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CURRENT AFFAIRS MAGAZINE

MAY 2020

Shankar IAS Academy™

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MAY 2020

G.S PAPER II

1. POLITY

1.1 CWMA under Jal Shakti Ministry - Opposition

What is the issue?

- The Centre, by way of a notification, officially brought the Cauvery Water Management Authority (CWMA) under the Jal Shakti Ministry.
- Several political parties, especially the Opposition, and some farmers' associations in Tamil Nadu have expressed concerns over this.

What is the Jal Shakti Ministry?

- It was formed at the Union in May 2019, by merging the Ministry of Water Resources and the Ministry of Drinking Water and Sanitation.
- It was to deal with all water, sanitation and irrigation-related issues.
- With this, the erstwhile water resources ministry has been brought under Jal Shakti ministry as a department.
- The management boards of all rivers like Godavari, Krishna and Narmada, were functioning under the erstwhile water resources ministry.
- With a notification on April 24, 2020, the following were brought under the Jal Shakti Ministry:
 - i. National Water Informatics Centre
 - ii. North Eastern Regional Institute of Water and Land Management
 - iii. Krishna River Management Board
 - iv. Godavari River Management Board
 - v. Cauvery Water Management Authority (CWMA)

What is the Cauvery Water Management Authority?

- The CWMA was formed following the instructions of the Supreme Court in February 2018.
- The Court had instructed the then water resources ministry to frame a scheme under section 6A of the Inter-State Water Disputes Act, 1956.
- The court insisted that a water sharing scheme be framed by the Centre and its order implemented through the authority.



- [The court's order rejected outrightly the discretionary powers of the Centre that argued that framing of a scheme was not mandatory.]
- Accordingly, the Central government notified the Cauvery Water Management Scheme on June 1, 2018.
- The CWMA was formed as a quasi-judicial authority by the Centre, with its own powers like an independent body.
- This was to implement the water-sharing award of the Cauvery Water Dispute Tribunal.
- The water sharing was to be carried out as modified by the Supreme Court earlier in 2018.
- [CWMA comprises of a Chairman, a secretary and eight members.
- The salary of the Chairman and others is divided among the basin states - 40% each for Karnataka and Tamil Nadu, 15% for Kerala, and 5% for Puducherry]

Why is the Centre's move opposed?

- While the other inter-state river dispute boards (Narmada, Krishna, Godavari) were directly set up by the ministry, the CWMA was set up with the instructions of the Supreme Court.
- Also, between June 2018-May 2019, there was no public notification on the CWMA being designated as an organisation under the Union Ministry of Water Resources.
- The Centre's present move will erode the autonomy and dilute the powers of the authority, and reduce it to a "puppet" of the Centre.
- The whole idea of being an independent body will be sidelined.
- The member states, particularly Tamil Nadu, being a lower riparian state, might not be able to represent their rights.
- The move is also seen as yet another assault on the federal structure.

What are the counter-arguments?

- The CWMA, a body corporate, has been working all along under the Water Resources Ministry.
- Even in the case of its predecessor, the Cauvery River Authority (1998-2013), the Water Resources Ministry had the administrative control.
- [It has the Prime Minister as the Chairman and Chief Ministers of the basin States as Members.]
- In fact, the CWMA has had only a part-time head, the Chairman of the Central Water Commission (CWC), attached to the Ministry.
- Besides, there are eight inter-State river water boards under the Jal Shakti Ministry.
- The formalisation of the CWMA's status corrects an apparent lapse on the Ministry's part and addresses administrative issues.
- Apart from meeting the procedural requirement, the notification does not, in any way, alter the character, functions or powers of the CWMA.

What are the other long-felt concerns?

- Successive governments at the Centre have been wary of acting decisively on this dispute, other than under the orders of the Supreme Court.
- This is due to the fear of alienating voters in one of the States involved.
- If there is anything the Centre can be blamed for, it is the way the CWMA functions.
- Even 2 years after its formation, the Authority does not have a full-fledged Chairman.
- The Centre would do well to act, at least now, in making the CWMA fully operational, when the southwest monsoon is about to set in.

1.2 Restoring 4G Internet in J&K - SC Direction

Why in news?

The Supreme Court directed that a special committee led by the Ministry of Home Affairs secretary should be constituted to look into restoration of 4G internet services in the UT of Jammu and Kashmir.

What is the case about?

- The central government had imposed a complete internet shutdown in the erstwhile state of Jammu and Kashmir in August 2019.
- This was after scrapping Article 370 which gave J&K its special status.
- Later in March 2020, it restored internet services partially, to allow 2G speed for mobile users.
- After this, several orders were passed from time to time, retaining speed restrictions.

What is the Court's direction?

- The committee suggested by the Centre will also include the -
 - i. Department of Communications Secretary of the Union Ministry of Communications
 - ii. the Chief Secretary of the Union Territory of Jammu and Kashmir
- This committee has been asked to look into the petitioners' contention.
- It will examine the alternatives suggested by them, on allowing faster internet on a trial basis in areas wherever possible.
- The Court emphasized on ensuring the balance between national security and human rights.
- The bench referred to the judgment in the Anuradha Bhasin case (January 2020).

What were the observations of the Anuradha Bhasin case?

- It was popularly known as the Kashmir internet shutdown case.
- The Supreme Court emphasized back then that Article 19 of the constitution guarantees the freedom of speech.



- The freedom to practice any profession or carry on any trade, business or occupation over the medium of Internet also enjoys constitutional protection.
- The Anuradha Bhasin case had also advocated for adequate procedural safeguards while implementing internet shutdowns.
- The Court refrained from taking any view on the legality of the government's imposition of a blanket communication lockdown in J&K.
- However, it held that repeated resort to Section 144 of the CrPC to impose wide restrictions without territorial or temporal limits was unacceptable.
- It directed the authorities to review each one of them from time to time.

What is the contention now?

- It is now desirable to have better internet when there is a worldwide pandemic and a national lockdown.
- But there is also the concern of outside forces trying to infiltrate the borders and destabilize the integrity of the nation.
- The government's rationale is that the limitation on internet speed was to "restrict the flow of information".
- This is to prevent misuse of data by terrorists and their supporters to disturb the peace and tranquillity of the UT of Jammu and Kashmir.
- Notably, there has been a spike in incidents of terrorism in the area; roughly 108 incidents between August 2019 and April 2020.

What are the concerns with the Court's decision?

- The Court failed to ask how those incidents could be linked to Internet speed when all of them took place while severe restrictions were in place.
- The Court has directed a review of the matter by the very authorities who imposed the restriction in the first place.
- This suggests abdication of responsibility by the Court, of discharging a judicial duty it was called upon to perform.
- The mandate that the Court enjoys under Article 32 of the Constitution (enforcing fundamental rights) cannot be transferred to the executive.
- The judgment is in consonance with a judicial trend that seeks 'balance' between rights and 'national security'.
- But in the J&K context, this approach would work in favour of the claims made by the executive on national security concerns.
- The Court has not even pursued the attempt it made in Anuradha Bhasin case.
- It has not laid down any set of rules by which authorities seeking to impose restrictions must adhere to the doctrine of proportionality.

- So, without any judicial standard to scrutinise the claims made, it would be unfair to dislodge fundamental rights.

1.3 Quashing Defamation Proceedings - Tamil Nadu

Why in news?

Multiple defamation proceedings initiated against media houses by the erstwhile Jayalalithaa government in TN were quashed by the Madras High Court.

What is the significance?

- Indiscriminate institution of criminal defamation proceedings against Opposition leaders and the media has become a feature of public life in Tamil Nadu in the last three decades.
- Justice Abdul Quddhose quashed a series of defamation complaints filed since 2011-12.
- It is a landmark judgement, also for applying a set of principles.
- These principles would firmly deter the hasty and ill-advised resort to State-funded prosecution on behalf of public servants.

What were the observations made?

- The State should not impulsively invoke CrPC provisions to get its public prosecutor to file defamation complaints in response to every report that contains criticism.
- Public servants and constitutional functionaries must be able to face criticism since they owed a solemn duty to the people.
- The State cannot use criminal defamation cases to throttle democracy.
- The Court advises the government to have a higher threshold for invoking defamation provisions.
- Each time a public servant feels defamed by a press report, it does not automatically give rise to a cause for the public prosecutor to initiate proceedings on her behalf.
- The court also found fault with the government for according sanction to the initiation of cases without explaining how the State has been defamed.
- The statutory distinction between defaming a public servant as a person and as the State itself being defamed has to be maintained.
- It cautioned prosecutors against acting like a post office, noting that their role is to -
 - a) scrutinise the material independently to see if the offence has been made out
 - b) if so, whether it relates to a public servant's conduct in the course of discharging official functions or not
- With this, the court found that many were cases in which public servants ought to have filed individual cases.

What are the other essential criteria?

- An accusation should have been actuated by malice, or with reckless disregard for the truth.

- This was noted as an essential ingredient of criminal defamation in an earlier Madras HC ruling.
- A recent judgment by Justice G.R. Swaminathan enunciated what is known in the U.S. as the ‘Sullivan’ rule of ‘actual malice’.
- The Judge made this while quashing a private complaint against a journalist and a newspaper.
- It was noted that two of the exceptions to defamation given in Section 499 pertained to -
 - i. ‘public conduct of public servants’
 - ii. ‘conduct of any person on any public question’
- Thus, the legislature itself clarifies that it should have been demonstrated that reporting on the above two cases were vitiated by malice.
- Otherwise, the question of defamation does not arise.
- Also, even inaccuracies in reporting need not amount to a prosecution for defamation.

1.4 Supreme Court on Migrants Issue

Why in news?

Taking suo motu cognisance of the plight of the migrant workers, the Supreme Court ordered the Centre and the States to immediately provide transport, food and shelter free of cost to those stranded.

What are the observations made?

- A three-judge Bench has initiated suo motu proceedings based on media reports and representations from senior advocates on the issue.
- The court admitted that the migrants' crisis is even continuing today, since the Centre announced a lockdown, with just 4 hours' notice.
- Large sections of migrant labourers are still stranded on roads, highways, railway stations and State borders.
- The Government of India and the State governments have taken measures.
- But there have been inadequacies and certain lapses.
- Effective concentrated efforts are required to redeem the situation.

What was the court's earlier stance?

- The court could have done this 7 or 8 week earlier, when petitions were filed before the top court.
- But back then, the Court had accepted the government's sweeping claims.
- The Centre had then maintained that there were no migrants on the roads any more.
- It said that the initial exodus of workers from cities to their home States had been set off by “fake news”.
- With limited intervention, the Court had then merely advised the police to treat the workers on the roads with kindness.

- It also directed the media to highlight the Centre's version of the developments.

What is the way forward for the Court?

- The Court's earlier reluctance to intervene may have stemmed from a belief in letting the executive handle the matter.
- But, in the process, the court abandoned its primary responsibility of protecting fundamental rights, especially of those most vulnerable.
- With the present stance, the Court can now be expected to take a more critical look at the government's lapses.
- The Supreme Court must now emulate the significant role that various High Courts are playing in holding administrations accountable.
- The Centre imposed a stringent lockdown on the pretext of preparing the health infrastructure.
- The top court must now find out if the Centre had discharged its responsibilities.
- It may even lay down guidelines for planning, coordination and establishment of a mechanism.
- This will go a long way in addressing the economic and humanitarian consequences of Centre's such actions in future.

2. GOVERNMENT POLICIES

2.1 Epidemic Disease Act, 1897

Why in news?

Recently, the Centre amended the Epidemic Disease Act, 1897.

What has changed?

- Through an ordinance, the Cabinet amended the 1897 Act.
- The amendment made commission or abetment of acts of violence against healthcare workers a cognisable, non-bailable offence.
- The offenders will be imprisoned for a term of three months to five years, and with fine of Rs 50,000 to Rs 2 lakh.
- In case of causing grievous hurt, imprisonment shall be for a term of six months to seven years and with fine of Rs1 lakh to Rs 5 lakh.

Why did the Centre invoke the 1897 Act now?

- In March 2020, this Act was invoked to fight the Covid-19 outbreak.
- The Act empowers the state governments to take special measures and prescribe regulations in an epidemic.
- It defines penalties for disobedience of these regulations, and provides for immunity for actions taken under the Act.

Why the Act was enacted?

- In January 1897, Council member J Woodburn tabled the Epidemic Diseases Bill during bubonic plague outbreak in Bombay.
- The Bill was tabled as a measure to contain the plague before it attains large proportions elsewhere in the country.
- It noted that the powers of the municipal bodies and other local governments were inadequate to deal with such situations.
- It called for special powers for governments of Indian provinces and local bodies, including to check passengers of trains and sea routes.
- It said existing laws were insufficient to enable municipal officers to deal with matters related to overcrowded houses, sanitation, etc.

How was it passed?

- The Bill was referred to a Select Committee, which submitted its report on 4th February 1897.
- The Bill was passed the same day, after a brief discussion.
- It was passed amid concerns of the disease spreading, with crowds from Bombay having reached places all over India.
- The government was particularly worried about Calcutta, then the Indian capital.
- Among the members, Rahimtula Muhammad Sayani and Maharaja of Darbhanga said that the Bill was passed hurriedly.

What were the challenges discussed?

- Babu Joy Gobind Law suggested that steps be taken with regard to **Muslims'** pilgrimage to Mecca.
- But Alexander Mackenzie, Lieutenant Governor of Bengal, clarified that his government was unwilling to interfere with religious practices.
- Sayani said that the persons desirous of performing the pilgrimage could be persuaded to put off their intention until the danger has passed.
- It was discussed that isolating **women** was particularly difficult.
- Woodburn told that the whole town could not run the risk of plague infection merely because its source is a woman.

2.2 Relaxing Labour Laws

What is the issue?

- Some state governments have recently decided to make significant changes in the application of labour laws.



- While these changes are reportedly being brought about to incentivise economic activity after the lockdown, there are lot many wider concerns.

What are Indian labour laws?

- Estimates vary but there are over 200 state laws and close to 50 central laws on matters of labour.
- However, there is no set definition of “labour laws” in the country.
- Broadly speaking, they can be divided into four categories (as in the figure below).
- The Factories Act aimed at ensuring safety measures on factory premises, and promoting health and welfare of workers
- The Shops and Commercial Establishments Act aims to regulate work hours, payment, overtime, weekly day off and other holidays with pay.
- It also regulates annual leave, employment of children and young persons, and employment of women.
- The Minimum Wages Act covers more workers than any other labour legislation.
- The most contentious labour law, however, is the Industrial Disputes Act, 1947.
- It relates to terms of service such as layoff, retrenchment, and closure of industrial enterprises and strikes and lockouts.

CHART 1: TYPES OF LABOUR LAWS

CONDITIONS OF WORK

- Factories Act, 1948
- The Contract Labour (Regulation & Abolition) Act, 1970
- Shops and Commercial Establishments Act

WAGES & REMUNERATION

- The Minimum Wages Act, 1948
- Payment of Wages Act, 1936

SOCIAL SECURITY

- Employees' Provident Fund Act, 1952
- Workmen's Compensation Act, 1923
- Employees State Insurance Act, 1948

EMPLOYMENT SECURITY & INDUSTRIAL RELATIONS

- The Industrial Disputes Act, 1947
- Industrial Establishments (Standing Orders) Act, 1946

What are the concerns?

- Indian labour laws are often characterised as “inflexible”.
- Due to the strict legal requirements, firms (those employing more than 100 workers) are wary of hiring new workers.
- This is because firing them requires government approvals.
- So, even the organised sector is increasingly employing workers without formal contracts.
- This, in turn, has constrained the growth of firms on the one hand and provided a less favourable deal to workers on the other.
- Also, there are too many laws, often unnecessarily complicated, and not effectively implemented.
- This has laid the foundation for corruption and rent-seeking.
- [With fewer and easier-to-follow labour laws, firms would be able to expand and contract depending on the market conditions.
- Also, the resulting formalisation would help workers, as they would get better salaries and social security benefits.
- At present, 90% of India’s workers are part of the informal economy.]

What are the likely implications of states' decisions?

- UP, for instance, has summarily suspended almost all labour laws including the Minimum Wages Act.
- This is something like creating an enabling environment for exploitation.
- For instance, a firm could fire all existing employees and hire them again at lower wages, and no law would stop them from doing so.
- Moreover, this move will in one go turn the existing formal workers into informal workers as they would not get any social security.
- This would bring down the wage rate sharply, and the workers will have no way to even seek grievance redressal.
- Notably, even before the Covid-19 crisis, given the deceleration in the economy, wage growth had been moderating.
- Moreover, there was always a wide gap between formal and informal wage rates.
- E.g. a woman working as a casual labourer in rural India earns just 20% of what a man earns in an urban formal setting

Will the changes boost economic growth?

- Theoretically, it is possible to generate more employment in a market with fewer labour regulations.
- But the experience of states that have relaxed labour laws in the past suggests other way.
- Dismantling worker protection laws have failed to attract investments and increase employment.
- Employment will not increase primarily because there is already too much unused capacity.
- Firms are shaving off salaries up to 40% and making job cuts.
- The overall demand has fallen and so, firms are not likely to hire more employees right now.
- The work-hours move and the resulting fall in wages will only further depress the overall demand in the economy.
- It would hurt the economic recovery process too.

2.3 Over-centralization in Education - NEET

What is the issue?

- The NEET (National Eligibility-cum-Entrance Test) for medical courses is becoming a sign of over-centralisation in education.
- The interests of democracy call for arresting the trend towards the governmental domination of the educational process.

What were the judicial pronouncements in this regard?

- NEET was initially struck down as unconstitutional in Christian Medical College, Vellore (2013) case by a 2:1 majority.
- In 2016, a review of this judgment was allowed.
- Also, the dissenting judge of the 2013 judgment made NEET compulsory even prior to a full hearing by the constitution Bench.
- In April 2020, the Supreme Court held that there was no fundamental right violation in prescribing NEET for medical courses admissions.
- The observations made by a Commission (1948-49) do not seem to have been kept in mind in the April 2020 judgment.
- [The Commission was appointed by the Government of India to report on Indian University Education and suggest improvements and extensions.]

What were the observations by the 1948-49 Commission?

- Freedom of individual development is the basis of democracy.
- Exclusive control of education by the government has been an important factor in facilitating the maintenance of totalitarian tyrannies.
- In such countries, institutions of higher learning controlled and managed by governmental agencies -
 - i. act like mercenaries
 - ii. promote the political purposes of the State
 - iii. make them acceptable to an increasing number of their populations
 - iv. supply them with the weapons they need

How does it work with NEET?

- In the case of education, over-centralisation is becoming a reality.
- NEET is much an assault on the autonomy of universities and higher education institutions, particularly private, unaided ones.
- In the name of state's power to "regulate", the rights of unaided private institutions and minority institutions cannot be violated.

How disadvantaged do students become?

- With NEET and other similar national tests such as the JEE and CLAT, coaching institutes are prospering.
- Since most of them are in cities, poorer students from a rural background face a disadvantage.
- The case is similar with students who have studied in the vernacular medium.
- There is also large-scale variation in the syllabus and standards of the Central Board of Secondary Education and State boards.

- Besides, the NEET paper was leaked twice in the last four years.
- Therefore, there is not much confidence in NEET's fairness and transparency.
- Also, there is the issue of wrong translation.
- In the 2018 NEET, as many as 49 questions had errors in Tamil translation.
- [This led to a Madras High Court order to award 4 marks for each of the 49 wrongly translated questions to all 1.07 lakh candidates of the state.
- The Supreme Court overruled this order as the HC had arbitrarily ordered for grace marks to everyone.
- It did not examine whether the student even attempted such a question.]
- However, the advantages of NEET include a student having the possibility of giving multiple tests.
- By this, students would have a chance to qualify without losing a year, if they fail in one test.

Does NEET really promote merit?

- The idea of meritocracy requires competition and equality of opportunity.
- In the case of NEET, competition cannot be termed as fair and just, and the equality of opportunity becomes illusory.
- Certainly, NEET and other such admission tests do not meet the fundamental criteria of meritocracy.
- It is unclear if NEET is adequately measuring the multidimensional construct of merit.
- Common admission tests fall short of measuring the abilities that are essential for learning such as imagination, curiosity and motivation.
- Empirical research in the U.S. on such tests reveals that these tests are biased against the poorer and underprivileged sections of population.
- Thus, there is also an element of 'class' in NEET, which the Indian judiciary has so far overlooked.

How important is differential treatment?

- Minority rights are not the violation of the equality provision in Article 14 as the Constitution does permit classification.
- In fact, substantive equality, as opposed to formal equality, mandates differential treatment.
- There are even hundreds of minority institutions of Hindus as linguistic minorities.
- The Court's opinion in Kerala Education Bill 1957 [1958], on minority rights, deserves mention.
- A crucial statement in the judgement observes that the key words in Article 30 are 'of their own choice.'
- It held 'choice' to be the dominant word.
- The then Chief Justice Das said that 'the content of the article is as wide as the choice of the particular minority can make it'.
- In the present case, a minority institution may want additional qualifications over and above the NEET score.



- In that case, denial of such additional and superior qualifications undermines its choice.
- Due to centralised counselling, several minority institutions and private medical colleges are unable to fill their seats.
- This is an encroachment of their rights.
- Moreover, every vacant seat is a national loss. COVID-19 has only demonstrated India's extremely poor doctor-population ratio.

3. SOCIAL JUSTICE

3.1 Religious Freedom Report 2020

Why in news?

The US Commission on International Religious Freedom (USCIRF) has released its report for 2020.

What is the USCIRF?

- The USCIRF is an independent, bipartisan **U.S. federal government commission**.
- It was created by the International Religious Freedom Act (IRFA), 1998.
- The USCIRF is dedicated to defending the universal right to freedom of religion or belief abroad.
- It monitors religious freedom violations globally and makes policy recommendations to the President, the Secretary of State, and Congress.

What did the report say?

- In the 2020 report, the USCIRF has downgraded India as "Country of Particular Concern (CPC)".
- It has placed India alongside countries, including China, North Korea, Saudi Arabia and Pakistan.
- [In the 2019 report, India was characterised as a "Tier 2 country".]
- The commission recommended that the U.S. government take stringent action against India under the IRFA.
- It called on the U.S. administration to impose targeted sanctions on Indian government agencies and officials responsible for severe violations of religious freedom.

Why did the USCIRF characterise India as a CPC?

- The USCIRF noted that India took a sharp downward turn in 2019.
- The report included the specific concerns about,
 1. The Citizenship Amendment Act,
 2. The proposed National Register for Citizens,
 3. Anti-conversion laws and
 4. The situation in Jammu and Kashmir

- The commission stated that these concerns are the reasons why it downgraded India in the report.

What was the Indian response?

- The Indian government repudiated the report and ridiculed the USCIRF.
- The Ministry of External Affairs had rejected the USCIRF statement as neither “accurate nor warranted”.
- It also questioned the body’s “locus standi” in India’s internal affairs.

Will U.S. act as per these recommendations?

- Whether or not the U.S. government acts on the commission’s recommendations depends on American strategic interests.
- The U.S. has used arguments of freedom, democracy, tolerance, and transparency as tools in its strategic pursuits.
- But there is no proof of any uniform or predictable pattern of enforcement of such moral attributes.
- The process can be selective and often arbitrary in spotlighting countries.

What is the pattern that India mirror?

- Mirroring the U.S. pattern, India selectively approaches global opinions on itself.
- It embraces the laudatory ones and rejects the inconvenient ones.
- Overall, the global reports contribute to the construction of an image of a country, and the Indian government is aware of this pattern.
- In March 2020, the Indian government told NITI Aayog to track 32 global indices and engage with the bodies that measure them, to advance reform and growth.

What should India focus on?

- **Ambitions** - India advertises itself as a multi-religious democracy and as an adherent to global norms of rule of law.
- It also aspires to be on the table of global rule making.
- For a country with such stated ambitions, its record on religious freedom as reflected through events of the last one year is deeply disconcerting.
- **Essentials** - Reputation is important for a country’s economic development and global standing.
- But, the rule of law and communal harmony are essential for any functioning democracy.
- Religious freedom is of paramount importance, not because it is about religion, but because it is about freedom.



3.2 Cruelty as Ground for Divorce

Why in news?

In India, the courts are seeing mental cruelty as grounds for divorce.

What is the Bombay HC judgment?

- The Bombay High Court observed cruelty as a ground while granting a divorce.
- In this case, it held that a wife writing to the employer of her spouse with unfounded allegations about him constitute actionable cruelty under the Hindu Marriage Act, 1955.
- It observed that there was both physical and mental cruelty.
- It said that if allegations are made in writing and if they are baseless, it may cause mental pain to other spouse.
- It will be considered as an instance of cruelty.

What are the grounds for divorce under Hindu law?

- The Hindu Marriage Act, 1955, lays down the law for divorce that applies to Hindus, Buddhists, Jains, and Sikhs.
- Under Section 13 of the Act, the grounds for divorce include:
 1. Voluntary sexual intercourse with any person other than spouse;
 2. Cruelty (both mental and physical);
 3. Desertion for a continuous period of not less than 2 years immediately preceding the presentation of the petition;
 4. Ceasing to be a Hindu by conversion to another religion; and
 5. Being incurably of unsound mind.
- In addition, Section 13B provides for divorce by mutual consent.
- Section 27 of The Special Marriage Act, 1954 provides the grounds for grant of divorce in the case of marriages solemnised under that Act.

When was mental cruelty added as ground for divorce?

- When it was first passed, the Hindu Marriage Act did not have 'cruelty' as a ground for divorce.
- It was after an **amendment in 1976** that this basis became available for seeking both divorce and judicial separation.
- While Parliament did insert the term 'cruelty' in the Act, it did not supply an exhaustive definition.
- As a result, the term has been understood according to its interpretation by the judiciary over the years.
- The courts have evolved grounds for providing relief in cases of both physical and mental cruelty.



What are the cases?

- **Dastane v Dastane Case (1975)** - The Supreme Court had examined the concept of legal cruelty while granted divorce to the husband.
- The SC held that the wife threatening to end her life, and verbally abusing the husband, among other acts, amounted to mental cruelty.
- It observed that the inquiry has to be whether the conduct charged as cruelty is of such a character as to cause in the mind of the petitioner a reasonable worry that it will be harmful to live with the respondent.
- **Shobha Rani v Madhukar Reddi (1988)** - The SC held that repeated demands for dowry by the husband or his relatives was a form of cruelty.
- The courts have also given similar relief in other cases, including those of persistent drunkenness and repeatedly making unfounded allegations.

3.3 Criminalising Female Genital Mutilation - Sudan

Why in news?

The transitional government in Sudan approved a landmark draft law to criminalise the widespread practice of female genital mutilation (FGM).

What is the FGM practice all about?

- Female genital mutilation is a deeply-rooted practice in Sudan and other countries in Africa, Asia and the Middle East.
- FGM involves the partial or total removal of external female genitalia or other injury to the female genital organs for non-medical reasons.
- It is traditionally seen as a way of curbing female sexual desire in order to reinforce conservative behaviour.
- It is regarded as crucial prior to matrimony.

How prevalent is the practice?

- According to the UN, over 200 million women in several African countries have been subject to this brutal social custom.
- These include Sudan, Egypt, Nigeria, Djibouti and Senegal, and some countries in Asia.
- A 2014 U.N. children's agency report estimated that 87% of Sudanese women and girls of 15-49 age group have been subjected to the procedure.
- Most undergo an extreme form known as infibulation, which involves the removal and repositioning of the labia to narrow the vaginal opening.
- The practice is not only a violation of every girl child's rights, but is also harmful and has serious consequences for physical and mental health.
- There is ongoing research to rectify the damage.

- But WHO is somewhat unconvinced with the effectiveness of recent reconstruction surgeries.

What are the changes brought in?

- The government's proposal is part of a set of sweeping amendments to the criminal code.
- They seek to scrap the repressive social codes and humiliating penalties that targeted women during the nearly 30-year dictatorship of Omar al-Bashir.
- Hundreds of Sudanese professionals had demanded a broad-based and inclusive constitutional order.
- Under the proposed amendments, anyone found guilty of performing the FGM procedure would be sentenced up to 3 years in prison.
- It would also abolish the death penalty for people under the age of 18.
- The amendment would also prevent pregnant women from being imprisoned for minor crimes.
- The law must still be ratified by a joint meeting of the Cabinet and the sovereign council.
- The council assumed power after the overthrow of long-time President Omar al-Bashir in 2019.
- The proposed law has been brought forward by the country's interim government, which includes four female ministers.

4. HEALTH

4.1 World Health Assembly Session - COVID-19

Why in news?

The 73rd session of the World Health Assembly (WHA) took place virtually from May 18-19, 2020.

What is the WHA?

- The WHA is the decision-making body of the WHO.
- The Assembly is held annually in Geneva, Switzerland and attended by member states of WHO.
- During the Assembly, the WHO's 194 member states discuss health agendas set by the body's Executive Board.
- They also set new goals and assign tasks to fulfil these goals.
- Due to Covid-19, the Assembly was held virtually this year, and has been fit into a two-day schedule from a three-week schedule.

What was the resolution at the meet?

- A resolution was brought forward by the European Union (EU) and was endorsed at the Assembly.
- During the session, countries including India, Japan, Indonesia, New Zealand, UK and Canada accepted the resolution.
- Reportedly, 116 of the 194 member states were in favour of the resolution.



- It asked for an “impartial, independent and comprehensive evaluation” of the WHO's response to the COVID-19 pandemic.
- The resolution also called for identification of the “zoonotic” source of the coronavirus.
- The origin of the virus is currently believed to be a wet market in Wuhan, China.
- Apart from this, the Assembly also addressed a global vaccine action plan with the “Immunisation Agenda 2030”.
- This aims to ensure immunisation for all age groups to prevent the spread of preventable diseases and sustaining vaccine supplies.

What does the resolution demand?

- The resolution does not mention China.
- It, however, says the Director General of the WHO, Tedros Adhanom Ghebreyesus should continue to work closely with the -
 1. World Organisation for Animal Health (OIE)
 2. the Food and Agriculture Organization of the UN (UN FAO)
 3. countries
- This is as part of the One-Health Approach to 'identify the zoonotic source of the virus'.
- Also, the route of introduction to the human population, including the possible role of intermediate hosts
- The call includes efforts such as scientific and collaborative field missions.
- This will enable targeted interventions and a research agenda to reduce the risk of similar events.
- It will also help provide guidance on how to prevent SARS-COV2 infection in animals and humans and prevent the establishment of new zoonotic reservoirs.

Why is the resolution important?

- Since the pandemic, there has been an increasing pressure on China.
- China has so far opposed suggestions for inquiry into the origins of the virus.
- Meanwhile, the US has repeatedly blamed the WHO.
- It claims that the WHO had failed to obtain timely information and share it in a transparent fashion.
- The US President Donald Trump said that WHO's response was “China-centric”.
- In this backdrop, he threatened to permanently cut funding to the WHO.
- At present, the US is the WHO's biggest contributor and makes up over 14.67% of the total funding, at \$553.1 million.
- Given all these, the resolution gains importance.



What does this mean for China?

- While the resolution has been endorsed, it remains to be seen how the probe will be carried out and to what degree of independence.
- Significantly, the timeline of the probe is also not clear.
- So far, China has opposed demands calling for an international investigation into the virus.
- Recently, China's premier Xi Jinping announced a \$2 billion donation to the United Nations.
- This is over twice the amount the US contributed before Trump cut off funding.
- It also offered to set up hospitals and health infrastructure in Africa.
- At the WHA, Xi said China "supports" the idea of a comprehensive review of the global response towards Covid-19 after it was brought under control.
- The Trump administration however sees China's announcement as a way to escape scrutiny.

4.2 Taiwan's COVID-19 Strategy and WHO

What is the issue?

- With nations having a tough fight against the COVID-19 pandemic, here is how Taiwan has appreciably contained the spread and handled the outbreak.
- [Notably, Taiwan is not a member of the World Health Organisation (WHO).]

What was Taiwan's COVID-19 strategy?

- It is 17 years since Taiwan was hit hard by the Severe Acute Respiratory Syndrome (SARS) outbreak of 2003.
- Given this history, Taiwan has been in a state of constant readiness to the threat of emerging infectious diseases.
- When information on COVID-19 outbreak was first confirmed on December 31, 2019, Taiwan began implementing onboard quarantine of direct flights from Wuhan that very same day.
- On January 2, 2020, Taiwan established a response team for the disease.
- It activated the Central Epidemic Command Center (CECC) on January 20 as a level 3 government entity.
- This was upgraded to level 2 and level 1 on January 23 and February 27, respectively.
- The CECC effectively integrates resources from various ministries and invest itself fully in the containment of the epidemic.
- Taiwan undertook rigorous testing. As of April 9, it had tested a total of 42,315 persons showing 380 confirmed cases.
- Despite its proximity to China, Taiwan ranked 123 among 183 countries in terms of confirmed cases per million people.



What were the specific measures?

- **Quarantine** - Taiwan has implemented dynamic plans concerning border quarantine measures.
- These included onboard quarantine, fever screening, health declarations.
- A 14-day home quarantine for passengers arriving from nations it has listed under the Level 3 Warning was part of the plan.
- **Monitoring and Support** - Taiwan has established an electronic system for entry quarantine.
- This allows passengers with a local mobile phone number to fill in health information using a mobile phone.
- A health declaration pass will then be sent to them as a text message.
- This is connected to the community care support management system.
- The system, in turn, allows government agencies to provide care services and medical assistance.
- The travel history of individuals is now stored on the National Health Insurance (NHI) card to alert physicians to possible cases and prevent community transmission.
- For those undergoing home quarantine or isolation, the government is working with telecom operators to allow GPS tracking of their locations.
- Quarantine offenders are subject to fines or mandatory placement according to relevant laws and regulations.
- **Testing** - Taiwan has increased its laboratory testing capacity.
- It expanded the scope of its surveillance and inspections based on trends of the disease.
- It also retested people with higher risk who had already tested negative.
- Meanwhile, it has designated 50 regional hospitals and medical centres and 167 community hospitals and clinics to create a tiered system for testing.
- **Precaution** - The above hospitals and clinics are also required to set up special wards or areas.
- In principle, COVID-19 patients are isolated and treated individually in these wards and areas to prevent nosocomial infections.
- [A nosocomial infection refers to a hospital-acquired infection (HAI).]
- Moreover, Taiwan has banned the export of surgical masks since January 24, 2020.
- It arranged for masks, and expanded domestic mask production to more effectively allocate masks.
- It launched a name-based rationing system for mask purchases at NHI-contracted pharmacies and local public health agencies.
- An ordering system for masks was brought in which allows people to order online and pick up masks at convenience stores.

Why is a connected global effort crucial?

- Infectious diseases know no borders.

- Pandemics can spread rapidly around the world because of the ease of international transportation.
- Among the most salient examples are:
 - i. the Spanish flu of 1918
 - ii. the Severe Acute Respiratory Syndrome (SARS) outbreak of 2003
 - iii. the H1N1 influenza of 2009
- Intermittently, serious regional epidemics have also occurred.
- These include the Middle East Respiratory Syndrome (MERS) in 2012, Ebola in West Africa in 2014, and the Zika virus in Central and South America in 2015-16.
- Certainly, global health security requires the efforts of every person to ensure an optimal response to public health threats and challenges.
- Taiwan, though not a member of WHO, cannot stand alone and must be included in the fight against such threats and challenges.

Can Taiwan rightfully claim this?

- Taiwan has long been excluded from WHO due to political considerations.
- But Taiwan has fulfilled its responsibilities as a global citizen.
- It has abided by the International Health Regulations 2005 (IHR 2005) in notifying WHO of confirmed COVID-19 cases.
- It has also communicated with other countries on confirmed cases, travel and contact histories, and border control measures.
- Taiwan has uploaded the genetic sequence of COVID-19 to the Global Initiative on Sharing All Influenza Data (GISAID) Initiative.

5. GOVERNANCE

5.1 Containment of COVID-19 Cases in Kerala

What is the issue?

- With its efforts, Kerala appears to have finally flattened the curve on COVID-19 cases.
- Kerala's steps on the virus are easy to follow, but its success rate is difficult to be replicated in other states. Here is why.

What are the recent developments?

- Kerala had containment strategies in place even before the first case of novel coronavirus was detected there on January 30, 2020.

- Since April 22, except on four days, the number of new cases reported has remained either the same or fewer than the number of recoveries.
- On May 1, 2020 for the first time, the State reported zero new cases, and again on two consecutive days - May 3 and May 4.
- Zero fresh cases on three days in May appear to be a good sign.
- There have been just three deaths, a case fatality rate of 0.6% against the national average of 3.3%.

What could this be credited to?

- Kerala did not wait for directions from the Centre but instead led from the front from the beginning.
- The number of cases increased to 12 on March 10 (a day before WHO declared the coronavirus a pandemic).
- The same day, Kerala -
 - i. shut down all educational institutions and entertainment centres
 - ii. banned large gatherings
 - iii. appealed to people to avoid visiting religious places
- On May 2, the ICMR lauded the State for the “unparalleled” containment and testing strategies and referred to it as the “Kerala model”.

What is unique to Kerala?

- Kerala has very good health-care infrastructure in place, down to the primary health-care centres.
- But what sets it apart from other States is the manner in which it followed textbook epidemiology protocols.
- It did this well before the ICMR advocated them.
- Also, the entire health-care infrastructure worked in tandem despite being decentralised.
- Political leadership and the complete involvement of the government at all levels with the bureaucracy and local community have been a huge advantage.
- The very different health-seeking behaviour and high literacy among people have also played a pivotal role.
- The active involvement of all the stakeholders is not something which was put in place during the crisis, but rather a legacy of the State.
- The COVID-19 containment is a success born out of decades-old social revolution and development.
- This is a prime reason why other States, even if they emulate the measures adopted by Kerala to fight the virus, may not be able to achieve the same level of success.

5.2 One Nation, One Ration Card System

Why in news?

Finance Minister recently announced the national rollout of a ‘One Nation, One Ration Card’ system in all states and UTs by March 2021.

What is the current practice?

- Under the National Food Security Act, 2013, about 81 crore persons are entitled to buy subsidized foodgrains -
 - i. rice at Rs 3/kg
 - ii. wheat at Rs 2/kg
 - iii. coarse grains at Re 1/kg
- This is receivable from their designated Fair Price Shops (FPS) of the Targeted Public Distribution System (TPDS).
- Currently, about 23 crore ration cards have been issued to nearly 80 crore beneficiaries of NFSA in all states and UTs.
- In the present system, a ration cardholder can buy foodgrains only from an FPS that has been assigned to her in the locality in which she lives.

What is the 'One Nation, One Ration Card' system?

- Under this, a beneficiary will be able to buy subsidised foodgrains from any FPS across the country.
- Based on a technological solution, a beneficiary will be identified through biometric authentication.
- This will be done with the electronic Point of Sale (ePoS) devices installed at the FPSs.
- The person can purchase the quantity of foodgrains to which she is entitled under the NFSA.

How will 'ration card portability' work?

- Ration card portability is aimed at providing intra-state as well as inter-state portability of ration cards.
- The Integrated Management of PDS (IM-PDS) portal would provide the technological platform for the inter-state portability of ration cards.
- This would enable a migrant worker to buy foodgrains from any FPS across the country.
- The other portal (annavitran.nic.in) hosts the data of distribution of foodgrains through E-PoS devices within a state.
- The Annavitran portal enables a migrant worker or his family to avail the benefits of PDS outside their district but within their state.
- A person can buy her share of foodgrains as per her entitlement under the NFSA, wherever she is based.
- And, the rest of her family members can purchase subsidised foodgrains from their ration dealer back home.

How did the system evolve?

- The PDS system had some inefficiencies leading to leakages in the system.
- To plug the leakages and make the system better, the government started the reform process.
- For this purpose, it used a technological solution involving the use of Aadhaar to identify beneficiaries.
- Under the scheme, the seeding of ration cards with Aadhaar is being done.

- Simultaneously, PoS machines are being installed at all FPSs across the country.
- Once 100% of Aadhaar seeding and 100% installation of PoS devices is achieved, the national portability of ration cards will become a reality.
- It was initially proposed to nationally rollout the 'One Nation, One Ration Card' scheme by June 1, 2020.

5.3 Amendments to Companies Act

Why in news?

Finance and corporate affairs minister Nirmala Sitharaman announced that the government was moving to decriminalise provisions of the Companies Act.

What are the recent changes?

- The move, which was initially announced on March 4, 2020, is part of a larger effort by the government since 2018.
- A number of offences previously classified as compoundable offences (with imprisonment or fines) have had the imprisonment penalty removed.
- The number of compoundable offences under the Companies Act has come down to 31 from 81 prior to the 2018 amendment to the Act.
- Some of these offences have been omitted altogether.
- Others have been shifted from the purview of the National Company Law Tribunals (NCLT) to being dealt with by Registrar of Companies (RoC).
- The RoC is empowered to decide penalties for these offences.
- The companies can appeal to the Regional Director (RD) of the Ministry of Corporate Affairs (MCA) to appeal or seek modifications.
- The recently decriminalised offences include administrative offences such as -
 - i. delays in filing CSR reports (or)
 - ii. failure to rectify the register of members in compliance with orders from the NCLT
- The changes also made violations of the Corporate Social Responsibility (CSR) provisions punishable by imprisonment.
- But it did not operationalise the provision after feedback from industry.
- The Companies Act amendment bill 2020 has also proposed to remove criminal liability from CSR provisions.

What is the rationale?

- With the overhaul of Companies Act in 2014, a lot more regulations were introduced for better corporate compliance.
- So, a number of penal provisions with both civil and criminal penalties were introduced.

- Now, as compliance levels improved and there is also the need to boost ease of doing business, the government is relaxing the criminal provisions.
- The key objective is to remove criminal penalties from all provisions of the Companies Act, except provisions dealing with fraudulent conduct.
- Currently, the changes are aimed at enhancing ease of doing business in the country as part of the government's Covid-19 relief package.

What are the next steps?

- The ministry is expected to make further measures to decriminalise provisions in the companies act particularly those relating to auditors.
- There was an issue with auditors being considered to be colluding with management if any fraud was found.
- The MCA had announced that it would move towards removing criminal liability for issues such as negligence by auditors.
- The easing of provisions of debarment of audit firms is also expected to be taken up in the next phase of decriminalisation of the Companies Act.
- The ministry is however currently in the process of seeking debarment of audit firms Deloitte as well as KPMG affiliate firm BSR & Co. for their alleged role in the IL&FS scam.

6. INDIA & ITS NEIGHBORHOOD

6.1 India-Nepal - Kalapani Territorial Issue

Why in news?

There is renewed tension between India and Nepal over the Kalapani territorial issue.

What is the Kalapani territorial issue?

- Kalapani lies on the easternmost corner of Uttarakhand's Pithoragarh district, between Nepal and India.
- Both India and Nepal lay claim to Kalapani.
- The dispute was revived in November 2019 when India published a revised political map showing the newly created UTs of J&K and Ladakh.
- The map showed Kalapani as part of Pithoragarh district.
- Nepal protested immediately and drew attention to the issue.
- Very recently, India inaugurated the Darchula-Lipulekh pass link road, cutting across the disputed Kalapani area.



- The road is used by Indian pilgrims to Kailash Mansarovar.
- Nepal hit back by summoning the Indian Ambassador to Nepal, Vinay Mohan Kwatra, to convey a formal protest.

What are Nepal's claims based on?

- The Kalapani region derives its name from the river Kali. Nepal's claims to the region are based on this river.
- The River became the marker of the boundary of the kingdom of Nepal following the Treaty of Sugauli.
- This was signed between the Gurkha rulers of Kathmandu and the East India Company after the Gurkha War/Anglo-Nepal War (1814-16).
- According to the treaty, Nepal lost the regions of Kumaon-Garhwal in the west and Sikkim in the east.
- The King of Nepal gave up his claims over the region west of the river Kali which originates in the High Himalayas and flows into the great plains of the Indian subcontinent.
- According to the treaty, the British rulers recognised Nepal's right to the region that fell to the east of the river Kali.
- Here lies the historic origin of the dispute.
- According to Nepal's experts, the east of the Kali river should begin at the source of the river.
- The source according to them is in the mountains near Limpiyadhura, which is higher in altitude than the rest of the river's flow.
- Nepal claims that a land mass, high in the mountains that falls to the east of the entire stretch starting from Limpiyadhura downwards, is theirs.
- India on the other hand says the border begins at Kalapani which India says is where the river begins.
- The dispute is mainly because of the varying interpretation of the origin of the river and its various tributaries that slice through the mountains.

Is the road new?

- For India, the Lipulekh pass has always been part of the road to Tibet.
- Since 1981, when China re-opened the Kailash-Mansarovar pilgrimage route for Indians, they have also used the pass to walk into Tibet.
- It was mentioned as one of the border passes for trade in a 1954 agreement with China.
- India's part was also reaffirmed in another trade agreement in 2015.
- The road built now follows the same alignment, and would essentially cut down their travel time by 3 days each way.





- [But India and China were in clear violation of Nepal's concerns during the 2015 Lipulekh agreement that renewed India's Mansarovar pilgrimage connection.
- Neither side consulted Nepal or sought its opinion before that agreement that boosted pilgrimage and trade to Tibet.]

What is the tussle now?

- Nepal Prime Minister K.P. Sharma Oli took New Delhi by surprise with an aggressive posture on the Kalapani territorial issue.
- India has been even angered by Nepal's strong protests, followed by fiery speeches by Mr. Oli and Nepal's Foreign Minister.
- The Nepali cabinet also decided to adopt a new political map.
- That reportedly claims not only Lipulekh but also other areas that are in Indian territory that have been claimed by Nepal.
- Nepal claims this by invoking the 1816 Sugauli treaty with the British.
- The move was described by India's MEA as "artificial", "unilateral" and "unacceptable".
- But, the struggle within the ruling Nepal Communist Party has probably spurred Mr. Oli's more combative posture.

How is it being dealt with?

- Boundary disputes are common ground for countries that have an ancient history and shared borders.
- The Kalapani issue is one such dispute that India and Nepal have resolved to sort out.
- Unfortunately, the respective Foreign Secretaries, tasked by the PMs in 2014 to discuss the matter, have failed to find an acceptable date for a meeting since then.
- Sadly, India was delaying in responding to this.
- Even recently, when tensions prevailed in Kathmandu, the MEA said that it would convene the meeting after the pandemic had been dealt with.
- This was unnecessarily dismissive of an issue important to Kathmandu.
- Mr. Oli's government had raised it in November 2019 as well; its offer to send a political envoy to New Delhi was refused.

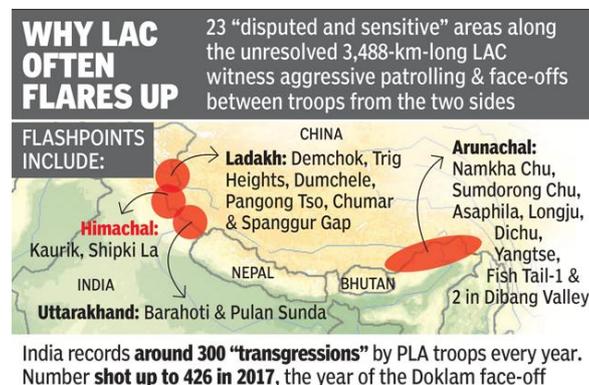
6.2 Tensions along LAC - India-China

Why in news?

With nearly four incidents along the Line of Actual Control (LAC) in recent weeks, India-China border is witnessing the highest tensions since the Doklam stand-off in 2017. Click [here](#) to know more

How have things been since the Doklam issue?

- In the 3 years since the Doklam stand-off, both sides have done remarkably well to keep the peace.
- Prime Minister Modi and President Xi both agreed differences should not be allowed to escalate into disputes.
- Also, a clear message was sent to the two militaries to abide by the detailed protocols in place, such as those agreed to in 2005 and 2013.
- These regulate the activities of troops in the contested zones that lie in between both sides' overlapping claim lines of the undefined LAC.



What is the current dispute?

- China's Foreign Ministry accused the Indian Army of "attempting to unilaterally change the status" of the LAC.
- The stand-off in Ladakh appears to have been triggered by China moving in troops to obstruct road construction activity by India.
- In 2019, India completed the Darbuk-Shyok-Daulet Beg Oldi (DBO) road which connects Leh to the Karakoram Pass.
- India also maintains a key landing strip at DBO at 16,000 feet.

What is the larger concern?

- The broader context for the tensions is the changing dynamic along the LAC.
- India has been upgrading its roads.
- It is well within India's right to carry out construction work.
- China already enjoys an advantage in both terrain and infrastructure.
- But China now seems to be telling India it has no right to carry out the kind of activity that Beijing has already done.

7. INTERNATIONAL ISSUES

7.1 Abandoning the WTO - U.S.'s Stance

What is the issue?

- A US senator, Josh Hawley's recent remarks in The New York Times much highlights the economic views of the U.S. during this pandemic.
- Among many, the call for abolishing the World Trade Organisation (WTO) needs attention.

What are the key observations?

- The emergency triggered by the coronavirus pandemic is not a mere health crisis.
- With millions of Americans unemployed, it is also an economic crisis.
- The pandemic has exposed a hard truth about the modern global economy.
- It weakens American workers and has empowered China's rise.
- Calling for a sweeping reform, Hawley wants the US to begin by abandoning the WTO.
- Under the WTO, capital and goods moved across borders easier than before.
- But the jobs also moved, and too many jobs left America's borders for elsewhere.
- As factories closed, workers suffered, from small towns to the urban core.

What are the other concerns highlighted?

- Hawley's attack was not just limited to the trading system.
- He takes on the myths of the "liberal international order".
- He criticises America's post-Cold War crusade.
- It worked to overturn the system of sovereign states into one without borders and supra-national institutions in the name of lasting peace and prosperity.
- But the liberal economic order is seen to have sent American production overseas, compromised American supply chains, and cost American jobs.
- All this is said to have happened while enriching Communist China.

What are the changing trends in the U.S.?

- Hawley has also moved a resolution in the US Senate asking Washington to walk out of WTO.
- The last time the US congress discussed such a resolution was during 2005.
- The House of Representatives had then rejected it with a massive margin of 338-86.
- But trade politics in the US have evolved significantly in recent years.
- Under Trump, the Republican Party has turned from the champion to a critic of free trade.
- The Democratic Party, which embraced globalisation since the early 1990s, has seen the erosion of working class support.
- Elections this year (2020) could reveal on the shifting alignments on trade and the anti-trade sentiment in America.

What are the future prospects?

- In replacing the WTO, Hawley calls for the U.S. to seek new arrangements and new rules, in concert with other free nations.

- The prime objective is to restore America's economic sovereignty.
- This in turn involves, "building a new network of trusted friends and partners to resist Chinese economic imperialism".
- Trump Administration is also reportedly working on an initiative to rearrange the global supply chains currently centred on China.
- Significant political contestations within the US and between the US and China to reform, reorient or bypass the WTO system are expected.
- All major economies will be drawn into this conflict.
- New Delhi should pay close attention to Hawley's theme on working with "trusted friends and partners" to restructure international trade.
- As the world trade system arrives at a crucial moment, India should be prepared to take the right direction.

7.2 US-WHO Relationship

Why in news?

The US President sent a letter to the World Health Organization (WHO) saying that the body had shown dependence on China.

What did the letter say?

- The US President wrote that the repeated missteps by the WHO in responding to the pandemic had been extremely costly for the world.
- He threatened to halt funding to the WHO permanently if it did not commit to "substantive" improvements within 30 days.
- He also said that he would reconsider the membership of the US in the body.

How much does the US contribute to the WHO?

- A large number of countries, philanthropic organisations, United Nations organisations, etc funds the WHO.
- According to information uploaded by the WHO,
 1. Voluntary donations from member states contribute 35.41%,
 2. Assessed contributions are 15.66%,
 3. Philanthropic organisations account for 9.33%,
 4. UN organisations contribute about 8.1%;
 5. The rest comes from myriad sources.
- The US contributes almost 15% of the WHO's total funding and almost 31% of the member states' donations, the largest chunk in both cases.
- India contributes 1% of member states' donations.

- Countries decide how much they pay and may also choose not to.
- For the WHO, the loss of about 15% of its total funding is bound to have an impact the world over.
- However, unless other countries do the same as the US, the move may not severely hamstring WHO operations.

What does the WHO do with its funds?

- The WHO is involved in various programmes.
- In 2018-19, 8.77% on increasing access to essential health and nutrition services, about 4.36% on prevention and control of outbreaks, etc.
- The Africa countries received \$1.6 billion for WHO projects; and South East Asia (including India) received \$375 million.
- India is a member state of the WHO South East Asia Region.
- The Americas received \$62.2 million for WHO projects.
- That is where most of WHO funding comes from and the least of it goes.

How does WHO prioritise spending?

- The annual programme of work is passed by WHO's decision-making body, the World Health Assembly (WHA).
- The WHA, held annually in Geneva, is attended by delegates from all member states.
- It focuses on a specific health agenda prepared by the Executive Board.
- The main functions of the WHA are to determine WHO policies, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget.
- The decisions on money allocation depend on the situation in countries.
- The WHO's 13th General Programme of Work (2019-23) lays down: "Unequal development in different countries in the promotion of health and control of diseases, especially communicable diseases, is a common danger."

What are the criticisms of WHO's handling of the pandemic?

- Since it first began handling the pandemic, the WHO has faced criticism from various quarters, much before Trump began his offensive.
- Some have blamed the UN body for the lavish praise it laid on Chinese efforts to contain the virus, while ignoring reports of whistleblowers being targeted in that country.
- It is also criticised for relying on data from China.
- It used this data to announce in January that there was no clear evidence of human-to-human transmission of the coronavirus.
- It is also blamed for its delay in classifying the outbreak as a global pandemic, which it did on March 11.



What is the US influence over WHO?

- The US, a founding member of the WHO, has long exercised a strong influence over the organisation.
- It has played a key role during the 2014 Ebola epidemic, and combating the HIV/AIDS epidemic, among several other achievements.
- US domestic bodies also collaborate with the WHO on a range of issues.
- During the Cold War, the US clout caused the Soviet Union and its allies to leave the WHO for several years.
- The tables now appear to have turned, with the US finding itself at odds with China's rising sway over the UN body.
- If the US ceases to remain a member state, it would be left with much less access to the WHO resources, especially at a time when it is the worst affected by the pandemic.

7.3 Open Skies Treaty

Why in news?

The United States administration said that it would withdraw from the Open Skies Treaty (OST).

What is the Open Skies Treaty?

- In 1955, the former **US President Dwight Eisenhower** first proposed it as a means to deescalate tensions during the Cold War.
- The treaty was eventually signed in 1992 between NATO members and former Warsaw Pact countries following the demise of the Soviet Union.
- It went into effect in **2002** and currently has **35 signatories** along with one non-ratifying member (Kyrgyzstan).
- The OST aims at building confidence among members through mutual openness, thus reducing the chances of accidental war.
- Under the treaty, a **member state can spy** on any part of the host nation, with the latter's consent.
- A country can undertake aerial imaging over the host state after giving notice 72 hours before, and sharing its exact flight path 24 hours before.
- The data gathered, such as on troop movements, military exercises and missile deployments, has to be shared with all member states.
- Only approved imaging equipment is permitted on the surveillance flights, and officials from the host state can stay on board throughout the planned journey.

Why the US wants to withdraw from the OST?

- While it was envisaged as a key arms control agreement, many in US had for over a decade accused Russia of non-compliance with OST protocols.



- Russia was blamed for obstructing surveillance flights on its territory, while misusing its own missions for gathering key tactical data.
- The U.S. Secretary of State Mike Pompeo accused Russia of violating the Treaty openly and continuously in various ways for years.
- So the U.S. President Trump's administration has now chosen to withdraw from the pact.
- Russia has denied the allegations, and has called U.S.'s exit as very regrettable.

What is the significance of the OST?

- The OST was signed in 1992, much before the advent of advanced satellite imaging technology, which is currently the preferred mode for intelligence gathering.
- Yet, surveillance aircraft provide key information that still cannot be gathered by satellite sensors, such as thermal imaging data.
- Also, since only the US has an extensive military satellite infrastructure, other NATO members would have to rely on US to obtain classified satellite data.
- This satellite data would be more difficult to obtain compared to OST surveillance records that have to be shared with all members as a treaty obligation.
- Notably, the OST's utility for U.S. is that since 2002, it has flown 201 surveillance missions over Russia and its ally Belarus.
- A former Trump official had also hailed OST data gathered during the 2014 Russia-Ukraine conflict.

What US departure could mean for the treaty?

- Pompeo said that the US would reconsider its decision to withdraw if Russia demonstrates a return to full compliance.
- This approach is reminiscent from last year when Trump had suspended US participation in the Intermediate-Range Nuclear Forces (INF) Treaty.
- [INF Treaty - A security agreement that had been credited with curtailing the arms race in Europe towards the end of the Cold War]
- Then too, the USA had said that it would re-engage with Russia if it sought a new treaty – a possibility that never materialised.
- Experts believe that the same could happen with the OST, with Russia using USA's exit as a pretext for leaving the treaty itself.
- Russia's departure could adversely impact USA's European allies that rely on OST data to track Russian troop movements in the Baltic region.
- Pulling out of the OST, an important multilateral arms control agreement would be yet another gift from the US to Russia.

What is the concern?

- The OST exit is only the recent example in the list of important pacts that US has stepped away from during the Trump presidency.
- The US has already stepped away from pacts such as the Paris Agreement and the Iran nuclear deal.
- Experts are now contemplating the fate of the US-Russia ‘**New START**’ nuclear arms control agreement, which will expire in February 2021.
- Trump has already said that his administration would not renew the treaty unless China joins.
- Many see this as improbable, given the already heightened tensions between USA and China over the pandemic.

7.4 Ireland's Help to Native Americans

What is the issue?

- Native American communities in the U.S. are usually the hard hit at times of a disease outbreak.
- For COVID-19, Ireland has offered aid to them. Here is how and why.

How vulnerable are the Native Americans?

- A study was conducted by various US government agencies in 2009 following the H1N1 flu outbreak.
- The reports suggested that death rates were higher among Native Americans in the country.
- Almost a decade later, now, Native American communities have found themselves hit hard by the onslaught of coronavirus infections.
- Native Americans in Navajo Nation, spread across the states of Utah, Arizona and New Mexico in the U.S., have been particularly affected.
- The reasons include -
 - i. high rates of poverty
 - ii. high risk pre-existing health conditions of diabetes, heart diseases and asthma that many suffer from in Native Americans communities
 - iii. little access to adequate healthcare
- These are the very reasons that made them more susceptible to H1N1 flu too.
- In addition, there are also various other social-cultural factors.
- Many households do not have access to running water, making sanitation a challenge.
- Due to socio-cultural factors, many generations in Native American families live together in cramped quarters.
- This makes isolation and social distancing difficult if not impossible during the times of COVID-19.
- Notably, the US is among the countries with the highest numbers of COVID-19 infections.

- The government and healthcare system is struggling to contain the outbreak.
- So, vulnerable communities face harsher circumstances in an already challenging environment.

What is Ireland's aid now?

- Institutions offering medical and public health services in federally-recognised Native American communities have been consistently underfunded.
- The health-related challenges have exacerbated due to COVID-19 for the communities.
- However, help arrived for the Native American communities from an unexpected source - Ireland.
- A crowd-funding campaign on GoFundMe had been set up in the U.S. to help Native Americans.
- This was unexpectedly flooded with donations in early May 2020, from people in Ireland and those with Irish surnames.
- The GoFundMe campaign collected approximately \$3.9 million in two weeks since it was set up.

Why Ireland?

- To recount, Native Americans had offered aid to Ireland during the Great Famine that occurred between 1845 to 1849.
- The famine altered Ireland's cultural, demographic and political landscape.
- Large sums of money were donated to Ireland, from people around the world.
- These included from places like Calcutta to Native American tribes in the United States.
- In 1847, Native American Choctaws had donated approximately \$150, which would be equivalent to approximately \$5,000 today.
- The Native Americans had themselves experienced starvation some 16 years prior to that.
- They had been forcefully displaced by settlers from their native lands, an occurrence that came to be known as the Trail of Tears.
- The humanitarian gesture of the Native Americans towards Ireland's people was thus rooted in an understanding of their own pain and suffering.
- In the comments section of the GoFundMe campaign now, people said they were making donations in commemoration of this aid.
- About 173 years later, Ireland's people are repaying the generosity of the Native Americans.

7.5 Israel's New Unity Government - Challenges

Why in news?

Israel's longest-serving PM, Benjamin Netanyahu, was sworn in along with his rival-turned-partner, the Blue and White party leader, Benny Gantz.

What happened?

- No single party in Israel has ever won an outright majority in parliament.
- Mr. Netanyahu failed to get enough seats in Parliament with consecutive elections.
- The rival factions were unable to strike a deal and assemble a ruling coalition.
- However, the rival factions recently ended a deadlock by joining hands.
- This happened after three consecutive snap elections and more than a year-long political impasse between the rival factions.
- As per the deal brokered, Mr. Netanyahu will serve as Prime Minister for the first 18 months.
- He will hand over the role to his erstwhile opponent Gantz for the remainder of the three-year term.
- Until then, Gantz will serve as the Defense Minister.

What was the rival party's stance?

- Netanyahu's Likud party is right-wing.
- On the other hand, Benny Gantz represents the centre-left of the country, and leader of the Blue and White party.
- Also a former Army Chief of Staff, Gantz entered politics with the sole mission to oust the Likud party head from office.
- The two political stances are very different from each other.
- Benny Gantz proposed legislation to set term limits for the premier.
- In his election campaigns and during difficult coalition negotiations, Mr. Gantz was firm that he would never work under a PM who faced criminal charges.
- He was even ready to join a unity government with Likud, provided that Mr. Netanyahu stepped aside.
- Ironically, the judicial trial into Mr. Netanyahu's indictment for corruption, bribery and breach of trust is yet to begin.
- The courts are also hearing challenges to his choice as PM, as Mr. Netanyahu could influence the nomination of judges and the prosecutor.

What are the contentions?

- The coalition partners differ on the extent of judicial authority and the role of ultraorthodox groups in the military.
- Gantz believes in protecting the independence of courts.
- In contrast, Netanyahu is accused of curbing judicial freedom under the garb of making judicial reforms.
- [The new government will also have to witness the corruption trial against Netanyahu.]

- Benny Gantz believes the annexation of occupied Palestinian lands should be carried out with an international consent.
- On the other hand, Netanyahu only believes it necessary to cooperate with the US.

G.S PAPER III

8. ECONOMY

9.1 Measures under Atmanirbhar Bharat Abhiyan

Why in news?

The Minister of Finance made a set of announcements under the Atmanirbhar Bharat Abhiyan (Atmanirbhar meaning self-reliant).

What are the welcome measures?

- The measures announced will go a long way in lifting the spirits of the two key and troubled sectors:
 1. micro, small and medium enterprises (MSMEs)
 2. non-banking finance companies (NBFCs)
- While for the former, it is an existential crisis, for the latter, it is a liquidity issue.
- **MSMEs** - The massive Rs. 3-lakh crore collateral-free assistance handed out to MSMEs will help them revive their operations.
- Extending a sovereign credit guarantee for the complete amount is a welcome move.
- This is because banks may otherwise have been reluctant to support troubled borrowers.
- Two of the feature that would help boost the equity portion on MSME finances are:
 - i. the Rs. 20,000 crore partially guaranteed subordinated debt programme
 - ii. the Rs. 50,000 crore fund of funds scheme
- **NBFCs** - NBFCs, housing finance firms and micro finance entities got a much-required liquidity boost.
- A Rs. 30,000 crore scheme is announced wherein their debt paper will be fully guaranteed by the government.

Lockdown antidote

Finance Minister Nirmala Sitharaman announced the features for the first part of the Atmanirbhar Bharat Abhiyan

<p>For small businesses</p> <ul style="list-style-type: none"> • ₹3,00,000 crore emergency credit for Micro, Small and Medium Enterprises (MSMEs) • Only domestic firms can bid for govt. procurements up to ₹200 crore 	<p>For employees/ tax payers</p> <ul style="list-style-type: none"> • EPF deductions slashed for 3 months to 20% of salary; IT returns deadline extended • This will enhance take-home pay if employers pass it on, but dent retirement savings 	<p>For infrastructure sector</p> <ul style="list-style-type: none"> • Power PSUs to lend ₹90,000 crore to stressed State distribution companies
<p>For financial sector</p> <ul style="list-style-type: none"> • Deadlines for realty projects and public infrastructure contracts extended • Fresh ₹45,000 crore partial credit guarantees for non-banking finance companies (NBFCs) • ₹30,000 crore special liquidity for microfinance/ housing finance firms and NBFCs 		



Relief at hand: Finance Minister Nirmala Sitharaman addressing a press conference to announce details of the economic stimulus package in New Delhi on Wednesday.
• SHIV KUMAR PUSHPAKAR

- This works along with the partial credit guarantee scheme of Rs. 45,000 crore.
- With these, the government has broken the logjam wherein banks were unwilling to extend credit despite the RBI's strong push.
- This will largely address the liquidity crisis in the non-banking space for now.
- **DISCOMS** - The liquidity issues of power distribution companies were addressed through a Rs. 90,000 crore infusion.
- This will be securitised on their receivables and backed by a State government guarantee.

What are the shortfalls?

- The finer details of the debt programme and the funds scheme for MSMEs should be more clear.
- The government could have specified the interest cap on the loans without leaving it to individual lenders.
- Now each of them has its own rate structure.
- Again, the scheme could have been extended until the end of this financial year instead of until October 31, 2020.

What is the overall objective?

- The announcements are focused on the liquidity part of the crisis.
- The reality is that the government will be called upon to bear the liability of these big numbers only if the economic situation becomes hopeless.
- But, hopefully, it may not come to that point.
- So, the announcements have in effect addressed the issue of lack of confidence in the credit market.
- Notably, liquidity was always there but only for the most credit-worthy of borrowers.
- The government has now just given the assurance to lenders and borrowers that it is willing to support their commitments.
- This is the signal that MSMEs and their lenders needed and so, overall, the measures are welcoming.

9.2 Core Sector Output Contraction - Lockdown Impact

Why in news?

Data released recently by the commerce department showed that India's core sector output contracted by 6.5% in March 2020.

How is the growth scenario?

- The Index of Eight Core Industries captures the output of coal, crude oil, natural gas, steel, cement, fertilisers, electricity, and refinery products.
- Crude oil production contracted 5.5%, natural gas 15.2%, refinery products 0.5%, fertilisers 11.9%, steel 13%, cement 24.7% and electricity 7.2% during the month.

- Coal was the only sector that grew 4%.
- The nationwide lockdown to combat the spread of Covid-19 has nearly stalled the economy.
- The core sector contraction is a sharp reversal from 7.2% growth in February 2020, which was an 11-month high.
- This is the sharpest contraction in the index since the new series began in April 2012.
- For the full year, infrastructure industries grew 0.6% against 4.4% last year.

What does the sector-wise trend reveal?

- The output has contracted by as much as 6.5% in a month.
- But the most economic activities came to a halt only in the last 7 days of the month.
- The drop in electricity and steel production sectors reflects the underlying stress in the economy, most crucially on the demand side.
- Demand for electricity declined by more than 9% in March 2020.
- The power sector has been exempted from the lockdown because of its essential nature.
- But the slump in demand from commercial customers is bound to have a significant sector-wide cascading impact.
- The existing cash flow problem at the already stressed power distribution companies is set to worsen the impact.
- Coal is the only sector to post a positive figure in March as output expanded 4%.
- But even this presents a far from reassuring picture as growth slowed sharply from February's 11.2%.
- It is also less than half the 9.1% pace seen in March 2019.
- The demand for coal from user sectors like thermal generators and the key process industries of steel and cement is unlikely to revive any time soon.
- So the production of coal is very likely to shrink in April 2020.
- The construction sector is hit hard and is likely to face serious labour supply issues even after the economy gradually reopens.
- So, cement production may shrink in April by an even greater extent than the 25% drop seen in March 2020.
- The uncertainty in the oil market with global crude prices falling is also certain to undermine the industries in the energy sector.

What are the wider implications?

- The latest data on core sector output is signalling that considerable economic pain lies ahead in the wake of the COVID-19 pandemic.



- Undoubtedly, April 2020's overall core output appears headed for an even sharper contraction given the extension of lockdown.
- The eight major industries (core sector) has 40.27% weight in the Index of Industrial Production (IIP).
- Thus, core sector contraction is certain to drag industrial output as a whole into negative territory for March 2020.
- The Centre may be left with little option but to massively lift public spending on infrastructure once the lockdown eases to revive the economy.

9.3 Consol Bond - COVID-19 Financial Stimulus

What is the issue?

- With rising COVID-19 cases, urgent attention needs to be paid to the economy that is on a weakening trend.
- In this context, a Consol Bond issue is a more convincing solution for the government, to go beyond current revenue receipts to fund the complete stimulus.

What is the deficit scenario?

- In the Budget (2020) before the pandemic, India projected a deficit of Rs.7.96-lakh crore.
- However, even then there were concerns around -
 - i. off balance sheet borrowings of 1% of GDP
 - ii. an overly excessive target of Rs. 2.1 lakh crore through disinvestments
- The financial deficit number is set to grow by a wide margin due to revenue shrinkage from the coming depression.
- This will most certainly be accompanied by a lack of appetite for disinvestment.

Is the stimulus announced so far sufficient?

- In addition to the expenditure that was planned, the government has to spend Rs. 5-6 lakh crore as stimulus.
- The Finance Ministry is optimistic at this front and has suggested that the government will not exceed the borrowing limits indicated in the Budget.
- However, the stimulus provided so far and recent announcements by the RBI leave much to be desired given the ground reality.
- All the RBI's schemes are dependent on the availability of risk capital, the market for which has completely collapsed.
- RBI has been encouraging banks to lend to below investment grade micro, small and medium enterprises, but the results are not welcoming.
- The 60% increase in ways and means limits for States is a welcome move.

- But many States have already asked for double the limits due to the shortages in indirect taxation collections from GST, fuel and liquor.
- The government and the RBI need to understand that half measures will do more harm than good, giving a false sense of security.

What is the Consol Bond?

- The COVID-19-led condition is termed as a war-like condition.
- Given this, it is fitting to look at war-time methods of raising finance.
- One such method that has been used as early as the First World War is the Consol Bond.
- Consol bond is a form of British government bond that has no maturity and that pays a fixed coupon.
- The value of a console bond was equivalent to its face value.
- The bonds, which paid out an interest of 5%, were issued in 1917 to raise more money to finance the ongoing cost of the First World War.
- The British government, in 2014, a century after the start of the First World War, paid out just 10% of the total outstanding Consol bond debt.

How will such a bond help India?

- For India, such bonds now would be a better option than the donations to PM-CARES Fund.
- Unlike PM-CARES, the proceeds of the bonds could be used for everything from PPE for doctors to a stimulus for small and medium-sized enterprises.
- Furthermore, with the fall of real estate and the lack of safe havens outside of gold, the bond would offer a dual benefit.
- It would be a risk-free investment for retail investors.
- Notably, most of the Consol bonds in the UK are owned by small investors, with over 70% holding less than £1,000.
- When instrumented, it would be issued by the central government on a perpetual basis with a right to call it back when it seems fit.
- An attractive coupon rate for the bond or tax rebates could also be an incentive for investors.
- The government can consider a phased redemption of these bonds after the economy is put back on a path of high growth.

9.4 Discontinuing 7.75% RBI Bonds

Why in news?

The Government of India discontinued 7.75% savings (taxable) bonds, 2018 for subscription with effect from the close of banking business on 28 May 2020.

What are 7.75% RBI bonds?

- The 7.75 bonds 2018 were issued with effect from January 10, 2018.
- These bonds are guaranteed for repayment by the RBI.
- These were available for subscription to resident citizens/HUF to invest in a taxable bond.
- While one bond was of Rs 1,000 each, the bonds had no maximum limit for investment.
- The bonds had a 7-year lock-in period from the date of issue.
- However, it permitted premature encasement to individuals who were 60 years and above.
- Interest on these bonds will be taxable under the Income-tax Act, 1961.
- Effectively, after tax, the bond will yield 4.4%.

What has happened now?

- The government has withdrawn these bonds with effect from 28 May 2020.
- Therefore, it will not be available for investors to invest.
- This means it is only ceasing fresh issuance, and not redeeming those already invested.
- Those whose cheques got submitted and cleared till 28 May 2020 will get 7.75%.

Why is the decision now?

- The global growth rate projections have been brought down following the spread of coronavirus Pandemic.
- And since then, the interest rates have been on a decline.
- The bonds move now comes in line with -
 - i. the cut in repo rate by the RBI
 - ii. cut in deposit rates by banks
 - iii. cut in small savings rate by the government
- The RBI's move to cut repo rate has been to push credit growth and demand to give a boost to the economy.

What will the impact be?

- Every government is bound to provide at least one safe, risk-free investment option to its citizens. It was the RBI bond since 2003.
- The 7.75% Savings (Taxable) Bonds, 2018 was mostly used by HNIs (High Net Worth Individuals) to invest.
- It has been a favourite investment option for savers and pensioners.
- They had considered these bonds as safe and generating adequate returns.
- The demand for RBI bonds went up significantly over the last couple of months as investors turned risk averse.
- At this time, investors are not looking much for returns on investment, but for the safety of their capital.



- So, investors rushed for the 7.75% bonds as they saw it as the safest investment instrument available.
- Given this demand, the present move will deprive investors of another saving instrument that yielded relatively higher post-tax returns.
- It has come as a big blow to savers and pensioners at a time when their returns from bank deposits have fallen steeply.

9.5 RBI Repo Rate Cut - May 2020

Why in news?

The RBI recently cut the repo rate by 40 basis points as a lockdown measure.

What is the rationale?

- The RBI has cut 1.15 percentage points from the rate chart in the 58 days since the lockdown began.
- This has brought the repo rate down to 4% and the reverse repo rate to 3.35%.
- The move will reduce the cost of capital and ease the financial burden on businesses due to the extended lockdown.
- With a careful move on repo rate, the RBI also seems to reserve some leverage for the future if economic conditions deteriorate even further.

Will this be effective?

- Some believe that the latest rate cut may be no more than a sentiment booster as economic activity is at its all-time low.
- There are not many investment proposals on the anvil that may benefit from the lower interest rate.
- Existing borrowers may be the only beneficiaries of the rate cut at this point in time.

How beneficial are the other RBI moves?

- The RBI is appreciable for its listening to feedback over some of its moves initiated earlier during the lockdown.
- Thus, the extension of the repayment moratorium on loans is a welcome measure.
- A large proportion of commercial borrowers have availed themselves of the moratorium but retail borrowers have not taken to it in a big way.
- But, extended lockdown has left many businesses in a shambles, and salaries have either not been paid or are being disbursed with delays.
- So, going forward, there may be more opting for the moratorium.
- The RBI has also shown empathy by allowing accumulated interest on working capital loans to be converted into a term loan.
- This could be repaid by the end of this fiscal.



- Borrowers would otherwise have faced problems in paying up their interest dues in one shot at the end of the moratorium period.
- The increase in group exposure limit for banks to 30% from 25% will help large corporate borrowers.
- Notably, these have found themselves handicapped in raising funds from the markets now.

What are the concerns?

- The extended period may however still not be enough as it will offer borrowers only about 7 months from the end of the moratorium period.
- During this, they will have to speed up their businesses and service their loans.
- The RBI might well find itself in a situation where it is forced to offer another extension in the next few months.
- So, it could have instead put off accumulated interest repayment by one year.
- There was also some disappointment in the markets that the RBI did not relax norms for loan restructuring by lenders.
- The central bank has played its cards well here because there is no way of knowing the true extent of distress now.
- So, it will be difficult to propose the right restructuring norms.
- Chances are that this may well form part of the RBI's next announcement.

9.6 Holding Foreign Companies Accountable Act - U.S-China

Why in news?

The US Senate recently passed a Bill by a unanimous vote that could delist some Chinese companies from selling shares on American stock exchanges.

What is the Bill about?

- The Bill is titled as 'Holding Foreign Companies Accountable Act.'
- It is in relation to foreign companies that have been operating on US stock exchanges while flouting Securities and Exchange Commission (SEC) oversight.
- The Bill aims at protecting American investors and their retirement savings from this.
- The Bill must be passed by the House of Representatives and signed by US President Donald Trump before it becomes law.

What are the provisions?

- The Bill prohibits securities of a company from being listed on any of the US securities exchanges if the company fails to comply with the PCAOB audits for 3 years in a row.
- [The Public Company Accounting Oversight Board (PCAOB) was set up to inspect audits of public companies.



- This is to ensure that the information companies provide to the public was accurate and trustworthy.]
- The Bill also requires public companies to disclose whether they are owned or controlled by a foreign government including China's Communist government.

What is the need now?

- Many Americans invest in US stock exchange as part of their retirement savings.
- According to the SEC, over 224 US-listed companies are located in countries where there are obstacles to PCAOB carrying out audits.
- These companies have a combined capitalisation of over \$1.8 trillion.
- Dishonest companies operating on the exchanges put Americans at risk.
- This legislation protects the interest of hardworking American investors.
- It ensures that foreign companies traded in America are subject to the same independent audit requirements that apply to American companies.
- Significantly, Chinese companies traded in the US have routinely avoided the SEC's rigorous company-specific disclosure and audit regulations.
- The Chinese government refuses to allow the PCAOB to inspect audits of companies that are registered in China and Hong Kong.
- This poses a substantial risk to Americans who want to invest in such companies.
- Moreover, in the last 10 years, an increasing number of Chinese companies are listing themselves on US stock exchanges.
- Most recently, the shares of the Chinese company Luckin Coffee dropped after an accounting fraud came to light.
- In April 2020, the company's shares dropped by over 80% after fake transactions to the tune of \$310 million were revealed.
- [China's Luckin Coffee is considered to be a competitor of the American coffee chain Starbucks.]

What does this mean for Chinese companies?

- While the Bill applies to all foreign companies, it is targeted specifically at China.
- The Bill offers a level playing field and gives investors the transparency they need to make informed decisions.
- In order to comply with the requirements of the Bill, Chinese companies may have to break state secret laws in China.
- Therefore, the Bill might be a way to encourage the Chinese government to take a re-look at its laws.
- Also, the move comes amidst rising tensions between the two countries over the COVID-19 pandemic.

9. INFRASTRUCTURE

10.1 India's Energy Options - Falling Oil Prices

What is the issue?

- Amid widespread demand destruction, the price of Brent crude oil has fallen to around \$30 a barrel.
- The COVID-19 pandemic is only enhancing the earlier-observed trends in the market and so, India needs to assess its energy options.

What are the evolving trends in oil market?

- The United States is now a leading oil producer.
- It may become the world's largest oil exporter in just 5 years.
- This is aided by the fact that its crude oil production has increased by 160% since 2008.
- In comparison, the domestic demand has remained steady there.
- India alone has increased its imports of US crude oil 10 times since 2017.
- Major global oil producers agreed on production cuts after considerable effort and expending political capital.
- Russia and Saudi Arabia agreed on production cuts only when the pandemic took hold and affected global demand.
- Even then, they have not made a great difference to the price.
- While Riyadh needs a price of closer to \$80 per barrel, Russia is well aware that it needs a price of only \$40 to balance its books.
- So, Russia has every incentive to return to production soon, once the global economy moves out of its current depressed stage.
- Given the structural changes, the Indian government should re-examine its assumptions about the country's energy mix.

Is coal an option?

- A major strategic and economic criterion for energy has always been a desire to use bountiful domestic reserves of coal.
- But domestic coal resources are never going to be sufficient, given the inferior quality of the current production.
- Many coal producers in Indonesia and Australia continue to believe that India will have import demand.
- In addition, many existing independent power producers are facing financial trouble.
- Also, only few new plants will be built in the private sector, given the difficulties of obtaining financial closure.
- There is also the impact of more coal mining in densely forested tracts and on local communities in those areas.



- The public health cost to populations near thermal power plants is also a factor.

What then should India's strategy be?

- The structural effects of the changed oil supply dynamics have to be taken into account.
- Oil and gas imports were seen as a dangerous drain on Indian foreign exchange resources.
- It has also caused a dependence upon a few exporters.
- Given all these, it would be wise for the government to re-evaluate its energy plans.
- It already has ambitious renewable energy targets, and it should re-commit to those once the pandemic is over.
- A way could be that thermal power plants should not receive any direct or hidden subsidies greater than those received by renewable power.
- It might also be sensible to re-examine natural gas-fired combined cycle plants in particular.
- Natural gas is cleaner than coal or oil, and its prices will also be lower in tandem with crude oil.
- Until a more extensive physical pipeline system comes into being, a flexible “virtual” pipeline system could be in place.
- The idea is to flatten tariffs for natural gas transport across various modes.

10.2 Electricity Amendment Bill, 2020

What is the issue?

- The Electricity Amendment Bill 2020, recently drafted by the Union power ministry will amend the Electricity Act 2003.
- Due to this Bill, a big challenge lies ahead for Punjab that provides free power to the agriculture sector.

What does the Bill propose to do?

- The new bill has proposed providing subsidy on power to farmers through Direct Benefit of Transfer (DBT).
- This would be different from the prevailing ‘free power’ system.
- Experts and farmers say that under the garb of DBT, it is a move to stop the free power supply to them.

What is the current system of power subsidy for farmers in Punjab?

- At present, Punjab is supplying free power to 14.16 lakh electricity-run tube wells of the agriculture sector.
- These tube wells are getting power through 5,900 Agricultural Pump set Feeders (APFs).
- These APFs are metered and the Punjab State Power Corporation charges the state government Rs 5.26 per unit for consumed units recorded in metered APFs.
- There are no individual meters installed on every tube well in Punjab, which is among the first states to separate agriculture sector feeders.



- Farmers are getting power supply for their Kharif and Rabi crops from these feeders as per the recommendations of the Punjab Agriculture University (PAU).
- It is supplied for around 8 hours every day in Kharif season and 4 hours on alternate days during Rabi crop season.
- Punjab government pays Rs 6,000 crore power subsidy bill to Punjab State Power Corporation Limited (PSPCL) every year under its 'free power scheme' to the farming sector.

What would change under the DBT allowed under the 2020 Bill?

- Under DBT, farmers will have to pay the bill for the power consumed for agriculture purposes.
- After that, they will get the subsidy in their bank accounts through DBT.
- A meter would be installed on every individual tube well.
- In Punjab, the consumption per tube well, having motors with power rating between 7.5 and 12 horse power (HP), is 8,000-9,000 units.
- So the annual power bill will come to around Rs 46,000 to Rs 48,000, and farmers are required to pay a bill of Rs 4,000 per month.
- In Punjab, 67% farmers come under the small and marginal categories with 1-2 hectares land.
- Paying bills in advance is not possible for them due to debt.
- If farmers don't pay their bills, the department will disconnect their connection.
- This could lead to several clashes in Punjab between PSPCL employees and farmers' unions as well as power theft.

Can it work like DBT on LPG gas cylinders?

- It may or may not, only time will tell, said experts.
- The bill suggests the subsidy be paid directly to consumers in cash on the pattern of LPG subsidy.
- This proposal should be tried in a pilot project and if results are encouraging, only then it should be included in the amendment bill.
- In the agriculture sector, free or subsidised power is being provided on the basis of a load of pump sets to consumers in every state without any provision of meter on the basis of fixed charges.
- It is impractical to provide meters on every pump set up across India and then give cash subsidy every month after the consumer has paid the bill.

How will it affect PSPCL?

- Currently, PSPCL is maintaining only 5,900 power meters installed on feeders.
- But as per the new bill, PSPCL needs to installed electricity meters on every tubewell.
- This will require at least Rs 1,200 crore along with 10% recurring charges on these annually.

- PSPCL needs to appoint more manpower to maintain it.
- It will be a huge burden on PSPCL too.

What do farmers' organisations think of this?

- **Protest** - Farmers' organisations say that if the Punjab government agrees to this bill, they will fight it tooth and nail.
- They ask, from where will poor farmers pay such heavy bills when they get income after six months following the sale of their crop.
- Farmers' organisations have planned to hold massive protests opposing the bill.
- **Data discrepancy** - Punjab government seems to be in favour of the bill when it says it will benefit 26 lakh farmers against the 10 lakh currently who own tubewells.
- According to PAU, there are around 12.50 lakh farming households in Punjab.
- Even if the division has taken place among the brothers, they share the water of the same tubewell connections, which are installed in their joint properties.

10. AGRICULTURE

11.1 Early Locusts

Why in news?

Last month, the Locust Warning Organisation (LWO) observed desert locusts in western part of India.

What is LWO?

- It is a part of the Union Agriculture Ministry's directorate of plant protection, quarantine & storage.
- It has a field headquarters at Jodhpur in Rajasthan.

Why these locusts are a concern?

- These desert locusts are the destructive migratory pests currently devouring acres of crops in East Africa.
- While locusts are seen in India as well, that is normally only during July-October and mostly as solitary insects or in small isolated groups.
- This year, their being spotted along the India-Pakistan border before mid-April has raised the alarm bells.
- They have damaged the growing rabi crops along western Rajasthan and parts of northern Gujarat during December-January.

What exactly are locusts?

- The desert locust (*Schistocerca gregaria*) is a short-horned grasshopper.
- **Solitary phase** - In "solitary phase", these winged insects are safe.

- They become dangerous only when their populations build up rapidly.
- Close contact in crowded conditions trigger behavioural changes.
- **Gregarious phase** - They enter the “gregarious phase”, by grouping themselves into bands and forming swarms.
- They travel great distances (up to 150 km daily), while eating up every bit of vegetation on the way.
- If not controlled at the right time, these insect swarms can threaten the food security of countries.

How the LWO’s first sighting of the locusts should be viewed?

- **No worries, for now** - The rabi crops has already been harvested and kharif crops are yet to be planted.
- The LWO has detected “gregarious” hopper groups, including in Punjab adjoining the Pakistan border.
- But no breeding or swarm movement has also been seen so far.
- **Timing, a concern** - Their normal breeding season in India is July-October. But this year, they have been sighted by mid-April.
- Last year, too, they were seen towards end-May as isolated grasshoppers.
- But, they could breed to high enough populations for forming swarming and wreaking havoc during the rabi season in Rajasthan and Gujarat.
- The longer time to breed is more conducive for build-up of gregarious insect swarms, as opposed to solitary hoppers.

What kind of damage can they cause?

- Locusts are **polyphagous** i.e., they can feed on a wide variety of crops.
- Locusts can **multiply rapidly**, a single female desert locust lays 60-80 eggs thrice during its roughly 90-day life cycle.
- The damage potential of locusts has been limited in India, as India hosts only one breeding season.
- [In Pakistan, Iran and East Africa, they also multiply during January-June.]

What is the genesis of the present locust upsurge?

- It lies in the **Mekunu and Luban cyclonic storms** of May and October 2018 that struck Oman and Yemen, respectively.
- These turned large desert areas in remote parts of the southern Arabian Peninsula into lakes.
- This allowed the insects to breed undetected across multiple generations.
- The swarms attacking crops in East Africa reached peak populations from November onwards.
- They build up since the start of this year in southern Iran and Pakistan.
- Widespread rains in East Africa in late March and April have enabled further breeding.

What is the prediction?



- A part of the new generation of swarms forming in late-June/July may migrate from the Horn of Africa across to the desert areas along India-Pakistan border.
- During May-June, the locusts from spring breeding areas of southwest Pakistan and southern Iran would arrive in Rajasthan and Gujarat.
- They would, then, breed with the onset of the southwest monsoon rains and continue doing so through the kharif cropping season.

What should be done?

- If the monsoon is good, and in the absence of control operations, the magnitude of attack could be worse than in the 2019-20 rabi season.
- In 2019-20, Rajasthan and Gujarat had to treat over 4.30 lakh hectares of infested areas with sprayers mounted on tractors and other vehicles.
- Old generation organophosphate insecticides such as Malathion (96% ultra-low volume aerial application) are effective against locusts.
- About one litre of the chemical is necessary to treat a hectare of their breeding areas, including trees where they halt for the night.
- There is ample stock of pesticides to control any swarms.
- Control operations require procurement of equipment, training of field teams, prepositioning of supplies in key breeding areas and updating contingency plans.

11.2 Direct Seeding of Rice (DSR)

Why in news?

Farmers could adopt 'direct seeding of rice' (DSR) in place of conventional transplanting.

Why is DSR encouraged now?

- Punjab and Haryana (granary states) could face a shortage of labourers to undertake transplantation of paddy in the upcoming kharif season.
- This is mainly because the seasonal migrants from Bihar and Uttar Pradesh who usually arrive by early June, may not come in time.

How is DSR different from normal transplanting of paddy?

- **Conventional transplantation** - Farmers prepare nursery seedbed in the 5-10% of the area to be transplanted.
- Here, the paddy seeds are sown and raised into young plants.
- These seedlings are then uprooted and transplanted 25-35 days later in the main field.
- **DSR** - There is no nursery preparation or transplantation. The seeds are directly drilled into the field by a tractor-powered machine.



- 'Lucky Seed Drill' developed by the Punjab Agricultural University (PAU) can both sow seeds and simultaneously spray herbicides.
- This machine is different from the 'Happy Seeder', which directly sow wheat on combine-harvested paddy fields.

Why spray herbicides along with sowing seeds?

- **Wateracts as a herbicide for paddy** - The threat from weeds recedes once tillering (stem development) stage is over.
- The need to flood the fields will also be over.
- For the first three weeks or so after transplanting, the seedlings have to be irrigated daily to maintain a water depth of 4-5 cm.
- Farmers continue irrigating every 2-3 days even for the next 4-5 weeks, when the crop is in the tillering stage.
- The underlying principle here is simple: Paddy growth is compromised by weeds that compete for nutrition, sunlight and water.
- Water prevents growth of weeds by denying them oxygen in the submerged stage.
- Aerenchyma tissues in paddy allow air to penetrate through their roots.
- **In DSR, water is replaced by real chemical herbicides.**
- Farmers have to only level their land and give one pre-sowing irrigation.
- Once the field has good soil moisture, they need to do two rounds of ploughing and planking (smoothing of soil surface).
- This is followed by sowing of the seeds and spraying of herbicides.

What are these herbicides?

- There are two kinds, called pre-emergent (applied before germination) and post-emergent (sprayed 20-25 days after sowing).
- **Pre-emergent** -In this case, the herbicide used is Pendimethalin.
- The Lucky Seed Drill that sows paddy can also spray the chemical, which costs Rs 450-500 at one litre per acre.
- Alternatively, farmers can use an ordinary seed drill and apply the herbicide immediately after sowing.
- **Post-emergent** - They include Bispyribac-sodium (Rs 600-700 at 100 ml/acre) and Fenoxaprop-p-ethyl (Rs 700-800 at 400 ml/acre).

What is the main advantage with DSR?

- **Watersavings** - The first irrigation (apart from the pre-sowing) under DSR is necessary only 21 days after sowing.



- This is unlike in transplanted paddy, where watering has to be done daily to ensure submerged/flooded conditions in the first three weeks.
- **Labour** - About three labourers are required to transplant one acre of paddy in a single day.
- In 2019, transplanting labour costs were around Rs 2,400 per acre, which may double this time.
- The cost of herbicides under DSR will not exceed Rs 2,000 per acre.

What are the drawbacks?

- As DSR demands more of herbicides, the **availability of herbicides** may become a problem.
- The **seed requirement** for DSR is also higher, at 8-10 kg/acre, compared to 4-5 kg in transplanting.
- **Laser land levelling**, which costs Rs 1,000/acre, is compulsory in DSR. This is not so in transplanting.

How much area is likely to come under direct seeding of rice?

- The adoption of any new technology, be it Happy Seeder or Lucky Seed Drill, is ultimately dependent upon farmers feeling the need.
- The maximum area covered by DSR in Punjab was roughly 1.60 lakh hectares (lh) in 2015, which dropped in the subsequent years.
- It is expected to rise to 2-2.5 lh this time on the back of labour shortages.
- Even that would be hardly a tenth of the state's total 29-30 lh paddy area.

11.3 Wheat Procurement in Punjab

Why in news?

Wheat procurement in Punjab is taking place despite the challenging circumstances during Covid-19.

Why this procurement is important?

- It is important because Punjab is the country's highest contributor of wheat at over 46% of the central pool.
- Punjab has already procured three-quarters of its procurement target of 13.5 million tonnes for the national pool.

What is the challenge?

- Punjab needs a **labour force** of 3.5 lakh to 4 lakh.
- 90% of its usual labour force comes from Bihar and Uttar Pradesh.
- They were meant to have reached Punjab during the first week of April, ahead of the procurement season starting April 15.
- This did not happen once the lockdown was announced.

How were the labour arranged?

- Punjab used the networking skills of its 27,000 registered commission agents.



- Each of them engaged 15 to 20 workers, mostly people working in urban sectors such as construction, catering or as taxi drivers.
- These agents have provided them with masks, soap and sanitisers.
- They also arranged for accommodation of those who want to stay in the mandis.
- Also, each agent is responsible for 20 to 200 farmers, whose crop he sells, and coupons for entry in the mandis.

What was the restriction imposed?

- The government **restricted the number of people in mandis** by setting a target of 27 lakh coupons for farmers.
- A farmer can come to the mandi only when his/her turn arrives.
- Every day, 70,000 to 1 lakh coupons are being issued.
- The government has **extended the procurement season** by a month (April 15 to June 15), to prevent a rush in mandis.
- The procurement has been staggered at the rate of less than 7 lakh tonnes daily, even during the peak phase (April 20-May 1).
- In previous years, the peak days would see 9 to 11 lakh tonnes daily.

How the number of mandis was increased?

- The Food and Civil Supply Department along with the Punjab Mandi Board (PMB) have set up 3,447 wheat purchase centres.
- This is up from the existing 1,849 grain markets.
- This increase is achieved by converting the rice sale centres into wheat purchase centres.

What are the other measures?

- **Designated trucks** are doing transportation to godowns and storage units of the FCI (Food Corporation of India).
- Less than 5 lakh tonnes is being transported daily across the state.
- The government has loaded 25.77 lakh tonnes of wheat and rice on 1,031 special trains.
- PMB is preventing crowds in mandis by issuing the coupons in a staggered manner.
- It has set up a **control room** for enquiries and complaints.

11.4 Ban on Agro-Chemical Products

Why in news?

The Union agriculture ministry made a proposal to ban 27 commonly used plant protection chemicals, due to disputable environmental and health concerns.

What is the proposal?

- The government plans to ban 27 widely used pesticides.
- The government has shortlisted these 27 from the 66 contentious pesticides being reviewed.
- Out of these 66 under review, the government has already banned 18 pesticides in 2018.
- The 27 pesticides now include popular molecules such as monocrotophos, acephate, carbofuran, 2,4-D and carbendazim.
- These have been found to contaminate water bodies and underground water.
- They are said to cause health hazards to humans, animals and honey bees that help in plant pollination.
- These are pesticides, which were banned, restricted or withdrawn in one or more countries but continued in India.
- However, now, companies may give their objections and representations within 45 days from May 14, 2020.
- After review of their objections, the final notification on the ban will be issued.

How significant are these 27 products?

- These 27 products account for some 20% of the country's agro-chemicals output.
- These include many broad-spectrum molecules that are used extensively to control a variety of pests, diseases, and weeds.
- Many of them have been in use for decades.
- They are in use without causing any visible harm to the environment, biodiversity, or human and animal health.
- They also constitute a sizeable part (70%) of the agro-chemicals exports, which are worth around Rs 21,000 crore a year.
- The domestic industry is likely to take a hit of Rs 8,000-9,000 crore, if the ban is implemented.

What are the conflicting responses?

- The move has evoked sharp criticism from all stakeholders in the agro-chemicals sector, including the industry and farmers.
- Agricultural scientists have also decried the move.
- They fear it may gravely hurt the farm sector, which has stood out as a silver lining in the coronavirus-battered economy.
- The agro-chemical industry intends to register its strong objection with the government.
- Only environmental activists have welcomed it, though without offering credible reasons for that.

What does it mean to farmers?

- Significantly, the farmers and their organisations are backing the industry in contesting this proposal.

- This is because most of the identified products are generic pesticides.
- They are, hence, far cheaper than their patented alternatives.
- The average cost of plant protection operations is now estimated at Rs 250-300 per acre.
- This might double with the use of expensive substitutes, thereby, further eroding the profitability of agriculture.

Is the proposal wise?

- Technically, only a few of these 27 products are said to fall in the “red” (most bio-hazardous) category of chemicals.
- But others are also being planned to be abandoned.
- This is because either they have been junked in certain other countries or they lack adequate safety data.
- The move thus disregards the wide-ranging ramifications of their withdrawal.
- Lessons from past experience of discarding versatile and cheap pesticides just to imitate the other countries is ignored.
- E.g. discarding the highly useful and inexpensive pesticide, DDT
- The malaria-eradication programme had made considerable headway in controlling mosquitoes.
- But this had collapsed due to the above hasty and ill-judged step.
- [Mosquitoes exit or even avoid DDT-sprayed dwellings.]
- Its cost-effective replacement has been elusive to date.
- The net result is the resurgence of mosquitoes and malaria.
- Importantly, there was emergence of several other vector-borne diseases like dengue and chikungunya, which were almost unheard of earlier.

What is a possible ramification now?

- The proposed phasing out of the versatile pesticide Malathion can potentially have a similar wide-ranging impact on the agricultural sector.
- Of particular concern in this case is the ongoing battle against the dreaded locusts.
- Malathion is the key chemical for its control.
- Ironically, the agriculture ministry itself is procuring large quantities of Malathion for the locust control programme even after deciding to ban it.

What is the way forward?

- The government should revisit its plan to proscribe so many agro-chemicals without properly weighing the pros and cons of the move.
- Undoubtedly, the truly hazardous molecules, carrying the red tag, should be abandoned straightaway.



- But the others need to be retained till their cost-effective and equally efficient generic substitutes are available.
- The need is to strike a balance between the economic and environmental concerns.

11. ENVIRONMENT

12.1 Ruling in Volkswagen Dieselpgate Scandal

Why in news?

Germany's Federal Court of Justice (BGH) ruled against car manufacturer Volkswagen, the first judgment in the dieselpgate scandal.

What was the “dieselpgate scandal”?

- In 2015, the US Environmental Protection Agency (EPA) found that in over 590,000 diesel motor vehicles, Volkswagen had violated the Clean Air Act.
- The vehicles were equipped with “defeat devices” in the form of a computer software.
- This was designed to cheat on federal emissions tests.
- A defeat device is one that bypasses or renders inoperative a vehicle's emission control system.
- Essentially, software of this kind is designed to detect when the vehicle is undergoing an emissions test.
- It then turns on full emissions controls during the testing period.
- In the course of normal driving, the effectiveness of such devices is reduced.

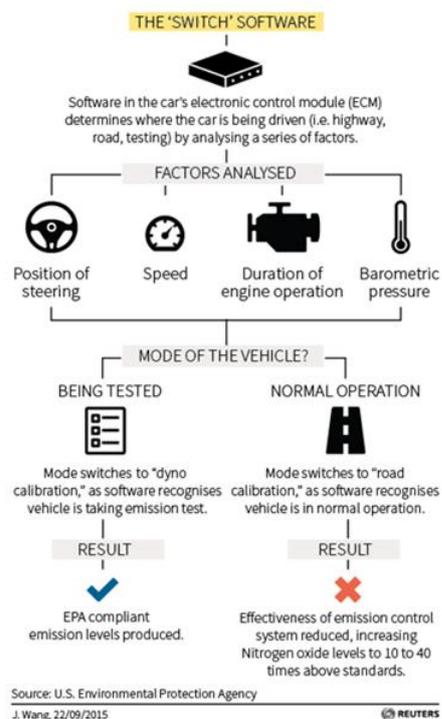
What did the EPA bring to light?

- EPA's notice in September 2015 alleged that Volkswagen installed these devices in its 2009-2015 two-litre diesel vehicles.
- It thereby was violating EPA's emissions standards since these vehicles emit 40 times more pollution than the level permitted.
- Some of the affected vehicles included Jetta (2009-2015), Beetle (2013-2015) and Passat (2012-2015) among others.
- The major excess pollutant, in this case, was nitrogen oxides.
- In November 2015, the EPA issued a separate notice of violation of the Clean Air Act to car manufacturers Audi, Porsche and Volkswagen.
- This was for producing and selling certain 2014-2016 model 3-litre diesel cars and SUVs that included a software device for circumventing emissions standards.
- These vehicles emitted nine times more pollution than the standards allowed.
- Subsequently, Volkswagen informed the EPA that the defeat devices existed in all of its US three-litre diesel models since 2009.

- On filing of a complaint, in 2017, Volkswagen pleaded guilty to three criminal offence and agreed to pay \$2.8 billion as a criminal penalty.
- Further, as separate civil resolutions of civil, environmental, customs and financial claims the company agreed to pay \$1.5 billion.

What is the latest court ruling about?

- Following the EPA allegation in 2015 in the U.S., regulatory investigations were carried out against Volkswagen in several countries.
- These included South Korea, France, Italy, Germany, UK and Canada.
- In September 2015, Volkswagen revealed that over 1.2 million vehicles in the UK were involved in the diesel emissions scandal.
- Out of the 11 million affected vehicles worldwide, over 2.8 million were in Germany.
- So, in 2019, the Federation of German Consumer Organisations (VZBV) brought forward a case against Volkswagen on behalf of consumers in the country.
- Following this, the recent ruling by Germany's Federal Court of Justice concerned a case involving petitioner Herbert Gilbert.
- He bought a used Volkswagen Sharan in early 2014 for approximately €31,000.
- In his case, Gilbert asked that the company pay him the full purchase price plus interest.
- Whereas, the Volkswagen group maintained that consumers did not suffer any damage from the manipulated diesel cars.
- The court however ruled that Gilbert be paid compensation to the tune of over €26,000, minus depreciation resulting from the kilometers he drove.
- The judgment also requires that petitioners return their cars to the company.



Why is the ruling significant?

- The ruling has set a crucial benchmark for over 60,000 such pending cases brought forward by German consumers.
- The company, on the other hand, has maintained that they would offer these consumers a payment.
- This would be less than what consumers can get through a court judgment.
- However, if consumers settle with the company directly they get to keep their vehicles.
- Several thousand consumers chose to settle with the company, due to which the recent ruling's impact will be limited.

- However, significantly, in the reasoning of their judgment, the judges maintained that it should be assumed that the Board of Directors knew about the manipulation because of the scale of the fraud.

12.2 Lockdowns & Reduced Air Pollution

Why in news?

Lockdowns around the world, enforced to slow down the spread of Covid-19, have also visibly reduced air pollution.

How was the result of reduced pollution quantified?

- **Quantification** - A new study in 'Lancet Planetary Health' has quantified the number of lives saved in China due to reduced pollution.
- It has estimated that 12,125 deaths were prevented during China's ban on traffic mobility between February 10 and March 14, 2020.
- This is higher than the lives lost to the pandemic - 4,633 as of May 4.
- **Applicability** - These findings cannot be directly applied to other countries due to the differences in severity of and responses to COVID-19, air pollution levels and population characteristics.
- But the reduction of air pollution levels have been detected in other countries such as South Korea, India, Italy, Germany, Spain, and the US after their own lockdowns.
- This could have likely brought health benefits in those countries, too.
- However, this way of having clean air through massive quarantine and travel restrictions is not sustainable and likely to be only temporary.

What are the calculations?

- The study was conducted in 367 Chinese cities from January 1, 2016 to March 14, 2020.
- The estimates are based on changes in daily concentrations of two air pollutants (nitrogen dioxide and PM2.5).
- The changes in air quality in 2020 (during quarantine versus before quarantine) were calculated.
- These changes were compared these findings with corresponding changes in the same periods (lunar calendar) for 2016 to 2019.
- Accounting for these earlier years helped factor in the already declining pollution levels in China on account of the country's clean air policy.
- The study calculated the deaths prevented due to reduced levels of these two pollutants.

What are the findings?

- Due to quarantine, nitrogen dioxide dropped by 22.8 micrograms/cubic metre (Wuhan) and 12.9 micrograms/cubic metre (China).
- PM2.5 dropped by 1.4 micrograms/cubic metre (Wuhan) and 18.9 micrograms /cubic metre (China).

- The improved air quality during the quarantine period **prevented**,
 - a) 8,911 nitrogen dioxide-related deaths (65% from cardiovascular diseases and COPD) and
 - b) 3,214 PM_{2.5}-related deaths (73% from cardiovascular diseases and COPD).

12.3 Heatwave in North India

Why in news?

Recently, many North Indian States have been experiencing severe to very severe heatwave conditions.

What is a heatwave?

- Heatwaves occur over India between March and June.
- Meteorologists declare a heatwave event when the maximum (day) temperature for a location in the plains crosses 40 degrees Celsius.
- Over the hills, the threshold temperature is 30 degrees Celsius.
- When the day temperature jumps by 4 to 5 degrees above the normal maximum temperature of a location, it is declared as a heatwave.

How long can a heatwave spell last?

- A heatwave spell generally lasts for a minimum of four days.
- On some occasions, it can extend up to seven or ten days.
- The longest recorded heatwave spell, in recent years, was between 18 and 31 May 2015.
- This spell had severely affected parts of West Bengal along with Odisha, Andhra Pradesh, and Telangana.
- The current heatwave spell commenced on May 22, 2020 and may continue till May 29.
- Heatwave conditions occurring in May have been observed to last longer, as the season reaches its peak this month.
- Whereas those reported in June die down sooner, often due to the onset of Southwest monsoon over the location or in its neighbourhood.

Does all of India experience heatwave conditions?

- No. Heatwaves are common over the Core Heatwave Zone (CHZ).
- CHZ includes Rajasthan, Punjab, Haryana, Chandigarh, Delhi, Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Orissa, Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana.
- This is categorised by India Meteorological Department (IMD).
- CHZ experiences more than six heatwave days per year during these four months.
- Many places in the northwest and cities along southeast coast report 8 heatwave days per season.
- However, the regions in the extreme north, northeast and southwest India are lesser prone to heatwaves.

Why did the country experience an unusual summer?

- Summer season reaches its peak by May 15 in India, when the day temperatures across north, west, and central India is between 40-45 degrees.
- This year, north India has experienced an unusual summer without heatwaves until May 21.
- It was mainly because of the **continuous inflow of Western Disturbances** that influenced the weather in the north until April.
- Between January & March, there were about 20 Western Disturbances over the north, appearing after every five to seven days.
- Originating in the Mediterranean Sea, Western Disturbances are eastward-moving winds that blow in lower atmospheric levels.
- They affect the local weather of a region during its onward journey.
- When they interact with weather systems heading from the two southern seas, they cause snowfall or rainfall over the north.
- [Here, Southern Seas = The Bay of Bengal or the Arabian Sea]
- A significant influence of Western Disturbances is experienced during December to February.
- However, this year, its influence persisted until early May.
- The recent Western Disturbances resulted in rainfall over Rajasthan, Punjab, Uttar Pradesh, north Madhya Pradesh and Delhi until mid-May.
- This has kept the atmospheric conditions cooler than normal for summer standards.

Has cyclone Amphan influenced the current heatwave?

- The event of severe heat has emerged immediately after the passing of Cyclone Amphan, a massive Super Storm covering 700 kms.
- Therefore, the experts confirm Cyclone Amphan's role in leading to the present heatwave spell.
- It managed to drag maximum moisture from over the Bay of Bengal, entire South Peninsula, parts of Central India and to some extent, even from the Arabian Sea.
- All the moisture got gradually depleted from over vast areas as the storm advanced towards West Bengal and Bangladesh between May 16 and 20.
- It has now triggered dry north-westerly winds to blow over Rajasthan, Madhya Pradesh, Uttar Pradesh and Maharashtra causing heatwave.

12. SCIENCE & TECHNOLOGY

13.1 Remdesivir

Why in news?

The US Food and Drug Administration (FDA) gave emergency approval to use the drug remdesivir for critical Covid-19 patients.

What is Remdesivir?

- It was manufactured in 2014 to treat for Ebola, by US-based biotechnology firm Gilead Sciences.
- It has since been used to treat for MERS and SERS, both caused by members of the coronavirus family.
- Current research is looking at whether the drug's antiviral properties work against SARS-CoV2, the coronavirus that causes Covid-19 disease.

What does the Remdesivir do?

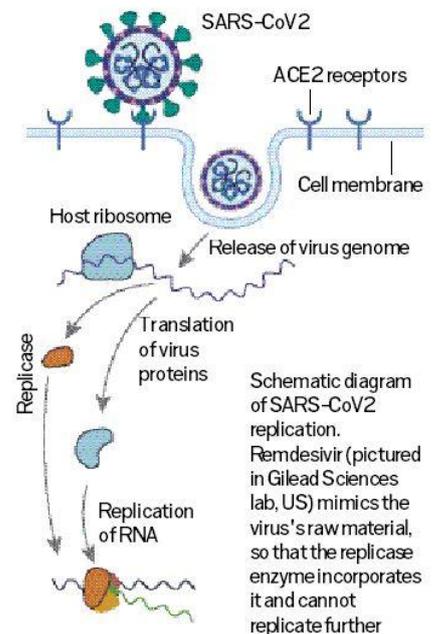
- The drug remdesivir is designed to obstruct the novel coronavirus SARS-CoV2 at the stage of replication.
- At this stage, the virus creates copies of itself, followed endlessly by the copies creating copies of themselves.
- Researchers have described the exact mechanism of interaction between the virus and the drug.

How does replication take place?

- Once the virus enters the human cell, it releases its genetic material, which is then copied using the body's existing mechanism.
- At every stage of infection, various human proteins, virus proteins, and their interactions come into play.
- At the replication stage, the key protein of the virus at play is an enzyme called RdRp.
- RdRp makes copies by processing components of the RNA of the virus.
- Scientifically, such an enzyme is called a polymerase or a replicase.
- In any case, RdRp is the enzyme that is targeted by remdesivir.

How does remdesivir target the RdRp enzyme?

- In order to replicate, RdRp processes raw material from the RNA of the virus, broken down by another enzyme with that specific function.
- When a patient is given remdesivir, it mimics some of this material, and gets incorporated in the replication site.
- With remdesivir replacing the material it needs, the virus fails to replicate further.



What are some new findings?

- As far as SARS-CoV2 is concerned, a Chinese research paper has added to the emerging knowledge about the action of remdesivir.
- They have **imaged the high-resolution structure** of the SARS-CoV-2 replicase complex, with remdesivir bound to it.
- The structure shows where the RNA template of the virus enters the replication spot.
- It also shows where the remdesivir is incorporated, and where the process of replication is terminated.

13. INTERNAL SECURITY

14.1 Handwara Encounter - Worrying Trend

What is the issue?

- Five security personnel and two unidentified militants were killed during an anti-militancy operation in north Kashmir's Handwara area.
- Encounters in Kashmir are on the rise, taking a disproportionate toll on security personnel.

What happened in Handwara area?

- It was an 18-hour anti-militancy operation near Handwara town in Jammu and Kashmir's Kupwara district.
- Intelligence suggested that terrorists were present in a house in Changimulla village.
- On this, the security personnel reached the site which had a building and a cowshed adjoining it.
- An intense firefight commenced.
- All the enemy fire came from the cowshed, not the building.
- Then there was a lull for more than an hour during which the team apparently decided to approach the house.
- They decided to use the vantage of the upper floor to fire at the terrorists in the cowshed.
- They entered the house and there was a fresh firefight but no communication from the Colonel and his team.
- Then it was noticed that their communication instrument was being used by the terrorists.
- That is when realisation came all was not well, and firing ensued all over again.

Why is it a cause of worry?

- The five security personnel who were dead include -
 - i. a Commanding Officer of a battalion in the rank of a colonel
 - ii. a major
 - iii. two other ranks
 - iv. a special operations group policeman in the rank of a sub inspector

- The details on the attack are unclear, yet provide compelling evidence of an operation that went horribly wrong.
- It is unusual and disproportionate for just a couple of terrorists to take down five highly skilled and motivated soldiers.
- The way this operation ended will have ramifications.
- It might affect both morale and operating procedures, on future operations of this kind.

What does this imply?

- Evidently, changing the nomenclature and status of J&K has not addressed any of the underlying causes of unrest and angst.
- Neither has it deterred Pakistan from its steadfast goals.
- Since the beginning of the year 2020, in 127 days, as many as 55 terrorists have been killed in the region.
- Such encounters have only aided the impulse of the disaffected to embrace arms.
- As the dangerous drift in J&K continues, New Delhi must realise the implications and look for ways to arrest this trend.



PRELIM BITS

14. HISTORY AND ART & CULTURE

Gorakhpur Terracotta Products

- Baked clay or 'terracotta' products made from the special soil found in Bhathat area of Uttar Pradesh's Gorakhpur district has received Geographical Indication (GI) tag.
- The clay used in the terracotta products is 'Kabis' clay which is found in the ponds of Aurangabad (UP), Bharwalia and Budhadih areas.
- Also, such clay is found only in the months of May and June, as for the rest of the year, the ponds are filled with water.
- No colours are used in this terracotta products, artisans only dip the clay structure in a mixture of soda and mango tree barks, and bake it.
- The red colour of terracotta does not fade for years.
- The terracotta artists make various structures like bells, vases, Ganeshas, tables, elephants, deer, horses, bullock carts, horse carts, lamps and chandeliers.

Manipur Black rice



- Chak-Hao- It is scented glutinous rice popularly known as Black Rice which is cultivated in Manipur since centuries and popular to people apart from the State.
- Chak-Hao of Manipur is registered under GI certificate number 364 which application was filled by North Eastern Regional Agricultural Marketing Corporation Limited (NERAMAC).
- However, the whole documentation processed was done by Manipur State Agriculture Department in collaboration with other agencies including Manipur Small Farmers Agri-Business Consortium.
- It is genuinely originated from Manipur and some States contended in the battle.
- Varieties of its products in different forms are marketed inside and outside Manipur by entrepreneurs.

Kashmir Saffron

- It is cultivated and harvested in Karewas (High lands) of Jammu and Kashmir.
- It is the only saffron in the world which is grown at an altitude of 1600m-1800m above the mean sea level.
- It is grown in Kishtwar, which is popularly known as “The Land of Sapphire and Saffron”.
- It was introduced in India by central Asian migrants around 1st century BC, It is known as Bahukam in ancient Sanskrit literature (Amarakosara).
- Three types of Kashmir saffron are Lachha Saffron, Mongra saffron and Guchhi saffron.
- Its unique characteristics - Longer and thicker stigmas, Natural deep-red color of stigmas, High aroma, Bitter flavor (Picrocrocin), Chemical free processing, High quality of crocin (coloring strength) and High medicinal values.

Kangra Tea

- It is grown in the Kangra district of Himachal Pradesh.
- It is well known for its unique colour and flavour.
- It is loaded with antioxidants like catechins and polyphenols, and said to offer these health benefits: promotes weight loss, builds immunity, improves oral health and mental alertness, etc.
- It is also used in making sanitizers, soap, vinegar, wine etc.
- Institute of Himalayan Bioresource Technology (IHBT), Himachal Pradesh has claimed that Kangra tea chemicals can boost immunity and block coronavirus activity better than anti-HIV drugs.
- IHBT, Palampur, Himachal Pradesh is a constituent of Council of Scientific and Industrial Research (CSIR).

Kovilpatti Kadalai Mittai

- It is a candy made of peanuts held together with glistening syrup, and topped with wisps of grated coconut dyed pink, green and yellow.
- It is produced by using both groundnuts and jaggery (organic jaggery), in carefully selected quantities from selected specific locations in Tamil Nadu.



- The groundnuts are grown in the native black soil in and around Kovilpatti.
- After sourcing, the groundnuts are shelled and roasted, this gives it a unique traditional flavour.
- In Kovilpatti, it is sold as single rectangular chunks, or rather cuboids, sealed in packets.
- It is made using all natural ingredients such as the traditional and special 'vellam' (jaggery) and groundnuts and water from the river Thamirabarani is used in the production, which enhances the taste naturally.
- Kovilpatti kadalai mittai is manufactured in Kovilpatti and adjacent towns and villages in Thoothukudi district.
- This product has a long shelf life and has a huge export potential.

Sohari Khovar Painting

- Recently, Jharkhand's Sohrai Khovar painting and Telangana's Telia Rumal have been given the Geographical Indication (GI) tag.
- The Sohrai Khovar painting is a traditional and ritualistic mural art.
- A mural is any piece of artwork painted or applied directly on a wall, ceiling or other permanent surfaces.
- It is being practiced by local tribal women during local harvest and marriage seasons using local, naturally available soils of different colors in the area of Hazaribagh district of Jharkhand.
- Style features a profusion of lines, dots, animal figures and plants, often representing religious iconography i.e. visual image and symbols.
- It has been painted on the walls of important public places in Jharkhand, such as the Birsa Munda Airport in Ranchi.

Telia Rumal Handloom

- It involves intricate handmade work with cotton loom displaying a variety of designs and motifs in three particular colors such as red, black and white.
- It is an art of Ikat tradition using natural vegetable dyes.
- Ikkat is a dyeing technique used to pattern textiles.
- Telia Rumal can only be created using the traditional handloom process and not by any other mechanical means as otherwise, the very quality of the Rumal would be lost.
- Telia Rumals were worn as a veil by princesses at the erstwhile court of the Nizam of Hyderabad, and as a turban cloth by Arabs in the Middle East.
- In Earlier times the fabric was exported to Persian Gulf, Middle East, Aden, East Africa, Singapore and Burma.

Purandara Dasa

- He belonged to the Vaishnava tradition during the Vijayanagar rule.



- He is considered the father of Carnatic Music.
- He formalized the music system which was a blend of various traditions of South India and the musical science as explained in the Vedas.
- He identified 84 ragas and devised a system of teaching Carnatic music in graded lessons.
- He composed songs in Kannada and Sanskrit with the pen name Purandara Vithala.
- In his compositions, he expressed his love for Sri Krishna describing various aspects of Krishna's life.
- It was widely believed that the Purandara Dasa was born in Purandharagad, Maharashtra.
- However, many people in Malnad claimed that he hailed from their region.
- On literary evidence, it is being speculated that Purandara Dasa was born near Araga.
- Recently Department of Archaeology, Heritage and Museums, Karnataka announced it will soon commence field research work at Araga in Malnad (Malenadu) region in Karnataka, to end the speculations regarding the birthplace of Purandara Dasa.
- The department comes under the Ministry of Culture and is responsible for archaeological studies and the preservation of cultural monuments.

Katkari Tribes

- Katkari is one of the 75 Particularly Vulnerable Tribal Groups (PVTGs), who are historically forest dwellers.
- The name Katkari is derived from a forest-based activity – the making and bartering or sale of Catechu from the Khair tree (Acacia Katechu).
- Catechu is an extract of acacia trees used variously as a food additive, dye, etc.
- It is extracted by boiling the wood in water and evaporating the resulting brew.
- Katkaris are located primarily in Raigad and in parts of Palghar, Ratnagiri and Thane districts of Maharashtra as well as in some places of Gujarat.
- The British administration had classified them under the Criminal Tribes Act, 1871.
- The Act described certain groups of people as 'habitually criminal'. The stigma associated with the Act continues.
- Giloy (Tinospora Cordifolia) is an Ayurvedic herb that has been used and advocated in Indian medicine for ages.

15. GEOGRAPHY

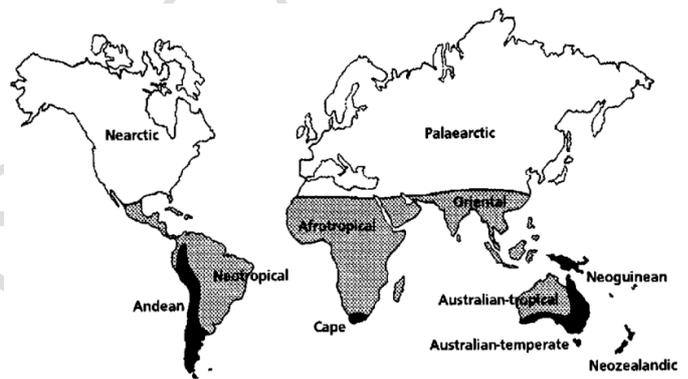
BoBBLE – Bay of Bengal Boundary Layer Experiment

- A team from Indian Institute of Science in Bengaluru and UK based University of East Anglia have created a blueprint for accurate prediction of monsoon, tropical cyclones and other weather related forecast.

- The Bay of Bengal Boundary Layer Experiment or BoBBLE in short is a project funded by Union Ministry of Earth Sciences and the Natural Environment Research Council of UK.
- The team carried out studies of oceanographic properties on board RV Sindhu Sadhana in the southern Bay of Bengal.
- Scientists from India and UK plans to release underwater robots in Bay of Bengal to monitor how ocean conditions influence monsoon, which can help in better predictions of the rainfall.
- Once out in the ocean, they will release seven underwater gliders to measure ocean properties such as temperature, salinity and current.

Biogeographic Zones

- The Biogeographic Zones are the large distinctive units of similar ecology, biome representation, community and species, e.g., The Himalaya, The Western Ghats.
- Palaearctic Zone includes arctic and temperate Eurasia, and all islands surrounding the continent in the Arctic, in the sea of Japan, and the eastern half of the North Atlantic.
- It thus also includes the Macaronesian islands, Mediterranean North Africa and Arabia.
- Regions and subregions of the world.
 1. **Holarctic region** = Nearctic + Palearctic subregions.
 2. **Holotropical region** = Neotropical + Afro-tropical + Oriental + Australian tropical subregions.
 3. **Austral** = Andean + Cape + Australian temperate + Neozelandic + Neoginean subregions.



Grand Ethiopian Renaissance Dam

- The dam is located on River Blue Nile (a tributary of River Nile) in Ethiopia and is the center of a dispute involving several East-African countries, dependent on the river's waters.
- Ethiopia began the construction of the GERD in 2011 on the Blue Nile that runs across one part of the country.
- After completion, the dam hydropower project will be Africa's largest.
- Egypt and Sudan has objected to the construction of the dam and proposed a longer timeline for the project.
- The Nile is an important water source in the region so there are concerns that this dispute may evolve into a full-fledged conflict between Egypt and





Ethiopia.

- For the past four years, tri-party talks between Egypt, Ethiopia and Sudan have been unable to reach agreements.
- Recently, the USA has stepped in to mediate and also Egypt has announced that it is willing to resume negotiations with Ethiopia and Sudan, concerning the (GERD).
- River Nile is the longest river in the world and is called the father of African rivers.
- It is formed by 3 principal streams – the Blue Nile, the Atbara, and the White Nile
- It rises south of the Equator and flows northward to drain into the Mediterranean Sea by forming arcuate delta.
- Drainage countries - Parts of Tanzania, Burundi, Rwanda, the Democratic Republic of the Congo, Kenya, Uganda, South Sudan, Ethiopia, Sudan, and the cultivated part of Egypt.

Etalin Hydropower Project

- The Project is based on the river Dibang. It is proposed to be completed in 7 years.
- Dibang is a tributary of the Brahmaputra River which flows through the states of Arunachal Pradesh and Assam.
- It envisages construction of two dams over the tributaries of Dibang: Dir and Tangon.
- The Project falls under the “richest bio-geographical province of the Himalayan zone” and would be located at the junction of the Palaearctic, Indo-Chinese and Indo-Malayan bio-geographic regions.
- The Project is in accordance with the Government’s push to establish prior user rights on rivers that originate in China and an effort to fast-track projects in the north-east.
- It is expected to be one of the biggest hydropower projects in India in terms of installed capacity.
- In 2015, the FAC had ruled that the Environment Impact Assessment commissioned by the power company had not properly accounted for the environmental impact of the project.
- It recommended that an “internationally credible” institute conduct studies over multiple seasons to record the region’s ecological constitution.
- It had also recommended that the National Tiger Conservation Authority be consulted, because tigers had been sighted in the region.
- In 2019, the FAC reviewed the progress of the environment appraisal and said neither of its recommendations had been fully complied with, though a wildlife assessment was done by the Wildlife Institute of India, Dehradun (an autonomous institute funded by the Environment Ministry)

Chardham Pariyojana

- The project involves developing and widening 900-km of national highways connecting the holy Hindu pilgrimage sites of Badrinath, Kedarnath, Gangotri, and Yamunotri at an estimated cost of Rs.12,000 crores.



- The highway will be called Char Dham Mahamarg (Char Dham Highway) and the highway construction project will be called as Char Dham Mahamarg Vikas Pariyojana (Char Dham Highway Development Project).
- It is a programme taken up by the Ministry of Road Transport and Highways.

Puthimari River

- The Puthimari River rises in Assam, India.
- It is a tributary of the Brahmaputra River, the fourth largest in the world.
- The Puthimari is known for its floods and high sediment load.
- Recently it is in news for flooding after Amphan cyclone.

Jia-Bhoreli River

- The Kameng River was previously named Bhoreli River, now called Kameng in Arunachal Pradesh and Jia Bhoreli in Assam.
- It originates from the glacial lake below snow-capped Gori Chen mountain in Tawang district on the India-Tibet border in South Tibet.
- It is one of the major tributaries of the Brahmaputra River, joining it at Tezpur, just east of the Kolia Bhomora Setu bridge.
- The Kameng forms the boundary between East Kameng District and West Kameng Districts and is also the boundary between the Sessa and Eaglenest sanctuaries to its west and the Pakke tiger reserve to the east.
- The Dafla Hills are east and the Aka Hills (home of Aka tribe) are west of the Kameng River.

Susta Area

- Susta area is one of the disputed territories between India (Uttar Pradesh) and Nepal.
- Susta is located on the bank of the Gandak river (called Narayani river in Nepal).
- The change of course by the Gandak River is the main reason for disputes in the Susta area.
- The area is very fertile for agriculture because of the alluvial soil brought by the river.

Kali River

- It is also known as Sharda river or Kali Ganga in Uttarakhand.
- It joins Ghagra river in Uttar Pradesh, which is a tributary of Ganga.
- River Projects: Tanakpur hydro-electric project, Chameliya hydro-electric project, Sharda Barrage.

River Nila

- River Nila is also known as Bharathapuzha and Ponnani.



- Amaravathipuzha originating from Thrimoorthy Hills of Anamalais in Tamil Nadu joins with Kalpathipuzha at Parali in Palakkad District and forms Nila.
- It drains in Kerala and Tamil Nadu.
- Malampuzha dam is the largest among the reservoirs built across Bharathapuzha.
- It flows westward through Palakkad Gap (most prominent discontinuity in the Western Ghats) and drains into the Arabian Sea.
- Main Tributaries - Kannadipuzha (Chitturpuzha), Kalpathipuzha (Korapuzha), Gayathripuzha, Thuthapuzha
- Recently, a webinar 'Exploring River Nila' was organized by Ministry of tourism.

Anakkampoyil-Kalladi-Meppadi corridor

- Union government has given the nod for a ₹ 658-crore two-lane tunnel road in the Anakkampoyil-Kalladi-Meppadi corridor.
- It would run parallel to the landslip-prone Thamarassery pass that links Kozhikode to Wayanad.
- On completion, the 6.5-km tunnel will be the third longest in the country.
- This alternative subterranean road would be 30-km shorter than the present ghat road.
- Approach roads and a 70-metre bridge over the Iranjipuzha river are part of the project.
- Kerala's longest is the 962-metre tunnel at Kuthiran, between Thrissur and Palakkad.
- The Konkan Railway Corporation, which prepared the detailed project report for this project.
- Cabinet has given the nod to make available the funds of the Kerala Infrastructure Investment Fund Board (KIIFB) for the tunnel road.
- **Perumon bridge** - The Cabinet has also given the nod for Perumon bridge across Ashtamudi Lake in Kollam district.
- The proposed bridge will link Perumon and Munrothuruthu.
- The Naluchira bridge across the Pampa river to link Thottappally and Naluchira in Alappuzha district has also got the approval.

Diamer Bhasha Dam

- The Diamer-Bhasha Dam is located on the Indus River in northern Pakistan between Kohistan district in Khyber Pakhtunkhwa and Diamer district in Gilgit Baltistan.
- The dam will have a gross storage capacity of 8.1 Million Acre Feet (MAF) and power generation capacity of 4500 MW.
- With the height of 272 meters, it will be the tallest Roller Compact Concrete (RCC) dam in the world, would be completed in 2028.



- Recently, Pakistan signed a contract with a joint venture of a China Power (Chinese state-run firm) and the Frontier Works Organization (FWO—a commercial arm of Pakistan’s military) for the construction of the Diamer-Bhasha dam.
- The contract covers construction of a diversion system, main dam, Access Bridge and the 21MW Tangir hydropower project.
- India has opposed the move on the grounds that Gilgit-Baltistan region is part of the erstwhile state of Jammu and Kashmir that was illegally occupied by Pakistan.

Trans-Tasman Zone

- Trans-Tasman Travel Arrangement is an arrangement between Australia and New Zealand which allows for the free movement of citizens of one of these countries to the other.
- The arrangement came into effect in 1973 and allows citizens of each country to reside and work in the other country, with some restrictions.

Ameri Ice Shelf (AIS)

- The floating sheets of ice called ‘ice shelves’ play a multi-faceted role in maintaining the stability of a glacier.
- Ice shelves connect a glacier to the landmass, the ice sheet mass balance, sea stratification, and bottom water formation are important parameters for the balancing of a glacier.
- The AIS is one of the largest glacier drainage basins in the world, located on the east coast of Antarctica, at about 70°S Latitude, 70°E Longitude.
- The AIS dynamics and mass balance help in understanding the changes in the global climate scenario.
- National Centre for Polar and Ocean Research (NCPOR) in Goa has predicted that there would be a 24 per cent increase in the expansion of the Ameri Ice Shelf (AIS) boundaries in Antarctica by 2021 and another 24 per cent by 2026 from its 2016 positions.
- The prediction made by NCPOR is based on a 16-year-long satellite-based observation that covered an area of 60,000 sq km across the AIS.
- This study would help understand the ongoing changes in the ocean and atmospheric forcing better.
- NCPOR carried out this study based on the satellite data collected from 2001-2016.

Marine Salvage Industry of Alang

- Alang is a census town in Bhavnagar district in the Indian state of Gujarat.
- In the past three decades, its beaches have become a major worldwide centre for ship breaking.
- The shipyards at Alang recycle approximately half of all ships salvaged around the world.
- It is considered the world's largest graveyard of ships.

- The yards are located on the Gulf of Khambat, 50 km (31 mi) southeast of Bhavnagar.
- The employers cannot employ laborers directly, they must be trained by the institute run by Gujarat Maritime Board.
- The Indian Ship-breaking industry generates resources such as re-rolling scrap, melting scrap, cast Iron scrap, non-ferrous metals, machinery, and wooden articles.
- The industry is so hazardous that it is said that one worker dies in Alang every day.

16. POLITY

Inter-State Migrant Act, 1979

- The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, seeks to regulate the employment of inter-State migrants and their conditions of service.
- It is applicable to every establishment that employs five or more migrant workmen from other States; or if it had employed five or more such workmen on any day in the preceding 12 months.
- It is also applicable to contractors who employed a similar number of inter-State workmen.
- The Act would apply regardless of whether the five or more workmen were in addition to others employed in the establishment or by the contractors.
- The principal employer is prohibited from employing inter-State workmen without a certificate of registration from the relevant authority.
- The law also lays down that every contractor who recruits workmen from one State for deployment in another State should obtain a license to do so.
- The provision for registration of establishments employing inter-State workers creates a system of accountability and acts as the first layer of formalizing the utilization of their labour.
- It helps the government keep track of the number of workers employed and provides a legal basis for regulating their conditions of service.
- The wage rates, holidays, hours of work and other conditions of service of an inter-State migrant workman shall be the same as those extended to other workmen in the same establishment, if the nature of their work is similar.
- In other cases, it would be as prescribed by the appropriate government.
- In no case, shall the wages be lower than what is prescribed under the Minimum Wages Act.

Sample Registration System (SRS)

- The SRS is a demographic survey for providing reliable annual estimates of infant mortality rate, birth rate, death rate and other fertility and mortality indicators at the national and sub-national levels.



- It was initiated on a pilot basis by the Registrar General of India in a few states in 1964-65, it became fully operational during 1969-70.
- The field investigation consists of continuous enumeration of births and deaths in selected sample units by resident part time enumerators, generally anganwadi workers & teachers, and an independent survey every six months by SRS supervisors.
- Recently, the Registrar General of India released data related to birth rate, death rate and infant mortality rate in its Sample Registration System (SRS) bulletin for 2018.
- The rates are calculated per one thousand of the population.

Highlights of 2018 SRS

- **Birth rate** - India's birth rate has declined drastically over the last four decades from 36.9 in 1971 to 20.0 in 2018.
- The rural-urban differential has also narrowed. However, the birth rate has continued to be higher in rural areas compared to urban areas.
- Bihar (26.2) continues to remain at the top of list in birth rate while Andaman and Nicobar (11.2) is at the bottom.
- **Death rate** - India has witnessed a significant decline over the last four decades from 14.9 in 1971 to 6.2 in 2018.
- In the last decade, death rate at an all-India level has declined from 7.3 to 6.2, the decline has been steeper in rural areas.
- Chhattisgarh has the highest death rate at 8 and Delhi, an almost entirely urban state, has a lowest death rate of 3.3.
- **Infant mortality rate** - IMR has decreased to 32 about one-fourth as compared to 1971 (129).
- The IMR at an all-India level has declined from 50 to 32 in the last decade.
- Madhya Pradesh has the highest IMR of 48 and Nagaland has the lowest IMR of 4.

17. GOVERNMENT INITIATIVES

Mission Surya Nagari

- Union government has launched a scheme for 100% solarisation of Konark sun temple and Konark town in Odisha.
- The scheme will meet all energy requirements of Konark town with solar energy, which is made under PM-vision to develop the historical Sun temple town of Konark in Odisha as 'Surya Nagri'.
- This aims to convey a message of synergy between the modern use of solar energy and the ancient Sun Temple and the importance of promoting solar energy.

- It envisages setting up of the 10-MW grid connected solar project and various solar off-grid applications such as solar trees, solar drinking water kiosks and off-grid solar power plants with battery storage.
- It will receive 100% Central Financial assistance (CFA) support of around Rs. 25 crore through the Ministry of New and Renewable Energy.
- Odisha Renewable Energy Development Agency will be the Implementation Agency of the project (and not union Ministry of Renewable energy or Ministry of culture)

Standards & Labelling Programme

- The Bureau of Energy Efficiency initiated the Standards & Labeling programme for equipment and appliances in 2006 to provide the consumer an informed choice about the energy saving and thereby the cost saving potential of the relevant marketed product.
- The energy efficiency labeling programs under BEE are intended to reduce the energy consumption of appliance without diminishing the services it provides to consumers.
- The scheme is invoked for 21 equipment/appliances including 10 for which it is mandatory.
- The other appliances are presently under voluntary labeling phase.
- The estimated savings from these labeling programmes have been about 12000 MW since 2007.

CHAMPIONS Portal

- Recently, the Ministry of Micro, Small and Medium Enterprises (MSME) has launched Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength (CHAMPIONS) portal.
- It is a technology driven Control Room-Cum-Management Information System which utilizes modern information and communication technology (ICT) tools.
- It is also fully integrated on a real time basis with the Government of India's main grievances portal Centralized Public Grievances Redress and Monitoring System (CPGRAMS) and the Ministry's other web based mechanisms.
- The entire ICT architecture is created in house with the help of the National Informatics Centre.

SAMARTH ERP

- The Ministry of Human Resource Development (HRD) has developed an e-governance platform 'SAMARTH Enterprise Resource Planning (ERP)' under the National Mission of Education in Information and Communication Technology Scheme (NMEICT).
- SAMARTH ERP is an open source, open standard enabled robust, secure, scalable, and evolutionary process automation engine for Universities and Higher Educational Institutions.

- Enterprise Resource Planning (ERP) refers to a type of software used to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations.
- ERP in a University can improve management and administration.
- The platform has been implemented at the National Institute of Technology (NIT), Kurukshetra, a participating unit under the World Bank-supported Technical Education Quality Improvement Program (TEQIP).

PM e-VIDYA

- Union Finance Ministry has announced several initiatives to boost Education Sector.
- A comprehensive initiative called PM e-VIDYA will be launched which unifies all efforts related to digital/online/on-air education.
- This will enable multi-mode access to education, and includes:
 1. **DIKSHA (one nation-one digital platform)** - nation's digital infrastructure for providing quality e-content in school education for all the states/UTs.
 2. **TV (one class-one channel)** where one dedicated channel per grade for each of the classes 1 to 12 will provide access to quality educational material.
 3. **SWAYAM** online courses in MOOCS format for school and higher education.
 4. **IITPAL** for IITJEE/NEET preparation.
 5. Air through Community radio and **CBSE Shiksha Vani podcast**.
 6. Study material for the differently abled developed on **Digitally Accessible Information System (DAISY)** and in sign language on NIOS website/ YouTube.
 7. **Manodarpan initiative** - It is being launched to provide psychosocial support to students, teachers and families for mental health and emotional wellbeing through a website, a toll-free helpline, national directory of counselors, interactive chat platform, etc.

Khudol Initiative

- Khudol is a crowdfunded initiative of Ya_All, an Imphal-based NGO that had created India's first transgender football team.
- The initiative entails ensuring food, health and hygiene of the LGBTQI+ community, people living with HIV, daily-wage earners, children and adolescents.
- The United Nations Secretary-General's Envoy on Youth has listed Manipur's Khudol (gift) among the top 10 global initiatives for an inclusive fight against the COVID-19 pandemic.

18. GOVERNMENT SCHEMES

Rozgar Setu scheme

- The Madhya Pradesh Government has announced the launch of the 'Rozgar Setu' scheme, to help secure employment for skilled workers who have returned back to their homes and were employed at industries elsewhere.
- Madhya Pradesh is the first state to devise such a work plan for the workers.
- The State government will act as a setu (bridge) between workers and employers so that both are benefited.
- This would fulfil the manpower requirement of industries as well as provide employment to workers during the Covid-19 pandemic.

SWAMITVA Yojana

- Madhya Pradesh administration also hailed the Centre's 'SWAMITVA Yojana' under which rural areas would be surveyed to help prepare land records.
- SVAMITVA - Survey of Villages and Mapping with Improved Technology in Village Areas scheme.
- It is a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India.
- Through the scheme rural population will be given land ownership records as proof of their right over plots of land.
- The State government has said the scheme would help gram panchayats secure local sources of revenue.
- At the panchayat level, it will be easier to draw up development plans and public properties could be protected.
- Further, the scheme would help resolve property disputes.

Sankalp Scheme

- Madhya Pradesh police launches 'Sankalp Scheme' to provide 24-hour help to elderly
- Under the Sankalp Scheme, Umair district Superintendent of Police has instructed all police officers to identify and help one or two elderly families who are living alone and are worried about their everyday needs during the lockdown.
- The elders are also happy with this innovative effort of the police.
- The Sankalp Scheme is indeed a commendable effort and can become exemplary for many districts.

PM- Vaya Vandana Yojana

- Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a Pension Scheme exclusively for the senior citizens aged 60 years and above which was available from 4th May, 2017 to 31st March, 2020.

- Union government recently extended the scheme up to 31st March, 2023 for a further period of three years beyond 31st March, 2020.
- Scheme provides initially an assured rate of return of 7.40 % per annum for the year 2020-21 per annum and thereafter to be reset every year.
- Pension is payable at the end of each period, during the policy term of 10 years, as per the frequency of monthly/ quarterly/ half-yearly/ yearly as chosen by the pensioner at the time of purchase.
- The scheme is exempted from GST.
- On survival of the pensioner to the end of the policy term of 10 years, Purchase price along with final pension instalment shall be payable.

Rajiv Gandhi Kisan Nyay Yojana

- Chhattisgarh government is set to launch the Rajiv Gandhi Kisan Nyay Yojana to encourage farmers to produce more crops and help them get the right price.
- The scheme will formally be launched in the state on May 21, the death anniversary of former Prime Minister Rajiv Gandhi.
- Under the scheme, based on registered area and area under cultivation during Kharif crop season 2019, Rs. 10,000 per acre will be deposited in the bank accounts of farmers as agriculture assistance grant for sowing crops such as paddy, maize and sugarcane.
- According to the government, at least 19 lakh farmers will benefit from the scheme, for which the state government had allocated Rs 5,756 crore in the budget 2020-21.
- The scheme would cover rice, maize and sugarcane farmers to begin with, and would expand to other crops later.
- Rice and maize farmers would get Rs.10,000 an acre while sugarcane farmers would get ₹ 13,000.
- The money would be distributed in four instalments.

19. BILATERAL ISSUES

20. GOVERNMENT ORGANISATIONS

Van Dhan Vikas Kendra

- Van Dhan Vikas Kendras have been set up under the program 'Van Dhan Yojana' which was launched in 2018, in Chhattisgarh.
- The Van Dhan Vikas Kendra caters to ten Self Help Groups of thirty tribal gatherers each.
- The selection of the tribal beneficiaries and formation of the SHGs has been undertaken by the Tribal Cooperative Marketing Development Federation of India (TRIFED).



- The Van Dhan Vikas Kendras boost the economic development of tribals involved in the collection of Minor Forest Produce (MFP) and provide a sustainable MFP-based livelihood in MFP-rich districts.
- Union government has also created an online monitoring dashboard, called the Van Dhan Dashboard, for reporting the procurement activities undertaken at the state level.
- The dashboard is a part of the “TRIFED E- Sampark Setu” that aims to facilitate exchange of information to and from every Panchayat and Van Dhan Kendra, either through email or mobile phone.
- States have appointed the Van Dhan Kendras as their primary procurement agents for MFP procurements from local bazaars.

CSIR-NIO

- The National Institute of Oceanography, founded in 1966 as one of 37 constituent laboratories of the CSIR.
- It is an autonomous research organization in India to undertake scientific research and studies of special oceanographic features of the Northern Indian Ocean.
- Headquartered in Goa, it has regional centers in Kochi, Mumbai and Vizag.

Indian Patent Office

- The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) generally known as the Indian Patent Office.
- It is an agency under the Department for Promotion of Industry and Internal Trade which administers the Indian law of Patents, Designs and Trade Marks.
- The CGPDTM reports to the Ministry of Commerce and Industry and has six main administrative sections namely - Patent Office, Designs Registry, Trademarks Registry, Geographical indications Registry, Rajiv Gandhi National Institute of Intellectual Property Management (NIIPM) and Patent Information System

NCPOR

- The National Centre for Polar and Ocean Research, (NCPOR) formerly known as the National Centre for Antarctic and Ocean Research (NCAOR) is an Indian research and development institution, situated in Vasco da Gama, Goa.
- It is an autonomous Institution of the Department of Ocean Development (DOD), Ministry of Earth Sciences, Government of India which is responsible for administering the Indian Antarctic Programme and maintains the Indian government's Antarctic research stations, Bharati and Maitri.
- NCPOR complex is a home to a special low-temperature laboratory and is setting up a National Antarctic Data Centre and a Polar Museum.
- Apart from this the NCPOR operates in different fields or tasks:
 1. Operating the Himadri and IndARC Arctic research stations in Svalbard, Norway.

2. Managing the oceanic research vessel ORV Sagar Kanya, the flagship of India's fleet of oceanographic study vessels.

INTERNATIONAL ORGANISATIONS

Unicode Consortium

- Unicode Standard assigns code to characters from different languages in the world so that they can be understood and displayed across software platforms.
- Recently Unicode consortium has recently accepted the proposal to add Tamil two characters to Telugu characters for transcribing religious Tamil Texts.
- This initiative will help preserving Tamil texts written in Telugu.
- The Unicode Consortium (Unicode Inc.) is a non-profit organization based in California, USA.
- Its primary purpose is to maintain and publish the Unicode Standard which was developed with the intention of replacing existing character encoding schemes which are limited in size and scope, and are incompatible with multilingual environments.
- Unicode's success at unifying character sets has led to its widespread adoption in the internationalization and localization of software.
- The standard has been implemented in many recent technologies, including XML, the Java programming language, Swift, and modern operating systems.

Marine Stewardship council

- The Marine Stewardship Council (MSC) is an independent non-profit organization which sets a standard for sustainable fishing.
- Fisheries that wish to demonstrate they are well-managed and sustainable compared to the science-based MSC standard are assessed by a team of experts who are independent of both the fishery and the MSC.
- Seafood products can display the blue MSC ecolabel only if that seafood can be traced back through the supply chain to a fishery that has been certified against the MSC standard.
- The mission of the MSC is to use its ecolabel, for which the MSC receives royalties for licensing it to products, and fishery certification program to contribute to the health of the world's oceans by recognizing and rewarding sustainable fishing practices, influencing the choices people make when buying seafood, and working with partners to transform the seafood market to a sustainable basis.
- Another organization, the Aquaculture Stewardship Council, promotes and certifies sustainable aquaculture.

Indian Ocean Commission

- The Indian Ocean Commission is an intergovernmental organization that links African Indian Ocean nations: Comoros, Madagascar, Mauritius, Réunion (an overseas region of France), and Seychelles.

- There are also six observers: China, India, Japan, Sovereign Order of Malta the European Union and the Organization internationale de la Francophonie.
- The commission was created in 1982 in Port-Louis, Mauritius.
- India has recently become an observer to the Commission.

21. ECONOMY

Helicopter Money

- It is an unconventional monetary policy tool, which involves printing large sums of money and distributing it to the public, to stimulate the economy during a recession (decline in general economic activity) or when interest rates fall to zero.
- Recently, the Telangana Chief Minister suggested that the helicopter money can help states to come out of the economic chaos created by Covid-19 pandemic.
- The term was coined by American economist Milton Friedman, It basically denotes a helicopter dropping money from the sky.
- Under such a policy, a central bank "directly increases the money supply and, via the government, distribute the new cash to the population with the aim of boosting demand and inflation.
- In case of helicopter money, currency is distributed to the public and there is no repayment liability.
- It does not rely on increased borrowing to fuel the economy, which means that it doesn't create more debt.
- It boosts spending and economic growth more effectively than quantitative easing because it increases aggregate demand the demand for goods and services – immediately.
- It does not involve repayment liability, therefore many people argue that it's not a feasible solution to revive the economy.
- It may lead to over-inflation.
- It may devalue the currency in the foreign exchange market.
- Difference between Helicopter money and Quantitative Easing

Risk Free Status

- RBI is likely to allow banks to assign zero risk weight for loans that will be extended to the micro, medium and small enterprises (MSMEs) under the Atmanirbar Bharat package.
- Zero risk would mean that banks will not have to set aside additional capital for these loans.
- The move is aimed at encouraging lenders to extend credit, as banks have turned risk averse and have been reluctant to lend.

- The Finance Ministry had requested the central bank to make these loans risk free, following an interaction with banks.
- As a part of the package, a ₹ 3 lakh crore loan for the MSME sector was announced.
- This will be guaranteed by the National Credit Guarantee Trustee Company Limited (NCGTC) in the form of a Guaranteed Emergency Credit Line (GECL) facility.
- However, such loans would attract a risk weight of a minimum 20% since these don't come with direct government guarantee.
- This facility is similar to the loans that are guaranteed by the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE).
- After banks highlighted the issue with the government, the Finance Ministry asked the RBI to waive the requirement of assigning a risk weight to the loans.
- The RBI is likely to waive the requirement of risk weight, the Finance Ministry is expected to issue detailed guidelines on this credit guarantee loan issues.

Guaranteed Emergency Credit Line (GECL) facility

- The Union Cabinet has given its approval for the Emergency Credit Line Guarantee Scheme (ECLGS) for MSMEs and MUDRA borrowers.
- Under the Scheme, 100% guarantee coverage to be provided by National Credit Guarantee Trustee Company Limited (NCGTC) for additional funding of up to Rs. 3 lakh crore to eligible MSMEs and interested MUDRA borrowers.
- The credit will be provided in the form of a Guaranteed Emergency Credit Line (GECL) facility.
- The scheme will be applicable till October 31, or till an amount of ₹ 3 lakh crore is sanctioned, whichever is earlier.
- Tenor of the loan under Scheme shall be four years with a moratorium period of one year on the principal amount.
- No Guarantee Fee shall be charged by NCGTC from the Member Lending Institutions (MLIs) under the Scheme.
- Interest rates under the Scheme shall be capped at 9.25% for banks and FIs, and at 14% for NBFCs.

22. ENVIRONMENT

Minor Forest Produce

- MFP includes all non-timber forest produce of plant origin and includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, honey, lac, tussar etc.
- It provides both subsistence and cash income for people who live in or near forests.

- They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sales.
- Recently, Union government has revised the Minimum Support Price (MSP) for Minor Forest Produce (MFP).
- The MSP is the rate at which the government buys produce from farmers and tribal.
- The idea of MSP is to counter price volatility of commodities due to the factors like variation in their supply, lack of market integration and information asymmetry.
- The increased Minimum support price (MSP) ranges from 16% to 66%.
- MSP for MFPs is revised once every three years by the Pricing Cell constituted under the Ministry of Tribal Affairs.
- However, the authorities have revised the MSP much earlier than 3 years.
- This will offer much-needed support to tribal gatherers in view of the "exceptional and very difficult" circumstances prevailing in the country due to the Covid-19 pandemic.
- The Ministry of Tribal Affairs will be the nodal Ministry for implementation and monitoring of the scheme.
- The Minimum Support Price would be determined by the Ministry with technical help of TRIFED.
- Earlier, the scheme was extended only to Scheduled Areas in eight states and fixed MSPs for 12 MFPs, now it has extended to all states and UTs with 73 products in total.

Ban on TB Drugs on crops

- Recently, the Registration Committee (RC) under the Central Insecticides Board and Registration Committee (CIBRC) has recommended to ban the use of antibiotics streptomycin and tetracycline.
- The RC recommended to ban antibiotics streptomycin and tetracycline with immediate effect on crops where other options are available for bacterial disease control.
- Where no alternatives are available, use of these antibiotics should be phased out by 2022-end.
- Till then, the antibiotics could be used on crops strictly as per the label claim i.e. streptomycin sulphate (9%) and tetracycline hydrochloride (1%).
- The RC acknowledged that diseases in crops can be managed by using integrated pest management and other practices.

Mount Harriet National Park

- It is located in the south of the Andaman and Nicobar islands.
- Mount Harriet is the third-highest peak in the Andaman and Nicobar archipelago next to Saddle Peak in North Andaman and Mount Thuillier in Great Nicobar.
- The park is covered with evergreen forest pockets.
- It is rich in flora and faunal species like andaman wild pigs, saltwater crocodiles, butterflies and palm trees.



Dehing Patkai Wildlife Sanctuary

- Dehing Patkai wildlife sanctuary is located in the Dibrugarh and Tinsukia Districts of Assam.
- The Dehing Patkai forms the largest stretch of tropical lowland rainforests in India.
- Ethnic groups living in the area include the indigenous Assamese communities, particularly Tai Phake, Khamyang, Khampti, Singpho, Nocte, Ahom, Kaibarta, Moran and Motok, Burmese, and non-indigenous Nepali people.
- Recently concerns have been expressed over the diversion of 98.59 hectares land of Saleki proposed reserve forest, which is a part of Dehing Patkai elephant reserve, for a coal-mining project in Upper Assam.

Mollem Wild Life Sanctuary

- Bhagwan Mahaveer Sanctuary and Mollem National Park is a 240 square kilometres protected area located in the Western Ghats of South India, in Sanguem taluk, Goa State, along the eastern border with Karnataka.
- National Highway 4A divides it into two parts and the Mormugao - Londa railway line passes through the area.
- It contains several important temples dating to the Kadambas of Goa, and home to waterfalls, such as Dudhsagar Falls and Tambdi Falls.
- The parkland is also home to a community of nomadic buffalo herders known as the Dhangar.

Kawal Tiger Corridor

- Kawal Tiger Reserve is located at Jannaram mandal of Mancherial District (Old Adilabad district) in Telangana state of India.
- Govt of India declared Kawal wildlife sanctuary as Tiger Reserve in 2012.
- The reserve is the oldest sanctuary in the northern Telangana region of the state.
- This sanctuary is catchment for the rivers Godavari and Kadam, which flow towards the south of the sanctuary.

Dibru-Saikhowa National Park

- It is a national park in Assam, India, located in Dibrugarh and Tinsukia districts.
- It was designated a Biosphere Reserve in July 1997.
- The park is bounded by the Brahmaputra and Lohit Rivers in the north and Dibru river in the south. It mainly consists of moist mixed semi-evergreen forests, moist mixed deciduous forests, canebrakes and grasslands.
- It is the largest salix swamp forest in north-eastern India, with a tropical monsoon climate with a hot and wet summer and cool and usually dry winter.
- Annual rainfall ranges from 2,300 to 3,800 mm (91 to 150 in).

- It is a haven for many endangered species and rich in fish diversity.

Vikramshila Gangetic Dolphin Sanctuary

- Vikramshila Gangetic Dolphin Sanctuary is located in Bhagalpur District of Bihar, India.
- The sanctuary is a 60 km stretch of the Ganges River from Sultanganj to Kahalgaon in Bhagalpur District.
- Designated in 1991, it is protected area for the endangered Gangetic dolphins in Asia.
- According to the latest estimate, there were nearly 170 dolphins in the Vikramshila Gangetic Dolphin Sanctuary.
- The last survey of Bihar's dolphin population was conducted in 2018.
- It was found that there were 1,363 dolphins in the rivers in the state.
- Going by this number, Bihar is home to around half of the estimated 2,500-3,000 Gangetic dolphins in India.

India's first Dolphin Observatory

- Bihar government is setting up India's first observatory for the mammals in Bhagalpur district at the Vikramshila Gangetic Dolphin Sanctuary (VGDS).
- The structural design of the observatory is such that it will promote eco-tourism.
- The observatory is being built on the Sultanganj-Aguwani Ghat bridge over the Ganga, it will be in the middle of the river, where bridge's width will be nearly 100 feet.
- The four-storey observatory will be 40 feet high, with the bridge passing through its middle.
- The observatory building will be transparent, with glass from all sides to ensure people can watch the dolphins.
- It will give people an incentive to visit the place and see dolphins in the sanctuary without disturbing them.
- There would be no bad or adverse impact on the river's ecology as the observatory is being constructed on a bridge over the Ganga.
- There are also suggestions to build another dolphin observatory at the confluence of the Ganga and Punpun rivers near Fatuha in Patna, about 5-15 dolphins are visible at the site at all times of the year.

23. SCIENCE & TECHNOLOGY

Van Allen Radiation belt

- A Van Allen radiation belt is a zone of energetic charged particles, most of which originate from the solar wind, that are captured by and held around a planet by that planet's magnetic field.
- Earth has two such belts and sometimes others may be temporarily created.



- The discovery of the belts is credited to James Van Allen, and as a result, Earth's belts are known as the Van Allen belts.
- Earth's two main belts extend from an altitude of about 640 to 58,000 km (400 to 36,040 mi) above the surface in which region radiation levels vary.
- Notable feature of Van Allen Radiation Belts are
 1. Most of the particles that form the belts are thought to come from solar wind and other particles by cosmic rays.
 2. By trapping the solar wind, the magnetic field deflects those energetic particles and protects the atmosphere from destruction.
 3. The belts are located in the inner region of Earth's magnetosphere.
 4. The belts trap energetic electrons and protons.
 5. Other nuclei, such as alpha particles, are less prevalent.
 6. The belts endanger satellites, which must have their sensitive components protected with adequate shielding if they spend significant time near that zone.

NASA Perseverance Rover

- Mars Exploration Program (MEP) is a long-term effort to explore the planet Mars, funded and led by NASA.
- Formed in 1993, MEP has made use of orbital spacecraft, landers, and Mars rovers to explore the possibilities of life on Mars, as well as the planet's climate and natural resources.
- NASA's 2020 Mars rover Perseverance is a part of NASA's Mars Exploration Program, is scheduled to launch between July 17 and August 5 to hunt for evidence of extraterrestrial life on the red planet.
- It will investigate an astrobiologically relevant ancient environment on Mars and investigate its surface geological processes and history, including the assessment of its past habitability, the possibility of past life on Mars, and the potential for preservation of biosignatures within accessible geological materials.
- It will cache sample containers along its route for a potential future Mars sample-return mission.
- To achieve its objective, NASA's Perseverance rover will have the most advanced pair of "eyes" ever sent to Mars.
- Its Mastcam-Z instrument packs a next-gen zoom capability that will help the mission make 3D imagery more easily.
- It will not only produce images that enable the public to follow the rover's daily discoveries, but it will also provide key data to help engineers navigate and scientists choose interesting rocks to study.

Gravitational Microlensing Technique

- Gravitational microlensing is an astronomical phenomenon due to the gravitational lens effect.



- It can be used to detect objects that range from the mass of a planet to the mass of a star, regardless of the light they emit.
- Typically, astronomers can only detect bright objects that emit much light (stars) or large objects that block background light (clouds of gas and dust).
- These objects make up only a minor portion of the mass of a galaxy. Microlensing allows the study of objects that emit little or no light.
- In the recent research the combined gravity of the planet and its host star caused the light from a more distant background star to be magnified in a particular way, telescopes distributed around the world were used to measure the light-bending effect.
- The microlensing effect is rare, with only about one in a million stars in the galaxy being affected at any given time, this type of observation does not repeat, and the probabilities of catching a planet at the same time are extremely low.

RV Sindhu Sadhana

- CSIR- NIO acquired India's first multidisciplinary oceanographic research vessel, RV Gaveshani, in 1976.
- The vessel enhanced the capabilities of Indian oceanographers and enabled the development of multi-disciplinary oceanographic research in the country.
- After rendering commendable service for 18 years, during which time over 200 cruises were undertaken in all parts of the Indian Ocean, R.V. Gaveshani was decommissioned in 1994.
- In 2012, a new multi-disciplinary oceanographic research vessel Sindhu Sadhana was acquired by NIO.
- It will have capabilities to undertake basin scale observations and will enable Indian oceanographers to take up studies not only in the seas around India, but also in any part of the Indian Ocean.
- It is aimed to serve as a stable platform allowing operation of sensible equipment and underway data acquisition.
- Another research vessel of NIO is "Sindhu Sankalp".

Defence Testing Infrastructure Scheme

- Union Government has approved the launch of Defence Testing Infrastructure Scheme (DTIS).
- It aims to give a boost to domestic defence and aerospace manufacturing.
- It has an outlay of Rs 400 crore for creating state of the art testing infrastructure for defence testing sector.
- It envisages to setup six to eight new test facilities in partnership with private industry.
- This will facilitate indigenous defence production, consequently reduce imports of military equipment and help make the country self-reliant.
- The projects under the Scheme will be provided with up to 75% government funding in the form of 'Grant-in-Aid'.



- The remaining 25% of the project cost will have to be borne by the Special Purpose Vehicle (SPV) whose constituents will be Indian private entities and State Governments.
- The SPVs under the Scheme will be registered under Companies Act 2013 and shall also operate and maintain all assets under the Scheme, in a self-sustainable manner by collecting user charges.
- While majority of test facilities are expected to come up in the two Defence Industrial Corridors (DICs), the Scheme is not limited to setting up Test Facilities in the DICs only.

Defence Industrial Corridor in India

- Union Government in 2019, has set up defence industrial corridors in Uttar Pradesh and Tamil Nadu.
- These defence corridors will facilitate a well-planned and efficient industrial base that will lead to increased defence production in the country.
- The corridors overlap with existing defence public sector companies, and aim to ensure connectivity among various defence industrial units.
 1. Uttar Pradesh Defence Industrial Corridor includes - Lucknow, Kanpur, Agra, Aligarh, Chitrakoot and Jhansi.
 2. Tamil Nadu Defence Industrial Corridor includes - Chennai, Hosur, Salem, Coimbatore and Tiruchirappalli.

Agneprastha

- Recently, the foundation stone for a missile park "Agneprastha" was laid at INS Kalinga.
- The Missile Park 'AGNEEPRASTHA' aims to capture glimpses of missile history of INS Kalinga from its establishment in 1981 till date.
- It has been set up with a replica of missiles and Ground Support Equipment (GSE) that showcase the evolution of missiles handled by the unit.
- P-70 'Amethyst', an underwater launched anti-ship missile from the arsenal of the old 'Chakra' (Charlie-1 submarine) which was in service with Indian Navy during 1988-91 is the main attraction point in the Park.
- AGNEEPRASTHA will provide a one-stop arena for motivation and stimulation of curious minds regarding the missiles and related technologies, from school children to Naval personnel and their families.
- It will be dedicated to all the officers, sailors and support staff of INS Kalinga.
- It will also commemorate the award of the prestigious Unit Citation to INS Kalinga for the year 2018-19.

Hypoxia

- Recently medical practitioners have reported a condition called silent or happy hypoxia, in which Covid-19 patients have extremely low blood oxygen levels, yet they do not show signs of breathlessness.
- It is a condition wherein there is not enough oxygen available to the blood and body tissues.



- Hypoxia can either be generalized, affecting the whole body, or local, affecting a region of the body.
- Normal arterial oxygen is approximately 75 to 100 millimeters of mercury (mm Hg) and normal pulse oximeter readings usually range from 95 to 100%, Values under 90% are considered low.
- When levels fall below 90%, patients could begin experiencing lethargy, confusion or mental disruptions because of insufficient quantities of oxygen reaching the brain.
- Levels below 80% can result in damage to vital organs.
- Silent Hypoxia is a form of oxygen deprivation that is harder to detect than regular hypoxia because patients appear to be less in distress.
- In many cases, Covid-19 patients with silent hypoxia did not exhibit symptoms such as shortness of breath or coughing until their oxygen fell to acutely low levels, at which point there was a risk of acute respiratory distress (ARDS) and organ failure.
- The reason why people are left feeling breathless is not because of the fall in oxygen levels itself but due to the rise in carbon dioxide levels that occur at the same time, when lungs are not able to expel this gas efficiently.
- A medical device called a pulse oximeter can be used in the early detection of silent hypoxia.

African Swine Flu

- ASF is a highly contagious and fatal animal disease that infects domestic and wild pigs, typically resulting in an acute form of hemorrhagic fever.
- It was first detected in Africa in the 1920s.
- The mortality is close to 100 per cent, and since the fever has no cure, the only way to stop it spreading is by culling the animals.
- ASF is not a threat to human beings since it only spreads from animals to other animals.
- According to the FAO, its extremely high potential for transboundary spread has placed all the countries in the region in danger and has raised the spectre of ASF once more escaping from Africa.
- It is a disease of growing strategic importance for global food security and household income.
- Around 2,800 pigs have died in Assam since February due to African Swine Fever virus, making the state the epicenter of ASF in India.

COVID Kavach Elisa

- National Institute of Virology (NIV) at Pune has developed and validated the indigenous IgG ELISA test "COVID KAVACH ELISA" for antibody detection for COVID-19.
- The robust indigenous IgG ELISA test for antibody will play a critical role in surveillance of proportion of population exposed to SARS-CoV-2 Coronavirus infection.
- The test kit has the advantage of testing 90 samples together in a single run of 2.5 hours, so that healthcare professionals can proceed quickly with necessary next steps.

- This kit was validated at two sites in Mumbai and has high sensitivity and accuracy.
- The ELISA-based testing is easily possible even at district level.
- Developed in a month's time, the testing kit would help to study the presence of anti-SARS-CoV-2 IgG antibodies in the Indian population.
- It is cost-effective, sensitive, rapid, and a large number of samples can be tested at any level of clinical setting, public health centers and hospitals.
- There are also minimal bio-safety and bio-security requirements for the test as compared to the real-time RT-PCR test.

24. INDEX AND REPORT

Impact of Energy Efficiency Measures Report

- Impact of Energy Efficiency Measures Report was prepared by an Expert agency PWC Ltd, who was engaged by Bureau of Energy efficiency (BEE) for an independent verification to assess the resultant annual savings in energy as well as CO₂ emissions through various initiatives in India.
- Since 2017-18, every year Bureau of Energy Efficiency (BEE) appoints an third party expert agency to conduct study for comparing the actual energy consumption due to different energy efficiency schemes, with the estimated energy consumption.
- The objective of this study is to evaluate the performance and impact of all the key energy efficiency programmes in India, in terms of total energy saved and the related reduction in the CO₂ emissions.
- The findings of the report reflect that implementation of various energy efficiency schemes have led to total electricity savings to the tune of 113.16 Billion Units in 2018-19, which is 9.39% of the net electricity consumption.
- This year the study has identified following major programmes, viz. Perform, Achieve and Trade Scheme, Standards & Labelling Programme, UJALA Programme, Municipal Demand Side Management Programme, etc.

Global Nutrition Report 2020

- Global Nutrition Report is the world's leading independent assessment of the state of global nutrition.
- The Global Nutrition Report was conceived following the first Nutrition for Growth Initiative Summit (N4G) in 2013.
- It is a multi-stakeholder initiative, consisting of a Stakeholder Group, Independent Expert Group and Report Secretariat (WHO or FAO is not involved).
- The first report was published in 2014.

- It acts as a report card on the world's nutrition globally, regionally, and country by country and on efforts to improve it.
- The Global Nutrition Report 2020 stated that India is among 88 countries that are likely to miss global nutrition targets by 2025.
- It also identified the country as one with the highest rates of domestic inequalities in malnutrition.

Energy Transition Index

- Recently, the World Economic Forum (WEF) has released the annual rankings of the global Energy Transition Index.
- The index benchmarks 115 economies on the current performance of their energy systems across
 1. Economic development and growth,
 2. Environmental sustainability and energy security
 3. Access indicators
 4. Readiness for transition to secure, sustainable, affordable and inclusive energy systems.
- According to the recent report, Sweden has topped the Index for the third consecutive year and is followed by Switzerland and Finland in the top three.
- Only 11 out of 115 countries have made steady improvements in ETI scores since 2015.
- Argentina, China, India and Italy are among the major countries with consistent annual improvements.
- In China (78th), problems of air pollution have resulted in policies to control emissions, electrify vehicles and develop the world's largest capacity for solar photovoltaic (SPV) and onshore wind power plants.
- Scores for the US, Canada, Brazil and Australia were either stagnant or declining.
- India has moved up two positions to rank 74th with improvements in all three dimensions of the energy triangle namely:
 1. Economic development and growth.
 2. Energy access and security.
 3. Environmental sustainability.
- For India, gains have come from a government-mandated renewable energy expansion programme i.e. to add 275 GW by 2027.
- India has also made significant strides in energy efficiency through bulk procurement of LED bulbs, smart meters and programs for labelling of appliances. Similar measures are being experimented to drive down the costs of electric vehicles (EVs).



Global Forest Resources Assessment 2020

- Global Forest Resources Assessment is a report released by the United Nations Food and Agriculture Organization (FAO).
- According to recent report estimates Africa had the largest annual rate of net forest loss in 2010–2020, at 3.9 mha, followed by South America, at 2.6 mha.
- On the other hand, Asia had the highest net gain of forest area in 2010–2020, followed by Oceania and Europe.
- The largest proportion of the world's forests were tropical (45 per cent), followed by boreal, temperate and subtropical.
- More than 54 per cent of the world's forests were in only five countries the Russian Federation, Brazil, Canada, the United States of America and China.
- The highest per cent of plantation forests were in South America while the lowest were in Europe.
