social significance across the country in various avatars.
- The same is evident in Indian mythology and ancient literature such as the Kamasutra, or the epics such as the Mahabharata.
- In all these, the transgender community has been portrayed with dignity and respect.

What happened thereafter?

- India's fluid gender and sexual norms did not fit into Britain's strict Victorian conceptions of appropriate sexual behavior.
- So under the colonial law, the formerly acceptable sexual behaviors and identities became criminalized. E.g. Section 377 of IPC
- So since the late 19th century, transgender persons lost the social-cultural position they once enjoyed.
- They have now been increasingly recognised as one of the most socio-economically marginalised.

How vulnerable are they?

- Despite laws, policies and their implementation, the community continues to remain quite marginalised and highly vulnerable.
- Most often, children who do not conform to the gender construct binary leave, or are forced to leave, their families.
- These children or young individuals begin their journey alone in search of individuals of their kind, and are ultimately vulnerable to abuse.
- They are subject to extreme forms of social ostracisation and exclusion from basic dignity and human rights.
- They remain highly vulnerable to gender-based violence, are forced to beg, dance at events and religious functions, or, even sell sex.
- Their vulnerability to fatal diseases can be extreme in the conditions they work in.
- Thus they have a higher prevalence of HIV-AIDS, tuberculosis as well as a whole host of other sexually transmitted infections.
- According to a recent UNAIDS report, the HIV prevalence among transgenders is 3.1% (2017).
- This is the second highest amongst all communities in the country.
- But, only about 68% of the people are even aware that they are infected, which is worrying.
- High instances of substance abuse and low levels of literacy only complicate matters.

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What are the measures in this regard?

- **Education** - Higher education institutions provide quota and give special consideration to transgender people.
- But only a few utilise these provisions as the school education of most transgender people either remains incomplete or non-existent.
- The lack of basic schooling is a direct result of bullying and, hence, they are forced to leave schools.
- Notably, schools largely remain unequipped to handle children with alternate sexual identities.
- **Voting** - Some voters were not getting registered as they refused to declare themselves as male or female - the two options available in registration forms.
- This was especially a significant issue for the local body elections in constituencies which are reserved for women.
- This was brought to the notice of the Election Commission (EC) in 2009, as a result of which appropriate directions were issued to all provinces.
- They were instructed to amend the format of the registration forms to include an option of "others".
- **Supreme Court** - In National Legal Services Authority Vs. Union of India (2014), the apex court recognised transgenders as the "Third Gender".
- It was observed that "recognition of transgenders as a third gender is not a social or medical issue, but a human rights issue".
- **Health** - HIV services for the community are rapidly improving in a targeted manner after the SC verdict.
- E.g. National Aids Control Organisation (NACO) reported that 2,40,000 hijras were provided with HIV prevention and treatment services in 2015, compared to 1,80,000 the previous year.
- **Law** - The Transgender Persons (Protection of Rights) Bill, 2016, has been passed in the Rajya Sabha. It is now pending in the Lok Sabha.
- Besides these, a number of activists are working at the grassroots for the welfare of the community.

3.2 Global Gender Gap Report 2018

Why in news?

The Global Gender Gap Report 2018 was recently released by the World Economic Forum.

What are the highlights?

- **India** has been ranked 108th in World Economic Forum (WEF) gender gap index, same as 2017.
- **Growth** - Being in 72nd place, India recorded improvement in wage equality for similar work.
- It has also closed its tertiary education enrolment gender gap for the first time in 2018.
- It has managed to keep its primary and secondary gaps closed for the third year running.
- India is also one of the countries that has done well on the political empowerment of women, ranking 20th.
- **Shortfalls** - Gender gaps have worsened for India in 2 categories - health and survival, economic participation and opportunity.
- India ranks 142nd out of 149 countries in the economic opportunity and participation subindex.

GGR

- The report maps the performance of different countries on an index that evaluates the parity among men and women.
- Gender gap is measured across four key pillars -
  1. economic opportunity
  2. political empowerment
  3. educational attainment
  4. health and survival

- India needs to make improvements ranging from women's participation to getting more women into senior and professional roles.
- India continues to rank third-lowest in the world on health and survival.
- It remains the world's least-improved country on this subindex over the past decade.

- In fact, India actually widens the gender gap on this subindex this year.
- India has the second-largest artificial intelligence (AI) workforce, but it has one of the largest AI gender gaps, with only 22% of roles filled by women.

What is the global scenario?

- The global list was topped by Iceland, having closed more than 85% of its overall gender gap.
- Iceland holds the top spot in the index for the 10th consecutive year.
- Nordic countries dominated the top slots with Norway, Sweden and Finland in the 2nd, 3rd, and 4th places respectively.
- Other countries in the top-10 include Nicaragua, Rwanda, New Zealand, the Philippines, Ireland and Namibia.
- South Asia was the second-lowest ranking region in the index, with only 65% of its gender gap now closed.
- India is slightly ahead of the regional average having closed 66% gap.
- **Overall,** the world has closed 68% of its gender gap i.e. there is still a 32% average gender gap that remains to be closed.
- But this gender gap extends to over 77% when it comes to political empowerment and over 44% in relation to economic participation.
- At the current rate of change, the world will take 108 years to close the overall gender gap.
- Also, it would take 202 years to bring about parity in the workplace.

5. HEALTH

5.1 Reassessing AIDS Measures

What is the issue?

Observing December 1 as the World AIDS day, it should be taken note that after 2011, the decline in new infections had not been very impressive.

What are the global measures?

- Specific themes are chosen every year to drive home the messages of prevention, treatment and fighting stigma and discrimination associated with AIDS.
- This year's theme is 'know your status' which signifies universal testing followed by treatment of those who are tested positive.
- In the last 30 years, no other disease control programme has attracted such global attention as AIDS.
- Other initiatives and measures include
    i. a UN General Assembly Special Session (UNGASS) on AIDS in 2000
    ii. a UN Security Council resolution treating AIDS as a security issue
    iii. a special Global Fund to finance AIDS programme along with TB and Malaria (about $20 billion for AIDS programmes alone)
- But the real game changer was the strong involvement of civil society.
- This especially included marginalised communities like sex workers, transgender population, gay men, people who use drugs and people living with HIV/AIDS.

How did these benefit?

- The cumulative effect was a greatly reduced mortality due to AIDS related illnesses.
- From a high of 1.5 million in 2000, it was reduced to 9,40,000 in 2017.
- The incidence of HIV, the new infections occurring every year, has also registered an impressive decrease.
- It has come down from 0.49 per thousand adults in 2000 to 0.33 in 2010.
- But instead of going forward and ensuring the reduction of new infections, the global programme lost direction around that time.

What happened thereafter?

- Both prevention of new infections and saving lives of infected people should be twin priorities.
- But the emphasis has decisively shifted to treatment alone.
- An entire spectrum of anti-retroviral drugs came into the market.
- Also, donors started investing in treatment programmes focussed on generalised epidemic countries in sub-Saharan Africa.
- UNAIDS has kept 90-90-90 as their top priority focussing on testing, treatment and viral suppression.
- [By 2020, diagnose 90% of all HIV-positive persons, provide antiretroviral therapy (ART) for 90% of those diagnosed, and achieve viral suppression for 90% of those treated]
- But somewhere in this process, the agenda of reduction of new infections among key populations lost the needed attention.
- More worryingly, the legal environment surrounding these populations has turned increasingly hostile.
- E.g. Same sex relations, transgender identity and sex work have all come under increasing pressure of criminalisation.
- But Global Commission on HIV and Law had emphasized that improving the legal environment alone could save up to 1 million new infections every year.
- Moreover, access to affordable prevention devices like condoms, needles and syringes greatly suffered in the last six to seven years.
- Funds for prevention programmes have dried up and the meagre amounts earmarked never reached the implementers.
- Several civil society organisations that were doing well lost momentum for want of adequate financial support.
- Resultantly, prevention interventions were left in the hands of inexperienced programme managers.

What was the result?

- The rate of decrease of new infections started slowing down since 2011.
- It has virtually stayed still in the last three to four years.
- The cumulative decrease of new infections from 2010 to 2017 was just 18%, a little more than 2% per year.
- Global HIV incidence still stands at high 1.8 million as revealed by UNAIDS in its latest estimate.
- Certainly, it is hard to get to the global fast track targets of reduction of new infections by 85% by 2020.
- Also, logically, the goal of ending AIDS by 2030 appears much farther away.

5.2 Global Nutrition Report 2018

What is the issue?

- The Global Nutrition Report 2018 was published recently.
- With India facing a major malnutrition crisis, it calls for concerted actions to address the gaps and concerns.

What are the highlights of the report?

- Globally 150.8 million children under five years are stunted and 50.5 million are wasted.
- **Stunting** - Of the three countries that are home to almost half (47.2%) of all stunted children, two are in Asia.
- With 31% children who are stunted, India tops the list of countries.
- It is followed by Nigeria and Pakistan.

Key Nutrition Indicators

- **Stunting**, or low height for age, is caused by long-term insufficient nutrient-intake and frequent infections.
- **Wasting**, or low weight for height, is a strong predictor of mortality among children under five.
- It is usually the result of acute significant food shortage and/or disease.
- **Overweight** is the condition of having more body fat than is healthy.

- **Wasting** - More than half of the world's children impacted by wasting (26.9 million) live in South Asia.
- India accounted for 25.5 million children who are wasted, followed by Nigeria and Indonesia.
- **Overweight** - India also figures among the set of countries that has more than a million overweight children.
- The other nations are China, Indonesia, Egypt, US, Brazil and Pakistan.
- In four countries, more than a fifth of all children are overweight - Ukraine, Albania, Libya and Montenegro.
- Prevalence of overweight children is the highest in upper-middle income countries and the lowest in low-income countries.
- In urban areas, there are 7.1% overweight children on average, whereas in rural areas 6.2% children are overweight.
- Overweight is slightly more common among boys (6.9%) than girls (6.1%).
- As with obesity, among adults, women are more overweight than among men (39.2% and 38.5% respectively in 2016).
- Conversely, diabetes is more common among men than women (9% and 7.9% respectively in 2014).
- Being overweight and obese contribute to an estimated 4 million deaths globally.
- **Malnutrition** - Malnutrition is responsible for more ill-health than any other cause.
- 88% of countries experience more than one form of malnutrition.
- **Packaged foods** - As per the report, only 21% of packaged foods in India are rated as being healthy.
- This is based on overall energy, salt, sugar and saturated fat on the negative side, and vegetable, fruit, protein, fibre and calcium as positive factors.

What is the case with India?

- **Spatial variation** - An International Food Policy Research Institute (IFPRI) study found that stunting varied greatly from district to district (nearly 12% to 65%).
- Notably, 239 of 604 districts have stunting levels above 40%.
- There are high and very high levels of stunting mainly in central and northern India (more than 30% and 40%, respectively).
- In contrast, less than 20% is the condition in almost the entire south.
- **Factors** - Factors associated with gender, education, economic status, health, hygiene, and other demographic factors explain the spatial variation.
- Factors such as women's low BMI accounted for 19% of the difference between the low versus high-burden districts.
- Other influential gender-related factors included maternal education (accounted for 12%), age at time of marriage (7%) and antenatal care (6%).
- Children's diets (9%), assets (7%), open defecation (7%) and household size (5%) were also influential.

What should be done?

- The district and region-wise sharp contrast shows the important role played by political commitment and administrative efficiency.
- It also reflects the role of literacy and women's empowerment in ensuring children's health.
- The figures thus call for immediate policy action to reduce inequalities and childhood stunting.
- In states where the Anganwadi Services scheme does not work well, it must be subjected to a rigorous review, and targeted interventions for supplementary nutrition should be made.

5.3 Global Burden of Disease Report

Why in news?

Global Burden of Disease report was recently published by The Lancet Planetary Health journal.

What does the report say?

- India, which accounts for 18% of the global population, recorded 26% of the global premature deaths and disease burden due to air pollution.
- One in every eight deaths in India (2017) could be attributed to air pollution, which now contributes to more disease burden than smoking.
- The states which recorded the highest exposure to particulate matter PM 2.5 were Delhi, Haryana and Punjab.
- The disease burden associated with air pollution in India includes ischaemic heart disease, stroke, chronic obstructive pulmonary disease and lung cancer.
- The average life expectancy in India would have been 1.7 years higher if the air pollution levels were less than the minimal level causing health loss.
- Also, no state in India had an average exposure norm of less than 10 micrograms per cubic metre for PM 2.5 as recommended by WHO.
- The recommended limit set by the National Ambient Air Quality Standards of India is higher than WHO limit at 40 micrograms per cubic metre.
- Even then, 77% of India's population was exposed to mean PM 2.5 more than the recommended limit.

What are the measures needed?

- Stubble-burning and the use of solid fuels in households serve as the two major sources of pollution.
- **Agricultural field** - The Centre should work with Punjab and Haryana to ensure that the machinery already distributed to farmers and cooperatives to handle agricultural waste is in place and working.
- A mechanism for rapid collection of farm residues and new approaches to recovering value from biomasshas to be instituted.
- **Pollution – rural** - The potential of domestic biogas units, solar cookers and improved biomass cook stoves has to be explored, since they impose no additional expenditure on rural and less affluent households.
- **Pollution – urban** - Fuels may be relatively cleaner today and vehicles better engineered to cut emissions, but traffic densities in cities have led to a rise in pollution.
- Thus, real-time measurement of pollution using ground-level monitoring stations for PM2.5 should be explored.
- **Global experience** - According to the WHO database of air pollution, 14 of the 15 cities with the worst air pollution in the world are in India.
- India should learn from the experience in controlling high pollution levels in the cities of Mexico City and Beijing.
- **Focus** - High pollution levels do not necessarily translate into a high disease burden.
- For example, Delhi has high ambient air pollution level but the number of deaths are comparatively lower.
- Hence, the country need to pay greater attention to the people living in the worst-affected States of Uttar Pradesh, Bihar, Rajasthan and Jharkhand.
- These are the regions with low social development, which still relies on solid fuels for cooking and engaging in stubble-burning and hence need more attention.

5.4 Health Impact of Air Pollution

Why in news?

India State-Level Disease Burden Initiative recently released the estimates of reduction in life expectancy associated with air pollution.

What is the initiative?

- The India State-Level Disease Burden Initiative was launched in 2015.
- The India State-Level Disease Burden Initiative is a venture of the
    i. Indian Council of Medical Research (ICMR)

ii. Public Health Foundation of India (PHFI)

iii. Institute for Health Metrics and Evaluation (IHME)

- This comes in collaboration with the Ministry of Health and Family Welfare, along with experts and stakeholders associated with over 100 Indian institutions.
- The Initiative makes assessment of the diseases causing the most premature deaths and ill-health in each state of the country.
- The data are analysed using the standardised methods of the Global Burden of Disease Study.

What are the key findings?

- India, with 18% of the world's population, has a high 26% of the global premature deaths and disease burden by air pollution.
- Moreover, one in eight deaths in India was attributable to air pollution in 2017.
- This makes pollution a leading risk factor for death.
- The estimate found that 12.4 lakh deaths in India in 2017 were due to air pollution.
- This included 6.7 lakh deaths due to outdoor particulate matter air pollution and 4.8 lakh deaths due to household air pollution.
- Over half of the deaths due to air pollution were in persons less than 70 years of age.
- In 2017, 77% population of India was exposed to ambient PM2.5 above the recommended limit by the National Ambient Air Quality Standards.
- The highest PM2.5 exposure level was in Delhi, followed by the other north Indian States of Uttar Pradesh, Bihar and Haryana.
- **Effect** - Contrary to the popular association of pollution with respiratory diseases, poor air is responsible for heart diseases as well.
- Disability-adjusted life years (DALYs) is the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.
- DALYs attributable to air pollution in India in 2017 for major non-communicable diseases were at least as high as those attributable to tobacco use.
- The average life expectancy in India would have been 1.7 years higher if the air pollution levels were less than the minimal level causing health loss.
- The highest increases in life expectancy would have been in the northern States of Rajasthan (2.5 years), Uttar Pradesh (2.2 years) and Haryana (2.1 years).

What does it call for?

- Air pollution needs much more than ad-hoc reactions such as bans, fines and shutting down of power stations.
- The variation between States in the exposure to outdoor and indoor air pollution is evident with the study.
- This factor should thus be taken into account while planning policies to reduce exposure to pollution and its health impact.
- The study also reveals air pollution is a year-round phenomenon, particularly in north India.
- This causes health impacts far beyond respiratory illnesses, which calls for a holistic response.
- With obvious links between pollution control and public health, there has to be collaboration between the ministries of health and environment.
- Pollution control policies should include the combined expertise of public health professionals, transport sector specialists, environmentalists and urban planners.

5.5 National Health Authority

Why in news?

The NITI Aayog has recently proposed the creation of a new National Health Authority.

What is the proposal?

- National Health Authority(NHA)is proposed to administer the Pradhan Mantri Jan Arogya Yojana (PMJAY) and will be chaired by the Health Minister with the Aayog as its administrative body.
- It is envisioned as an autonomous body that could initially be formed by an executive order.
- This is because, with health and public health being state subjects, two or more state legislatures will need to pass resolutions before Parliament enacts a law for the constitution of the NHA. (Article 252)
- The NHA will report directly to the Prime Minister's office, making the Union Health Ministry to have little say in the PMJAY scheme.

Why is there a demand for a separate authority?

- PMJAY will target about 10.74 crore poor, deprived rural families and identified occupational category of urban workers' families as per the latest Socio-Economic Caste Census (SECC) data covering both rural and urban.
- PMJAY is currently administered by the National Health Agency which is a registered society under the Health Ministry.
- While the Health Ministry is not responsible for the day to day running of the scheme, it does have a say in policy matters.
- For example, the package rates were decided by the Directorate General of Health Services.
- However, since PMJAY caters to around 40% of the population, setting the price for the targeted people could artificially inflate health costs for the remaining 60% who are not covered under the scheme.
- Hence, there is an argument for a distinct authority, without government intervention, to administer the price modalities of the scheme.

What will be its purpose?

- The NHA will address the shortage of capacity in many states at the administrative level that could manage the extra monitoring and supervision involved.
- Also, NHA could lay down uniform standards and access rules that could allow free movement between different jurisdictions without losing access to health care or to health information.
- Internal migration from labour-surplus areas to those parts of the country where wages are higher is raising in India and hence NHA should ensure that they are not left out.
- NHA will have penal powers and can issue orders to its state counterparts rather than mere advisoriesand it can also act against errant hospitals.
- The NHA will also have full say over the package rates and the mandate to negotiate with the private sector for the strategic purchasing of services.
- The NITI Aayog proposal also envisages the formation of an advisory board.

What are the concerns?

- The crucial determinants of any scheme's success lie at the state government level.
- The experience from previous centrally-sponsored schemes is that line ministries have often created too many requirements and required excessive standardisation.
- These have meant that the administration of schemes is not as accountable or efficient as it would be otherwise.
- This must not be repeated in the case of the NHPS.
- Thus, NHA as an independent authority provides for the chance of less interference from the government.
- But it should ensure that the NHPS does not turn into a purely central scheme with little involvement from the states.

5.6 Lapses in Blood Screening - Tamil Nadu Case

Why in news?

A 23-year-old pregnant woman in Tamil Nadu tested positive for HIV after receiving a unit of blood at a government hospital blood bank.

What is the mandate?

- Testing all donated blood units for a number of transfusion-transmissible infections, including HIV, is mandatory in India.
- The ELISA test is used in all blood banks to screen for HIV.
- Notably, ELISA test has very high levels of sensitivity to diagnose samples positive for the virus.
- Since 2004, the National AIDS Control Organisation (NACO) Action Plan-specified guidelines are being followed.
- All blood banks are required to obtain from donors a written consent on their wish to be informed about a positive test result.
- In case of testing positive for HIV, blood banks are required to refer the donors to designated voluntary counselling and testing centres (VCTCs) for disclosure and counselling.
- VCTCs are required to inform the blood bank of a donor's status only when the confirmatory test done at the VCTC too is positive.
- This is to stop the person from donating blood in the future.

What happened in the recent case?

- The donor's HIV-positive status became known in 2016 when he donated blood at the same blood bank.
- This particular donor had consented to be informed of a positive result.
- It is said that the blood bank tried but failed to contact the donor in 2016 to inform him of his HIV positive status.
- But recently he had found out elsewhere that he was HIV-positive, and dutifully contacted the hospital.
- But his blood (recent donation) had already been transfused to the pregnant woman.
- The donor passed away after consuming poison following the incident.

5.7 Concerns with Generic-Only Model

What is the issue?

- There is an increased push by the government for generic drugs, for affordable healthcare.
- But the concerns with quality of the generics call for a relook on this 'generic-only model'.

What are generics?

- A generic drug is a copy of drug medication created to be the same as an already marketed brand-name drug.
- It equals in dosage form, safety, strength, route of administration, quality, performance characteristics, and intended use.
- Generics do not involve repetition of extensive clinical trials over the years, unlike brands that undergo extensive R&D procedure.
- Hence, generics' manufacturing cost is less, and so are their prices.

Why is the emphasis on generics?

- The government, to cut down on out-of-pocket expenditure and ensure affordable healthcare, is relying on a generics-only model.
- In the Indian market, generics hold a whopping 75% share.
- The push for generics witnessed a boom under Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP).
- It is a campaign launched by the Department of Pharmaceuticals to provide quality medicines at affordable prices to the masses.
- PMBJP stores have been set up to provide generic drugs, which are available at lesser prices.

What are the concerns?

- India ranks third in the global pharma market (10% in global sales) but the domestic scenario is less encouraging.
- A 2016 study on Spurious and Not of Standard Quality (NSQ) medicines in the supply chain in India hints at this.
- More than 10% samples were declared NSQ in the supply chain, of medicines procured by government agencies, compared to the all-India average of 4%.
- Central Drugs Standard Control Organisation (CDSCO) report shows that a range of commonly consumed generic drugs fall short of standard quality-control criteria.
- In 2017, five drugs were recalled from Jan Aushadhi stores over quality lapses.
- Another six drugs were rolled back in the first four months of 2018.
- Most of India's generic drugs manufacturers do not follow US Food and Drug Administration (US FDA) guidelines for domestic distribution.
- India has more than 67,000 drug formulations.
- But the quality control mechanism of all the Central Drugs Testing Laboratories can ascertain the quality of only 15,753 drugs annually.
- But branded generics follow regulatory mechanisms like US FDA and WHO Good Manufacturing Practices, making them more reliable.

What is the inherent risk?

- Come 2020, the NCD burden will be responsible for 73% of deaths and 60% of disease burden in India.
- A low-quality drug delays recovery time, weakens the immune system by a longer duration of dosages, and invites comorbidities.
- Substandard medicines may promise affordable healthcare in the present, but in the future results could be catastrophic.
- Thus, relying on generics alone can be counter-productive in the mission to make India disease-free.

What does it call for?

- Medicine procurement and distribution should be driven by global best standards, not lowest price.
- For the goal of universal health coverage by making medication affordable, superior-quality drugs are a prerequisite.
- The 'generics-only model' approach needs a critical reassessment for dealing with India's disease burden.

6. NEIGHBORHOOD

6.1 Implications of Assam's NRC

What is the issue?

- The last date for filing claims and objections for Assam's National Register of Citizens (NRC) has been extended by the Supreme Court by 15 days from December 15, 2018.
- The outcome of the NRC exercise has implications for India's ties with Bangladesh.

Why is Bangladesh significant for India?

- According to the latest available Bangladesh government estimates of 2009, more than 500,000 Indians were working in Bangladesh.
- More recently, Bangladesh was reported to be among the highest source of remittances to India, behind the UAE, the U.S., Saudi Arabia, Qatar and the U.K.
- Many Indian citizens are securing employment opportunities in Bangladesh through MNCs, NGOs and trading activities.

- Most of them are employed in advantageous jobs in Bangladesh while Bangladeshis in India are largely employed in low-paying jobs.
- More importantly, it is to be noted that there are legal as well as illegal Indian immigrants in Bangladesh too.

What is the tussle?

- The government maintains that the NRC is an administrative task overseen by the Supreme Court, and not a political one.
- However, some members of the ruling party have been making hateful anti-migration and anti-Bangladeshi comments.
- This reflects poorly on the prevalent positive relationship between Bangladesh and India.
- Also, Indian PM has assured the Bangladesh government that those excluded from the NRC will not be deported.
- But Bangladesh has so far been silent on the issue, terming it as an 'internal matter of India'.
- Notably, Bangladesh is already at the extremes in terms of use of resources and manpower to host Rohingya refugees.
- So it would not be acceding to a request of taking back Bengali-speaking Muslims in case deportation is initiated.

How is India's 'Neighbourhood First' policy performing?

- The 'Neighbourhood First' policy of the Government of India seems to be undergoing a transformation in the recent period.
- **Nepal** - Nepal, once a time-tested ally of India, has tilted towards China.
- This is particularly since the 2015 Nepal blockade barring the entry of fuel, medicine and other vital supplies.
- Nepal now has been given access to four Chinese ports at Tianjin, Shenzhen, Lianyungang and Zhanjiang.
- This is in addition to access to its dry (land) ports at Lanzhou, Lhasa and Xigatse, as well as roads to these facilities.
- These seem to be ending India's monopoly to Nepal's trading routes.
- **Bhutan** - The India-Bhutan relationship has also been strained.
- This is witnessed ever since India temporarily withdrew subsidies on cooking gas and kerosene in 2013, constraining bilateral ties.
- The Doklam stand-off of 2017 reinforced Bhutan's scepticism towards Chinese expansionist plans across the region.
- Simultaneously, this landlocked kingdom has been underlining its aspiration to affirm its sovereignty.
- E.g. it has stepped out of India's diplomatic influence, as evidenced by its withdrawal from BBIN (Bangladesh-Bhutan-India-Nepal) motor vehicles agreement
- **Bangladesh** - With China making inroads into South Asia and India's backyard, Bangladesh has been the most trusted ally of India.
- On the security front, it has cooperated in India's crackdown on insurgents.
- With close cooperation with Border Guard Bangladesh (BGB), a number of training places and hideouts of these insurgents (in Bangladesh) has been reduced to almost zero.
- Annual bilateral trade is set to cross the $9 billion mark, making it India's biggest trading partner in South Asia.
- In addition, Bangladesh has facilitated connectivity with the Northeast by allowing the use of Chittagong and Mongla ports.
- However, the following issues remain unresolved, being irritants in the relationship -
    i. the Teesta water-sharing issue
    ii. non-tariff barriers on Bangladeshi exports

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iii. border killings

- **Others** - The India-China power play has also cast its shadow over Sri Lanka and the Maldives in the last few years.

What do these imply?

- The NRC compilation exercise has sparked a debate around its political, economic and humanitarian consequences.
- The issue threatens to disturb the equilibrium in India-Bangladesh ties.
- Any deportation of those not in the NRC list is not only politically unwise but also risk inciting unrest across the region.

6.2 India-Maldives Relations

What is the issue?

The President of Maldives made a three-day visit to India recently.

What are the points of engagement?

- The two countries reiterated their strong commitment to further strengthening and reinvigorating the traditionally strong and friendly relations between them.
- They have also reiterated their commitment to democracy, development and peaceful co-existence.
- **Aligning policies** - 'India-First' Policy has been re-affirmed by Maldives, thus committing to working together closely with India.
- India has announced a financial assistance package of $1.4 billion for the Maldives in the form of budgetary support, currency swap agreements and concessional lines of credit under its 'Neighbourhood-First' Policy.
- **Maritime co-operation** - Both sides agreed to strengthen cooperation to enhance maritime security in IOR through coordinated patrolling and aerial surveillance, exchange of information and capacity building.
- **Terrorism**–Both sides reaffirmed their support for increased cooperation in combating terrorism in all its forms and manifestations both within the region and elsewhere.
- **P-2-P relations** - The Maldives is one of the very few countries with which India has a visa-free arrangement.
- This is important in facilitating people-to-people exchanges and travel between the two countries.
- **Climate** - Both sides agreed on the importance of combating the impact of climate change, especially detrimental to developing countries, and small island developing states.
- They agreed on the need to work towards strengthening the global response to climate change, through the UNFCCC and the Paris Agreement.
- **Institutional reform** - The voice and participation of developing countries in multilateral financial institutions has to be enhanced.
- Maldives reiterated support for India's candidature for permanent membership of an expanded and reformed UN Security Council.
- It has also supported India's candidature for a non-permanent seat for the year 2020-21.
- **Trade** - India has noted the expanding opportunities for Indian companies to invest in the Maldives to boost trade ties.
- Areas such as fisheries development, tourism, transportation, connectivity, health, education, information technology, new and renewable energy and communications were earmarked for enhancing bilateral cooperation.
- The two sides also signed four agreements –
    1. Visa liberalisation for Indian investors
    2. Cultural cooperation
    3. IT and electronics cooperation

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4. Improving the ecosystem for agriculture business.

How does the China factor play a role here?

- The Maldives has maintained a close relationship with China, especially in financial terms,under its previous government.
- It has welcomed Chinese money for major infrastructure projects and has also signed free trade agreement (FTA) with china.
- This has ignored political moderation and closer security ties with India.
- However, it is now estimated that China's loans to the Maldives total at least $1.3 billion, or a quarter of Maldives' gross domestic product.
- Hence the new Maldivian government is looking to India for more budgetary support to overcome the crisis and to help meet its development goals.
- Maldives is also planning to revise the FTA with China.

What should be done?

- Apart from the India-First policy of Maldives, China will continue to play an important role as an economic partner.
- However, India's role will be critical in determining the trajectory of political developments in the Maldives.
- India's patient handling of the Maldives crisis over the last few years has positioned it well.
- By coordinating its response with other like-minded regional and extra-regional players, India should underscore the options available to the Maldives if it decides to move away from China.
- The more India invests in strengthening democratic institutions in its neighbourhood, the better returns it will get in its foreign policy.

6.3 India – Bhutan relations

What is the issue?

India has an enormous opportunity to transform from being Bhutan's largest developmental partner to its largest investor and business partner.

What is the changing nature of relationship?

- The Mangdechhu hydroelectric project is a 720MW run-of-river power plant being built in central Bhutan.
- It is one of the 10 hydroelectric projects planned by Bhutan to generate 10,000MW hydropower by 2020 with support from India.
- However, both sides have faced issues in getting a favourable tariff for the project, which is set to start production in January 2019.
- Bhutanese and Indian negotiators have had seven rounds of meetings so far, but have not been able to agree on a mutual tariff rate.
- However, Bhutan's tariff rate is below what new hydropower projects in India are charging and hence India has to make a final decision in this regard.
- Bhutan also wants India to start the construction of the 2,560 MW Sunkosh Reservoir project and the 2,640 MW Kuri Gongri reservoir project along with India.
- Both these projects are not only mentioned as priority projects by Bhutan but also as one of its key economic priorities.
- On the other hand, the process from the Indian side is getting slow due to the financing concerns for the projects.
- Despite that, these two mega projects will be part of a clean and reliable stabilising power source for India and contribute to its renewable energy targets.
- These projects show that Bhutan wants to convert the relationship with India from the traditional donor and aid recipient to that of investment and trade.

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What are the reasons?

- While hydro projects built with India will provide the bulk of the revenue for the Bhutan government, the projects by themselves cannot generate many jobs for the Bhutanese youth.
- This is especially so because Bhutan has the highest proportion of youth to the total population in South Asia.
- The hydro projects, in the long run, will also not be enough to bridge the ever-widening trade gap or current account deficit with India.
- Hence, Bhutan made a long-standing national objective of achieving economic self-sufficiency.
- Bhutan have also made an in-principle decision to not seek more aid from India for its 12th plan period than it did in the 11th plan.
- Not only from India, Bhutan is also sharply reducing its overall grant component.

What will be the recourse?

- This development presents an enormous opportunity for India graduate from being Bhutan's largest developmental partner to Bhutan's largest investor and business partner.
- Bhutan sees Indiaas the largest potential source of investment for its economic diversification programmes.
- India also serve as alargest market for their products and services that come out of this diversification.
- Bhutan is also on the path of demanding an exemption from India's Central GST in the future.
- This is because CGST is affecting the export of Bhutanese goods to India, both in terms of price and procedures at the border.
- On the other hand, Bhutan is willing to pay the state-level GST.
- Thus the relationship of India with Bhutan should go deeper than its engagement in the hydropower sector into other dimensions of mutual interest.
- As, Bhutan remains India's closest and most reliable friend, it is now time to take this relationship to the next level.

6.4 Repatriating Prisoners

Why in news?

Pakistan recently releases Indian prisoner Hamid Nihal Ansari after 6 years in Pakistani jail.

What is the background?

- Hamid Nihal Ansari, an engineer from Mumbai, left India for Kabul for employment and then was reported "missing" since 2012.
- He reportedly became friendly with a Pakistani girl on social media and reached Kohat in Khyber Pakhtunkhwa to save her from a forced marriage.
- On November 12, 2012, he crossed over from Afghanistan border in Jalalabad to Peshawar in Pakistan where he was arrested by Pakistan intelligence.
- Pakistan had alleged that he was an "Indian spy" who illegally entered the country, and accused him of involvement in anti-state crimes by forging his documents.
- Though subsequent investigations proved his innocence on all charges other than entering Pakistan illegally, the authorities there put him through a trial in a military court.
- Accordingly, he was tried by a military court in Pakistan on charges of espionage in 2012and was given a three-year sentence in December 2015.
- Pakistan had also not responded to many requests by India for consular access, which was a violation of the Vienna Convention on Consular Relations.
- His sentence was ended recently and the Peshawar high court had given a one-month deadline to the Pakistan government to complete formalities for Ansari's repatriation.
- However, legal experts have argued that he should have been freed earlier as he had already spent three years in jail at the time of his sentencing.

What does the incident show on the bilateral relations?

- To its credit, the Ministry of External Affairs applied sustained diplomatic pressure on Islamabad.
- It has consistently demanded information on Mr. Ansari's whereabouts and then for a fair trial and consular access, which was never granted.
- The Government of Pakistan must also be commended for expediting Mr. Ansari's release after he completed his sentence on December 15, although it had received another month from a Peshawar court to finish the formalities.
- India would do well to acknowledge the Pakistan government's gesture in releasing him.
- Also, credit goes to citizens' groups in both countries that helped the family, particularly lawyers and human rights activists in Pakistan who have ensured Mr. Ansari's release.
- Thus, the repatriation of Hamid Nihal Ansari is cause for cheer on the otherwise bleak landscape of India-Pakistan relations.

What should be done?

- Both India and Pakistan must dedicate themselves to freeing hundreds of other prisoners who remain in each other's jails.
- Many of the prisoners have completed their sentences but await long processes of identification and repatriation.
- According to government figures, Pakistan holds 471 Indian prisoners while India holds 357 Pakistani prisoners.
- A large number of them are fishermen who inadvertently trespassed into each other's waters.
- Thus, the two countries must revive the biannual meetings of the Joint Judicial Committee on Prisoners as agreed to a decade ago, which has not met since 2013.
- Its last recommendations, that women and children as well as prisoners with mental health issues be sent back to their countries on humanitarian grounds, are yet to be implemented.
- Holding these prisoners as hostages only result in bitter bilateral ties and prolongs the misery of their impoverished families.
- Thus, a more humane approach on the treatment and repatriation of prisoners needs to be adopted by both these countries.

8. INTERNATIONAL ISSUES

8.1 China – Taiwan Relations

What is the issue?

Taiwan's fine balance in its relationship with China is coming under stress in recent times.

What is the history and source of this tension?

- The first known settlers in Taiwan are Austronesian tribal people thought to have come from modern day southern China.
- After a brief spell as a Dutch colony (1624-1661) Taiwan was unquestionably administered by China from 1683 to 1895.
- At the beginning of the 17th Century, significant numbers of migrants started arriving from China, often fleeing turmoil or hardship.
- The descendants of these migrated people now make up by far the largest population group in Taiwan.
- Following Japan's victory in the First Sino-Japanese War in 1895, China ceded Taiwan to Japan.
- But after World War Two, the Republic of China began ruling Taiwan, after Japan surrendered it back to China.

- In the next few years, the then Kuomintang (KMT) government in China were beaten back by the Communist armies under Mao Zedong and they were fled to Taiwan in 1949.
- This group, referred to as Mainland Chinese, dominated Taiwan's politics for many years, even though they only account for 14% of the population.

How does China view Taiwan?

- After decades of hostile intentions and angry rhetoric, relations between China and Taiwan started improving in the 1980s.
- China asserts that there is only "one China" and that Taiwan is an inalienable part of it.
- China put forward a formula, known as "one country, two systems", under which both Beijing and Taipei agree that Taiwan belongs to China, while the two still disagree on which entity is China's legitimate governing body.
- The tacit agreement underlying the formula is that Taiwan will not seek independence.
- China also stated its right to use "non-peaceful means" against Taiwan if it tried to secede from China.
- Thus, China regards Taiwan as a breakaway province which it has vowed to retake, by force if necessary.

What role does the US play?

- The US is by far Taiwan's most important friend, and its only ally.
- In 1979, US ended diplomatic recognition of Taiwan in order to concentrate on burgeoning ties with China.
- However, it later revoked and passed the Taiwan Relations Act, which promises to supply Taiwan with defensive weapons, and stressed that any attack by China would be considered of "grave concern" to the US.
- The Taiwan Travel Act aims to promote greater engagement between US and Taiwan.
- US has also sought to leverage Taiwan to pressure China in the U.S.'s ongoing trade war.

What is the position taken from the Taiwan side?

- The diplomatic shift of the U.S. towards Taiwan have predictably angered Beijing.
- China is believed to be applying overt and covert pressure to stop countries from according diplomatic recognition to Taipei.
- Accordingly, a number of African and Central American states have withdrawn formal ties with Taipei and established links with China.
- However, Taiwan did not want to jeopardise the strong trade relations between the two territories.
- In a recent referendum, the Taiwanese rejected a proposal to rename the country's Olympic team as Taiwan, instead of the current Chinese Taipei.
- The verdict is an indication of the limited support for independence and a greater preference to maintain the status quo.

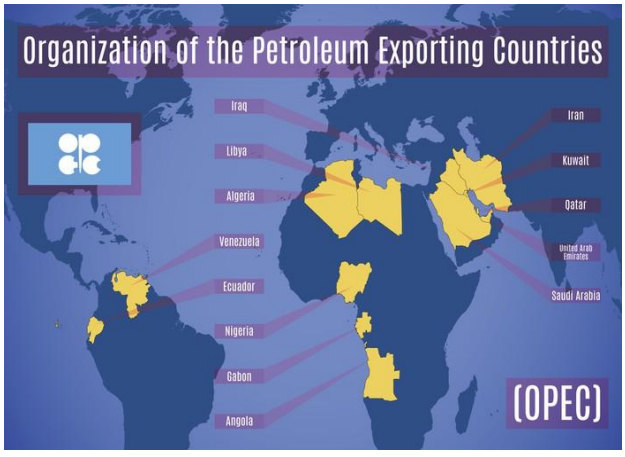
8.2 Qatar's OPEC Exit

Why in news?

Qatar recently announced that it was walking away from the Organisation of the Petroleum Exporting Countries (OPEC).

What is OPEC?

- OPEC was initially founded in 1960 by Saudi Arabia, Iraq, Iran, Kuwait, and Venezuela. Qatar joined in 1961.
- OPEC is now a group of 15 countries that produce about 45% of the world's oil and contain over 80% of its "proven" reserves.
- OPEC has a very big influence on global oil prices.
- It plays a crucial role in determining the economic health of many countries, including India.



What is the rationale behind Qatar's decision?

- Qatar is among the world's smallest countries by area.
- However, it is the richest in terms of per capita gross national income ($128,000 according to World Bank figures).
- Qatar's riches are due to its natural gas reserves, and it is the world's largest exporter of liquefied natural gas (LNG).
- So it wanted to focus on its gas industry rather than on oil, in which it was in any case a small player.
- It denies any political reasons for leaving OPEC.
- However, Qatar's broken diplomatic relationship with Saudi Arabia is to be noted.
- Notably, Saudi Arabia plays a dominant role in the OPEC, having pumped 11 million barrels per day in October, 2018.
- So Qatar feels it was pointless to put efforts, resources and time in an organisation that it was a very small player in.

Why is Qatar's regional relations strained?

- Qatar has long showed an independent mind in foreign policy.
- This includes having a close economic and diplomatic relationship with Shia Iran, Sunni Saudi's great regional rival.
- This stance does not always align with the priorities of its regional Arab neighbours.
- In June, 2017, Saudi Arabia, UAE, and Bahrain cut ties with Qatar.
- They directed Qatari citizens to leave within 14 days, and forbade their citizens from going to or staying in Qatar.
- Egypt too severed diplomatic contact with Qatar.
- All of these countries shut their airspace to Qatari aircraft, and told foreign airlines to seek permission if flying to and from Qatar.
- Saudi also sealed Qatar's only land border, and closed its ports to Qatari-flagged ships.
- It claimed Qatar had refused to end ties with "terrorists", after Doha declined to fulfil 13 demands that were presented to it.
- It included
    i. cutting diplomatic relations with Tehran and military ties with Turkey
    ii. shutting down the TV station Al Jazeera
    iii. aligning with other Arab countries "militarily, politically, socially and economically"
- But Qatar said the demands amounted to surrendering their sovereignty, which it would never do.
- It has backed the Muslim Brotherhood and Hamas, but it is also part of the US-led war on the Islamic State.
- It has assisted the rebels fighting Bashar al-Assad's regime in Syria.
- Over the last year and a half, hopes of reconciliation of Qatar with its neighbourhood have dimmed.
- Doha has only deepened its cooperation with Iran and Turkey, and with political Islamist organisations.

How will Qatar's decision impact global oil prices?

- Qatar is a tiny player that pumped only 2% of OPEC's total output of 32.9 million barrels per day.
- It has limited influence on OPEC's pricing decisions and so the exit would not make a much impact in terms of global oil prices.

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- However, over the last many decades, it has played a role mediating internal rivalries in OPEC.
- It helped strike production-cut deals with producers like Russia.
- So in these areas, Qatar's absence may hurt OPEC slightly.
- **India** - Qatar's position as the world's top LNG exporter and an influential player in the global LNG market is important for India.
- Qatar is one of India's oldest LNG suppliers, with Petronet LNG among the companies that have contracted to buy LNG from Qatar.
- But LNG pricing is not in OPEC's domain, so Qatar's decision is unlikely to impact these trends.

8.3 Changes to H1B Visa Rules

What is the issue?

The U.S. government is proposing to change H1B visa rules that may have a significant impact on Indians.

What are the proposed changes?

- The H1B visa is an employment-based, non-immigrant visa for temporary workers in the U.S.
- It allows US companies to employ graduate level workers in specialty occupations that require theoretical or technical expertise in specialized fields.
- The proposed rule will require potential H1B petitioners to electronically register with U.S. Citizenship and Immigration Services (USCIS).
- This should be during a designated period, prior to petitions being filed.
- It also changes the order in which the advanced degree lottery and general H1B lottery are conducted.
- Under the proposed rule, advanced degree registrations will be selected first up to a cap of 20,000.
- After this, the regular H1Bs, up to a cap of 65,000, are selected from all the unselected registrations.
- The unselected registrations will also include those advanced degree registrations that did not get selected in the exclusive advanced degree lottery.

Whom will it benefit?

- There is a higher probability that advanced (U.S. masters and higher) degree holders will be selected in larger numbers than regular H1B applicants.
- It is aimed at awarding this popular work visa to the most skilled and highest paid foreign workers.
- The changes could also potentially bring down the costs for sponsoring companies, by reducing the paperwork of sponsors.
- Only those H1B sponsoring employers who get selected from the list of registered petitioners will be required to actually submit H1B petitions.
- This applies for both regular and advance degree categories.

What is U.S.'s rationale?

- Foreign students are a $40 billion export market.
- So favouring students helps university budgets and America's trade balance.
- Also, foreign students on H-1Bs are more likely to secure green cards and gain US citizenship, becoming productive members of society.
- They are more likely to be upwardly mobile, switching from job to job.
- On the other hand, the IT H-1Bs are more likely to be bonded to the majors, with most profits flowing to native countries (E.g. India).

What are the implications for India?

- This will have a significant impact on Indians, as 74% of H1B petitions were on behalf of India-born workers in the fiscal year 2018.

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- The two major H-1B beneficiary groups are:
    i. Indian employees that work for the big IT majors in the US
    ii. Indian students who obtain a US Master's/Ph.D. degree and then apply for H-1B visas at US-based companies
- The proposed rules, if implemented, will dramatically tilt this competition in favour of the students.
- The new process could increase the number of H-1B holders who have advanced degrees by up to 16%.
- So the IT majors will lose heavily to a tune of over 10,000 visas each year.

8.4 Withdrawal of US Forces from Syria

What is the issue?

- US President Donald Trump has decided to pull all American troops out of Syria and reduce by half the US forces in Afghanistan.
- The move could have varied geopolitical and foreign policy implications for India's neighbourhood and the world.

What is Trump's rationale?

- The US has about 2,000 troops in Syria and 14,000 in Afghanistan.
- Right from his election campaign, Trump had criticised US military interventions in Afghanistan and Iraq as extremely expensive and politically foolish.
- Rather than spend American blood and treasure abroad to serve other people's causes, Trump insisted he would put America First.
- He has been demanding a thorough overhaul of America's external commitments.
- He claims that the physical infrastructure of the IS caliphate is destroyed.
- So the U.S. can leave the war against the remnants of the jihadist group to the Syrian government and its main backers, Russia and Iran.
- The caliphate is actually destroyed as the IS has lost 95% of the territory it once controlled.
- It is now confined to narrow pockets on the Iraqi-Syrian border.
- The U.S. would also not like to get stuck in Syria forever as it is basically Russia's war.
- The U.S. is already stranded in Afghanistan (for 17 years) and Iraq (over 15 years) without a way out.

What are the risk factors of the move?

- The U.S. has only 2,000 troops in Syria, and they were not directly involved in the ground battle.
- They were supporting the Syrian Democratic Forces, a rebel group led by Kurdish rebels who were in the forefront of the fight against the IS.
- The U.S. support for the Kurdish rebels has irked Turkey.
- Turkey sees them as an extension of the Kurdistan Workers Party, the rebels on the Turkish side who have been fighting Turkish troops for decades.
- Turkey considers the military consolidation of Kurds as a strategic threat.
- In the past, Turkey had attacked Kurds in some pockets on the Syrian side, but was prevented from launching a full-throttle attack because of the U.S. presence.
- So the US pull out would in effect be leavinsg the Syrian Kurds at the mercy of Turkish troops.
- A risk factor will emerge if Turkey launches an attack on the Kurdish militants, which President Erdoğan has vowed to do.
- The Kurds will then have to re-channel their resources to fight Turkish soldiers.
- This will weaken the ground resistance against the remaining IS militants on the southern side of the border.

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What is the larger implication?

- The move marks the end of a prolonged phase of American military interventions in the Middle East and South Asia.
- The decision to pull troops out of Syria has predictably upset both the Washington establishment and America's global allies.
- US Defence Secretary, James Mattis, who advised against the withdrawal, has resigned.
- Its internal tussle on its external relations is making U.S. an unpredictable factor in international politics.
- So the rest of the world has no option but to factor it into their own geopolitical calculus.
- Besides this, Trump's move may undermine the war against the Islamic State.
- It would also help legitimise the Syrian ruler Bashar al Assad, and boost his backers in Moscow and Tehran.
- In Afghanistan, the decision comes at a time when US has embarked on direct talks with the Taliban brokered by Pakistan.
- **India** - If the decisions are implemented, India will have to take into account the consequences for its western neighbourhood.
- This is especially the case with Afghanistan where the U.S. has been fighting the longest war in American history.
- India must start preparing for the inevitable geopolitical turbulence.
- These may include the resurgence of the IS and the potential return of the Taliban to power in Kabul.

What could have been done?

- The ground reality is too complex and requires Mr. Trump to be more patient and strategic in his policymaking.
- He could have considered waiting for the conflict in the disturbed zones to de-escalate even further.
- Also, he could have gained assurances from Turkey that it would refrain from attacking Kurdish troops.
- The cost of being so abrupt is that it leaves a dangerous vacuum in north-eastern Syria.

8.5 Arrest of Huawei's Executive

What is the issue?

- Canadian authorities recently arrested Huawei's global chief financial officer Meng Wanzhou on allegations of fraud levelled by the US.
- It comes as a signal for the emerging high-tech trade war between the United States and China.

What is the charge against Meng?

- Meng is alleged to have tricked financial institutions into making transactions that violated US sanctions against Iran.
- Between 2009 and 2014, Huawei used a Hong Kong company, Skycom Tech, to do business with telecom companies in Iran.
- Huawei had tried to import US-made computer equipment there.
- Banks in the US cleared transactions for Huawei, inadvertently doing business with Skycom.
- When financial institutions asked Huawei about the allegations, Meng reportedly met with an executive from one institution.
- He had said Huawei operated in Iran in compliance with US sanctions, and that it had sold its shares in Skycom.
- But Canada alleges that Huawei operated Skycom as an unofficial subsidiary, making efforts to keep the connection secret.
- Also, Meng's presentation to the financial institution constituted fraud.

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- Meng faces possible extradition to the US, a process that can take time.
- The arrest has led to China warning Canada and calling in the US Ambassador in Beijing to lodge its protest.

Is this the first time?

- Huawei is the second big Chinese tech company to be accused of breaching those sanctions.
- The first was ZTE Corp. in 2017.
- The US punished ZTE by forbidding it from buying American components, most importantly, telecom chips made by US-based Qualcomm Inc.
- Those restrictions were lifted after ZTE agreed to pay a fine.

Is it a trade war scenario?

- These episodes highlight Chinese companies' dependence on critical US technology.
- US moves against Huawei and ZTE may be intended to force China to remain a cheap supplier instead of a threatening competitor.
- More systematic efforts to block Chinese access to US components are in the works.
- E.g. the recently passed Export Control Reform Act
- It increased regulatory oversight of US exports of emerging and foundational technologies deemed to have national-security importance.
- A second weapon in the high-tech trade war is investment restrictions.
- The Trump administration has greatly expanded its power to block Chinese investments in US technology companies.
- This is done through the Committee on Foreign Investment in the US (CFIUS) which has already cancelled a bunch of Chinese deals.
- The objective is to prevent Chinese companies from copying or stealing American ideas and technologies.
- By blocking these investors, the Trump administration hopes to preserve US technological dominance.
- The European Union is also moving to restrict Chinese investments, signalling the less-publicised high-tech trade war.

How does the future look?

- **Trade** - The high-tech trade war shows that for all the importance over manufacturing jobs, steel, autos and tariffs, the real competition is in the tech sector.
- Losing the lead in the global technology race means lower profits and a disappearing military advantage.
- So the US cannot afford to lose its dominance in the tech sector.
- With the coming of the high-tech trade war, China's economic co-dependency with the U.S. would come to an end.
- Investment restrictions may spur China to upgrade its own homegrown research and development capacity.
- **Relations** - It is very recently that the US and Chinese Presidents declared a 90-day "truce" in their trade war. Click here to know more.
- But the arrest in Canada of a Chinese telecom company executive signals a second US-China trade war.
- China sees the moves as a political play to create leverage on trade or cripple Chinese technology companies.
- This could potentially pose a challenge to the already difficult relationship.

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G.S PAPER III

9. ECONOMY

9.1 Quarterly Growth Estimates - CSO

Why in news?

The Central Statistics Office (CSO) recently released the growth estimates for the July-September quarter.

How is the growth scenario?

- **Growth -** GDP growth weakened to 7.1%, from the robust 8.2% in April-June.
- It comes as a result of rising oil prices combined with a weakening rupee that hampered demand.
- Gross value added (GVA) data show five of the eight sectors reflecting the slowdown from the first quarter.
- Only utility services, public administration, defence and other services, trade, hotel, transport, communication and broadcasting services showed growth.
- **Agriculture -** Worryingly, GVA growth in agriculture, forestry and fishing eased to 3.8%, from 5.3% three months earlier.
- It's because foodgrain output in the kharif season went up a mere 0.6%.
- Besides, there is distress in the farm sector, below-normal monsoon rains and a shortfall of over 8% in rabi sowing till November.
- **Rural -** Given the above, the outlook for rural demand remains challenging at least for the next couple of quarters.
- This demand weakness in the hinterland is also evident in the consumption spending data.
- Notably, growth in private final consumption expenditure slowed down to 7%, compared to 8.6% in the first quarter.
- **Manufacturing -** The manufacturing sector recorded a 7.4% expansion.
- However, it also poses cause for concern as the momentum almost halved from the June quarter's 13.5%.
- It has slipped back nearer to the year-earlier level of 7.1%.
- Index of Industrial Production data reveal that manufacturing output growth remained stuck at 4.6% through August-September.
- This, along with the weakness in car and two-wheeler sales, suggests that an acceleration may take some time.

How is the investment scenario?

- Gross fixed capital formation (GFCF), a key metric for investment demand, showed a positive trend.
- It expanded by a robust 12.5%, building on the first quarter's 10% increase, and constituted 32.3% of GDP.
- With non-food bank credit also showing signs of a recovery, there is an apparent prospect of an investment revival.
- An RBI research paper notes that improvement in investment activity is being driven by cyclical factors and may last up to 2022-23.
- It, however, points to risks to the investment outlook and flags the gross fiscal deficit as a key pressure point.
- As, borrowing by the government invariably crowds out investment demand.
- Here, the latest expenditure and receipts figures released by the Controller-General of Accounts are not reassuring.
- The fiscal deficit crossed the budget estimate for the full year in just the first seven months.
- It raises the chances that the Centre would miss its target of limiting the deficit to 3.3% of GDP.

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- Given the multiple uncertainties looming on the global trade and growth horizon, India's economy will have to be at its best to keep the momentum from sliding.

9.2 Interest Rates Unchanged - Monetary Policy Review

Why in news?

The Reserve Bank of India decided to leave interest rates unchanged in the recent monetary policy review.

How is the inflation scenario?

- The RBI now expects retail inflation to stay below the legally mandated 4% mark for the coming 12 months.
- Resultantly, RBI has sharply cut its inflation forecast for the second half of the current fiscal year - from 3.9-4.5% to 2.7-3.2%.
- For the first half of the next financial year, it has been revised from around 4.8% to 3.8-4.2%.
- The RBI's own household survey of inflation has shown a 40 basis point downward movement over the last round.
- Retail inflation is expected to fall further. E.g. the November data is estimated at 3%
- The dip in retail inflation is largely a result of the unexpected deflation in food items such as pulses, vegetables and sugar.

What is RBI's rationale?

- Over the policy reviews, RBI has maintained its single-minded focus on targeting only retail inflation and inflation expectations.
- But despite a favourable inflation trajectory, the monetary policy committee did not cut the repo rates.
- An analysis of the components of retail inflation explains this.
- Evidently, the headline retail inflation, mapped by year-on-year changes in the consumer price index, has decelerated sharply.
- This is primarily driven by the sharp decline in food and fuel prices.
- However, the non-food, non-fuel retail inflation has actually risen to over 6%.
- Moreover, the RBI is worried about
  i. the residual impact of minimum support prices
  ii. possible fiscal slippages
  iii. a sudden increase in oil prices if the OPEC countries decides on production cuts
- So the RBI wants to pause and decide only after ensuring the decline in inflation is of a more robust nature.

What is RBI's stance on growth?

- The Q2FY19 gross domestic product (GDP) data undershot the RBI's projection.
- However, the RBI maintains its annual forecast of 7.4% GDP growth in the current financial year.
- Economic growth has suffered in most of the advanced world.
- Both the US and the euro area have slowed even as Japan has contracted in the past quarter.
- Moreover, several emerging economies such as China and Russia, too, have decelerated.
- Yet, the RBI sounded relatively confident about the domestic economy.
- It highlighted the increased capacity utilisation in manufacturing sector, improving credit offtake and lower crude oil prices that may boost consumption.
- Notably, capacity utilisation in manufacturing sector rose to 76.1% in Q2, higher than the long-term average of 74.9%.
- Also, industrial firms reported an improvement in the demand outlook for Q4.
- But besides these, RBI has once again raised a cautionary signal to governments, both at the Centre and in the States.

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- Fiscal slippages risk impacting the inflation outlook, heightening market volatility and crowding out private investment.
- Instead, this may be an opportune time to bolster macroeconomic fundamentals through fiscal prudence.

9.3 FDI in e-commerce

Why in news?

Ministry of Commerce & Industry recently reviewed the policy on Foreign Direct Investment (FDI) in e-commerce.

What does the guidelines say?

- E-commerce entities would engage only in Business to Business (B2B) e-commerce and not in Business to Consumer (B2C) e-commerce.
- **FDI Limit** - E-commerce means buying and selling of goods and services including digital products over digital & electronic network.
- 100% FDI under automatic route is permitted in marketplace model of e-commerce.
- Marketplace based model of e-commerce means providing an IT platform by an e-commerce entity on a digital & electronic network to act as a facilitator between buyer and seller.
- However, FDI is not permitted in inventory based model of e-commerce.
- Inventory based model of e-commerce means an e-commerce activity where inventory of goods and services is owned by e-commerce entity and is sold to the consumers directly.
- **Control** - E-commerce entity providing a marketplace should not exercise ownership or control over the inventory i.e. goods purported to be sold.
- If more than 25% of the inventories of an E-commerce entity are linked to a single seller, it ceases to be an intermediary between buyers and sellers.
- Such an E-commerce entity will be treated as an inventory based model rather than a market-place platform.
- **Equity holding** - An entity having equity participation by e-commerce marketplace entity will not be permitted to sell its products on the platform run by such marketplace entity.
- Hence, a product in which, say, Amazon or Flipkart have a stake cannot be sold on their respective platforms.
- **Responsibility** - In a marketplace model, goods/services made available for sale electronically on website should clearly provide name, address and other contact details of the seller.
- Post sales, delivery of goods to the customers and customer satisfaction will be responsibility of the seller.
- Any warrantee/ guarantee of goods and services sold will be the responsibility of the seller.
- Also, e-commerce marketplace entity will not mandate any seller to sell any product exclusively on its platform only.
- **Price** - E-commerce entities providing marketplace will not directly or indirectly influence the sale price of goods or services and should maintain a level playing field.
- Also, cash back provided by group companies of marketplace entity to buyers should be fair and non-discriminatory.
- The above decision will take effect from 01 February, 2019.

What are the possible benefits?

- Under the guidelines, the e-commerce players cannot directly or indirectly influence the price of goods and services.
- Also, e-commerce marketplace entity will not mandate any seller to sell any product exclusively on its platform only.
- Thus, consumers may no longer enjoy the deep discounts offered by retailers that have a close association with marketplace entities.
- However, the absence of large retailer's monopoly will, however, bring relief to small retailers selling on these platforms.

- Traders running traditional brick-and-mortar stores, who now find it difficult to compete with the large e-commerce retailers with deep pockets, could also gain.
- These changes will enable a level playing field for all sellers, helping small retailers, including MSME, to leverage the reach of e-commerce.

What are the concerns?

- The guidelines say that e-commerce companies running marketplace platforms (Amazon and Flipkart) cannot sell products through companies in which they hold equity stake.
- Also, a vendor's inventory will be deemed to be controlled by the e-commerce player if more than 25% of its purchases are from the e-commerce player or its related firms.
- **Business model** - The changes will have a significant impact on the business model of e-commerce majors, as most of them source goods from sellers who are related party entities.
- Going forward, the suppliers will not be permitted to sell their products on the platform run by such marketplace entity.
- This will impact backend operations, as Group entities would have to be removed from the e-commerce value chain.
- Separately, any specialised back-end supportgiven by e-commerce players for some sellers must now be extended to all vendors.
- **Equity restrictions** - E-commerce players, who have their private labels on a product, will not be able to sell them on their platforms if they hold equity in the company manufacturing them.
- For example, Cloudtail India Pvt Ltd is the biggest retailer operating on Amazon, while WS Retail was the biggest seller on Flipkart.
- Cloudtail's ownership shows a clear link with Amazon.
- Hence, under the new rules, Cloudtail, in which Amazon holds equity stake, may not be able to sell products on Amazon's e-commerce platform.
- **Voluntary sale** - An e-commerce marketplace entity will not mandate any seller to offer a product exclusively on its platform under the new rules.
- However, there is no explanation on what to do when a seller voluntarily opts to sell exclusively on one e-commerce portal over another.

9.4 Widening of Current Account Deficit

What is the issue?

- RBI's preliminary data on India's balance of payments (BoP) for July-September 2018-19 was released recently.
- It highlights the damage caused by high global oil prices and thus calls for appropriate policy response from the government.

What is the CAD state?

- Current Account Deficit (CAD) is the difference between outflow and inflow of foreign exchange in the country's current account.
- India's CAD widened to 2.9% of gross domestic product (GDP) in the July-September quarter, a four-year high.
- This is in contrast to the same quarter a year ago when the CAD was only 1.1% of GDP.
- The widening of the CAD was due to an increase in the trade deficit.
- Trade deficit jumped to $50 billion in the September quarter as compared to $32.5 billion a year ago.
- This is due to a higher import bill, largely under the increasing pressure from the oil bill.

Is it a cause for concern?

- The major factor that was behind the Current Account Deficit phenomenon is the global oil prices.

- This has declined now as the global oil prices have dropped sharply since early October.
- Brent crude is down almost 30% from the high it reached in early October.
- The size of the deficit is thus likely to come down in the quarter ending December.
- So, the government may not be too worried about the widening CAD figures.

What is the need for caution?

- Despite the above, as usual, medium to long-term risks to the external sector remain, with widening CAD.
- There is the threat of price volatility faced by heavy importers of oil, a perennial threat to economic stability.
- India, thus, has to diversify its energy base by tapping into local sources of energy.
- **Inflows** - As long as foreign capital inflows into the economy are brisk enough to fund the huge import needs, widening CAD is not a worry.
- But the trouble arises when foreign inflows dry up and restrict the ability to purchase essential imports.
- So as liquidity conditions continue to tighten across the world, India's heavy import dependence is a cause for concern.
- Also, if Western central banks tighten their monetary policy, the RBI will be forced to tighten its own policy stance.
- On the one hand, this would be essential to retain investment capital and defend the rupee.
- But on the other, this will impact domestic economic growth negatively.

What should be done?

- Each time the external account has come under pressure, the government has simply tried to bring in piecemeal emergency measures.
- These include a little opening up of the capital account or restrictions on imports.
- But such a policy is less likely to bring a permanent solution to the problem.
- In order to bring about any meaningful change, the government should also try implementing proper structural reforms.
- This would boost exports and help fund imports through means other than capital inflows, and end the over-reliance on imported oil.

9.5 Easing Listing Norms – SEBI

Why in news?

The SEBI-appointed committee to examine the listing requirements for Indian and foreign companies in various stock exchanges has submitted its report recently.

What are the recommendations?

- Indian companies can be allowed to list on overseas exchanges withouta requirement to also list in the domestic markets.
- Companies that are domiciled abroad can be in turn permitted to list on Indian stock exchanges.
- The committee has laid down the legislative changes required in the FEMA, Companies Act, SEBI's investor protection rules and tax laws to pave the way for this change.

Depository Receipts (DR)

- A DR is a type of negotiable (transferable) financial security traded on a local stock exchange but represents a security, usually in the form of equity, issued by a foreign, publicly-listed company.
- The DR, which is a physical certificate, allows investors to hold shares in equity of other countries.
- DRs are created when a foreign company wishes to list its securities on another country's stock exchange and tap those local funds.
- Global Depository Receipts(GDR) and American Depository Receipts(ADR) are amongst the most common DRs.
- IDRs are transferable securities to be listed on Indian stock exchanges, against the underlying equity shares of the issuing company which is incorporated outside India.
- Typically, companies with significant business in India, or an India focus, may find the IDR route advantageous.
- Similarly, the foreign entities of Indian companies may find it easier to raise money through IDRs for their business requirements abroad.

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- To avoid round-tripping, funds from overseas exchanges will only be allowed to and from permissible jurisdictions with strong anti-money laundering laws.
- Also, only 'high-quality' companies with a minimum Rs. 1,000 crore issue size may be permitted through this route.

What are the advantages?

- **For Indian companies** - The ability to list on foreign exchanges will expand the choices available to Indian companies as to where and how to list their shares efficiently.
- In particular, it will allow them to access funds at a significantly lower rate than they otherwise might have.
- Indian companiescan tap under-utilised funds in other jurisdictions, command higher valuations and sharply lower their costs of capital.
- This is because, some large institutional investors are not permitted by their governing regulations to invest in companies listed outside their home economies.
- It will increase competition for Indian stock exchanges and thereby render them more efficient.
- Deeper equity markets would also allow more accurate price discovery, thereby ensuring that companies are better valued.
- **For foreign companies** – Many companies that operate in India are currently domiciled in foreign jurisdictions.
- By being listed on Indian stock exchanges, they could benefit from the pool of investors and funds that are best informed about their operations and their operating environment.
- It would also allow for the creation of a globalised financial services industry that could create the capacity to analyse and trade in companies from all over the world.
- Thus the idea of direct cross- border listing is in keeping with the spirit of liberalisation and enhances ease of doing business.

What are the concerns?

- With over 5,000 listed stocks, state-of-the-art trading platforms and a globally well-regarded regulator, India's stock market is certainly far from nascent.
- However, only one foreign company has chosen to list in India through the Indian Depository Receipts route in over a decade.
- This is mainly because of regulatory arbitrage and a high compliance burden in Indian stock markets that are leading to such skewed preferences.
- Thus, Indian regulators need to first fix this before liberalising rules for direct foreign listing.

9.6 RBI's Stance on Bank Capital Norms

What is the issue?

Reserve Bank of India (RBI) has opposed government calls to relax the rules for risk weights and capital requirement for Indian banks.

What is RBI's rationale?

- At present, the capital adequacy norms for Indian banks are higher than those recommended under Basel.
- Government now calls for aligning the capital adequacy norms of Indian banks with those of Basel III to allow Indian banks to lend more.
- But RBI says that applying Basel-specified risk weights would understate the "true riskiness" of loans on the books of these banks.
- Relaxing the current risk-adjusted capital norms (Basel-III-plus norms) could hit the economy at a time when defaults are high and provisions low.
- Indian banking system has a high proportion of nonperforming assets (NPAs) that are not provided for in relation to capital levels.

- Introducing regulatory relaxations before bringing in structural reforms and with inadequate understanding of defaults could be detrimental to economy's interests.
- So the case for a recalibration of risk-weights or minimum capital requirements would need to be carefully assessed.

What are RBI's proposals?

- **Capital norms** - RBI proposes to take a fresh look and intends to issue revised prudential regulations, including guidelines on -
    i. exposure and investment norms
    ii. risk management framework
    iii. select elements of Basel III capital framework
- **Board** - RBI called for legislative changes to do away with the need to nominate the central bank's officials as nominee directors on the boards of public sector banks.
- Former RBI governor Urjit Patel had suggested withdrawal of these nominee directors from the boards to avoid any conflict of interest.
- **PCA** - RBI also upheld the prompt corrective action (PCA) framework for weak banks, another point of contention with the government.
- RBI said that weak banks under the PCA framework have shown improvement in deposits.
- They have also shown lower growth in gross NPAs, relative to non-PCA public sector banks.
- **Besides**, the RBI is also looking at reviewing the guidelines for compensation for private sector banks.
- This follows a demand by banks for an objective assessment of remunerations for whole-time directors.

9.7 RBI's Proposal on Loan Pricing

What is the issue?

The Reserve Bank of India (RBI) has proposed linking the interest rates charged by banks on loans to the external benchmarks.

What is the current practice?

- Currently, interest rates on loans are linked to internal benchmarks.
- All loans such as for car and home disbursed from April 1, 2016 are linked to marginal cost of funds-based lending rate (MCLR).
- The MCLR-based regime had replaced the earlier base rate regime.
- The shift was to provide transparency in the transmission of monetary policy decisions.
- MCLR is an internal benchmark rate that depends on various factors such as fixed deposit rates, source of funds and savings rate.
- The price of loan comprises the MCLR and the *spread* or the bank's profit margin.

What is the concern with MCLR-based system?

- The biggest problem with the current system is the lack of required transmission of policy rates. Click here to know more.
- The internal benchmark is not influenced solely by the policy rate cut but depends on a variety of factors.
- So, policy rate cuts often do not reach the borrowers i.e. when the RBI cuts repo rate there is no guarantee a borrower will get the benefit of it.
- Also, the MCLR system is opaque since it is an internal benchmark that depends on the way a bank does its business.

How will the new system work?

- The new system will come into effect from April 1, 2019.

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- Banks will then have to link their lending rates charged on different categories of loans with an external benchmark instead of MCLR.
- The RBI has given the following options to banks:
    i. RBI repo rate
    ii. the 91-day *T-bill* yield
    iii. the 182-day T-bill yield
    iv. any other benchmark market interest rate produced by the Financial Benchmarks India Pvt. Ltd
- One of these benchmarks will be used to decide the lending rate in addition to the spread.
- Banks will be free to decide their spread value but it will have to be fixed for the tenure of the loan.
- However, it can change if the credit score of the borrower changes.
- The interest rates under the new system will change every month.

How will it benefit borrowers?

- It will help better transmission of policy rate cuts i.e. an RBI rate cut will immediately reach the borrower.
- It will make the system more transparent since every borrower will know the fixed interest rate and the spread value decided by the bank.
- It will help borrowers compare loans in a better way from different banks.
- Under the new system, a bank is required to adopt a uniform external benchmark within a loan category.
- This will ensure transparency, standardisation and ease of understanding for the borrowers.
- This would mean that same bank cannot adopt multiple benchmarks within a loan category.

9.8 Section 74 of IBC

Why in news?

Section 74 of the Insolvency and Bankruptcy Code (IBC) was recently invoked against a company for its failure to comply with the approved resolution plan.

What are the elements of IBC?

- Under IBC, either the creditor (banks) or the loaner (defaulter) can initiate insolvency proceedings on a defaulted company.
- It is done by submitting a plea to the adjudicating authority (AA) at the National Companies Law Tribunal (NCLT).
- Insolvency proceedings can be initiated on admission of the application by the NCLT.
- After the admission, the lenders have to form a committee of creditors (CoC) and appoint an insolvency professional (IP).
- The IP act as a resolution professional (RP) and run the borrower's business in the interim period.
- Meanwhile, any resolution applicant may submit a resolution planto the RPthat is placed before the committee of creditors.
- A resolution plan can be said to be a bid for the corporate debtor, through which he/she proposes to repay the bad debt or part of the bad debt of the corporate debtor.
- The responsibility of approving a resolution plan rests with the CoC, which will approve it with not less than 75% voting in favour of it.
- Where a plan approved by the CoC is subsequently approved by the AA, the final plan will be binding on the corporate debtors, involved in the resolution plan.

What does section 74 contain?

- Section 74 lays down the provisions to penalise officials of corporate debtors, creditors and bidders if and when they violate a resolution plan as approved by the adjudicating authority.

- Officials of the corporate debtor who violate the norms can be imprisoned for a maximum term of five years and a penalty of up to Rs 300,000.
- Officials of creditors who violate the norms can be jailed for a maximum of five years and a penalty of up to Rs 1 crore.
- Officials of bidders, who violate the norms can similarly be imprisoned for a maximum tenure of five years and a penalty of up to Rs 1 crore.
- This provision is required to protect the Code from being taken lightly, and ensure that a resolution happens as planned.

Why is it in news at this point?

- The Liberty House, an international metals and industrial group, had made a successful resolution plan for a defaulted company, Amtek Auto, earlier this year.
- The terms of the resolution plan were also approved by the adjudicating authority (NCLT).
- However, Liberty House failed to pay the banks according to the terms of the resolution plan.
- Liberty House alleges that there were serious issues in the information and valuation reports shared with it prior to the bidding process.
- Hence, the lenders to Amtek Auto have moved the Chandigarh bench of the NCLT to invoke Section 74 against the Liberty House Group.
- Once the Section is invoked by the Committee of Creditors, it is up to the NCLT to decide on the course of action with respect to the corporate debtor.
- The NCLT can then either decide to allow the resolution professional of the corporate debtor to invite fresh bids, or penalise the erring bidder with jail and fine as per Section 74.
- In case there are no fresh bidders, the NCLT can also allow liquidation of such corporate debtors.

What are the concerns?

- The section could bring seriousness into the entire corporate insolvency resolution process.
- However, this could also further deter bidders from a market that anyway lacks good resolution plans.
- Also, penalising only the bidder is unfair as delays often happen due to litigations involving other bidders or even the debtor.
- Thus the decision of the NCLT will likely set a precedent for future cases, since this is the first time that Section 74 is being invoked by lenders.

9.9 Lowering Import duty

What is the issue?

There has been a strong case for lowering of import duties in India, which has to be followed with elaborate product standards and non-tariff measures.

What are the advantages of lowering duties?

- **Increase exports** - India's overall share in world goods trade is only 1.7%.
- Import duties and time taken at the port/Customs is the major reason for a low share of Indian exports in global value chains.
- Since the complex production process requires goods to cross borders several times at different stages, any duty charged has a cascading and accumulative effect on trade.
- Thus, a reduction in import duty and quick clearances at the port/Customs will improve the situation and help Indian exports.
- **Improve ease of doing business** - For industrial goods, India's average rate of import duty is 10.2% while the weighted average import duty is only 5.7%.
- The significant difference in the two numbers is because some of the key imports attract low duty and large value of imports are allowed end-use specific exemptions.

- Lower duties will do away with the need for grant of many exemptions which make implementation complex.
- This will also avoid smuggling, evasion, litigation, and corruption which are the consequence of higher duties.
- **Reduce the need for export schemes** - Many exporters use duty exemption schemes to import inputs and machinery needed for making an export product at zero duty.
- Low import duties will reduce the need for such export schemes.
- Duty Drawback is the rebate of duty chargeable on imported material or excisable material used in the manufacturing of goods that are to be exported.
- The exporter may claim drawback or refund of excise and customs duties paid by his suppliers.
- Lower import duties will reduce the government spending under the duty drawback scheme.
- Further, over-invoicing of exports will be avoided since there will be less possibilities of duty drawback from the government.

What should be done?

- **Robust trade policy regime**–High tariffs are usually levied by domestic governments to protect new industries against foreign competition.
- India generally levy high tariffs on imported goods, making domestic goods cheaper for domestic consumers and imported goods more expensive.
- However, once a Free Trade Agreement (FTA) is signed with a country, imported goods will become cheaper than the domestic goods.
- As a result, their firms gain more price advantage in India from an FTA agreement.
- Thus, reform of Customs duty regime in India is needed to avoid the impacts of FTA on domestic industries.
- **Differential tariffs** - The top 50% imports in valueare concentrated in only 25 lines relating to crude oil, gold, diamonds, mobile phones, telecom products, etc. which are mostly low-duty products.
- India collects more than 85% of basic customs duty from less than 10% of tariff lines.
- Thus, India can identify 15% of industrial tariff lines as strategic and retain the current level of duty on them.
- On the other hand, duties on raw materials and intermediate goods that will go on to make an industrial product can be reduced.
- **Non-tariff barriers** - India have to switch to the usage of non-tariff barriers such as product standards to control unwanted imports.
- Lower duty regime works best in tandem with elaborate standards and non-tariff measures regime.
- Thus, there is a need to set up quality and standard infrastructure to ensure that the duty reduction measures will be accompanied by importing high quality imports, without violating our commitments at the WTO.

9.10 Global Wage Report 2018/19 - ILO

Why in news?

The International Labour Organisation recently released the Global Wage Report 2018/19.

What are the highlights?

- India recorded the highest average real wage growth in South Asia during 2008–17.
- India led the average real wage growth in 2008–17 at 5.5 against a regional median of 3.7.
- Following India was Nepal (4.7), Sri Lanka (4), Bangladesh (3.4), Pakistan (1.8) and Iran (0.4).
- Workers in Asia and the Pacific have enjoyed the highest real wage growth among all regions over the period 2006–17.
- This reflects more rapid economic growth than in other regions.
- Countries such as China, India, Thailand and Vietnam are leading the way.

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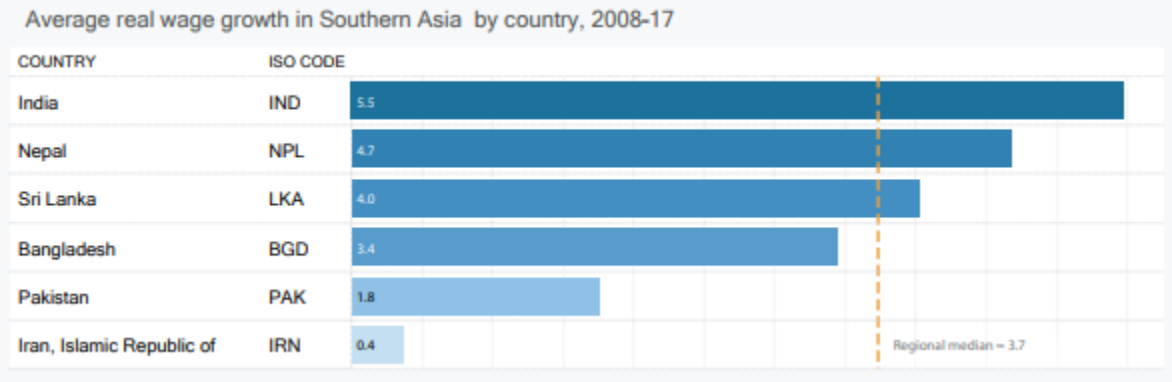
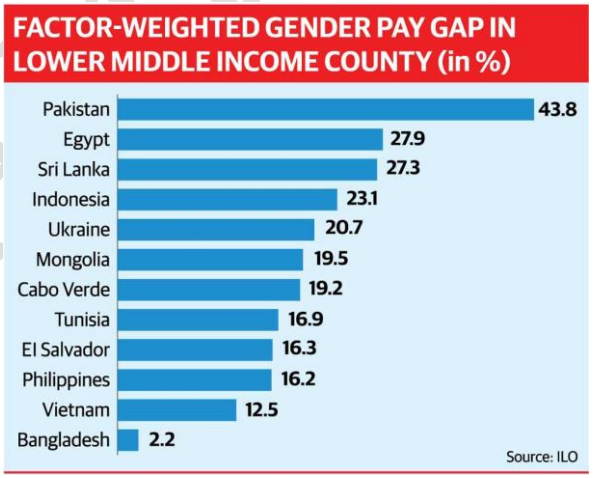


- All emerging G20 countries except Mexico experienced significant positive growth in average real wages between 2008 and 2017.
- Wage growth continues in Saudi Arabia, India and Indonesia, whereas in Turkey it declined to around 1% in 2017.
- South Africa and Brazil have experienced positive wage growth starting from 2016.
- This was notably after a phase of mostly zero growth during the period 2012–16, with negative growth in Brazil during 2015–16.
- Russia suffered a significant drop in wage growth in 2015, owing to the decline in oil prices.
- But since then, it has bounced back with moderate though positive wage growth.
- The U.S. posted an unchanged 0.7% wage growth and Europe (excluding Eastern Europe) stalled at about zero last year.
- **Wages** in developing countries are increasing more quickly than those in higher-income countries.
- Pay rose by just 0.4% during last year in advanced economies, but grew at over 4% in developing countries.



- The real wages almost tripled in the developing and emerging countries of the G20 between 1999 and 2017.
- However, in the advanced economies of G20, the increase over the same period aggregated to a far lower 9%.
- This is however seen positive in the sense of 'convergence' happening around the world.
- Nevertheless, salaries are still far too low in the developing world.
- The gaps are still significantly big as often the wage level is still not high enough for people to meet their basic needs.
- **Gender pay gap** - For the first time, the ILO report also focuses on the global gender pay gap.
- It notes that despite some significant regional differences, men continue to be paid around 20% more than women.
- In high-income countries the gender pay gap is at its biggest in top-salaried positions.
- In low and middle-income countries, however, the gap is widest among lower-paid workers.
- Data suggests that traditional notions like differences in the levels of education play only a "limited" role in explaining gender pay gaps.
- In many countries women are more highly educated than men but earn lower wages, even in the same occupational categories.
- The wages of both men and women also tend to be lower in enterprises/occupations with a predominantly female workforce.

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What was the driving factor for growth?

- The report noted that a number of countries have recently undertaken measures to strengthen their minimum wage.
- The prevailing view was to provide more adequate labour protection.
- South Africa announced the introduction of a national minimum wage in 2018.
- India is also considering extending the legal coverage of the current minimum wage from workers in 'scheduled' occupations to all wage employees in the country.

What is the implication?

- It is to be noted that the overall global wage growth declined to 1.8% in 2017 from 2.4% in 2016.
- The obvious impact of this low pace of wage growth has been on global economic growth.
- It's because the consumption demand was hurt by restrained spending by wage-earners.
- So the acceleration of economic growth in high-income countries in 2017 was led mainly by higher investment spending rather than by private consumption.
- There is intensification of competition in the wake of globalisation, accompanied by a worldwide decline in the bargaining power of workers.
- This has resulted in a decoupling between wages and labour productivity.
- The effect has been the weakening share of labour compensation in GDP across many countries, which remain substantially below those of the early 1990s.
- Also, widening inequality is slowing demand and growth by shifting larger shares of income to rich households that save rather than spend.
- For India, reaping the demographic dividend needs not only jobs, but wage expansion that is robust and equitable.

9.11 World Bank Report on Remittances

Why in news?

The report on remittances for 2018 was released in the latest edition of the World Bank's Migration and Development Brief.

What are the highlights?

- **India** - India will retain its position as the world's top recipient of remittances this year with its diaspora sending a USD 80 billion back home.
- India is followed by China (USD 67 billion), Mexico and the Philippines (USD 34 billion each) and Egypt (USD 26 billion).
- Over the last three years, India has registered a significant flow of remittances, from USD 62.7 billion in 2016 to USD 65.3 billion 2017.
- In 2017, remittances constituted 2.7% of India's GDP.
- **Global** - Officially-recorded remittances to developing countries will increase by 10.8% to reach USD 528 billion in 2018.
- This new record level follows a robust growth of 7.8% in 2017.
- Global remittances, which include flows to high-income countries, are projected to grow by 10.3% to USD 689 billion.
- **South Asia** - Remittances to South Asia are projected to increase by 13.5% to USD 132 billion in 2018.
- This is a stronger pace of growth than the 5.7% growth seen in 2017.
- The upsurge is driven by stronger economic conditions in advanced economies, particularly the US.
- Also, the increase in oil prices has a positive impact on outflows from some Gulf Cooperation Council (GCC) countries.

- This, notably, include the UAE which reported a 13% growth in outflows for the first half of 2018.
- Bangladesh and Pakistan both experienced strong upticks of 17.9% and 6.2% in 2018, respectively.
- But for 2019, it is projected that remittances growth for the South Asian region will slow to 4.3% due to -
    i. moderation of growth in advanced economies
    ii. lower migration to the GCC
    iii. the benefits from the oil price spurt dissipating
- **Future** - The future growth of remittances is vulnerable to lower oil prices, and restrictive migration policies.
- Also, the global economic growth is projected to moderate in the coming year.
- So future remittances to low- and middle-income countries are expected to grow only moderately by 4% to reach USD 549 billion in 2019.
- Global remittances are expected to grow 3.7% to USD 715 billion in 2019.
- **Remittance cost** - The report highlights that even with technological advances, remittances fees remain too high.
- The global average cost of sending USD 200 remains high at 6.9% in the third quarter of 2018.
- The average cost of remitting in South Asia was the lowest at 5.4%, while Sub-Saharan Africa continued to have the highest at 9%.
- Notably, reducing remittance flows to 3% by 2030 is a global target under Sustainable Development Goal (SDG) 10.7.
- Increasing the volume of remittances is also a global goal under the proposals for raising financing for the SDGs.

What lies ahead?

- Remittances have a direct impact on alleviating poverty for many households.
- World Bank has the mandate and scope to work with countries to facilitate this process.
- Finding solutions to address the factors that drive up remittance costs is thus essential.
- Opening up markets to competition and promoting the use of low-cost technologies will ease the burden on poorer customers.

9.12 Common Geographical Indication Logo

Why in news?

Recently, the Commerce and Industry Minister unveiled a tricolour logo that is common for all Geographical Indications (GI), with a tagline "invaluable treasures of incredible India".

What is Geographical Indication?

- GI indicates the 'link' between a product and the place it belongs to.
- The link could be the natural resources, climatic factor or human skills that render uniqueness to the product.
- The essential difference between GI and other intellectual properties (IP) is that, GI is a collective intellectual property right.
- It is thus owned by all the producers within the defined GI territory.
- Unlike this, the IPs like patent and trademark are owned by an individual or a business entity.
- So unlike the commercial use of patent that would benefit an innovator or a firm, the commercialisation of GI would benefit all the producers in the GI territory.

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- It could promote tourism and rural development, and some of the Sustainable Development Goals - empowering women, fostering sustainable communities and reducing poverty.

What are the concerns in India in this regard?

- The potential of GI has not yet been realised in India.
- **Procedure** - Filing a GI application is a huge task that involves documenting historical evidences about the linkage of the product with the region.
- Also, the application has to be filed by an association or group of persons.
- So despite India's diversity in handicrafts or agricultural products, only about 320 products have so far been registered with the GI registry.
- Some of them include Kanchipuram saris, Darjeeling tea, Channapatna toys, Gir kesar mango, Sindhudurg and Ratnagiri Kokum, Kulu shawls, Ratlami sev, Pochampalli Ikat.
- **Commercialisation** - The efforts have so far mainly focused on the first step of filing GI applications (Part A of GI registration).
- Mere filing of the GI applications amounts to cultural accounting of regional products.
- But post registration activities in terms of utilising the GI certification as a marketing/branding tool has not been attempted in most products.
- This is due to limited awareness about GI in the country among producers, consumers and policy makers.
- **Stakeholders** - As pet the GI Act (1999), the term producer can include any one who 'deals'/'exploits' the GI product.
- It could thus include a wide range of stakeholders including a trade facilitator, online marketer, who may or may not belong to the GI territory.
- But the registered proprietors of GI fail to identify the value chain and do not register the authorised users (Part B of GI registration).
- So the majority of the 'producers' (other stakeholders in the value chain) are unaware of the GI registration itself.

How could a logo help?

- After 15 years of the GI Registry coming into being, the GI logo that is common for all registered GIs is now in place.
- Logos convey a specific message to the consumers about the product, as the ISI or Agmark assures about the quality.
- Promotion of common GI logo will create an edge for GI products over similar products.
- It will also bring more awareness among consumers in distant markets as well and result in increased demand.
- It could enhance market access and preserve unique local economies, provided the producers benefit.
- This will check distress migration, promote biodiversity, prevent artisans and farmers leaving their livelihoods.
- Importantly, it will arrest the erosion of traditional knowledge and practices.

What are the challenges ahead?

- Mere unveiling of the logo may not serve any purpose for the producers of registered GIs.
- Determining the protocols for actual use by 'producers' and preventing the misuse of the logo are essential tasks.
- Enormous human efforts and financial resources are required to position the common GI logo so that it is used as a marketing tool.
- The GI logo needs to be widely popularised for consumers to associate it with the uniqueness and authenticity of GI products.

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- But the shortfalls in Part B registration make it difficult to identify the authorised users and check GI infringement.

9.13 Share Swap

Why in news?

Hindustan Unilever (HUL) announced the merger of Glaxo SmithKline Consumer (GSK Consumer) with it, in a deal that has been structured as a share swap.

What is a share swap?

- When a company pays for an acquisition by issuing its own shares to the shareholders of the target company, this is known as a share swap.
- The number of shares to be issued in lieu of their existing holdings to the target company is called the swap ratio.
- Swap ratio is determined by valuing the target company after looking into metrics such as its revenues and profits, as well as its market price.
- If the target company is listed, the market value of its shares is often a key consideration to arrive at the right price to be paid.
- Paying a premium linked to a market value usually indicates healthy prospects and high potential, while a discount could indicate a distress sale.

What are the advantages?

- **Sharing risks** - In a cash deal, if the acquirer has paid a premium and the synergies don't materialise, shareholders of the acquiring company alone bear the fallout.
- In the case of share swap, shareholders of the target company will also become shareholders of the merged entity.
- So, the risks and benefits of the expected synergy from the merger will be shared by both the parties.
- **Less borrowing costs** - In a share swap, there is no cash outgo involved for the acquirer, saving the acquirer borrowing costs.
- The acquirer companies, in turn, can put their cash to use for investments in the business or for other buyouts.
- **Creating Goodwill** - Issuing fresh shares could lead to reduction in promoter holding and dilution in earnings for shareholders of the acquiring company.
- However, the acquiring company can benefit from lower taxes, if there is goodwill created out of the merger which it writes off over the years.
- Goodwill arises when the acquisition price is higher than the value of assets and liabilities of the acquired company.

What does the HUL-GSK deal show?

- The merger with HUL values the total business of GSK Consumer Healthcare at ₹31,700 crores.
- Shareholders will receive 4.39 HUL shares for each GSK Consumer share held, according to the share swap ratio.
- The valuation is based on a premium of 5% on the 15-day weighted average stock price of GSK Consumer.
- Thus, HUL is paying close to the market price of the GSK Consumer stock whose consumer goods stocks have had a good run in the market.
- HUL too has good long-term prospects with a diversified product portfolio and market leadership in several categories.
- Hence, GSK Consumer shareholders have got a fair deal.
- Earnings per share (EPS) is the portion of a company's profit allocated to each share of common stock.
- From the HUL side, the acquisition will immediately add to the Earnings Per Share despite the equity dilution of about 8% from the share swap.

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Are the share swaps taxable?

- In case of a share swap, when shareholders of the acquired company are given shares of the acquirer company as part of the deal, this is not considered a transfer of shares.
- Hence, capital gains tax will not arise in the hands of the shareholders (including minority shareholders) of the acquired company.
- The tax liability will arise only when the shares of the merged entity are sold.

10. INFRASTRUCTURE

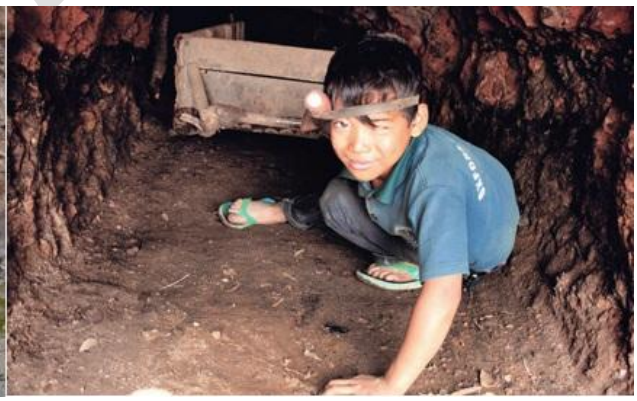
10.1 Rat-Hole Mining in Meghalaya

What is the issue?

- A coal mine in Meghalaya's East Jaintia Hills collapsed recently, trapping at least 15 workers who are feared dead.
- It has thrown light on a dangerous procedure known as "rat-hole mining".

What is rat-hole mining?

- It involves digging of very small tunnels, usually only 3-4 feet high, which workers (often children) enter and extract coal.
- The rat-hole mining is broadly of two types - side-cutting and box-cutting.
- In side-cutting procedure, narrow tunnels are dug on the hill slopes and workers go inside until they find the coal seam.
- The coal seam in hills of Meghalaya is very thin, less than 2 m in most cases.
- In the box-cutting type, a rectangular opening is made, varying from 10 to 100 sq m.
- Through this, a vertical pit, 100 to 400 feet deep, is dug.
- Once the coal seam is found, rat-hole-sized tunnels are dug horizontally through which workers can extract the coal.



Why is it very prevalent?

- In Jharkhand, the coal layer is extremely thick, where open-cast mining can be done.
- But no other method would be economically viable in Meghalaya, where the coal seam is extremely thin.
- Removal of rocks from the hilly terrain and putting up pillars inside the mine to prevent collapse would be costlier.
- So despite a ban, rat-hole mining remains the prevalent procedure for coal mining in Meghalaya.
- Rat-hole mining is the locally developed technique and the most commonly used one.
- It is not regulated by any law, and coal extraction has been made by unscrupulous elements in a most illegal and unscientific manner.
- Meghalaya's annual coal production of nearly 6 million tonnes is mostly said to have come through rat-hole mining.

What are the impacts?

- **Ecology** - Rat-hole mining in Meghalaya had caused the water in the Kopili river (flows through Meghalaya and Assam) to turn acidic.
- The entire roadsides in and around mining areas are used for piling of coal.
- This is getting to be a major source of air, water and soil pollution.
- Off road movement of trucks and other vehicles in the area causes further damage to the ecology of the area.
- **Risk to lives** - Due to rat-hole mining, during the rainy season, water flood into the mining areas resulting in death of many.
- If water has seeped into the cave, the worker can enter only after the water is pumped out.

What are the shortcomings?

- **Ban** - The National Green Tribunal (NGT) has banned rat-hole mining in 2014, and retained the ban in 2015.
- The ban was on grounds of the practice being unscientific and unsafe for workers.
- The NGT order bans not only rat-hole mining but all "unscientific and illegal mining".
- But orders of the Tribunal have been violated without exception.
- The State Government has failed to check illegal mining effectively.
- It has also not framed the mining policy, mining plan and the guidelines as directed under the orders of the Tribunal.
- The state has in place the Meghalaya Mines and Mineral Policy, 2012; but the NGT finds it inadequate.
- **Protection** - Constitution's 6th Schedule intends to protect the community's ownership over its land and autonomy and consent over its nature of use.
- Coal mining currently underway in Meghalaya was a corruption of this Constitutional Provision.
- Private individuals with interests in earning monetary benefits from minerals vested under the land are engaging in coal mining.
- They are attempting to legitimize this act by claiming immunity through tribal autonomy over land ownership.

10.2 Significance of Bogibeel Bridge in Assam

Why in news?

Bogibeel, the longest rail-road bridge of India, was recently inaugurated by the Prime Minister.

What is it?

- The Bogibeel Bridge, inside Assam, is 20 km from the border with Arunachal Pradesh.
- It spans nearly five-km across the Brahmaputra river.
- It connects Dibrugarh on the Brahmaputra's south bank to Dhemaji on the north bank.
- It will link Dibrugarh with North Lakhimpur district of Assam and parts of eastern Arunachal Pradesh.
- It is the country's longest road-cum-rail bridge, and its fourth longest of any kind above water.

Why is it so significant?

- **Dibrugarh** - Dibrugarh is seen to be reclaiming its lost glory 68 years after being ravaged by a devastating earthquake and the ensuing floods.
- It used to be a thriving centre of the plantation industry during the colonial times.
- It remains a hub of higher education and medical treatment in the region.
- However, for decades, the only recourse for people to cross the Brahmaputra is a diesel propelled ferry.
- So commissioning the bridge has reduced the journey time across the river to less than five minutes.
- **North-East** - The single biggest factor which has hampered the development of the Northeast region is the absence of robust connectivity.

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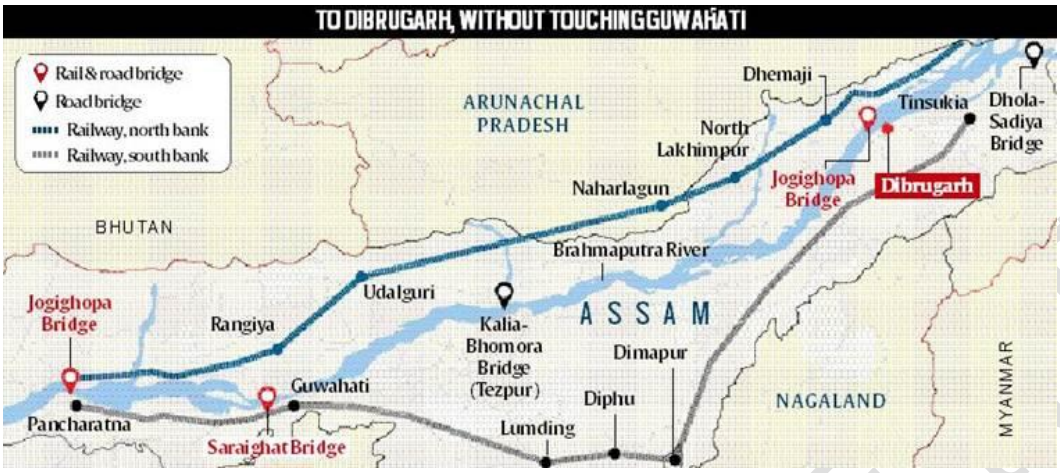
- A maze of river systems across Arunachal Pradesh, with their confluence in Brahmaputra, has posed an enormous challenge.



- The bridge has the potential to infuse economic dynamism in the region.
- It could provide opportunities for the expansion of tourism, industrial development and trade.
- **Infrastructure** - Bogibeel must be viewed alongside other infrastructure developments in neighbouring Arunachal Pradesh.
- The iconic Bhupen Hazarika bridge (Dhola–Sadiya Bridge) over the Lohit river was commissioned recently by the Prime Minister.
- A 7.5 km long bridge over the Dibang river was also dedicated to the nation recently.
- The Trans Arunachal Highway has seen considerable progress, especially in the eastern part of the state.
- An airport has been commissioned at Pasighat, barely two hours away from Dibrugarh.
- **Tourism** - The region has now become more accessible to the rest of the world.
- This could give a fillip to tourism, given the region's abundant wildlife and ideal condition for river rafting and angling.
- But a roadmap of tourism development, promotion and branding needs to be crafted, which is centred on the region's tribal ethos.
- **Industries** - Dibrugarh lies at the heart of a crucial oil and gas axis in Assam, given its proximity to Digboi and Duliajan oilfields.
- Further east lie the Kharsang gas fields and Kumchai oilfields of Arunachal Pradesh.
- The district also has significant coal deposits. There are more than 200 tea factories as well in Dibrugarh.
- So the bridge has raised the prospects of industrial development and employment opportunities, especially in the mining and plantation sectors.
- **China** - Bogibeel is the gateway to the historic Stilwell Road.
- The road connects Ledo in Assam to Kunming in China, passing through Myanmar's Kachin state, via Arunachal Pradesh.
- The 1,800 km long route was used for transporting arms to the Chinese by the Americans during World War II.
- From a strategic standpoint, movement of troops has become a much quicker, efficient and reliable proposition.
- The road beyond Dibrugarh leads to the frontier parts of Arunachal Pradesh, with a fully functional advanced landing ground of Air Force at Walong, barely 100 km from the Chinese border.
- **Trade** - The route could now well become the centrepiece of the ambitious Act East Policy. It could boost trade across the region.

- Infrastructure in Myanmar would need to be strengthened and the land customs station at Nampong in Arunachal Pradesh revived.
- Importantly, the advantage of connectivity must be accompanied by an imaginative blueprint of economic development.

11. AGRICULTURE

11.1 Mitigating Farmers' Distress

What is the issue?

Poor earnings of the farmers result in an unending distress in the agricultural sector and there is need for an appropriate policy response.

What is the current scenario?

- Agricultural prices are rising less than others and as a result, the rural wages are depressed.
- 70% of India's recent disinflation has been led by the fall in rural inflation.
- When incomes are low, the demand for some food items such as milk and protein tends to be weak, leading to a fall in their prices.
- Chronic income crunch is pushing farmers into a debt trap, leading to a clamour for loan waivers and higher MSPs.

What are the concerns?

- **MSP calculation**–The National Commission for Farmers had recommended that MSP for crops be fixed at 50% above the C2 cost.
- But the government is still using 50% margin of Cost A2 or maybe cost A2+FL, which is lower than cost C2.
- **Pricing** - The arbitrarily fixed pricestend to cause distortion in production, perpetuating a glut and depressing prices to the detriment of producers.
- Efficient, transparent, competitive and hassle-free marketing is a must to ensure reasonable prices to the growers.
- This will ensure demand-driven production, thereby, restricting surpluses and shortages to manageable levels.
- **Focus on productivity** - Most of the agricultural development schemes aim largely at boosting crop productivity and production.
- It disregards the negative impact of higher output on prices in a surplus situation.
- **External trade policy** - These are focused more on managing inflation than on maintaining the price line to safeguard the farmers' interests.
- An export window is usually denied for farm products by imposing import and export curbs, which makes it difficult to mitigate domestic surplus.
- Frequently modifying duties and minimum export prices on the pretext of controlling inflation add to the woes.

MSP Calculation

- The Commission for Agricultural Costs and Prices (CACP), gives three definitions of production costs: A2, A2+FL and C2.
- A2 costs - It basically cover all paid-out expenses, both in cash and in kind, incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, etc.
- A2+FL costs - It cover actual paid-out costs plus an imputed value of unpaid family labour.
- C2 costs - These costs are more comprehensive, accounting for the rentals and interest forgone on owned land and fixed capital assets respectively, on top of A2+FL.
- The M.S. Swaminathan Committee report had recommended a minimum support price of 50% profits above the cost of production classified as 'C2' by the CACP.

What should be the future course of action?

- The focus has to be shifted from farm income to farmers' income.
- A recent discussion paper brought out by the **NITI Aayog** reveals that about two-thirds of rural income now comes from non-agricultural sources.
- Also, **70th round of NSSO** finds that wage employmentis the principal source of income for 56% of small and marginal farmers.

- Clearly, expanding job avenues in and around rural areas is imperative to boost farmers' earnings.
- Promoting relatively lucrative allied activities of agriculture such as horticulture and floriculture also helps boost farm incomes.
- Thus, amultifaceted income-generation plan, rather than MSP hikes and loan waivers, can mitigate farmers' disquiet.

11.2 Reforming Agri-Credit System

What is the issue?

Agriculture in India should be made profitable, in addition to reforming the credit system in the sector.

What are the existing concerns?

- The NSSO Situation Assessment Survey of Agricultural Households (2013) shows that 52% of farming households are indebted, with rates as high as 89-92% in some States.
- The quantum of debt has increased enormously, especially from informal sources.
- Tenant farmers who lease land from other land owners are especially vulnerable.
- A study showed that 75% of farmer suicides in Telangana are by tenant farmers.
- The NSSO Situation Assessment Survey (2013) also showed that the average debt from institutional sources for small and marginal farmers was only Rs. 17,570 per household, and Rs. 1,41,804 for medium and large farmers.
- Though the RBI issued guidelines (2014) for extending loans to landless farmers and for a debt-swapping scheme to convert informal loans of farmers into bank loans, they have remained merely on paper.
- However, many state governments push for a loan waiver which is only an element of immediate and temporary relief.
- The burden on farmers lies elsewhere inthe -
    1. Lack of compensation during drought and disasters
    2. Failures of the crop insurance scheme
    3. Deficit due to prices falling below the announced MSP
- Thus, any immediate relief should be accompanied by a long-term systemic solution to indebtedness.
- Accordingly, a Bill has been developed by the All India Kisan Sangharsh Coordination Committee recently to provide freedom from indebtedness.

What does the bill contain?

- It incorporates two key elements of reform - a functional institutional credit system which is accessible and accountable to all cultivators, and protection from debt trap in bad years.
- Access to institutional credit covers not only land-owning farmers but also sharecroppers, tenants, Adivasi and women farmers, and animal-rearers.
- It requires the registration of all cultivators and providing them Kisan credit cards.
- This is critical because marginal and landless farmers are mostly excluded from institutional credit, thereby putting them at the mercy of predatory lending by moneylenders and input dealers.
- The Bill also establishes farmers' distress and disaster relief commissions at the national and State levels, based on the model of Kerala's Farmers' Debt Relief Commission.
- The commission can recommend declaration of certain areas or crops as distress-affected in any particular year, based on incidences of natural disasters, extensive pest attack and such calamities.
- It has the power to order measures of debt relief, which may include loan rescheduling, interest waiver, one-time settlement, discharge of debt in instalments, or even an immediate discharge of debt.
- The State-level commission is also empowered to pass orders regarding non-institutional loans of distress-affected farmers.

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What are the advantages?

- The bill ensures that farmers who suffer losses due to circumstances entirely out of their control deserve to be protected.
- Given that agriculture is a key national enterprise, the concepts of limited liability and bankruptcy protection need to be adapted to the farming sector.
- Thus the bill provides targeted protection to distressed farmers when they require it, rather than allowing debt, distress and suicides to accumulate until an election year.
- Also, the problem of inadequate coverage and payout faced by crop insurance schemes will be included and covered under the distress relief provided by these commissions.

What more should be done?

- In addition to reforming the credit system, agriculture should be made profitable by –
    1. Ensuring fair remunerative prices
    2. Lowering the cost of cultivation
    3. Promoting viable farmer collectives
    4. Engaging in sustainable models of agriculture.
- Thus the challenge before political parties and governments is to implement these institutional solutions demanded by farmers.

11.3 Ending the APMC Monopoly - Maharashtra Ordinance

Why in news?

The Maharashtra government intends to bring back the Ordinance on Agriculture Produce Market Committee (APMC), after withdrawing the Bill from the upper house.

What is the ordinance on?

- Earlier, the Maharashtra government passed an ordinance to amend the Agricultural Produce Marketing (Development and Regulation) Act, 1963.
- The Ordinance sought to remove all farm produce (including livestock) from the purview of the APMC.
- It also proposed to grant 'Markets of National Importance (MNI)' status to the large mandis in Maharashtra.
- [Currently, only the Azadpur fruit and vegetables mandi in Delhi has MNI status.]
- The objective was to facilitate exports and easy inter-State trade.
- But the state government then withdrew the Ordinance from the Upper House, following protests by APMC markets.
- Now, a committee has been formed to listen to the concerns of different stakeholders.
- Accordingly, changes would be made to the ordinance and would be presented before the State Legislative Assembly.

Why is it a concern for APMC markets?

- De-listing agri commodities from the purview of the APMC would threaten the dominance of the APMC markets.
- It would snatch away their power to levy a 1% fee on virtually all wholesale trade in farm produce, even on trades that take place outside their defined areas.
- There are a total of 307 APMC markets in Maharashtra. These charge a cess of 1% of the trade value.
- The Vashi APMC, the largest mandi in Maharashtra, collects about Rs. 60 crore in cess in a year.
- Notably, 14 States, including Maharashtra, have removed fruit and vegetables from ambit of APMCs.
- But even today, farmers in Maharashtra who sell fruits and vegetables in a private market are forced to pay the cess to the APMC.
- So the APMC markets fear loss of income if the Ordinance is passed in its original form.

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How will it benefit farmers?

- By acting as moneylenders as well as buyers, commission agents or arthiyas extract a high price from farmers.
- Today, farmers are forced to sell their produce at the price quoted by the commission agents in the APMC in their area.
- Meanwhile, the APMCs have done little to improve their infrastructure.
- The government move would thus break the monopoly of APMC yards.
- It will give farmers the freedom to sell wherever and to whomsoever they desire.
- All farm items can then be sold in bulk either by way of contract farming, direct selling or in private wholesale markets.
- It would also help bring private investment for setting up markets and creating the infrastructure needed for agriculture marketing.

What lies ahead?

- Agri-marketing reforms are about creating multiple avenues for farmers and reducing intermediation costs.
- Going ahead, many more market yards (above 40,000) than the present 7,700 APMCs are required, so that farmers can access markets within close range.
- Private players should create new infrastructure, and not merely step into existing yards.

12. SCIENCE & TECHNOLOGY

12.1 GSAT-7A Launch - GSLV-F11

Why in news?

ISRO launched the communication satellite, GSAT-7A with GSLV-F11 (Geosynchronous Satellite Launch Vehicles).

What is GSAT-7A?

- GSLV-F11 injected GSAT-7A into a Geosynchronous Transfer Orbit (GTO) very close to the intended orbit.
- GSAT-7A is an advanced communication satellite with a Gregorian Antenna and other new technologies.
- GSAT-7A is the 39th Indian communication satellite of ISRO to provide services to users in Ku-band over the Indian region.
- The satellite operating in the Ku band will service communication needs for network-centric operations of the Indian Air Force and the military.
- Most of the functional requirements of the communication payloads and other systems have been derived from ISRO's earlier geostationary INSAT/GSAT satellites.

What is the key feature?

- At 2,250 kg, GSAT-7A is the heaviest satellite launched by GSLV-Mk-II since it began using the indigenous cryogenic engine.
- The cryogenic stage of this vehicle has been modified to increase the thrust rate.
- The rocket was pushing the limits of its capabilities in launching satellites of the two-tonne class for the seventh time.
- This is a standout factor with this launch and 12 other successful flights carried out so far by ISRO's GSLV-Mk-II rocket.
- They include six successive flights since 2014 with an indigenous cryogenic fuel upper stage.

What is ISRO's GSLV programme?

- GSLV-Mk-II is ISRO's fourth generation rocket with three stages.
- The first stage has four liquid strap-ons and a solid rocket motor.
- The second has a high thrust engine using liquid fuel, and the third is the cryogenic upper stage.
- The indigenous cryogenic engine was tested successfully for the first time in 2014.

- The cryogenic stage uses liquid hydrogen as fuel and liquid oxygen as an oxidiser.
- Compared to solid and earth-storable liquid propellant stages, it is a highly efficient rocket stage that provides more thrust for every kg of propellant it burns.
- ISRO initially used 7 cryogenic engines sold by Russia for the early phase of its GSLV programme that began in 2001.
- GSLV launches with Russian engines have had mixed success, with only two flights performing well.
- ISRO is developing a more powerful, fifth-generation GSLV-Mk-III rocket to launch satellites in the 4-6-tonne category.
- GSLV-Mk-III had a successful development flight recently when it launched the 3,423-kg GSAT-29 communication satellite.
- GSLV-Mk-III is the designated launch vehicle for India's upcoming second moon mission and the first human space flight scheduled for 2022.

13. ENVIRONMENT

13.1 Assessing the Progress of Paris Agreement

What is the issue?

- The 24th Conference of the Parties (COP-24) meeting to the United Nations Framework Convention on Climate Change (UNFCCC) is held in Katowice, Poland.
- With this, it is essential to assess the progress of countries in terms of Paris Agreement (PA) commitments made in 2015.

How is the global warming scenario?

- Average global temperatures have crossed a degree Celsius above preindustrial levels.
- Such concentration of carbon dioxide in the atmosphere (410 ppm) has never been seen by humans before.
- Resultantly, today's children are inheriting an earth that is out of control and heading to be 3-4° C warmer by the end of the century.
- Perpetual growth is not viable for any species.
- Business-as-usual policies with high consumption by the rich are driving the destruction of ecosystems and mass extinction of species.
- The "sixth extinction", massive destruction of species on earth is ongoing.
- In this context, the 1.5 Degree Report, a special publication, was recently released by the Intergovernmental Panel on Climate Change (IPCC).
- It calls for far-reaching, speedy transformative changes by countries in order to stay below 1.5° C.
- It emphasises on immediate and drastic drop in GHG emissions through technology and lifestyles, and on mitigation and adaptation.

What was the outcome of the Paris conference?

- The Nationally Determined Contributions (NDCs) were planned ahead of the Paris COP-21.
- Under this, each country described the actions it would take and the levels to which GHG emissions would be reduced (mitigation).
- Countries also described what they would do to improve their capacity to live in a warmer world (adaptation).
- The extent to which these goals required support in the form of finance or technology transfer was also mentioned.
- The Paris Agreement (PA) was ratified rapidly and went into force within a year (in November 2016).
- The Katowice meeting's objective is to set guidelines, or agree on a rulebook, to implement pledges made by countries at the Paris Climate Conference in 2015.

What are the concerns with PA progress?

- **Finance** - There has been little, if any, progress on finance, technology transfer and capacity development.
- Article 9 of the PA calls for financial support from developed countries that is significantly derived from public funds.
- This was expected to result in at least $100 billion per year to address mitigation and adaptation needs of developing countries.
- Article 9.5 requires developed countries to communicate their levels of support, including pledges of additional finance.
- Even a rough estimate of financial needs for implementing all the NDCs puts it at $4.4 trillion.
- But the Climate Funds Update of 2018 notes that multilateral funds pledged until 2017 are less than $30 billion.
- There have also been charges of double counting and counting of development aid levelled against developed countries.
- **Response** - While the U.S. and its current policies are much to blame for the situation, other developed countries are not doing that much better.
- Australia and France have had political turmoil due to their climate policies even while experiencing severe weather events.
- Europe is still heavily reliant on coal and European Union emissions were stable in 2014-2016.
- The U.K. has been relying on fuel from fracking.

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How does the future look?

- The implementation of the activities for the PA formally begins in 2020 and concludes in 2030.
- The world is currently in the Doha Amendment period, or the second phase of the Kyoto Protocol, which has not been ratified.
- In a couple of years after the start of the PA implementation, there will be review on progress and decisions on more stringent targets for the future.
- This renewed commitment towards the future means that countries have to trust each other.
- So fulfilling obligations is a foundation of future ambition and action.

What is required?

- What is required for India is credible, accurate and verifiable numbers on the climate flows expected from developed countries.
- Such reliable flow will encourage and persuade all countries that commitments made will be fulfilled.
- There also has to be a general agreement on how to estimate adaptation.
- Countries with high emissions should alter their lifestyles considerably, for the transformational change that 1.5 Degree Report calls for.
- As extreme events are on the rise, the separate stream referred to as "loss and damage" needs attention.
- This is a provision for support to poor countries experiencing economic and non-economic losses and destruction from climate change events.
- There has not been much progress on this issue by the task force set up to advance it, which also needs to be addressed at Katowice.

13.2 Rulebook for the 2015 Paris Agreement

Why in news?

Negotiators from 196 countries finalised a rulebook for the 2015 Paris Agreement at the climate change conference in Katowice, Poland.

What is the rulebook for?

- The Paris Agreement seeks to keep the global average temperatures "well below" 2°C from pre-industrial times.
- It specifies the steps that countries need to take in the fight against climate change.
- The rulebook prescribes how to do those things, and how each of them would be measured and verified.
- It holds the operational details of the Paris Agreement, the processes and guidelines for its implementation.
- Notably, the rulebook is a dynamic document, as new rules can be added or existing rules amended.
- It would facilitate the implementation of Paris Agreement which is supposed to replace the existing Kyoto Protocol in 2020.
- Nevertheless, several countries and NGOs feels that the deal reached in Katowice, though welcome, was not enough.

What are the highlights?

- The Paris Agreement says every country must have a **climate action plan** to be periodically updated and submitted to the UN climate body.
- The rulebook now specifies what actions can be included in the action plan, how and when to submit them.
- Further, the Paris Agreement asks every member nation to submit information about their **greenhouse gas emissions** every two years.
- The rulebook now specifies
    i. which gases to measure
    ii. what methodologies and standards to apply while measuring them

iii. the kinds of information to be included in their submissions

- Article 4 of Paris Agreement mandates **nationally determined contributions** (NDCs) by countries.
- The rules now say that support shall be provided to developing country Parties for the implementation of Article 4.
- Parties shall provide the information necessary for clarity, transparency and understanding as applicable to their NDCs.
- The Paris Agreement demands developed countries to provide "**climate finance**" to developing countries and submit an account of this.
- The rulebook says what kinds of financial flows - loans, concessions, grants - can be classified as climate finance.
- It specifies how they should be accounted for and the kind of information about them needed to be submitted.

What were the contentious issues?

- **Carbon Credits** - An emissions trading system already exists under the Kyoto Protocol.
- But it has become ineffective over the last few years and is meant to end with the end of Kyoto Protocol in 2020.
- So Article 6 of the Paris Agreement talks about setting up a market mechanism for trading of carbon emissions.
- A carbon market allows countries, or industries, to earn carbon credits for the emission reductions they make in excess of what is required of them.
- These carbon credits can be traded to the highest bidder in exchange of money.
- The buyers of carbon credits can show the emission reductions as their own and use them to meet their own reduction targets.
- In the last few years, several countries walked out of the Kyoto Protocol, and no country was feeling compelled to meet its 2020 emission reduction targets.
- So there has been virtually no demand for carbon credits.
- As a result, developing countries like China, India and Brazil have accumulated huge amounts of unused carbon credits.
- Together, China and Brazil are estimated to account for about 70% of global unused carbon credits.
- In Katowice, these countries called for considering as valid their unused carbon credits in the new market mechanism that was being created.
- But the developed countries strongly opposed this, questioning the authenticity of the unused carbon credits.
- They pointed to the weak verification mechanisms of the Kyoto Protocol that allowed dubious projects to claim carbon credits.
- So failing to arrive at an agreement, the discussion over carbon markets was deferred to the next year.
- But the confrontation would re-emerge as countries seem to attach more importance to the new emission trading system.
- **IPCC Report** - The report highlighted the need to slash carbon pollution by nearly half before 2030 in order to hit the 1.5°C target.
- The countries were divided on the IPCC report; US, Saudi Arabia, Russia and Kuwait refused to "welcome" the report.
- So the Katowice meet welcomed "the timely conclusion" of the report and invited "parties to make use of it".
- But it did not accede to the demand for IPCC's (Intergovernmental Panel on Climate Change) findings to form a key part of future planning.

IAS PARLIAMENT

13.3 Re-vitalising Ethanol blending

What is the issue?

A consistent and flexible policy for ethanol blending is needed to derive the many advantages that it offers across sectors.

What is the need?

- To achieve the government's target of 10% blending by 2022, the ethanol required is 300 crore litres.
- Of this, 130 crore litres is consumed by the potable alcohol sector and 60 crore litres by chemical industries, leaving only about 110 crore litres for blending with petrol.
- India's fuel bill in 2018-19 is expected to rise by 42% to $125 billion from $88 billion in 2017-18.
- To help reduce current account deficit and to make best use of a domestically available alternate, ethanol blending with petrol for fuelling vehicles was proposed.
- It serves as an environment-friendly alternative which can help reduce India's dependence on oil imports, thus presenting itself as a compelling option.

What are the concerns?

- The ethanol blending policy was first announced in 2002 with a target of 5% blending rate.
- However, lack of a consistent policy and the will to implement the programme effectively resulted in the average blending rate still hovering around 2.07% in 2016-17.
- Along with that, pricing of ethanol, whether to be fixed by the government or identified through tendering, created so much of hassle for the oil marketing companies.
- Also, since the price offered by the potable alcohol industry more attractive, sugar mills tend to leverage more towards them rather contributing towards ethanol blending.
- State governments, on their part, have either banned inter-State movement of ethanol or dis-incentivised it by levying taxes, affecting both demand and supply.

What are the measures needed?

- For India's ethanol blending programme to deliver, three critical factors are essential — policy consistency, price stability and flexibility.
- Automotive Industry will have to study if engines need to be modified, with increasing blending requirements, and have to make necessary adjustments.
- **Price stability** - Ethanol has competing users and for OMCs to get their share for blending they should pay a remunerative price.
- Thus, for ensuring price stability, ethanol pricing should be de-linked from crude prices.
- **Policy consistency** - Blending ethanol with petrol will help the country manage its surplus farm output by using feedstock that goes into making ethanol.
- The national bio-fuel policy permits damaged/broken food grains apart from agri-waste to be converted into ethanol.
- **Flexibility**- In India, ethanol is produced after distilling molasses, a by-product of sugar.
- Sugar mills should be allowed to produce ethanol directly from cane juice or by converting molasses earlier in the process instead of producing sugar.
- This would avoid rising cane arrears due to surplus production of sugar and would also ensure better price realisation for farmers through diversification.

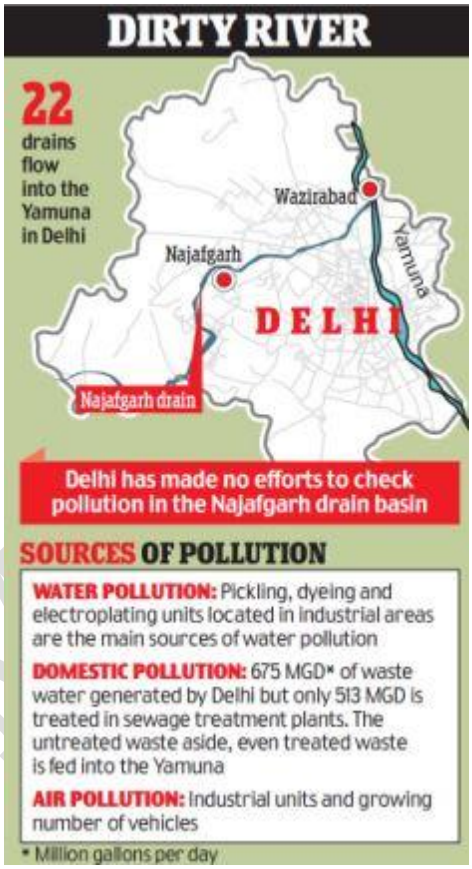
13.4 Effects of Drugs Discharged into the Yamuna

Why in news?

A recent study reveals the effects of the discharge of drug-containing effluents into the Yamuna.

What is the study on?

- Human body does not use the entire quantity of the drug when it is taken.
- Resultantly, most of it is excreted and thus end up in aquatic systems via domestic sewage.
- The study thus looks at the occurrence, fate and ecological risks of these compounds.
- It observed nine different pharmaceutical active compounds in the Yamuna river.
- These are six over-the-counter drugs (aspirin, paracetamol, ibuprofen, ranitidine, caffeine, diclofenac) and three prescription drugs (carbamazepine, codeine, diazepam).



What were the findings?

- The highest concentration of pharmaceutical compounds was located downstream Wazirabad at the point where Najafgarh drain joins the Yamuna.
- This is one of the largest drains of Delhi and has an average discharge of about 25 cubic metres per second.
- This drain is the largest polluter of the river contributing more than 50% of the total discharge into the Yamuna.
- At this site, ibuprofen and paracetamol were found at a high concentration of 1.49 and 1.08 microgram per litre respectively.
- Previous studies have shown that even small concentration of ibuprofen could cause an antagonistic effect on aquatic organisms.
- Studies have also shown that ibuprofen exposure could increase cyanobacterial growth in the water.
- Caffeine was found in high concentration in most of the sites.
- Caffeine is used as a stimulant in medicine. Residue from beverages and other food products may also be a contributor.

What could the impact be?

- The individual levels of the drugs were small and cannot cause acute toxicity to the marine life.
- But the mixture of compounds can "possibly cause chronic toxicity" to aquatic life and to humans who use this water for drinking purposes.
- This not only affects the biodiversity of the river but can also lead to the rise of superbugs.
- The discharge of drug-containing effluents in rivers and other water bodies can potentially make many microbes drug-resistant.
- The sewage treatment plants are not designed to take care of these pharmaceutical compounds.
- The study thus highlights the need for the government to bring in the guidelines or specific rules to arrest and address this.

14. NATIONAL SECURITY

14.1 National Drones Policy - Drone Regulations 1.0

Why in news?

The National Drones Policy drafted by the Ministry of Civil Aviation came into effect from December 1, 2018.

Click here to know more on DGCA's guidelines on drone operations.

What is the policy on?

- The new policy called "Drone Regulations 1.0" clarifies where, when and how drones can operate within India.
- With the policy coming into effect, flying drones or remotely-piloted aircraft have become legal in India.
- Also, the Ministry of Civil Aviation has kick-started the online registration of drones in India through its Digital Sky portal.

What was the need?

- A few businesses have managed to manufacture or operate drones in India, without attracting hostile government attention.
- They provided products and services primarily for the cinematography, agriculture, and infrastructure sectors.
- However, there were no regulations in place that guarantee the legality of their products and services.
- So it has been difficult for these businesses to attract investors, limiting their ability to grow.
- It is also to be noted that India has no indigenous drone manufacturer capable of competing on the global stage.
- So the national policy on drone would go a long way in addressing these concerns.

What are the highlights of the policy?

- **Categories** - The Directorate General of Civil Aviation (DGCA) has designed five different categories of drones as Nano, Micro, Small, Medium, and Large.
- Under the new policy, Nano drones which weigh less than 250 grams or equal does not need a registration or license.
- However, drones that belong to remaining categories will need to be registered on the Digital Sky portal.
- **Digital Sky portal** - It is an online platform as part of an enforcement system designated as No Permission No Takeoff (NPNT).
- Here, a drone operator can obtain all the necessary paperwork required.
- It includes procedures to conduct a drone operation, including final flight permission immediately before the operation.
- **Permission** - Following registration, DGCA will issue a Unique Identification Number (UIN) or Unmanned Aircraft Operator's Permit (UAOP).
- The fee for a fresh UIN is Rs 1,000. The fee for a fresh UAOP is Rs 25,000 and is valid for 5 years.
- To get permissions to fly, RPAS (Remotely Piloted Air System) operators or remote pilots will have to file a flight plan.
- **Zones** - Flying in the 'green zones' will require only intimation of the time and location of the flights via the portal or the app.
- But permissions will be required for flying in 'yellow zones', and flights will not be allowed in the 'red zones'.
- The location of these zones will be announced soon. Permission, if granted, will be available digitally on the portal.
- DGCA has also designated a set of test sites for drone manufacturers and operators to innovate in a safe and secure environment.
- **Drone Policy 2.0** - The ministry has constituted a task-force on the recommendation of Drone Policy 2.0.
- This task-force is expected to release their final report by the end of this year.
- Drone 2.0 framework for RPAS are expected to include
    i. regulatory architecture for autonomous flying
    ii. delivery via drones
    iii. beyond visual line of sight (BVLOS) flights

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What are the concerns?

- The current regulations make it legal for non-governmental agencies, organisations and individuals to use UAVs.
- But the high costs put them beyond the reach of NGOs and rural communities.
- The processes and fees render it difficult for them to conduct drone operations without hiring companies, which again would increase the costs.
- Besides this, some activities with the potential for market transformation are not currently permitted.
- E.g. functional drone-based delivery is not allowed
- It's because it requires the operator to conduct BVLOS operations and for the drone itself to release payloads while in flight.
- But this is considered to be a major growth area for the drone industry.
- It is also a focus for research and development as it will have a significant impact in online retail and healthcare.

What lies ahead?

- Drone applications are extremely relevant to India's large rural population.
- E.g. farming communities could cooperatively use drones to map vegetation stress, prevent crop-raiding by wild animals, conduct precise spraying of fertilisers and pesticides
- So the necessary infrastructure must be put in place for the implementation of regulations without delay.
- Aside from technical issues, the societal concern of making drone operation inclusive should be addressed.
- More representatives from outside the drone industry including civil society organisations and advocacy groups should be involved in framing the subsequent versions of regulations.

PRELIM BITS

HISTORY, ART & CULTURE

Train 18

- Train 18 is India's first indigenously built engine-less train that has breached the 180 kmph speed threshold during a test run in the Kota-SawaiMadhopur section, becoming the country's fastest train.
- The approximate cost of the train is Rs.100 crore and it is expected to go up to a maximum speed of 200kmph.
- Some of the top features and facilities in this train are –
    - Aerodynamically designed driver cabins at both ends for quicker turn-around at destinations
    - Alternate coaches are motorised to ensure even distribution of power and faster acceleration or deceleration
    - Regenerative braking system to save power
    - GPS-based passenger information system
    - Modular toilets with bio-vacuum systems
    - Disabled-friendly toilets
    - Emergency talk-back units to contact train crew
    - CCTVs in all coaches for safe and secure travel

Hornbill Festival

- Hornbill Festival 2018 has been inaugurated in Kohima, coinciding with the Formation Day of Nagaland.
- Nagas celebrate this festival to revive, protect, sustain and promote the richness of the Naga heritage and traditions.

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- Hornbill festival is known as "Festival of Festivals" which occurs during 1 – 10 December on an annual basis.
- The festival pays tribute to Hornbill, the most admired and revered bird for the Nagas for its qualities of alertness and grandeur.
- It is organized by State Tourism and Art & Culture Departments and also supported by Union Government.

Paika Rebellion

- Prime Minister has recently released the commemorative stamp and coin on Paika Rebellion.
- The setting up of a Chair on the Paika Rebellion, in Utkal University, Bhubaneswar, was also announced.
- It was an armed rebellion against the British East India Company's rule in Odisha in 1817.
- The Paiks were the traditional landed militia of Khurda, Odisha.
- Rulers of Khurda were traditionally the custodians of Jagannath Temple and ruled as the deputy of Lord Jagannath on earth.
- The British, having established their sway over Bengal Province occupied the Khurda's land in 1803 and took over the hereditary rent-free lands granted to Paikas.
- The Paikas rose in armed rebellion in 1817 under the leadership of BaxiJagabandhu.
- The tribals of Ghumusar and other sections of the population actively took part in it.
- Many scholars, researchers and historians have opined that the Paika Rebellion was India's first organized armed rebellion against British Raj.

Sattriya Dance

- Nritya Parva - Sattriya Dance festival is being organised every year to mark the day of recognition of sattriya dance as a classical dance in 2000.
- The dance form was introduced in the 15th century A.D by the great Vaishnava saint – Sankaradeva.
- The word Sattriya is derived from 'Sattra', the place of its birth.
- It was once a domain of male monks at the sattras, now it is performed by both men and women.
- It is governed by strictly laid down principles in respect of hastamudras, footworks, aharyas, music etc
- The costumes are usually made of pat - a silk produced in Assam which is derived from the mulberry plantand woven with intricate local motifs.
- **Sankaradeva** – He was a poet, a playwright, a social and religious reformer.
- His contributions include theatrical performance AnkiaNaat, sattriya dance and a form of music called Borgeet, which is sung during the performance of Sattriya.
- He founded "Ekasarana Dharma" – a neo-vaishnavite movement, resulted in an assembly of followers.

'Adopt a Heritage' project

- The 'Adopt A Heritage:ApniDharohar, ApniPehchaan' scheme is a collaborative effort by Ministry of Tourism, Ministry of Culture, Archaeological Survey of India (ASI) and State/UTs Governments.
- It focuses development and maintenance of tourist amenities at heritage sites and making them tourist friendly, to enhance tourism potential and cultural importance in a planned and phased manner.
- The Project envisages involvement of Private/Public Companies / Organizations and Individuals to adopt Monuments, Natural Heritage Sites and other Tourist Sites in the country, primarily under CSR for funding.
- The 10 monuments adopted under the scheme are –
    1. Red Fort,
    2. Gandikota Fort,
    3. Gangotri Temple and Trail to Gaumukh,
    4. Mt.StokKangri Trek in Ladakh,
    5. Jantar Mantar,

6. Surajkund,
7. QutubMinar,
8. Ajanata caves,
9. Leh Palace,
10. Hazara Rama Temple in Hampi.

List of Intangible Cultural Heritage of Humanity

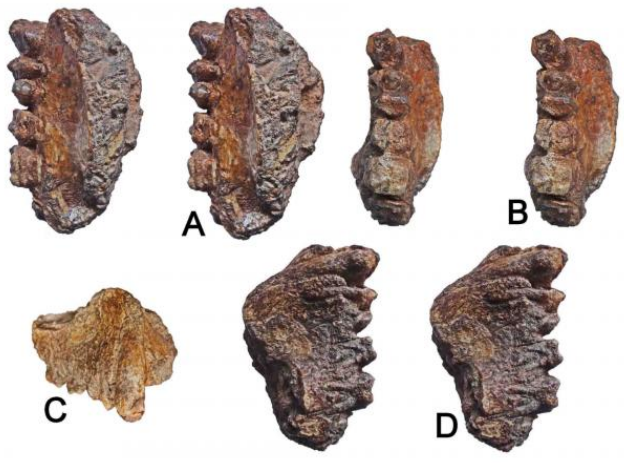
- Representative List of the Intangible Cultural Heritage of Humanity is annually released by UNESCO.
- This coveted list is made up of those intangible heritage elements that help demonstrate diversity of cultural heritage and raise awareness about its importance.
- The list was established in 2008 when Convention for Safeguarding of the Intangible Cultural Heritage came into effect.
- It has two parts viz. Representative List of Intangible Cultural Heritage of Humanity and List of Intangible Cultural Heritage in Need of urgent safeguarding.
- From India the Intangible Cultural Heritages added into this list include:
  1. Tradition of Vedic chanting
  2. Ramlila, the traditional performance of the Ramayana
  3. Kutiyattam, Sanskrit theatre
  4. Ramman, religious festival and ritual theatre of the Garhwal Himalayas.
  5. Mudiyettu, ritual theatre and dance drama of Kerala
  6. Kalbelia folk songs and dances of Rajasthan
  7. Chhau dance
  8. Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir.
  9. Sankirtana, ritual singing, drumming and dancing of Manipur
  10. Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab
  11. Yoga
  12. Nawrouz
  13. Kumbh Mela

Dead Sea Scrolls

- The Dead Sea Scrolls are a collection of ancient manuscripts that include the earliest existing copies of books from the Hebrew Bible, date from the 3rd century BC to the 1st century AD.
- Around 900 scrolls were discovered between 1947 and 1956 in the Qumran caves above the Dead Sea.
- Israeli scholars have recently deciphered one of the previously unread manuscripts of the Dead Sea Scrolls.
- The latest deciphered scroll contains references to the 364-day calendar used by the sect, as opposed to the lunar calendar used in Jewish religious practice today.
- It also refers to annual wine and olive harvest festivals no longer observed in Judaism.

First hominoid ape fossils in Peninsular India

- Fossil evidences of a hominid species have recently been discovered at Tapar in the Kutch basin of Gujarat.



Fossil Remains of *Sivapithecus* Jaw

- First human-like footsteps were traced from the Olduvai Gorge in Tanzania.
- About 14 million years ago (Miocene) ape-like species first originated on earth and gave rise to the present-day taxonomic family called *Hominidae*.
- This belief is supported by fossil remains recovered from Africa and beyond, including India, where at least four hominid families are found.
- Two of them belonged to the larger *Indopithecus*, and the other two to smaller *Sivapithecus*.
- *Indopithecus* fossils have been reported earlier from Himachal Pradesh, while those of *Sivapithecus* from Siwalik regions of India and Pakistan.
- Present discovery is exciting because this is the first-ever discovery of a *Sivapithecus* fossil outside the Siwaliks.
- This represents a significant southern range extension of Miocene hominoids in the Indian peninsula.
- This fills a time window of approximately 11 million years in the evolutionary history of future hominid remains in India.
- Hominidae includes all great apes – Orangutans, Gorillas, Chimpanzees & Humans.

Lingayat Community

- Lingayats are distinct Shaivite religious tradition founded by Basaveshwara, a 12th-century social reformer, Kannada poet, and philosopher.
- They are strict monotheists and instruct the worship of only one God, namely, Linga (Shiva).
- They constitute 17% of Karnataka's state population.
- They are currently classified as a Hindu sub-caste called "VeerashaivaLingayats".
- Veerashaivism is a Shaiva sect within Hinduism and is predominantly located in Karnataka.
- Veerashaivas claim that Basavanna was not the founder of the Lingayat tradition, but rather a reformer of an already existing religious tradition which they call Veerashaivism.
- The demand for separate religion tag and minority status is a long pending demand of the Lingayat community.

Practice	Veerashaiva	Lingayat
The founder	Panchacharyas	Basavanna
Religious script	Vedas, Agama, ***Siddhanta Shikhamani***	Vachana literature
Caste and gender equality	No equality. It puts Aradhyas at the top of the ladder, while there is no gender equality	Complete equality of men and women in religious, political and social practices
Worship	The statue of Shiva, and Shiva as envisaged in the Vedas with snake around the neck etc	Shiva (ishta linga) as a formless, timeless entity that resides in each and every life form
Temples and priests	Has a system of temples and priests	Bans temple worship. Worships only ishta linga

Lalitgiri Museum

- Earliest Buddhist settlements in Lalitgiri, Cuttack district, Odisha has been recently converted in to a museum.
- it will be the third site museum of the Bhubaneswar circle of the Archaeological Survey of India after Ratnagiri and Konrak.
- Excavations at Lalitgiri shows the cultural community from the post-Mauryan period till the 13th century CE.
- Lalitgiri along with the Ratnagiri and Udayagiri sites are known as the "Diamond Triangle".
- Excavations at the site shows that "Tantric Buddhism" was practiced.
- Tantric Buddhism is a tradition that focuses on mystical practices and concepts as a path to enlightenment and is associated with the Vajrayana sects.

GEOGRAPHY

Deep Earth

- It is the region that exists between 2 km and 3 km below the ocean-floor.
- It consists of about 2-2.3 billion cubic km, which is about twice the volume of the oceans combined.
- Its biosphere constitutes “Subterranean Galapagos” which includes members of all 3 domains of life – Bacteria, Archaea and Eukarya.
- Bacteria and archaea (microbes with no membrane-bound nucleus) dominate deep earth.
- Eukarya, multicellular organisms with cells that contain a nucleus as well as membrane bound organelles, found less in numbers.
- Scientists say about 70% of earth’s bacteria and archaea live in the subsurface.

Third Pole

- It is in the region which is to the north of India and to the south of China.
- The Third Pole region spreads across the Himalaya-Hindu Kush mountain ranges and the Tibetan Plateau.
- It is called the Third Pole because it contains the third largest expanse of frozen water on earth.
- It is much smaller in area than the north or the south pole, but is still enormous, covers 100,000 square kilometres and has around 45,000 glaciers.
- Ten of Asia’s largest rivers begin in the third pole.
- These include the Yellow river and Yangtze river in China, the Irrawaddy river in Myanmar, the Ganges which flows through India and Bangladesh, and the Mekong river that flows through several countries.
- It has the largest reserve of fresh water outside the two major polar regions and its waters sustain life over many thousands of miles.

Tsunami in Indonesia

- Anak Krakatau Volcano in the middle of the Java and Sumatra islands in the Sunda Strait erupted and triggered underwater landslides.
- This has led to Volcano triggered Tsunami in the region.
- Also called the "Child of Krakatoa", it emerged around 1928 in the caldera of Krakatoa, a volcanic island that violently erupted in 1883.
- It has become a small volcanic island with subsequent lava flows at an altitude of 1000 feet above sea level.
- The island is part of the Ujung Kulon National Park, listed in UNESCO's World Heritage site.
- Since its birth, it has been in a state of semi-continuous eruptive activity.

- Indonesia has nearly 130 active volcanoes, forming part of the pacific "Ring of Fire".
- Indonesia's proximity to the junction of 3 continental plates, makes it particularly vulnerable to earthquakes and eruptions.
- According to the International Tsunami Information Centre, Tsunamis triggered by volcanic eruptions are relatively rare, caused by the sudden displacement of water or "slope failure".
- Unlike earthquake triggered Tsunami, which trigger alert systems, Volcano triggered give little time to give warning.

POLITY

Minority Status to Lingayats

- The Central Government has rejected the Karnataka Government's proposal seeking a separate minority religion status for the Lingayat community.
- The Centre gave two reasons for rejecting the proposal,
  1. Lingayat has always been classified under Hindus ever since the first official census in India - 1871
  2. IfLingayatsare treated as a separate religion by providing separate code other than Hindu, all members of the Scheduled Caste professingLingayat would lose their status as SC along with the consequential benefits.

Separate High Courts

- Andhra Pradesh and Telangana are set to have separate high courts by January, 2019.
- This is in line with the Supreme Court order issued to the centre to bifurcate the common Hyderabad high court for both the States.
- Notification for this purpose was issued by the President quoting Article 214 of the Constitution, which provides that there shall be a High Court for each State.
- The President was conferred power under the Andhra Pradesh Reorganisation Act, 2014 to constitute separate high court for both States.
- The principal seat of the Andhra Pradesh High Court is Amaravati, the capital of the State.
- The High Court in Hyderabad will function separately as the High Court of the State of Telangana.
- With the creation of the new high court, the country now has 25 high courts.

Common High Courts in India

- Following are the list of High Courts which have jurisdiction over more than 1 State/UT.
  1. Bombay HC - Goa, Dadra and Nager Haveli, Daman and Diu and Maharashtra
  2. Calcutta HC- Andaman & Nicobar Islands and West Bengal
  3. Guwahati HC- Arunachal Pradesh, Assam, Mizoram and Nagaland.
  4. Kerala HC– Lakshadweep and Kerala
  5. Madras HC – Pondicherry and Tamil Nadu
  6. Punjab and Haryana HC – Chandigarh, Punjab and Haryana

GOVERNMENT INITIATIVES

Emergency Response Support System (ERSS) for Nagaland

- The Union Home Minister launched Emergency Response Support System (ERSS) for the State of Nagaland at Kohima.
- Nagaland is the first amongst the North-Eastern States and the second State in India to launch Pan-India single emergency number '112' under ERSS.
- Under this project, one Emergency Response Centre (ERC) has been established in Kohima along with 3 District Command Centers (DCCs), namely Kohima, Dimapur and Mokokchung.

IAS PARLIAMENT

- The Emergency Response Centre is capable of receiving emergency calls through voice call to 112, email, panic buttons activated calls and 112 India mobile App.
- State of Nagaland has integrated ERSS with Tourist Police and Highway patrol and will expand to interior districts subsequently.
- As a special feature, to ensure safety of women, a unique 'SHOUT' feature exclusively for women has been introduced in 112 India mobile App.
- This feature allows victims to seek immediate assistance from registered volunteers in the vicinity apart from contacting Emergency Response Centre.

Tribal Circuit: Peren-Kohima-Wokha

- The project of development of Tribal Circuit "Peren-Kohima-Wokha" was recently sanctioned by the Ministry of Tourism under Swadesh Darshan Project.
- This is the first project to be implemented in the State of Nagaland under Swadesh Darshan.
- It is one among the flagship schemes of the Ministry of Tourism for development of thematic circuits in the country in a planned and prioritised manner.
- It is focusing on development of quality infrastructure with objective of providing better experience and facilities to the visitors and fostering the economic growth.

Ground Water Extraction Guidelines

- India is the largest user of ground water in the world, extracting about 25% of the global ground water extraction.
- Ground water extraction in India is regulated by Central Ground Water Authority (CGWA) constituted under the Environment (Protection) Act of 1986.
- Ground water is primarily extracted for irrigation in agricultural activities, accounting for 90% of the annual ground water extraction and remaining 10% is for drinking & domestic as well as industrial uses.
- Central Government has recently notified the revised ground water extraction guidelines which will be effective from June, 2019.
- The most important feature of the revised guideline is the introduction of the concept of Water Conservation Fee (WCF).
- The WCF payable varies with the category of the area, type of industry and the quantum of ground water extraction.
- WCF is designed to progressively increase from safe to over-exploited areas and from low to high water consuming industries as well as with increasing quantum of ground water extraction.
- The high rates of WCF is to discourage packaged drinking water units in over-exploited areas and a deterrent to large scale ground water extraction.
- The guideline also encourages use of recycled and treated sewage water by industries.
- It exempted the requirement of No-Objection Certificate (NOC) for various following fields,
  i. Agricultural users,
  ii. Users employing non-energised means to extract water,
  iii. Individual households (using less than 1 inch diameter delivery pipe)
  iv. Armed Forces Establishments during operational deployment or during mobilization in forward locations.
  v. Strategic and operational infrastructure projects for Armed Forces, Defence and Paramilitary Forces Establishments and
  vi. Government water supply agencies.

ECO Niwas Samhita 2018

- Ministry of Power has recently launched the ECO Niwas Samhita 2018 which is an Energy Conservation Building Code for Residential Buildings (ECBC-R).

- ECBC for **commercial buildings** is already in place since 2017.
- ECBC-R aims to benefit the occupants and the environment by promoting energy efficiency in design and construction of homes, apartments and townships.
- It will assist architects and builders who are involved in design and construction of new residential complexes.
- Implementation of this code will have potential for energy savings to the tune of 125 Billion units of electricity per year by 2030, which is equivalent to about 100 million ton of Co2 emission.

Law Against the Offence of Sextortion

- Sextortion refers to sexual exploitation of women by those in positions of authority, having a fiduciary relationship, or a public servant.
- Jammu & Kashmir has become the first State in the country to bring a law to prevent people in power from exploiting subordinates sexually.
- J&K Governor has approved an amendment to Jammu and Kashmir Criminal Laws (Amendment) Bill, 2018, to incorporate the new Section.
- He also approved Prevention of Corruption (Amendment) Bill, 2018 to amend the definition of misconduct and to provide that demand for sexual favours would also constitute misconduct within the meaning of Section 5.

Women Entrepreneurship Platform

- The upgraded portal of Women Entrepreneurship Platform was recently launched by NITI Aayog.
- The platform is a one-stop resource centre for future and budding women entrepreneurs.
- It acts as a medium for various stakeholders and offer integrated services such as Incubator Support, Mentorship, Funding venues, Compliance etc.
- It seeks to transform the entrepreneurial ecosystem in the country.

Integrated Government Online Training Programme (iGOT)

- Ministry of Personnel, Public Grievances & Pensions has recently launched iGOT to augment existing training mechanism for civil servants with online based module.
- This will make training inputs available to government servant on site and on flexitime basis.
- The initiative aims at “Competent Civil Services for Good Governance”.
- It would be a platform to bring together the numerous Government and other training institutions for providing a single point of access to the repository of training resources.

BIMS

- Bidder Information Management System (BIMS) was launched by Ministry of Road Transport & Highways.
- It is aimed at streamlining the process of prequalification of bidders for EPC Mode of contracts for National Highway works with enhanced transparency and objectivity.
- The portal will work as a database of information about bidders, covering basic details, civil works experience, cash accruals and network, annual turnover etc.
- BIMS portal will significantly reduce the procurement time for projects through an objective and transparent online evaluation system thereby leading to accelerated project implementation.

BhoomiRashi

- It is a portal developed by MoRTH and NIC, comprises the entire revenue data of the country, right down to 6.4 lakh villages.
- The entire process flow for land acquisition from issuing notifications for land acquisition, submission of draft notification by the State Government to its approval will be carried out by the portal.
- BhoomiRashi portal has been instrumental in reducing the time taken for approval and publication of notifications pertaining to land acquisition.

Restricted Area Permit

- National Commission for Scheduled Tribes (NCST) has written to Union Home Minister seeking re-imposition of Restricted Area Permit (RAP) regime in Andaman & Nicobar.
- It includes 6 Islands inhabited by Andamanese, Jarawas, Sentinelese, Onges and Sompens.
- Union Home ministry has previously excluded these islands from Restricted Area Permit till December 2022.
- The commission has quoted Article 338A (9) of the Constitution of India for reimposition of RAP.
- Article 338A (9) mandates that Union and every State Government should consult the Commission on all major policy matters affecting Scheduled Tribes.

Click here to know about RAP

GOVERNMENT SCHEMES

Ideate for India

- It is a national challenge to students of classes 6 - 12 across the country to give them a platform to become solution creators for the problems.
- It will help inculcate innovation skills in youth and equip all students to utilise technology for the betterment of their communities and the society at large.
- It is designed and launched by the National e-Governance Division, Ministry of Electronics & ITin collaboration with Intel India, with the support of Ministry of Human Resource Development.

Pradhan Mantri Fasal Bima Yojana

- The PMFBY has replaced two crop insurance schemes, National Agricultural Insurance Scheme as well as the Modified NAIS.
- PMFBY aims to provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- Under the scheme the premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
- There is no upper limit on Government subsidy, even if balance premium is 90%, it will be borne by the Government.
- All farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible for the scheme.

Partners' Forum

- It is a global health partnership launched in 2005 to accelerate efforts to reduce child and maternal mortality, improve adolescent, child, newborn and maternal health.
- It is an alliance of academic & research institutions, health care professionals, NGOs,global financing mechanisms and the private sector.
- India has recently hosted the forum this year.
- It is co-hosted by Ministry of Health and Family Welfare and the Partnership of Maternal, Newborn and Child Health (PMNCH).
- The previous chapters were held in Johannesburg, South Africa (2014), New Delhi, India (2010) and Dar es Salaam, Tanzania (2007).
- This is the second time India is hosting the Partners' Forum.
- Union Health Minister has inauguratedthe "Marketplace" at the Forum which is showcasing some of India's best practices and innovations in reproductive maternal, newborn, child and adolescent health (RMNCH+A).

North East Special Infrastructure Development Scheme

- Non-Lapsable Central Pool of Resources (NLCPR)was created by the government for the development of North-Eastern states.
- Accumulations under this fund are made by union ministries which failed to spend 10% of their budget allocation for the development of north eastern region.

IAS PARLIAMENT

- The funds under NLCPR are utilized by Ministry of Development of north east region (DoNER).
- NLCPR scheme has been restructured as North East Special Infrastructure Development Scheme (NESIDS).
- It is fully funded by Central Government.
- One of the objectives of NESIDS is creation of infrastructure in the areas of primary and secondary sectors of education and health.

Pradhan Mantri Ujjwala Yojana

- The Scheme was launched in 2016 to provide free cooking gas (LPG) connections to poor households.
- Under the scheme, the government provides a subsidy of Rs. 1,600 to state-owned fuel retailers for every free LPG gas connection that they install in poor households.
- This subsidy is intended to cover the security fee for the cylinder and the fitting charges.
- The scheme allows beneficiaries to pay for the stove and the first refill in monthly installments.
- However, the cost of all subsequent refills has to be borne by the beneficiary household.
- So far, the scheme targeted the poor and underprivileged listed in the Socio-Economic and Caste Census, 2011.
- Union Cabinet has recently approved the expansion of the scheme to all poor households (not covered under the existing beneficiary categories).

Pradhan Mantri Jan Vikas Karyakram

- The scheme is earlier known as Multi-sectoral Development Programme (MsDP).
- It is an area development programme implemented in identified Minority Concentration Areas (MCAs) of the country for the remaining period of 14th Finance Commission.
- The objective of the scheme is to bring the identified MCAs at par with the national average by providing infrastructure related to education, skill, health etc.
- MCAs are relatively backward areas having substantial population of minority communities.
- They are identified as per Census, 2011 data related to backwardness indicators and population of all notified minority communities as a whole residing in the area.
- Under MsDP, Clusters of Villages are to be identified in consultation with the State Govt./UT administration concerned.
- MsDP has been restructured as PMJVK to include Minority concentration Blocks, Minority Concentration Towns and Minority Concentration Districts Headquarters.

IMPRESS Scheme

- Impactful Policy Research in Social Sciences (IMPRESS) scheme has been launched to promote Social Science Research in the country.
- The broad objectives of the scheme are:
    i. To identify and fund research proposals in social sciences with maximum impact on the governance and society.
    ii. To ensure selection of projects through a transparent, competitive process on online mode.
    iii. To provide opportunity for social science researchers in all the Central and State Universities and private institutions with 12(B) status conferred by UGC.
- The Indian Council of Social Science and Research (ICSSR) is the project implementing agency.
- Where 1500 research projects will be awarded for 2 years to support the social science research in the higher educational institutions and to enable research to guide policy making.

NATIONAL INSTITUTES

National Security Guard (NSG)

- A parliamentary panel has recently recommended that the Centre should take steps to equip NSG with its own dedicated air wing.

IAS PARLIAMENT

- NSG was raised in the year 1986 following the assassination of former Prime Minister Indira Gandhi and Operation Blue Star.
- It is a force specially equipped to deal with anti-terrorist activities in all its manifestations.
- It doesn't have a cadre of its own or direct recruitment and is instead dependent on personnel sent on deputation from the army and the central armed police forces (CAPF).
- It has Special Action Group (SAG) comprising Army Personnel and the Special Ranger Groups (SRG) comprising personnel drawn from the CAPF/State Police forces.
- NSG's delay in reaching Mumbai during 2008 terrorist attack with the non-availability of dedicated aircraft came under severe criticism.

National Commission for SafaiKaramcharis (NCSK)

- NCSK has recommended that all states across India should have individual state safaikaramchari commissions in order to end the practice of manual scavenging.
- NCSK was constituted as a statutory body via an act of parliament National Commission for SafaiKaramcharis Act, 1993.
- The act was lapsed in 2004.
- Now, it is a non-statutory body and its tenure is extended from time to time through government resolutions.
- It makes recommendations in its annual report to Social Justice and Empowerment ministry.
- Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 outlaws manual scavenging but people still being employed in the manual cleaning of dry toilets, sewer and septic tanks.

National Testing Agency

- It is an autonomous body, constituted last year under the Ministry of Human Resources Development.
- It has taken the mantle of conducting competitive exams like UGC-National Eligibility Test, NEET and JEE (Main) from CBSE.
- It is likely to conduct board exams in various states from 2020.
- This would reduce the burden of the Central Board of Secondary Education (CBSE).
- The entrance examinations will be conducted in online mode at least twice a year, giving adequate opportunity to candidates.
- There had been concerns of paper leaks, cheating scandals, outdated syllabus, etc with the CBSE. NTA is thus likely to address these shortfalls.

Equatorial Geophysical Research Laboratory

- Equatorial Geophysical Research Laboratory (EGRL), is a regional centre of the Indian Institute of Geomagnetism (IIG), Mumbai.
- It is a multi-disciplinary centre with instruments to measure the Earth's magnetic field variations and various atmospheric parameters.
- It is trying to establish the teleconnection between distant regions of the atmosphere and their impact on regions up to 100 km height and beyond.
- It is in Tirunelveli, Tamil Nadu and this facility has been continuously monitoring the Earth's near-space environment for over 25 years.
- **Significance of the location -** Tirunelveli is in close proximity to both the geomagnetic and geographic equator.
- When winds blow, electric currents are expected to be produced in the electrically charged upper layers of the atmosphere across the geomagnetic field.
- Over Tirunelveli and the adjoining regions, where the geomagnetic field is horizontal the current flowing primarily in the east–west direction would be enhanced.
- Scientists call this current **'Equatorial Electrojet'** and probing this helps scientists understand the Sun–Earth connection.

IAS PARLIAMENT

- **New facility –** Another major experimental facility was recently set up to monitor secondary cosmic rays.

INTERNATIONAL ORGANISATIONS

FAO Council

- Food and Agriculture Organisation (FAO) was established in 1945 with the objective of eliminating hunger and improving nutrition standards by increasing agricultural productivity.
- Its secretariat is in Rome, Italy.
- **Recent Developments** - The 160th session of the FAOCouncil is currently underway in Rome.
- It has approved India's membership to the Executive Board of the United Nations World Food Program (WFP) for 2020 and 2021.
- It also approved India's proposal to observe an International Year of Millets in 2023.
- The international endorsement comes in the backdrop of India celebrating 2018 as the National Year of Millets.
- **WFP**–It was established in 1961 as an experiment to provide food aid through the UN system.
- It is a member of the United Nations Development Group.

G20 Nations

- G20 is an international forum of the governments and central bank governors from 20 major economies formed in 1999.
- The Group was formed with an aim of studying, reviewing, and promoting high-level discussion of policy issues pertaining to the promotion of international financial stability.
- In addition to it, the group also hosts separate meetings of the finance ministers and foreign ministers.
- The G20 has no permanent staff of its own and its chairmanship rotates annually between nations divided into regional groupings.
- The members of the G20 consist of 19 individual countries plus the European Union (EU).
- The 19 member countries of the forum are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom and the United States.

Seabed 2030

- Seabed 2030 project was launched at the United Nations (UN) Ocean Conference in June 2017.
- It is a collaborative project between the Nippon Foundation of Japan and the General Bathymetric Chart of the Oceans (GEBCO).
- It aims to bring together all available bathymetric data (depth and shape of the ocean floor) to create a map of the world ocean floor by 2030 and make it available to all.
- The bathymetric data is fundamental for understanding ocean circulation, tides, tsunami forecasting, fishing resources, underwater geo-hazards, cable and pipeline routing, mineral extraction, oil and gas exploration.
- The project is aligned with the UN's Sustainable Development Goal 14 to conserve and sustainably use the oceans, seas and marine resources.
- It comprises a global center and 4 regional centers (Arctic and North Pacific center, Atlantic and Indian Ocean center, South and West Pacific center and Southern Ocean center).

GEBCO

- It is an international group of mapping experts developing a range of bathymetric data sets and data products.
- It operates under the joint auspices of the International Hydrographic Organization (IHO) and UNESCO's Intergovernmental Oceanographic Commission (IOC).
- IHO is an intergovernmental organization, established in 1921 to support safety of navigation and the protection of the marine environment.

- Its secretariat is in Monaco, which coordinates IHO's programmes.

Click here to know about Intergovernmental Ocenaographic commission.

Gulf Cooperation Council

- The Gulf Cooperation Council is a regional political and economic alliance of six Gulf States.
- Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates are the member countries.
- It is headquartered in Riyadh, Saudi Arabia.
- Its aim is to achieve ever closer union between the energy rich Gulf countries.
- The 39th GCC summit was recently held in Riyadh, Saudi Arabia.
- The summit has failed to resolve a diplomatic crisis that continues to grip the region.
- Saudi Arabia, Bahrain, UAE and Egypt have imposed an air, land and sea blockade on Qatar since June 2017.
- The blockading countries has accused Qatar of supporting terrorism.

Trans Regional Maritime Network (T-RMN)

- It facilitates information exchange on the movement of commercial traffic on the high seas.
- It is a multilateral agreement comprises 30 countries and is steered by Italy.
- India has recently signed the ascension agreement to the T-RMN.

Information Fusion Centre

- Indian Navy is going to inaugurate the Information Fusion Centre (IFC) for the Indian Ocean Region (IOR).
- IFC has been established at the Navy's Information Management and Analysis Centre (IMAC) in Gurugram.
- IFC will help in exchanging information on white shipping or commercial shipping with countries in region.
- It is to improve maritime domain awareness in the Indian Ocean.
- All countries that have already signed white shipping information exchange agreements with India are the partners of IFC.
- The information is available primarily through the Automatic Identification System (AIS) fitted on merchant ships as mandated by the International Maritime Organisation.
- Indian navy is mandated to conclude white shipping information exchange agreements with 36 countries and three multi-national constructs.

White Shipping

- White shipping information refers to exchange of relevant advance information on the identity and movement of commercial non-military merchant vessels.
- Advance information of the vessels like destination and planned itinerary, etc. is extremely helpful towards collating an effective Maritime Domain Awareness.
- This information is likely to be available with the country from whose port it sails and is equally relevant for the destination country and those it passes enroute.
- India has signed white shipping agreements with several countries including United States and Singapore and is seeking similar agreement with more countries.

ITCOocean

- Ministry of Earth Sciences (MoES) has recently inaugurated ITCOocean at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad.
- The General Conference of UNESCO approved the offer of Government of India to establish ITCOocean as a UNESCO Category 2 Centre in 2017.
- It will provide training to scientists/ researchers/government officers/disaster managers/decision makers in the areas of ocean science and management.
- The mission of the centre is to

1. Assist the member states of Intergovernmental Oceanographic Commission (IOC) of UNESCO in developing oceanographic scientific base,
2. Provide expertise and experience of INCOIS to South Asian and African states bordering the Indian Ocean and the small island nations in the Pacific
3. Developing new methods of capacity building for the countries on the Indian Ocean Rim (IOR)

Intergovernmental Oceanographic commission

- The Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO) was established by a resolution adopted by the General Conference of UNESCO.
- It assists governments to address their individual and collective ocean and coastal management needs, through the sharing of knowledge, information and technology.
- Beginning with the International Indian Ocean Expedition in 1960, it has coordinated and promoted program and activities in ocean observations, ocean science, and reduction of marine hazards.
- IOC also coordinates and fosters the establishment of regional intergovernmental coordinating tsunami warning and mitigation systems in the Pacific and Indian Oceans, in the North East Atlantic, Mediterranean and Caribbean seas.
- Its headquarters is in Paris, France.
- General Bathymetric Chart of the Oceans (GEBCO), Tara Expeditions, Océanopolis Brest are some of its partners.
- There are 149 members of which India is also a member.

International Press Institute

- According to Death Watch list published by International Press Institute, 78 journalists were killed in 2018.
- IPI's Death Watch lists journalists and media staff who were deliberately targeted because of their profession either because of their reporting or simply because they were journalists as well as those who lost their lives while on assignment.
- IPI is a global network of editors, journalists and media executives who share a common dedication to quality, independent journalism.
- Its headquarters is based in is Vienna.
- It represents leading digital, print and broadcast news outlets in nearly 100 countries.
- According to its 2017 report, India and Mexico are the two countries where the greatest number of recent cases are pending investigation.

Intermediate-Range Nuclear Forces Treaty

- The treaty was signed in the year 1987 between United States and Soviet Union.
- It required both countries to eliminate and permanently disown all of their nuclear and conventional ground-launched ballistic and cruise missiles with ranges of 500 to 5,500 kilometers.
- It did not cover sea-launched missiles.
- The treaty marked the first time the superpowers had agreed to reduce their nuclear arsenals, eliminate entire category of nuclear weapons.
- As a result of this treaty, superpowers destroyed a total of 2,692 short, medium and intermediate-range missiles by the treaty's implementation deadline of June 1, 1991.
- In 2014, United States has alleged that Russia violated the treaty and it has deployed the non-compliant missile.

INTERNATIONAL ISSUES AND EVENTS

50/50 milestone

- International Telecommunication Union (ITU) has recently said that by the end of 2018, world will surpass the 50/50 milestone for internet use.

- It means that for the first time, more than half of the global population will be using internet by the end of 2018.
- This represents an important step towards a more inclusive global information society.
- According to ITU, the world's richest countries have been showing slow and steady growth in Internet use, from 51% in 2005 to 80% now.
- The development is more dramatic in developing countries where 45% people are currently online, compared to just 7.7% in 2005.

Click here to know about ITU

UN Migration Compact

- The Global Compact for Safe, Orderly and Regular Migration has been formally adopted by UN member states at a conference in Marrakesh, Morocco.
- It is the first intergovernmental negotiated agreement under the auspices of UN to cover all dimensions of migration.
- It aims to protect the human rights of migrants, help them resettle and ensure they have access to education.
- The agreement was signed in the UNGA by adopting a political declaration "New York Declaration for Refugees and Migrants" in 2016.
- It is a non-binding political accord on member countries.
- Under the agenda, member States committed to cooperate internationally to facilitate safe, orderly and regular migration.
- Few countries have refused to sign or withdrawn from the agreement – USA, Australia, Hungary, Australia, Israel, Poland, Slovakia, the Czech Republic, Austria, Switzerland, Bulgaria, Latvia, Italy, Switzerland and Chile.

Art. 13 of EU Copyright Law

- Article 13 of EU copyright law is an attempt to reshape copyright law for the internet age.
- It's based around the relationship between copyright holders and online platforms, compelling the latter to enforce tighter regulation over protected content.
- The Article stipulates that platforms should "prevent the availability" of protected works, suggesting these ISSPs will need to adopt technology that can recognize and filter work created by someone other than the person uploading it.
- By this proposed article Memes, remixes and other types of user-generated content would all be put at risk, they claim, as these could technically be seen as breaches of copyright.

ECONOMY

National Pension Scheme

- It is a pension cum investment scheme launched to provide old age security.
- The scheme was introduced for central government employees who joined service on or after January 1, 2004 and later extended to all citizens (18-65 years) in 2009.
- The minimum employee contribution in NPS is 10 per cent of basic pay. An equal contribution is made by the government.
- It offers two kinds of accounts – Tier 1 and Tier 2.
- Tier 1 account is non-withdrawable till the person reaches the age of 60.
- The Tier II NPS account works like a savings account from where the subscriber is free to withdraw money as and when required.

- The subscribers could withdraw 60% of the corpus, with 40% of mandatory being deposited in annuity schemes.
- Of the 60%, one-third was taxable and two-third was tax exempt. 40% of the fund deposited in annuities is totally tax exempted.
- **Recent developments** – The government has recently announced few changes in the scheme.
- The government increased its share of contribution from the current 10% to 14%.
- The tax exemption limit when withdrawing funds from corpus has also been increased.
- Following the changes, the entire 60% of the fund withdrawn from the corpus is tax-exempted.
- Taken in combination with 40% deposited in annuities, the change means that the entire withdrawal from NPS will now be tax free.
- Contribution by the Government employees under Tier-II of NPS will now be covered for tax exemption up to Rs. 1.5 lakh.

Bimal Jalan Panel

- RBI in consultation with the Government has set up Bimal Jalan Panel to review the economic capital framework of the central bank.
- The economic capital issue was a bone of contention, among other issues, between the central bank and the Finance Ministry.
- To solve this, RBI board has decided to setup this panel.
- It is a 6-member committee with Economic Secretary, RBI Deputy Governor, members of RBI board as members.
- Terms of reference of the committee –
    1. To review status, need and justification of various provisions, reserves and buffers presently provided for by the RBI,
    2. Review best practices followed by the central banks globally in making assessment and provisions for risks, to which central bank balance sheets are subjected.
    3. Suggest an adequate level of risk provisioning that the RBI needs to maintain, and to determine whether it is holding provisions, reserves and buffers in surplus or deficit of the required level.
    4. Propose a suitable profit distribution policy taking into account all the likely situations of the RBI.
- The committee would submit its report within 90 days from the date of its first meeting.

Public Credit Registry

- RBI has proposed to set up a wide-based digital Public Credit Registry (PCR) to capture details of all borrowers and willful defaulters.
- The PCR will be an extensive database of credit information for India that is accessible to all stakeholders.
- The idea is to capture all relevant information in one large database on the borrower and, in particular, the borrower's entire set of borrowing contracts and outcomes.
- The proposed PCR will also include data from entities like market regulator SEBI, Ministry of corporate affairs, Goods and Service Tax Network (GSTN) and the Insolvency and Bankruptcy Board of India (IBBI).

INFRASTRUCTURE

Kaiga Nuclear Power Plant

- Kaiga plant in Karnataka has recently created a world record for the longest uninterrupted operation for 941 days.
- It breaks the earlier record of 940 days by the Heysham – 2 reactor of United Kingdom.
- Kaiga is an indigenously built Pressurised Heavy Water Reactor (PHWR) run by domestic fuel (Uranium).
- It began commercial operation in 2016.

- While Kaigais aPHWR and Heysham-2 Unit-8 is an Advanced Gas Cooled Reactor (AGR).

Noney Bridge

- The bridge is going to be constructed by the Northeast Frontier Railway (NFR) across the river Ijai in the state of Manipur.
- It is set to get the World's tallest railway bridge and it is expected to be over 142 meters tall.
- It will connect Manipur with the rest of the Country.
- It will be twice the height of Qutub Minar which is the tallest minaret made up of brick in the world.
- Mala-Rijeka viaduct bridge (139 meters) in Europe currently holds the tallest railway bridge record.

Dhubri-Phulbari Bridge

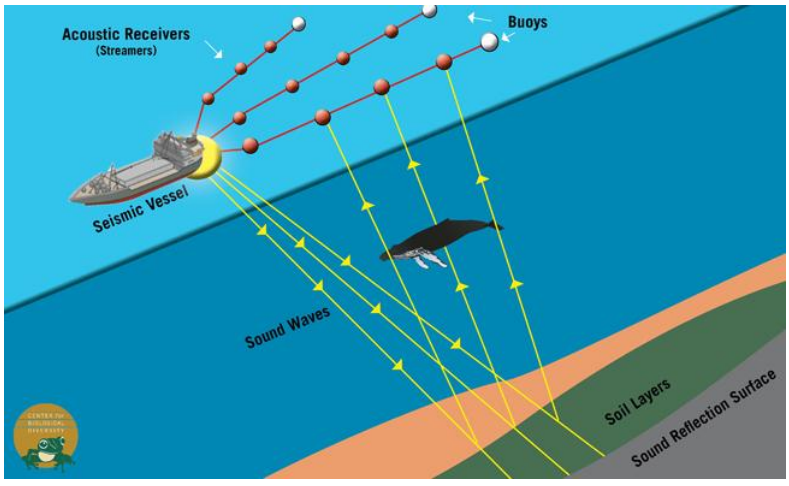
- It is the new bridge going to be constructed across Brahmaputra between Dhubri on North bank and Phulbari on South bank.
- It will connect Assam and Meghalaya with the rest of the country.
- The implementing agency is the National Highways and Infrastructure Development Corporation (NHIDCL), a fully owned company of Ministry of Road Transport & Highways.
- This project is being funded by Japan International Cooperation Agency (JICA).
- At present, the 9.15-km-long Dhola-Sadiya bridge (Bhupen Hazarika Setu) over the Brahmaputra (Lohit river) is the longest one in the country.
- Once completed, Dhubri-Phulbari will be the longest bridge in the country beating the length of Dhola-Sadiya Bridge.

ENVIRONMENT

POLLUTION

Seismic Airguns & Marine Wildlife

- Seismic Air Gun consists of one or more pneumatic chambers that are pressurized with compressed air.
- When it is fired air into a fire chamber which in turn causes a piston to move, thereby allowing the air to escape the main chamber and producing a pulse of acoustic energy.
- This controlled seismic energy used to perform both reflection and refraction seismic surveys i.e they are used to find oil and gas deep underneath the ocean floor.
- Sound from these intense blasts can travel over 2,000 miles.
- Five oil and gas companies have recently been given the green light to use seismic airgun blasts to search for oil and gas deposits in the sea floor from New Jersey to Florida.



- The blasts could potentially harm commercial fishing by killing Zooplanktons.
- But conservationists are particularly concerned about critically endangered North Atlantic right whales, of which only about 450 remain.
- Large marine mammals like whales and dolphin use sound for communicating, feeding, and mating.

- So the blasts could impact all three of those essential activities.

Bioplastics

- Plastics are usually made from petroleum, with the associated impacts in terms of fossil fuel depletion and climate change.
- It is estimated that by 2050, plastics could already be responsible for 15% of the global CO2 emissions.
- Bioplastics, plant-based plastics is often considered as an alternative to petroleum-based plastics.
- They are in principle climate-neutral since they are based on renewable raw materials such as maize, wheat or sugar cane.
- Therefore, producing bioplastics consumes CO2 and their net greenhouse gas balance is assumed to be zero.
- However, a recent study found that shifting to plant-based plastics could lead to generate increased greenhouse gas emission from cropland expansion on a global scale.

International Conference on Sustainable Water Management

- The first International conference on sustainable water management was recently organized in India.
- It was organized under the aegis of national hydrology project, Union Ministry of Water Resources, River Development and Ganga Rejuvenation.
- National hydrology project is a central sector scheme, helps in gathering hydro-meteorological data which will be stored and analysed on a real time basis.

Outcome of COP 24

- The 24th Session of the of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 24) was held in Katowice, Poland on 02nd– 15th December 2018.
- It focused on 3 key issues such as
  1. Finalization of guidelines/ rules for the implementation of Paris Agreement,
  2. The conclusion of 2018 Facilitative Talanoa Dialogue and
  3. The stocktake of Pre-2020 actions implementation and ambition.
- The guidance on adaptation recognizes the principle including equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).
- Parties have also agreed to initiate the work on setting up the new collective finance goals post-2020 from the floor of USD 100 billion.
- The guidance on Nationally Determined Contributions provides for Parties to submit different types of contributions including adaptation.
- The outcome onTalanoa dialogue also recalls the commitment ofdeveloped country Parties to a goal of mobilizing jointly USD 100 billion per year by 2020.

Talanoa Dialogue

- The countries put in place a road-map for 'Talanoa Dialogue' in COP 23 which is a year-long process to assess the countries' progress on climate actions.
- Under this, it was agreed that the next two climate conferences, in 2018 and 2019, will have special 'stock-taking' sessions.
- This stock-take would focus on the 'pre-2020 actions' being taken by different countries to reduce greenhouse gas emissions.
- It included the progress made by developed nations in their obligations to provide finance and technology support to the developing countries.
- It reflected a strong message to developed countries that post-2020 climate action as part of the Paris Agreement cannot be divorced from pre-2020 commitments.

GOVERNMENT INTERVENTIONS

The Draft River Basin Management Bill, 2018

- The Draft River Basin Management Bill by the Ministry of Water Resources, proposes optimum development of inter-State rivers by facilitating inter-State coordination ensuring scientific planning of land and water resources.
- It aims toensure comprehensive and balanced development of both catchment and command areas by taking basin/sub-basin as unit with unified perspectives of water in all its forms (including soil moisture, ground and surface water).
- The draft Bill has proposed to establish 13 River Basin Authorities for various river basins of the country which would result in optimum integrated development and management of inter-State River waters.

Green Ganga App

- The application was launched recently by the Ministry of Water Resources during India Water Impact Summit, 2018.
- It was developed by Remote Sensing Centre of ISRO.
- It is used for geo-tagging of saplings and delineation of plantation boundaries under ongoing afforestation activities of Namami Gange programme.

Namami Gange Programme

- It is a flagship programme to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.
- The 8 Main Pillars of the programme are,
    i. Sewerage Treatment Infrastructure
    ii. River-Front Development
    iii. River-Surface Cleaning
    iv. Bio-Diversity
    v. Afforestation
    vi. Public Awareness
    vii. Industrial Effluent Monitoring
    viii. Ganga Gram

Vaccine to Protect Bees

- Scientists have recently developed world's first vaccine to protect bees against disease.
- It aims to tackle the drastic decline in insect numbers which could cause a global food crisis.
- The vaccine works by giving bees resistance to fight off severe microbial diseases that can be fatal for pollinator communities.
- UN-led research in 2016 found that more than 40 percent of invertebrate pollinators, particularly bees and butterflies, are facing extinction.
- Bees are vital for growing the world's food as they help fertilise crops around the globe, by transferring pollen from male to female flowers.
- Diseases are believed to be just one of a number of reasons for the loss of pollinators, alongside pesticides and intensive farming, which reduces the diversity of insects' nutrition.

Task Force to protect Wildlife

- India, Nepal and Bhutan are considering having a joint taskforce to protect wildlife across the Kanchenjunga Landscape, a trans-boundary region spread across Nepal, India and Bhutan.
- It will allow free movement of wildlife across political boundaries and checking smuggling of wildlife across the landscape.
- The landscape stretches along the southern side of Mount Kanchenjunga covers Nepal (21%), Bhutan (23%) and India (56%).

Asiatic Lion Conservation Project

IAS PARLIAMENT

- Ministry of Environment has recently launched Asiatic Lion Conservation Project.
- It aims to protect and conserve the world's last ranging free population of Asiatic Lion and its associated ecosystem.
- Habitat improvement, scientific interventions, disease control and veterinary care supplemented with adequate eco development will be carried out under the project.
- The project will be funded from the Centrally Sponsored Scheme - Development of Wildlife Habitat (CSS-DWH) with 60:40 share ratio of Central and State government.
- Asiatic Lion that once ranged from Persia (Iran) to Palamau in Eastern India were almost driven to extinction by hunting and habitat loss.
- According to 2015 census, it is found in Gir Protected Area Network that includes Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary adjoining reserved forests, protected forests.
- It is included in 21 critically endangered species for recovery programme and financial assistance under the species recovery component of CSS-DWH.

Integrated Development of Wildlife Habitats (IDWH)

- The Cabinet Committee on Economic Affairshas recently approved continuation of the IDWH beyond the 12thPlan period from 2017-18 to 2019-20.
- It is a centrally sponsored umbrella scheme consists of Project Tiger, Development of Wildlife Habitats and Project Elephant.
- The schemes would result in overall strengthening/ consolidation of tiger, elephant and wildlife conservation in the country.
- Besides, it would also address the Man-Animal conflict effectively and benefit the communities relocating from core protected areas.
- The implementation of the schemes would be done through the respective States in designated Tiger Reserves, Protected Areas and Elephant Reserves.

Biennial Update Report (BUR)

- Union Cabinet has approved Submission of India's second Biennial Update Report (BUR) to the United Nations Framework Convention on Climate Change (UNFCCC).
- The biennial update report aims to provide an update to India's first biennial report to the United Nation's body on climate change.
- The report contains five major components including
    1. National circumstances.
    2. National greenhouse gas inventory.
    3. Mitigation actions,
    4. Finance.
    5. Technology and capacity building needs.
- The report has been prepared based on a range of studies conducted at the national level.

Coastal Regulation Zone

- Cabinet approved easing of norms for development in CRZs.
- The notification aims at enhancing activities in the coastal regions and promoting economic growth while keeping in mind conservation principles of coastal regions.
- There are four different categories under CRZ, they are as follows
    1. CRZ I - Ecologically Sensitive Areas.
    2. CRZ II - The areas that have been developed up to or close to the shoreline.
    3. CRZ III - Areas that are relatively undisturbed.
    4. CRZ IV - Area covered between Low Tide Line and 12 Nautical Miles seaward.

IAS PARLIAMENT

- According to the new notification only such projects, which are located in CRZ I & IV will require the necessary clearance from the Ministry of Environment, Forest and Climate Change.
- The powers for clearances with respect to CRZ-II & III have been delegated at the State level.
- The new notification also relaxed the No Development Zone (NDZ) criteria.
- The notification also permits temporary tourism facilities such as toilet blocks, change rooms, drinking water facilities etc. in beaches.

SPECIES IN NEWS

Great Indian Bustard

- The great Indian bustard (or simply Indian bustard), a large, white-and-brown bird with wing markings, is native to India and Pakistan.
- India effectively the only home of the bustards, now harbours less than 150 individuals in five States.
- It is listed in Schedule I of India's Wildlife Protection Act.
- It has almost lost its 90% of its original habitat.
- Hunting was one of the first factors that caused the decline of its population.
- Recently, several threats are including power lines are decimating its populations.
- The arid grassland that bustards thrive in are being made productive by increasing water availability and expansion of agricultural lands.
- More recently, their grassland homes are now sites of renewable power projects (wind turbines).
- Poor frontal vision and heavy bodies of bustards cannot manoeuvre away from cables in time.

Click here to know about sanctuaries that conserve Indian Bustard.

Olive Ridley Site

- A new olive ridley mass nesting site is going be added in Odisha's wildlife map.
- Odisha forest department has started preparing the beach at the Bahuda river mouth in Ganjam district for mass nesting of olive ridley.
- The Bahuda rookery is located 20km to the south of Rushikulya rookery coast, a major mass nesting site of olive ridleys.

Kashmiri Stag

- The Hangul Deer or Kashmiri Stag is the state animal of Jammu & Kashmir.
- It is the only sub-species of European red deer in India.
- The animal was classified as 'critically endangered' by the International Union for Conservation of Nature (IUCN).
- Dachigam National Park in Srinagar is considered to be the last undisturbed home of the Kashmiri stag.
- Similar in appearance to the European red deer, the Kashmir stag has a tiny white rump patch and a short dark tail.

IAS PARLIAMENT

Ganges River Dolphin

- Rise in Salinity in the water systemsin the Indian Sundarbans has resulted in the decrease of population of the Gangetic River Dolphin.
- Gangetic River Dolphin is the National Aquatic Animal.
- It inhabits he Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- It is classified as "Endangered" by the IUCN Red list.
- It is listed on Appendix I of the CITES.

Convention of Biological Diversity (CBD)

- India has recently submitted its Sixth National Report (NR6) to the Convention on Biological Diversity (CBD).
- CBDprovides the framework of an international law, recognising conservation of biological diversity as an integral part of the development process.
- The CBD is aimed at conserving biological diversity, sustainably using biological components and fair and equitable sharing of benefits (with local or indigenous communities) that may arise out of the utilisation of genetic resources.
- Equitable sharing of benefits was delineated in the Nagoya Protocol, which came into effect in 2014.

Himalayan Griffon Vultures

- Himalayan Griffon Vultures is the largest of the genus Gyps.
- It has been listed as "Near Threatened" under IUCN Red list of threatened species and under Appendix II in CITES.
- Its habitat is mainly Terrestrial such as Rocky areas (eg. inland cliffs, mountain peaks) and Grassland.
- It is distributed from western China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan and Pakistan, east through theHimalayan mountain range in India, Nepal and Bhutan, to central China and Mongolia.
- It has become an almost annual, but rare, winter visitor to Thailand, Myanmar, Bangladesh, Cambodia and Thai-Malay Peninsula.
- The species population appears to be stable in Dehradun District, Uttarakhand.
- The current population trend is stable, but it is suspected that it may undergo population decline over the next 3 generations.
- It is mainly because of the impacts of diclofenac use in livestock.
- The species was recently sighted at the famous vulture habitat Penchikalpet forest range in Telangana.
- The significance of the sighting, the experts opined that Pala Rapu can become a winter migration destination for the birds from the north.

Rat Kangaroo

IAS PARLIAMENT

- Northern bettongs, sometimes referred to as rat-kangaroos, are truffle-eating Australian marsupials.
- The World Wildlife Fund recently reported that they have suffered a dramatic population decline and could become extinct without urgent action.
- Their numbers are down by 70% in the past 30 years.
- They are at risk from feral cats, land-clearing and wildfires, which have become more frequent and fierce in Queensland due to climate change.

AGRICULTURE

Agriculture Export Policy

- Union Cabinet has recently approved the Agriculture Export Policy, 2018.
- The policy aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains.
- Its objectives are
    i. Doubling agriculture exports from present $30 billion to $60 billion by 2022.
    ii. Diversify export basket, destination and boost high value added agricultural exports.
    iii. Promoting novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
    iv. Providing an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
    v. Striving to double India's share in world agri exports by integrating with global value chain at the earliest.
    vi. Enabling farmers to get benefit of export opportunities in overseas market.

Ensure Portal

- Ministry of Agriculture and Farmers' Welfare has recently launched a portal "Ensure" to connect with Direct Benefit Transfer (DBT)
- It is developed by NABARD and operated under the Department of Animal Husbandry, Dairying & Fisheries.
- The National Livestock Mission consists of a component called Entrepreneurship Development and Employment Generation (EDEG).
- Under this component, subsidy payment for activities related to poultry, small ruminants, pigs etc. through DBT goes directly to the beneficiary's account.
- Ensure online portal was launched to make the DBT better, simpler and transparent.

Pokkali Paddy

- Pokkali paddy variety is a saltwater-tolerant paddy grown in the coastal fields of Alappuzha, Ernakulam and Thrissur districts of Kerala.
- It is endemic to Kerala and was given Geographical Indication (GI) tag.
- It grows to a height of up to 2 m and it survived the recent devastating floods in farmlands across the State.
- The single-season paddy is raised in saltwater fields between June and November followed by a season of fish-farming.
- After the harvest, the paddy stubble in the fields acts as food and shelter for shrimp and small fish.
- Fish excreta and scales, along with the decomposed stubble, provide excellent natural manure for another season of Pokkali.
- The cultivation is labour intensive and this farming tradition is under threat due to lack of labour.

Fall Armyworm

- Tamil Nadu State government has recently launched awareness programme among farmers to fight invasive pest fall armyworm.

IAS PARLIAMENT

- It has been wreaking havoc in the farmlands of Maize in the state of Karnataka, Telangana, Andhra Pradesh, Maharashtra, Bihar and Assam.
- It is a major maize pest in North America and it arrived in Africa in 2016.
- It has spread to Central and Western Africa in 2016 and has proved very hard to control.
- It prefers Maize, but can feed on 80 species of plants, including rice, sorghum, millet, sugarcane and cotton.
- It can be controlled with insecticides, through natural enemies or by inter-cropping.

SCIENCE AND TECHNOLOGY

SPACE

GSAT-11

- ISRO has recently launched its heaviest and most-advanced high throughput communication satellite GSAT-11 successfully.
- It was launched from the Spaceport in French Guiana.
- The launch vehicle Ariane 5 VA-246 was used to lift off and the satellite was placed in an elliptical Geosynchronous Transfer Orbit.
- The satellite weighs 5,854-kg and will provide high data rate connectivity to users of Indian mainland and islands through 32 user beams in Ku-band and 8 hub beams in Ka-band.
- It will boost the broadband connectivity to rural and inaccessible Gram Panchayats in the country coming under the Bharat Net Project, which is part of Digital India Programme.
- The Bharat Net Project aims to enhance the public welfare schemes like e-banking, e-health, e-governance among others.

Osiris-Rex

- NASA's has launched Osiris-Rex mission to Bennu asteroid, a rock that may predate the solar system.
- OSIRIS-Rex stands for Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer.
- OSIRIS-REx will be conducting a range of scientific experiments in order to better understand the asteroid.
- The aim of the mission is to collect a sample of regolith- the loose, soil-like material which covers the surface of the asteroid.

Chang'e-4

- Chang'e-4 mission was launched by China to explore the far side of the Moon.
- The mission will incorporate an orbiter, a robotic lander and rover.
- It will be China's second lunar lander and rover.
- It is a global first probe named after the moon goddess in Chinese mythology.
- Unlike the near side of the moon that is "tidally locked" and always faces the earth, and offers many flat areas to touch down on, the far side is mountainous and rugged.

VISIONS – 2

- The VISIONS-2 mission, short for Visualizing Ion Outflow via Neutral Atom Sensing-2, is a sounding rocket going to be launched by NASA.
- It aims to explore how the Earth's atmosphere is slowly leaking in to space.
- Sounding rockets are unique among scientific spacecraft for their superior dexterity.
- The current mission's precursor, VISIONS – 1 was launched from Alaska in 2013.
- It studied oxygen outflow from aurora that forms on Earth's night side, the part of the planet that is temporarily pointed away from the Sun.

Heliosphere, Heliopause and Interstellar Space

IAS PARLIAMENT

- The sun creates **heliosphere** by sending a constant flow of particles and a magnetic field out into space at over 670,000 miles per hour. This stream is called the 'solar wind.'
- **Heliopause** marks the end of a region created by our sun that is called the heliosphere.
- It is the boundary between our Solar System and the interstellar medium.
- It is the place where the sun's constant flow of material and magnetic field stop affecting its surroundings.
- **Interstellar Space** is the part of space that exists between stars with cold particles around it.
- Inside the heliosphere, the solar particles are hot but less concentrated. Outside of the bubble, they are very much colder but more concentrated.
- Once an object arrive in interstellar space, there would be an increase of "cold" particles around it.

Voyager 2

- Voyager 2 is the space probe launched by NASA in 1977 to study the outer planets (Jupiter, Saturn, Uranus and Neptune).
- It has recently passed an incredible milestone in its journey to explore the solar system by **entering interstellar space** (exited the heliosphere).
- Initially the two spacecraft (Voyager 1 and 2) were intended to last for 5 years and provide close-up studies of Jupiter and Saturn.
- However, as the mission continued and evolved, Voyager Interstellar Mission (VIM), a mission extension was launched to allow the spacecrafts to investigate the heliosphere and the interstellar medium.
- Voyager 2 carries a working instrument that will provide the first-ever observations of Heliopause.
- The twin voyager probes (Voyager 1 and 2) are the NASA's longest running missions.
- Voyager probes are the first spacecraft to date that humans have sent to this boundary, called the heliopause.

Small Satellite Launch Vehicle

- ISRO has completed the design of baby rocket "Small Satellite Launch Vehicle (SSLV)".
- SSLV can place a 500 kg payload at a height of 500 km in the Low Earth Orbit (LEO).
- It has three solid motor stages with a lift off mass of 120 tonnes.
- It is shorter in length than the PSLV and GSLV.
- It can accommodate multiple satellites like the PSLV and GSLV, albeit smaller ones.
- Unlike the PSLV and GSLV, the SSLV can be assembled both vertically and horizontally.

Israel Spacecraft

- Israel is set to launch the country's first spacecraft to the moon.
- If it becomes successful, it will be the first private spacecraft to be launched by Israel and would be the 4th country to land on the moon.
- The spacecraft, called Beresheet, or Genesis in Hebrew, weighing 585 kg.
- It will be sent via a Falcon 9 rocket from SpaceX firm.
- It will take around a month to arrive in the moon.

NASA's New Horizons

- NASA's New Horizons spacecraft was launched in 2006, this was the first spacecraft to provide the close-up views of the Pluto.
- Recently it is reported that the spacecraft will reach icy object nicknamed Ultima Thule (TOO-lee).
- Ultima Thule will be the farthest world ever explored by humankind, no spacecraft has visited anything so primitive.
- Pluto is barely in the Kuiper Belt, the so-called Twilight Zone stretching beyond Neptune, Ultima Thule is in the Twilight Zone's heart.

IAS PARLIAMENT

- The color of Ultima Thule is expected to be darker than coal, burned by eons of cosmic rays, with a reddish hue.

Kuiper Belt

- The Kuiper Belt is a region of the Solar System that exists beyond the eight major planets.
- It is similar to the asteroid belt, in that it contains many small bodies, all remnants from the Solar System's formation.
- But unlike the Asteroid Belt, it is much larger – 20 times as wide and 20 to 200 times as massive.

Secondary Cosmic Rays

- They are produced from supernovae, colliding galaxies and spinning black holes.
- When the cosmic rays from these sources enter the Earth's atmosphere, it loses its energies through collisions with our atmospheric molecules.
- As a result, it produces a cascade of subatomic particles known as secondary cosmic rays.

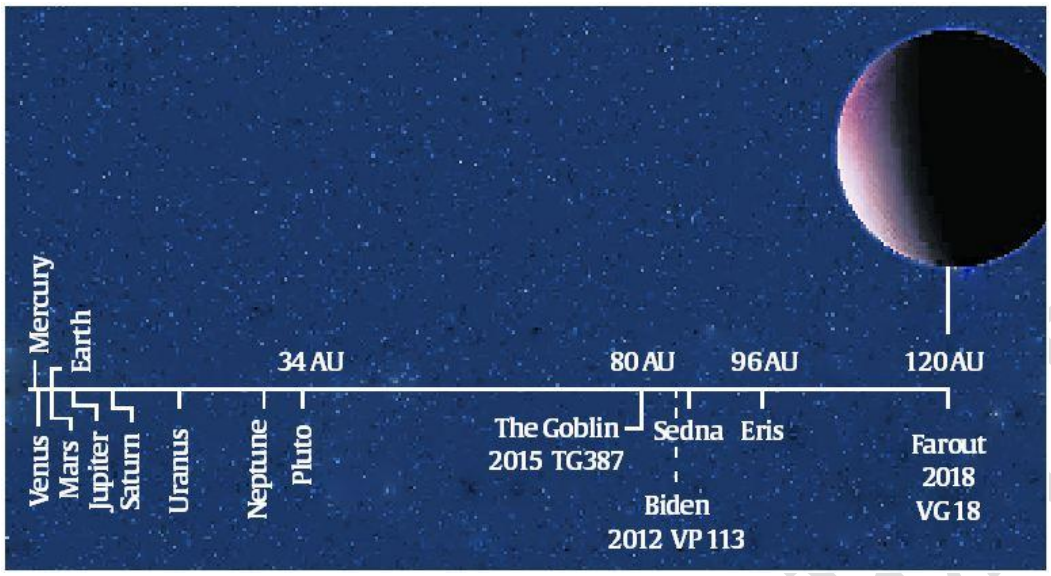
Chang'e-4

- Chang'e 4 is a Chinese lunar exploration mission.
- It incorporated an orbiter, a robotic lander and rover.
- It is the world's mission to land on the dark side of the moon.
- The moon is tidally locked Earth, rotating at the same rate that it orbits our planet, so the far side (Dark side) is never visible from the Earth.
- The probe has recently entered a planned orbit to prepare for the first ever soft landing on the far side of the moon.
- It will explore the lunar surface in the south pole – Aitken basin, which is one of the largest known impact craters in the solar system.

Farout

- Astronomers have reported the discovery of the most distant body ever observed in the Solar System, at 120 astronomical units (AU) from the Sun.
- This has led to the nickname "Farout" for the object, provisionally titled 2018 VG18.
- Farout is also the first known Solar System object that has been detected at a distance that is more than 100 times farther than Earth is from the Sun.
- For context, the second-most distant observed Solar System object is Eris, at about 96 AU. Pluto is currently at about 34 AU.
- 1 AU is defined as the distance between the Earth and the Sun.

IAS PARLIAMENT



DEFENCE

Agni – V

- Agni – V was successfully test fired from a canister on a road mobile launcher from Dr. Abdul Kalam Island, off the coast of Odisha.
- It is India's longest-range ballistic missile which will be inducted into the nuclear arsenal soon.
- It is an Inter-Continental Ballistic Missile (ICBM) with a range of over 5,000 km and can reach most parts of China.
- It is powered by three stage solid fuelled missiles.
- It can carry a payload of 1.5 tonnes.
- It is a part of Integrated Guided Missile Development Program (IGMDP).
- Earlier variants of the Agni family of long-range missiles have already been deployed.

BrahMos Supersonic Missile

- Union Defense ministry approved military procurement of Brahmos supersonic cruise missiles for Navy's two stealth frigates.
- BrahMos is a supersonic cruise missile being developed by BrahMos Aerospace, a joint venture between Defence Research and Development Organisation (DRDO) of India and NPO Mashinostroeyenia (NPOM) of Russia.
- The missile can be installed on ships, submarines, aircraft and ground vehicles and can be launched against ships and land-based targets.
- The missile is named after two rivers, the Brahmaputra in India and the Moskva in Russia.
- BrahMos has a flight range of up to 290km and can reach a maximum speed of Mach 3.

Digital Sky Platform

- The DGCA announced the Civil Aviation Regulations (CAR) to enable safe flying ofRemotely Piloted Aerial Systems (RPAS) popularly referred to as drones in India.
- It specified the obligations of operators, remote pilots/ users and manufacturers/ OEM for safe operations of RPAS and co-operative use of airspace.
- It also announced Digital Sky Platform, a first of its kind that implements 'no permission, no take-off' (NPNT) – a novel system of software based self-enforcement to minimize deviations from the CAR.
- The Digital Sky Platform will register and monitor the drones, pilots, and operators for online permission before the take-off.

- This platform is built to evolve with the needs of the rapidly changing industry with Digital Sky Service Providers (DSPs) by extending the functionality of the platform through Application Program Interfaces (APIs).

Pralay

- It is a newly developed surface-to-surface tactical missile.
- The trial of the missile was recently deferred by the Defence Research and Development Organisation (DRDO) due to the cyclone Phethai.
- It is a derivative of Prithvi Defence Vehicle (PDV) exo-atmospheric interceptor which can destroy enemy weapons at high altitudes.
- It has a payload of 1 tonne and it has the capacity to strike targets 350 km away.
- It can travel up to 500 km if the payload is halved.
- It is propelled by solid-fuel rocket.
- It can fly faster than the conventional missiles in its class and can evade ballistic missile defence system.
- It will be launched from its own canister-based transport erector launcher.

Cyber-Physical Systems

- Union Cabinet has recently approved the launching of "National Mission on Interdisciplinary Cyber-Physical Systems".
- The mission aims at establishment of Technology Innovation Hubs (TIH), Application Innovation Hubs (AIH) and Technology Translation Research Parks (TTRP).
- It is a Pan India mission covering Central Ministries, State Governments, Industry and Academia, to effectively use Cyber Physical System (CPS) technologies.
- CPS is an interdisciplinary field that deals with the deployment of computer-based systems that do things in the physical world.
- Smart grids, where electricity is optimally distributed on the basis of calculations in real time by micro-processors and autonomous unmanned vehicles and aircraft navigation systems qualify as 'cyber physical systems.'
- Artificial Intelligence (Al), Internet of Things (loT), Machine Learning (ML), Deep Learning (DP), Big Data Analytics, Robotics,Quantum Computing, Quantum Communication, Quantum encryption (Quantum Key Distribution) are associated technologies of CPS.

Deep Submergence Rescue Vehicle

- Indian Navy has recently inducted deep submergence rescue vehicle which will be operational from April, 2019.
- Currently India operates conventional submarines of the Sindhughosh, Shishumar, Kalvari classes as well as nuclear powered submarines.
- The traditional methods of search and rescue by these conventional submarines during an eventuality exposes them to high degree of risk.
- To overcome this gap, India has acquired a 3rdgeneration, advanced submarine rescue system considering of a Non-tethered Deep Submergence Rescue Vehicle (DSRV) and its associated equipment.
- It is capable of undertaking rescue from a disabled submarine up to 650 metres depth.
- The DSRV, operated by a crew of three, can rescue 14 personnel from a disabled submarine at a time.
- The vehicles are developed by Scotland-based JFD.
- With this, India joins a select league of navies with the sovereign capability to search, locate and rescue crew from a disabled submarine.

Advanced Towed Artillery Gun System (ATAGS)

- It is a 155mm, 52 calibre gun being developed by the Defence Research and Development Organisation.

IAS PARLIAMENT

- Indian Army has recently begun finalising the Preliminary Specifications Qualitative Requirements (PSQR) for the gun system.
- DRDO developed the gun system in two parallel protocols.
- The gun is currently weighing about 18 tonnes while the ideal weight is 14-15 tonnes.
- Significant features of the gun system - All-electric drive, high mobility, quick deployability, auxiliary power mode, advanced communications system, automated command and control system.

Hypersonic Missile

- Avangard, Hypersonic missile system in Russia, was recently test fired successfully.
- It is Intercontinental missile system and considered as a strategic weapon.
- It could fly at 20 times the speed of sound and manoeuvre up and down, meaning that it could breach defence systems.
- The final test of the missile comes after US announced its withdrawal from Intermediate-Range Nuclear Forces Treaty (INF).

EX SHINYUU Maitri-2018

- The Japanese Air Self Defence Force (JASDF) is in India for a bilateral air exercise SHINYUU Maitri-18 with Indian Air Force.
- The theme of the exercise is joint Mobility/Humanitarian Assistance & Disaster Relief (HADR) on Transport aircraft.
- The focus of the exercise is set for the IAF and JASDF crews to undertake Joint Mobility/ HADR operations. Display of heavy loading/ off loading are also planned to be practiced during this exercise.

Ex Aviaindra 2018

- Ex AVIAINDRA is an Air Force level exercise between Indian Air Force and Russian Federation Aerospace Force (RFSAF).
- First AVIAINDRA was conducted in 2014, planned as a bi-annual exercise.
- AVIAINDRA-2018 is the second in the series of bilateral joint exercise between IAF-RFSAF.
- This exercise is unique, where the foreign participants does not bring its assets.

Hand-in-Hand 2018

- It is an exercise conducted annually as part of military diplomacy and interaction between armies of India and China.
- The joint exercise will be conducted at Chengdu, China.
- The aim of the exercise is to build and promote close relations between armies of both the countries and to enhance ability of joint exercise commander to take military contingents of both nations under command.
- The exercise will involve tactical level operations in an International Counter Insurgency/ Counter Terrorist environment under UN mandate.

EX Konkan

- Konkan is the naval exercise between India and United Kingdom.
- The exercise is aimed at deriving mutual benefit from each other's' experiences and is indicative of continuing cooperation between two countries.
- Bilateral KONKAN exercise was started in 2004 and since then has grown in scale.

EX Cope India

- Cope is a bilateral exercise between Indian Air Force (IAF) and US Air Force (USAF).
- The first such exercise was conducted at Gwalior IAF air force station in 2004.

OTHERS

IAS PARLIAMENT

National Supercomputing Mission

- India has recently granted contract to French technology firm to build 70 supercomputers under the National Supercomputing Mission.
- The mission aims to connect national academic and R&D institutions with a supercomputing grid of over 70 high-performance computing facilities.
- Supercomputers will be installed across the country and will be networked on the National Supercomputing grid over the National Knowledge Network (NKN).
- It will be implemented by the Department of Science and Technology and Department of Electronics and Information Technology (DeitY) through Centre for Development of Advanced Computing (C-DAC) and IISc, Bangalore.
- The Mission also includes development of highly professional High Performance Computing (HPC) aware human resource for meeting challenges of development of these applications.
- The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed network.

Leprosy

- Leprosy, also known as Hansen's disease, is a bacterial disease.
- It affects skin and nerves which can lead to physical deformity and disability if left untreated.
- It is not hereditary and completely curable, as opposite to general public views on leprosy.
- It is only mildly infectious (i.e) more than 85% of cases are non-infectious and over 95% of the population has a natural immunity to the disease.
- Leprosy colonies in the country still faces stigma and government's attention towards it is also going down.
- This is mainly because of WHO declaration of the elimination of leprosy as a public-health concern in India in 2005.
- This has diluted the international funding and reduced attention and made life difficult for the people living in the colonies.

Crimean-Congo Haemorrhagic Fever (CCHF)

- Crimean-Congo haemorrhagic fever (CCHF) is a widespread disease caused by a tick-borne virus called *Nairovirus*.
- CCHF virus causes severe viral haemorrhagic fever outbreaks.
- Such outbreaks have a case fatality rate of up to 40%.
- The virus is primarily transmitted to people from ticks and livestock animals.
- Human-to-human transmission can occur resulting from close contact with the blood, secretions, organs or other bodily fluids of infected persons.
- CCHF is endemic in Africa, the Balkans, the Middle East and Asia, in countries south of the 50th parallel north.
- There is no vaccine available for either people or animals

Vaccine for Multiple Pathogens

- A global coalition set upto develop a synthetic vaccine system that could be tailor-made to fight multiple pathogens such as flu, Ebola, Marburg and Rabies.
- Coalition for Epidemic Preparedness Innovations (CEPI) and Britain scientists is developing a "vaccine platform" to fight disease epidemics.
- Vaccine platform is using synthetic self-amplifying RNA (saRNA) approach.
- SaRNA aims to harness the body's own cell machinery to make an antigen rather than injecting the antigen itself directly into the body.
- It can be adapted to immunize against different diseases by inserting new genetic sequences.

- The other advantage of this approach is that it's very rapid to manufacture.
- **Antigen** – A foreign substance which induces an immune response in the body.
- **Antibodies** - also called immunoglobulins, are proteins manufactured by the body that help fight againstforeign substances called antigens.
- **CEPI,** set up in 2017, aims to dramatically speed up the development of vaccines against new and unknown diseases, collectively known as "Disease X".

High Nitrogen Steel

- High nitrogen steel (HNS) is corrosion-resistant material, it has better holistic capabilities and mechanical properties than rolled homogenous armor steel and imported metals.
- The potential applications of HNS include combat platforms like futuristic infantry combat vehicles, mine-protected vehicles, army bridges and army corridors.
- In India Mishra Dhatu Nigam (MIDHANI), Hyderabad is having production capacity to manufacturehigh-nitrogen steel (HNS) for armor applications.
- This steel is will be produced in commercial scale as part of transfer of technology from Defense Metallurgical Research Laboratory (DMRL).

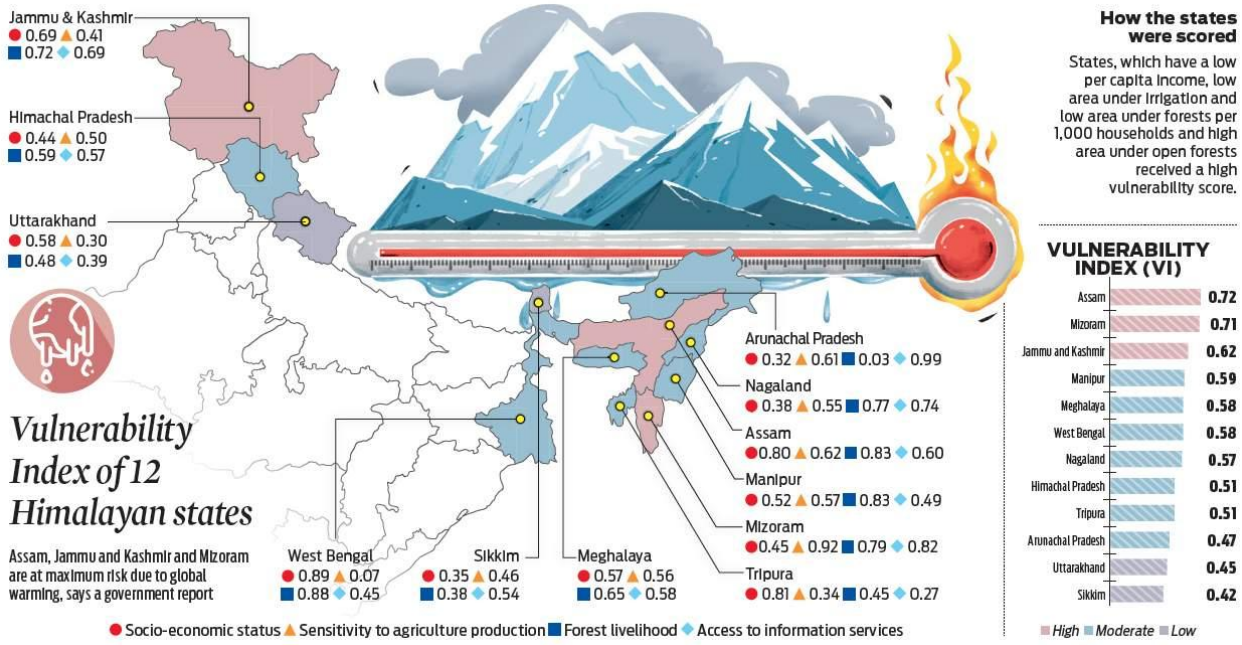
Helium

- Helium is the second most abundant element in the Universe, after Hydrogen.
- Its abundance is due to the very high nuclear binding energy (per nucleon) of helium.
- In its gaseous form, it is so light, and it escape from the Earth easily.
- In one of the places, it is found is in volcanic lava plumes, such as seen in Iceland and Hawaii, originating from the Earth's mantle.
- This is ancient helium from when the Earth was formed.
- It is believed to be trapped in compounds deep within the earth.
- A team of researchers has come up with the possibility that the mantle helium must exist as the compound FeO2He.
- The compound is stable and solid under the pressure and temperature conditions prevailing at those depths.
- Researchers are using a crystal search algorithm to look at possible compounds containing helium.
- It will solve the long-standing problem of where ancient helium is stored in the Earth.

INDEX AND REPORT

Climate Vulnerability Report

- Climate Vulnerability Assessment for the Indian Himalayan Region Using a Common Framework is a first-of-its-kind report prepared by the Department of Science and Technology.
- According to the report, all the 12 Himalayan states in India are extremely vulnerable to global warming.
- It is based on 4 indicators such as
  1. The economic and sociological status of the people and their health,
  2. Possible impact on agriculture production,
  3. Forest-dependent livelihoods and
  4. Access to information services and infrastructure
- States having low per capita income, low area under irrigation and low area under forests per 1,000 households and high area under open forests received a high vulnerability score.
- Assam, Mizoram and Jammu & Kashmir topped the list.
- Sikkim is the least vulnerable state.



Regulatory Indicators for Sustainable Energy (RISE)

- RISE report is published by World Bank.
- It rates 133 countries on electricity access, renewable energy, energy efficiency and access to clean cooking.
- It is to provide useful data to policymakers and help the private sector make informed decisions about investing in energy projects.
- It charts global progress on sustainable energy policies.
- The 2018 report finds that the world has seen a huge uptake in sustainable energy policies.

SDG India Index

- The index has been released by NITI Aayog in collaboration with the Ministry of Statistics &Programme Implementation (MoSPI), Global Green Growth Institute and United Nations in India.
- It tracks progress of all States and UTs on 62 Priority Indicators based on each aggregate performance across 14 SDGs selected by NITI Aayog.
- The score ranges between 0 (performing poor) and 100 (achieved national target in meeting SDG).
- According to the Index, Kerala, Himachal Pradesh and Tamil Nadu are progressing at a faster rate towards the SDG set for 2030.
- Among the UTs, Chandigarh is the front runner followed by Puducherry.
- U.P, Bihar and Assam are progressing at a slower rate.
- Tamil Nadu is the top scorer in eradicating poverty and also providing clean and affordable energy.
- The average score for the States was the worst in gender equality, in creating sustainable cities and communities, in enabling industry, innovation, and infrastructure, and in eradicating hunger.

States' Startup Ranking

- The Department of Industrial Policy and Promotion (DIPP) announced results of thefirst ever States' Start-up Ranking 2018 recently.
- The key objective of the exercise was to encourage States/UT to take proactive steps towards strengthening the Start-upecosystems in their states.
- The States have been identified under different categories - Start-up policy leaders, incubation hubs, seeding innovation, scaling innovation, regulatory change champions, procurement leaders, communication champions, North-Eastern leader, and hill state leader.

- Based on these categories, the States have been recognised as the Best Performer, Top Performers, Leaders, Aspiring Leaders, Emerging States and Beginners.
- Gujarat has been identified as the **best performer.**
- Karnataka, Kerala, Odisha, and Rajasthan have been identified as the **top performers.**
- Andhra Pradesh, Bihar, Chhattisgarh, Madhya Pradesh, and Telangana have been identified as leaders.

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