Self Reliance- Atma Nirbhar Abhiyan

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

In an effective response to an unprecedented emergency (Covid-19 pandemic) that disrupted most channels of national and international trade, Indian Prime Minister, under Atma Nirbhar Abhiyan, gave a clarion call for the country to become self-reliant.

India in the pre-1991 era also strived for achieving self-reliance and import substitution. While it resulted in a diversified economic base for heavy industries such as Steel, coal, petroleum refinery etc, India fell behind the curve on quality, technology and productivity.

Economists attribute these shortcomings to the then industrial and trade policies, particularly industrial licensing, physical barriers to import of goods, high tariffs and imperative economic policies.

Though Indian Prime Minister clarified that the current idea of self-reliance is not about a return to import substitution or autarkic isolationism, rather aimed at a quantum jump to the economic potential of the country by strengthening infrastructure, using modern technologies, enriching human resources, and creating robust supply chains.

In order to achieve this goal policy making needs to address underlying issues and leverage economic opportunities.

Underlying Issues in Becoming Self Reliant

- **Market Distortion:** India opened itself to the global market in 1991 through its LPG (liberalisation, privatisation and globalisation) reforms, but remained hesitant in giving the market model full freedom.
  - This may be reflected in market distorting subsidies and other restrictive policies, especially in Agriculture.
- **Weak Manufacturing:** India is far behind from its target of achieving manufacturing sector contribution of 25% of the GDP.
  - Currently, the Make In India initiative hasn’t reached its intended goal and manufacturing is only at about 17% of GDP.
- **Dependence on China:** India is dependent on China for imports related to electronics, solar equipment, pharmaceutical (Active pharmaceutical ingredients) and Capital goods. Without developing domestic capacity for manufacturing in these areas, breaking away from dependence on China would not be easy.
- **Federal Issue:** Information asymmetry with respect to Central and State governments can act as a roadblock on ease of doing business. This is particularly important in sectors like...
Available Opportunities

- **Global Manufacturing Shifting Away from China:** Mostly all the multinational companies are more concerned about concentration risk of businesses in China than ever before. So, the trend towards moving sourcing away from China will continue. India can attract these investments and become the next global manufacturing hub.

- **Ageing Global Population:** Considering demographics, most developed nations lack the workforce to produce all that they need in their own countries. India’s demographic dividend may adequately bridge the requirement for a young human resource for the world.

- **Huge Domestic Demand:** India is blessed with a vast array of natural resources, a huge demographic advantage, a large farming community, dynamic industrial setup (sectors like Automobiles and Information technology) and a set of entrepreneurial path-breakers. In this context, India has almost all the input as well as output (demand and supply) factors, those are needed for becoming self-reliant and stimulating demand.

---

**Way Forward**

Given the underlying issues and opportunities, it is vital to become competitive in pursuance of self reliance.
Promoting Local: Being vocal for “local” is a key complement of Atma-Nirbhar Bharat Abhiyan. In this context, people must internalise the concept of valuing local products and artefacts and promoting them. Only after this the dream of transforming “Local” India into a “Glocal” India will be possible.

Favourable Policy: In general, competition enhances innovation and efficiency. However, crony capitalism weakens local competitiveness and often diverts resources away from more efficient and technologically innovative companies. Thus, policies should enhance domestic competition and eschew crony capitalism.

Support Control of Critical Value Chains: India cannot become self-reliant until it has control over domestic and global supply chains. Thus, there is a need to ensure greater control over certain parts of the global value chain to protect strategic interests, especially in healthcare, agriculture and defence.

Strengthen Public Procurement: Some steps like compulsory e-tendering and the creation of the Government Electronic Marketplace have already created a more level playing field for suppliers. These processes should be strengthened further by quickening the cycle time for completion of the “quote to cash” cycle of public procurement.

Focusing on Comparative Advantage: India can focus on one area where it can differentiate and attract global and domestic investors and be a leader. The next big thing for India can be 3D (additive) manufacturing, and robotics & automation. As these technologies are the confluence of manufacturing and IT, India’s leading edge on IT, provides a platform to become a leader in this space globally.

Source: FE

---

Police Reforms

Part of: GS-II- Governance (PT-MAINS-PERSONALITY TEST)

India’s existing police system suffers a series of deficiencies from problems relating to a police organization, environment, infrastructure, and understaffing, to obsolete weaponry and intelligence gathering techniques to a shortage of manpower to corruption, the police force in the country is not in a good shape.

Underreporting of crime in India

- An expert committee under the Ministry of Statistics and Programme Implementation has
noted that there is significant under-reporting of crimes under the NCRB. The National Crime Records Bureau (NCRB) under the Ministry of Home Affairs annual report called Crime in India, that records crime on the basis of the FIRs registered in the police stations across the country.

- There could be suppression of data and low registration of crimes because the police know that their work is judged on the basis of this information.
- Sometimes victims of crime may decide against reporting the incident with the police because they are afraid to approach the police, or think the crime is not serious enough, etc.

**Major Deficiencies**

- **Understaffed and overburdened police force:** The police-population ratio, currently 192 policemen per lakh population, is less than what is recommended by UN i.e. 222 policemen per lakh population. There are only 144 police officers for every 100,000 citizens (the commonly used measure of police strength), making India’s police force one of the weakest in the world.
- **Policing in India is a state subject** which means there is significant variation across states. Uttar Pradesh, Bihar, Andhra Pradesh and West Bengal’s police forces are all extremely understaffed with less than 100 police staff for 100,000 population. The only states with police forces that meet the global standard are the insurgency-affected states in the North-East and Punjab. Even as states have increased the sanctioned strength of their police forces, their populations have increased by even more -especially in states such as Uttar Pradesh and Bihar.
- **Understaffing** in turn results into overburdening of work that not only reduces the effectiveness and efficiency of the police personnel (leading to poor quality of investigation) but also leads to psychological distress (which has been held responsible for various crimes committed by the policemen) and contributes to Pendency of cases.
- As a result of the overburdening of work, Police personnel discharges a range of functions related to:
  
  - Crime prevention and response (e.g., intelligence collection, patrolling, investigation, production of witnesses in courts)
  - Maintenance of internal security and law and order (e.g., crowd control, riot control, anti-terrorist or anti-extremist operations)
  - Various miscellaneous duties (e.g., traffic management, disaster rescue and removal of encroachments).

**An overburdened police force:** A high percentage of vacancies within the police forces exacerbate an existing problem of overburdened police personnel.

- 86% of the state police comprises of the constabulary.
- Crime per lakh population has increased by 28% over the last decade (2005-2015).
However, convictions have been low.

- In 2015, convictions were secured in 47% of the cases registered under the Indian Penal Code, 1860. The Law Commission has observed that one of the reasons behind this is the poor quality of investigations.

- Pendency: 30% of all cases filed in 2016 were pending for investigation by the end of the year (this combined with the pendency in the judiciary means securing justice in India can take a very long time). Pendency in the police is driven by lack of resources.

- Decreased Expenditure on police in recent years is adding to the resource crunch. Between fiscal 2011 and 2015, states spent 4.4% of their budgeted expenditure on policing on average but this has reduced to 4% over the last four years. According to PRS Legislative Research, an under-resourced, overburdened police force means that both core police activities (enforcing daily law and order) and more long-term criminal investigations are compromised.

- Police accountability: As per the police laws, both the Central and State police forces come under the superintendence and control of political executives. Police priorities are frequently altered based on the will of political executives. In this context, the Second Administrative Reforms Commission in 2007 had noted that politicians were unduly influencing police personnel to serve personal or political interests.

- Police-Public Relations, which is an important concern in the effective policing is suffering from the great trust deficit. 2018 survey across 22 states on perceptions about policing, found that less than 25% of Indians trust the police highly (as compared to 54% for the army) and the reason for the distrust is that interactions with the police can be frustrating, time-consuming and costly.

- The Second Administrative Reforms Commission has noted that police-public relations is in an unsatisfactory state because people view the police as corrupt, inefficient, politically partisan and unresponsive.

- Criminalization of Politics: improper implementation of police reforms could be attributed to lack of political will, which in turn could be linked to the growing criminalization of politics. A large number of lawmakers in the Parliament with serious criminal charges imply little incentive to professionalize the police force. In each successive Lok Sabha election over the past twenty years, the proportion of candidates with serious criminal charges is rising. Low police salaries increases the vulnerability of police personnels to form a deep nexus with the criminals and the politicians.

Way Forward

- **SMART Police:** Police reforms are needed on three fronts:
  - Improvement in capacity and infrastructure of police forces.
  - Revisiting the constitution of police forces in the country through legislative/administrative changes.
  - Technological scaling-up.

- **Independent Complaints Authority:** The Second Administrative Reforms Commission and the Supreme Court have observed that there is a need to have an independent complaints authority to inquire into cases of police misconduct. This may be because the
political executive and internal police oversight mechanisms may favour law enforcement authorities, and not be able to form an independent and critical judgment.

- **Community Policing Model** can help in reducing the trust deficit between police and public as it requires the police to work with the community for prevention and detection of crime, maintenance of public order, and resolving local conflicts, with the objective of providing a better quality of life and sense of security.

- Various states have been experimenting with community policing including Kerala through ‘Janamaithri Suraksha Project’, Rajasthan through ‘Joint Patrolling Committees’, Assam through ‘Meira Paibi’, Tamil Nadu through ‘Friends of Police’, West Bengal through the ‘Community Policing Project’, Andhra Pradesh through ‘Maithri’ and Maharashtra through ‘Mohalla Committees’.

- Binding powers must be conferred on **State Security Commissions and the Police Establishment Boards** as many of these Commissions did not have the power to issue binding recommendations.

- Constitute **Police Complaints Authorities** at the state and district levels to inquire into allegations of serious misconduct and abuse of power by police personnel.

- The CAG and the Bureau Of Police Research And Development (BPRD) have noted that modern policing requires strong communication support, state-of-art or modern weapons, and a high degree of mobility.

- Proper utilization of center and states funds allocated for modernisation of state police forces as these funds are typically used for strengthening police infrastructure, by way of construction of police stations, purchase of weaponry, communication equipment and vehicles.

Internal security is very much a prerogative of police and efficient policing is needed in order to tackle threats arising in the form of cyber-attacks, bank frauds, and organized crimes, which need to be tackled in a more specialized manner but for that, the police system needs to be efficient, effective and technologically sound.

Source: PSIR

Proxy war-New Cold War

GS-I | 01 July, 2020

Proxy war-New Cold War
China is soon to become the largest economy in the world. Its growth is based on technology, innovation and trade, which sought to balance U.S. military superiority, and has fueled the strategic rivalry between the two countries.

The rising tensions between the US and China have prompted many experts to warn of a new Cold War akin to the Cold War between the US and USSR.

In 2017, the US National Security Strategy called China as “a revisionist power” seeking “to erode American security and prosperity” and “shape a world antithetical to U.S. values and interests”. Also, China has been proactive in undermining the US hegemony on multiple fronts.

COVID-19 pandemic has further aggravated the deterioration of ties between the two countries. Thus, this new Cold War between China and the United States is a major geopolitical risk of the 21st century.

**Events Signalling a New Cold War**

- China has come out with alternative governance mechanisms to the U.S.-dominated International Monetary Fund, World Bank and World Trade Organization with its all-encompassing Belt and Road Initiative and institutions like Asia infrastructure investment bank, contingency reserve agreement (CRA) of New Development Bank.
- For several decades, China’s breakneck development under the relatively enlightened authoritarianism of Deng Xiaoping and his successors was seen positively in the United
States. However, under Xi Jinping, China has evolved from a soft to a hard authoritarianism. There is now a president-for-life with a budding personality cult.

- In order to contain rising China’s assertiveness, the US under its ‘pivot to Asia policy’ has launched a quad initiative, indo pacific narrative. Most recently, the US proposed to expand G7 to G-11 without including China in it.
- China’s incremental “salami slicing” tactics in the South China Sea, first by land reclamation and then constructing artificial islands for extending extra-territorial claim, has seen sharp criticism from the US and its allies. It is similar to the way dominance over the Caribbean enabled the United States to strategically control the Atlantic Ocean and thus, affect the balance of forces in the two world wars and a cold war.
- From Trade war to tensions over 5G telecommunications to currency wars, US-China confrontation is on multiple economic fronts. Further, the donor-recipient relationship between US and developing countries has weakened with China’s pledge of $2-billion amid COVID-19 pandemic, thereby starting a new phase of donation diplomacy.
- Moreover, China perceives US support for Taiwan as an interference in its internal matters.

**Differences Over Previous Cold War**

There are several key differences between the previous Cold War between the US & Soviet Union and the Cold War between the US and China.

- **No Ideological conflict:** Cold War between the US and Soviet Union was a battle between two opposing ideologies viz. capitalism vs communism, whereas there is no such ideological conflict between US and China.
- **No proxy conflicts:** Previous Cold War was full of proxy conflicts between the US and Soviet Union like in Cuban missile crisis 1962, Soviet afghan war 1979-89, etc. However, till now there are no proxy wars between the U.S. and China.
- **Multi-polar world:** Today, the world is also not bipolar anymore. There are countries like Russia, India and Japan, which act as swing states, as they have a choice whether or not to align with the US or China.
- **Economic interdependence:** Unlike the US and Soviet Union, the economies of US and China are closely integrated through investments and markets in a hyper globalized world.

**Role of India**

India is a rising global power and citing its importance both the US and China sought to attract India in its camp. Foreign policy experts in the US argue India is a Natural US Ally in the New Cold War. On the other hand Chinese’s Ambassador in India has suggested writing “together a new chapter” with “a shared future for mankind”. In this context:

- India can promote new multilateralism under the aegis of Vasudhaiva Kutumbakam- which relies on restructuring both the economic order and societal behaviour for equitable sustainable development.
- India must take up intensified diplomacy with global powers so that Asian Century can be
defined in terms of peaceful co-existence and global interest.
- Apart from it, India should acknowledge that national security now relies on technological superiority in artificial intelligence (AI), cyber and space, and not expensive capital equipment. Thus, India should become self-sufficient in the domain of critical technologies.

Conclusion
As India joins the UN Security Council (non-permanent seat) and chairs the BRICS Summit and hosts the G-20 in 2022, the development will bring opportunity for India to assume leadership role and propose a new globalisation model based on humanity, fairness and equality has wide support in a more equal world rather than a world divided by Cold War.

Source: Web

India and Bhutan - Kholongchhu Hydropower Project

GS-II | 01 July, 2020

India and Bhutan - Kholongchhu Hydropower Project

Part of: GS-II - India and South Asia (PT-MAINS-PERSONALITY TEST)

Recently, India and Bhutan have signed concession agreement on the 600 MW Kholongchhu Hydropower Project.

- It will be the first-ever Joint Venture (JV) project between India and Bhutan.
- The JV partners are Satluj Jal Vidyut Nigam (SJVN), and the Druk Green Power Corporation (DGPC) from India and Bhutan respectively.

ImpPoints

- Description:
  - The Kholongchhu project is one of four additional projects agreed in 2008, as a part of India’s commitment to help Bhutan to create a total 10,000 MW of installed capacity by 2020.
  - The 600 MW run-of-the-river project is located on the lower course of the Kholongchhu river in eastern Bhutan’s Trashiyangtse district.
  - The project is expected to be completed in the second half of 2025.
  - The project will be constructed as a 50:50 joint venture.

- Significance:
  - Concession Period: The Government of India will provide, as a grant, the equity share of the Bhutanese DGPC in the JV Company. Once the project is commissioned, the JV partners will run it for 30 years, called the concession period, after which the full ownership will transfer to the Bhutan government, which will receive power from the project as a royalty.
  - Bilateral Cooperation: The tapping of hydropower in Bhutan would pave a way for successful bilateral cooperation and mutual engagement between India and Bhutan.
Strategic Interest: Being a member of BIMSTEC, Bhutan holds geostrategic importance for India. The shared sense of support and help in terms of such development projects between the two countries can help India in executing its Act East-Look East Policy.

Energy Trade: The project would act as a milestone in generation of energy and related trade. The project would aid in a clean and stabilising power source for India and also contribute to its renewable energy targets.

Employment Opportunities: Commencement of construction activities of the project will create economic and employment opportunities in Bhutan. India needs to focus on the youth of Bhutan, as it is the youth only, which would take the people-to-people contact forward in the future.

Economic Growth: The plant would drive economic growth and hence socio-economic development would be facilitated in Bhutan.

Concerns:
- Power Tariffs: The project which started in 2014 was on halt since December 2016 over India’s new power tariff guidelines on Cross Border Trade of Electricity - CBTE, until the government amended its guidelines after negotiations with the Bhutan government. Power tariff revision which includes the increase in the operations and maintenance charges may become a bone of contention.
- Risk of the JV-model: Another issue is regarding the risk of the JV-model for the project as Bhutan had expressed concern over a greater financial risk due to project delays.
  - The delays had an impact on Bhutan’s growth, as well as its exports and revenues. For example, the World Bank has attributed the decline in the country’s growth rate directly to delays in hydropower construction and the dip in electricity generation.
  - However, India has maintained that it prefers the more commercial model as it not only shares the risk, but also makes Indian PSUs show greater accountability on time and cost, as they become investors rather than contractors.

India Bhutan Hydropower Projects
- So far, Government of India has constructed three Hydroelectric Projects (HEPs) in Bhutan totaling 1416 MW (336 MW Chukha HEP, 60 MW Kurichhu HEP and 1020 MW Tala HEP), which are operational and exporting surplus power to India.
- India has recently completed 720 MW Mangdechhu HydroElectric Power Project and both sides are in process of expediting the completion of other ongoing projects including the 1200MW Punatsangchhu-1 & 1020MW Punatsangchhu-2.

Way Forward
- Both India and Bhutan have emphasised the importance of “hydro-power development” as one of the most important areas of mutually beneficial bilateral cooperation.
- Kholongchhu is a continuation of bilateral cooperation which epitomises the core of the
friendship for a greater good.

- However, the **delay in the implementation of the project** has led to cost escalation and missed opportunities in terms of immediate benefits to the community. Therefore, all the **details of a project should be thoroughly worked out** before the construction commences.

Source: IE
Self Reliance- Atma Nirbhar Abhiyan

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

In an effective response to an unprecedented emergency (Covid-19 pandemic) that disrupted most channels of national and international trade, Indian Prime Minister, under Atma Nirbhar Abhiyan, gave a clarion call for the country to become self-reliant.

India in the pre-1991 era also strived for achieving self-reliance and import substitution. While it resulted in a diversified economic base for heavy industries such as Steel, coal, petroleum refinery etc, India fell behind the curve on quality, technology and productivity.

Economists attribute these shortcomings to the then industrial and trade policies, particularly industrial licensing, physical barriers to import of goods, high tariffs and imperative economic policies.

Though Indian Prime Minister clarified that the current idea of self-reliance is not about a return to import substitution or autarkic isolationism, rather aimed at a quantum jump to the economic potential of the country by strengthening infrastructure, using modern technologies, enriching human resources, and creating robust supply chains.

In order to achieve this goal policy making needs to address underlying issues and leverage economic opportunities.

Underlying Issues in Becoming Self Reliant

- **Market Distortion**: India opened itself to the global market in 1991 through its LPG (liberalisation, privatisation and globalisation) reforms, but remained hesitant in giving the market model full freedom.
  - This may be reflected in market distorting subsidies and other restrictive policies, especially in Agriculture.
- **Weak Manufacturing**: India is far behind from its target of achieving manufacturing sector contribution of 25% of the GDP.
  - Currently, the Make In India initiative hasn’t reached its intended goal and manufacturing is only at about 17% of GDP.
- **Dependence on China**: India is dependent on China for imports related to electronics, solar equipment, pharmaceutical (Active pharmaceutical ingredients) and Capital goods. Without developing domestic capacity for manufacturing in these areas, breaking away from dependence on China would not be easy.
- **Federal Issue**: Information asymmetry with respect to Central and State governments can act as a roadblock on ease of doing business. This is particularly important in sectors like...
Available Opportunities

- **Global Manufacturing Shifting Away from China:** Mostly all the multinational companies are more concerned about concentration risk of businesses in China than ever before. So, the trend towards moving sourcing away from China will continue. India can attract these investments and become the next global manufacturing hub.

- **Ageing Global Population:** Considering demographics, most developed nations lack the workforce to produce all that they need in their own countries. India’s demographic dividend may adequately bridge the requirement for a young human resource for the world.

- **Huge Domestic Demand:** India is blessed with a vast array of natural resources, a huge demographic advantage, a large farming community, dynamic industrial setup (sectors like Automobiles and Information technology) and a set of entrepreneurial path-breakers. In this context, India has almost all the input as well as output (demand and supply) factors, those are needed for becoming self-reliant and stimulating demand.

Way Forward

Given the underlying issues and opportunities, it is vital to become competitive in pursuance of self-reliance.
Promoting Local: Being vocal for “local” is a key complement of Atma-Nirbhar Bharat Abhiyan. In this context, people must internalise the concept of valuing local products and artefacts and promoting them. Only after this the dream of transforming “Local” India into a “Glocal” India will be possible.

Favourable Policy: In general, competition enhances innovation and efficiency. However, crony capitalism weakens local competitiveness and often diverts resources away from more efficient and technologically innovative companies. Thus, policies should enhance domestic competition and eschew crony capitalism.

Support Control of Critical Value Chains: India cannot become self-reliant until it has control over domestic and global supply chains. Thus, there is a need to ensure greater control over certain parts of the global value chain to protect strategic interests, especially in healthcare, agriculture and defence.

Strengthen Public Procurement: Some steps like compulsory e-tendering and the creation of the Government Electronic Marketplace have already created a more level playing field for suppliers. These processes should be strengthened further by quickening the cycle time for completion of the “quote to cash” cycle of public procurement.

Focusing on Comparative Advantage: India can focus on one area where it can differentiate and attract global and domestic investors and be a leader. The next big thing for India can be 3D (additive) manufacturing, and robotics & automation. As these technologies are the confluence of manufacturing and IT, India’s leading edge on IT, provides a platform to become a leader in this space globally.

Source: FE

Police Reforms

Part of: GS-II- Governance (PT-MAINS-PERSONALITY TEST)

India’s existing police system suffers a series of deficiencies from problems relating to a police organization, environment, infrastructure, and understaffing, to obsolete weaponry and intelligence gathering techniques to a shortage of manpower to corruption, the police force in the country is not in a good shape.

Underreporting of crime in India

- An expert committee under the Ministry of Statistics and Programme Implementation has
noted that there is significant **under-reporting of crimes** under the NCRB. The National Crime Records Bureau (NCRB) under the Ministry of Home Affairs annual report called Crime in India, that records crime on the basis of the FIRs registered in the police stations across the country.  
- There could be suppression of data and low registration of crimes because the police know that their work is judged on the basis of this information.  
- Sometimes victims of crime may decide against reporting the incident with the police because they are afraid to approach the police, or think the crime is not serious enough, etc.

**Major Deficiencies**

- **Understaffed and overburdened police force:** The police-population ratio, currently 192 policemen per lakh population, is less than what is recommended by UN i.e. **222 policemen per lakh population.** There are only 144 police officers for every 100,000 citizens (the commonly used measure of police strength), making India’s police force one of the weakest in the world.

  - **Policing in India is a state subject** which means there is significant variation across states. Uttar Pradesh, Bihar, Andhra Pradesh and West Bengal’s police forces are all extremely understaffed with less than 100 police staff for 100,000 population. The only states with police forces that meet the global standard are the insurgency-affected states in the North-East and Punjab. Even as states have increased the sanctioned strength of their police forces, their populations have increased by even more -especially in states such as Uttar Pradesh and Bihar.

  - **Understaffing** in turn results into **overburdening** of work that not only reduces the **effectiveness and efficiency** of the police personnel (leading to poor quality of investigation) but also leads to **psychological distress** (which has been held responsible for various crimes committed by the policemen) and contributes to Pendency of cases.

- As a result of the overburdening of work, Police personnel discharges a range of functions related to:
  
  Crime prevention and response (e.g., intelligence collection, patrolling, investigation, production of witnesses in courts)

  Maintenance of internal security and law and order (e.g., crowd control, riot control, anti-terrorist or anti-extremist operations)

  Various miscellaneous duties (e.g., traffic management, disaster rescue and removal of encroachments).

**An overburdened police force:** A high percentage of vacancies within the police forces exacerbate an existing problem of overburdened police personnel.

- 86% of the state police comprises of the constabulary.
- Crime per lakh population has increased by 28% over the last decade (2005-2015).
However, convictions have been low.

- In 2015, convictions were secured in 47% of the cases registered under the Indian Penal Code, 1860. The Law Commission has observed that one of the reasons behind this is the poor quality of investigations.

- **Pendency:** 30% of all cases filed in 2016 were pending for investigation by the end of the year (this combined with the pendency in the judiciary means securing justice in India can take a very long time). Pendency in the police is driven by lack of resources.

- **Decreased Expenditure** on police in recent years is adding to the resource crunch. Between fiscal 2011 and 2015, states spent 4.4% of their budgeted expenditure on policing on average but this has reduced to 4% over the last four years. According to PRS Legislative Research, an under-resourced, overburdened police force means that both core police activities (enforcing daily law and order) and more long-term criminal investigations are compromised.

- **Police accountability:** As per the police laws, both the Central and State police forces come under the superintendence and control of political executives. Police priorities are frequently altered based on the will of political executives. In this context, the Second Administrative Reforms Commission in 2007 had noted that politicians were unduly influencing police personnel to serve personal or political interests.

- **Police-Public Relations,** which is an important concern in the effective policing is suffering from the great trust deficit. 2018 survey across 22 states on perceptions about policing, found that less than 25% of Indians trust the police highly (as compared to 54% for the army) and the reason for the distrust is that interactions with the police can be frustrating, time-consuming and costly.

- The **Second Administrative Reforms Commission** has noted that police-public relations is in an unsatisfactory state because people view the police as corrupt, inefficient, politically partisan and unresponsive.

- **Criminalization of Politics:** improper implementation of police reforms could be attributed to lack of political will, which in turn could be linked to the growing criminalization of politics. A large number of lawmakers in the Parliament with serious criminal charges imply little incentive to professionalize the police force. In each successive Lok Sabha election over the past twenty years, the proportion of candidates with serious criminal charges is rising. Low police salaries increases the vulnerability of police personnel to form a deep nexus with the criminals and the politicians.

**Way Forward**

- **SMART Police:** Police reforms are needed on three fronts:
  - Improvement in capacity and infrastructure of police forces.
  - Revisiting the constitution of police forces in the country through legislative/administrative changes.
  - Technological scaling-up.

- **Independent Complaints Authority:** The Second Administrative Reforms Commission and the Supreme Court have observed that there is a need to have an independent complaints authority to inquire into cases of police misconduct. This may be because the
political executive and internal police oversight mechanisms may favour law enforcement authorities, and not be able to form an independent and critical judgment.

- **Community Policing Model** can help in reducing the trust deficit between police and public as it requires the police to work with the community for prevention and detection of crime, maintenance of public order, and resolving local conflicts, with the objective of providing a better quality of life and sense of security.

- Various states have been experimenting with community policing including Kerala through ‘Janamaithri Suraksha Project’, Rajasthan through ‘Joint Patrolling Committees’, Assam through ‘Meira Paibi’, Tamil Nadu through ‘Friends of Police’, West Bengal through the ‘Community Policing Project’, Andhra Pradesh through ‘Maithri’ and Maharashtra through ‘Mohalla Committees’.

- Binding powers must be conferred on **State Security Commissions and the Police Establishment Boards** as many of these Commissions did not have the power to issue binding recommendations.

- Constitute **Police Complaints Authorities** at the state and district levels to inquire into allegations of serious misconduct and abuse of power by police personnel.

- The CAG and the Bureau Of Police Research And Development (BPRD) have noted that modern policing requires strong communication support, state-of-art or modern weapons, and a high degree of mobility.

- Proper utilization of center and states funds allocated for modernisation of state police forces as these funds are typically used for strengthening police infrastructure, by way of construction of police stations, purchase of weaponry, communication equipment and vehicles.

Internal security is very much a prerogative of police and efficient policing is needed in order to tackle threats arising in the form of cyber-attacks, bank frauds, and organized crimes, which need to be tackled in a more specialized manner but for that, the police system needs to be efficient, effective and technologically sound.

Source: PSIR
China is soon to become the largest economy in the world. Its growth is based on technology, innovation, and trade, which sought to balance U.S. military superiority, and has fueled the strategic rivalry between the two countries.

The rising tensions between the US and China have prompted many experts to warn of a new Cold War akin to the Cold War between the US and USSR.

In 2017, the US National Security Strategy called China as “a revisionist power” seeking “to erode American security and prosperity” and “shape a world antithetical to U.S. values and interests”. Also, China has been proactive in undermining the US hegemony on multiple fronts.

COVID-19 pandemic has further aggravated the deterioration of ties between the two countries. Thus, this new Cold War between China and the United States is a major geopolitical risk of the 21st century.

Events Signalling a New Cold War

- China has come out with alternative governance mechanisms to the U.S.-dominated International Monetary Fund, World Bank and World Trade Organization with its all-encompassing Belt and Road Initiative and institutions like Asia infrastructure investment bank, contingency reserve agreement (CRA) of New Development Bank.
- For several decades, China’s breakneck development under the relatively enlightened authoritarianism of Deng Xiaoping and his successors was seen positively in the United
States. However, under Xi Jinping, China has evolved from a soft to a hard authoritarianism. There is now a president-for-life with a budding personality cult.  
- In order to contain rising China’s assertiveness, the US under its ‘pivot to Asia policy’ has launched a quad initiative, Indo pacific narrative. Most recently, the US proposed to expand G7 to G-11 without including China in it.  
- China’s incremental “salami slicing” tactics in the South China Sea, first by land reclamation and then constructing artificial islands for extending extra-territorial claim, has seen sharp criticism from the US and its allies. It is similar to the way dominance over the Caribbean enabled the United States to strategically control the Atlantic Ocean and thus, affect the balance of forces in the two world wars and a cold war.  
- From Trade war to tensions over 5G telecommunications to currency wars, US-China confrontation is on multiple economic fronts. Further, the donor-recipient relationship between US and developing countries has weakened with China’s pledge of $2-billion amid COVID-19 pandemic, thereby starting a new phase of donation diplomacy.  
- Moreover, China perceives US support for Taiwan as an interference in its internal matters.

Differences Over Previous Cold War

There are several key differences between the previous Cold War between the US & Soviet Union and the Cold War between the US and China. 

- **No Ideological conflict**: Cold War between the US and Soviet Union was a battle between two opposing ideologies viz. capitalism vs communism, whereas there is no such ideological conflict between US and China.  
- **No proxy conflicts**: Previous Cold War was full of proxy conflicts between the US and Soviet Union like in Cuban missile crisis 1962, Soviet afghan war 1979-89, etc. However, till now there are no proxy wars between the U.S. and China.  
- **Multi-polar world**: Today, the world is also not bipolar anymore. There are countries like Russia, India and Japan, which act as swing states, as they have a choice whether or not to align with the US or China.  
- **Economic interdependence**: Unlike the US and Soviet Union, the economies of US and China are closely integrated through investments and markets in a hyper globalized world.

Role of India

India is a rising global power and citing its importance both the US and China sought to attract India in its camp. Foreign policy experts in the US argue India is a Natural US Ally in the New Cold War. On the other hand Chinese’s Ambassador in India has suggested writing “together a new chapter” with “a shared future for mankind”. In this context:

- India can promote new multilateralism under the aegis of Vasudhaiva Kutumbakam- which relies on restructuring both the economic order and societal behaviour for equitable sustainable development.  
- India must take up intensified diplomacy with global powers so that Asian Century can be
defined in terms of peaceful co-existence and global interest.

- Apart from it, India Should acknowledge that national security now relies on technological superiority in artificial intelligence (AI), cyber and space, and not expensive capital equipment. Thus, India should become self sufficient in the domain of critical technologies.

Conclusion
As India joins the UN Security Council (non-permanent seat) and chairs the BRICS Summit and hosts the G-20 in 2022, the development will bring opportunity for India to assume leadership role and propose a new globalisation model based on humanity, fairness and equality has wide support in a more equal world rather than a world divided by Cold War.

Source: Web

India and Bhutan - Kholongchhu Hydropower Project
GS-II | 01 July, 2020

India and Bhutan - Kholongchhu Hydropower Project

Part of: GS-II- India and South Asia (PT-MAINS-PERSONALITY TEST)

Recently, India and Bhutan have signed concession agreement on the 600 MW Kholongchhu Hydropower Project.

- It will be the first-ever Joint Venture (JV) project between India and Bhutan.
- The JV partners are Satluj Jal Vidyut Nigam (SJVN), and the Druk Green Power Corporation (DGPC) from India and Bhutan respectively.

ImpPoints

- Description:
  - The Kholongchhu project is one of four additional projects agreed in 2008, as a part of India’s commitment to help Bhutan to create a total 10,000 MW of installed capacity by 2020.
  - The 600 MW run-of-the-river project is located on the lower course of the Kholongchhu river in eastern Bhutan’s Trashiyangtse district.
  - The project is expected to be completed in the second half of 2025.
  - The project will be constructed as a 50:50 joint venture.

- Significance:
  - Concession Period: The Government of India will provide, as a grant, the equity share of the Bhutanese DGPC in the JV Company. Once the project is commissioned, the JV partners will run it for 30 years, called the concession period, after which the full ownership will transfer to the Bhutan government, which will receive power from the project as a royalty.
  - Bilateral Cooperation: The tapping of hydropower in Bhutan would pave a way for successful bilateral cooperation and mutual engagement between India and Bhutan.
Strategic Interest: Being a member of BIMSTEC, Bhutan holds geostrategic importance for India. The shared sense of support and help in terms of such development projects between the two countries can help India in executing its Act East-Look East Policy.

Energy Trade: The project would act as a milestone in generation of energy and related trade. The project would aid in a clean and stabilising power source for India and also contribute to its renewable energy targets.

Employment Opportunities: Commencement of construction activities of the project will create economic and employment opportunities in Bhutan. India needs to focus on the youth of Bhutan, as it is the youth only, which would take the people-to-people contact forward in the future.

Economic Growth: The plant would drive economic growth and hence socio-economic development would be facilitated in Bhutan.

Concerns:

- **Power Tariffs**: The project which started in 2014 was on halt since December 2016 over India’s new power tariff guidelines on Cross Border Trade of Electricity - CBTE, until the government amended its guidelines after negotiations with the Bhutan government. **Power tariff revision** which includes the increase in the operations and maintenance charges may become a bone of contention.

- **Risk of the JV-model**: Another issue is regarding the risk of the JV-model for the project as Bhutan had expressed concern over a greater financial risk due to project delays.
  - The delays had an impact on Bhutan’s growth, as well as its exports and revenues. For example, the World Bank has attributed the decline in the country’s growth rate directly to delays in hydropower construction and the dip in electricity generation.
  - However, India has maintained that it prefers the more commercial model as it not only shares the risk, but also makes Indian PSUs show greater accountability on time and cost, as they become investors rather than contractors.

India Bhutan Hydropower Projects

- So far, Government of India has constructed three Hydroelectric Projects (HEPs) in Bhutan totaling 1416 MW (336 MW Chukha HEP, 60 MW Kurichhu HEP and 1020 MW Tala HEP), which are operational and exporting surplus power to India.
- India has recently completed 720 MW Mangdechhu HydroElectric Power Project and both sides are in process of expediting the completion of other ongoing projects including the 1200MW Punatsangchhu-1 & 1020MW Punatsangchhu-2.

Way Forward

- Both India and Bhutan have emphasised the importance of “hydro-power development” as one of the most important areas of mutually beneficial bilateral cooperation.
- Kholongchhu is a continuation of bilateral cooperation which epitomises the core of the
friendship for a greater good.

- However, the **delay in the implementation of the project** has led to cost escalation and missed opportunities in terms of immediate benefits to the community. Therefore, all the **details of a project should be thoroughly worked** out before the construction commences.

Source: IE
Legal principles to reduce custodial deaths

Part of: GS-II- Governance POLICE REFORMS (PT-MAINS-PERSONALITY TEST)

Understanding the background of problem

- In wake of custodial deaths in Tamil Nadu, the debate on Roman dilemma: “Who will guard the guardians” rises again. Torture is anathema to democracy and cannot be tolerated in a civilized society.
- Answer to prevention of torture can be found in multiple sources like Royal Commissions in the UK, Law Commission report and Police Commission reports in India and also Supreme Court’s progressive case law, like Joginder Kumar (1994) and Nilabati Behera (1993).
- However, the basic loophole which exists even today is that most torture is done before the arrest is recorded by the police. Safeguards obviously kick in only after the arrest is shown. This is a perennial, insoluble dilemma and all devious police forces globally use it.

Supreme Court judgement in DK Basu case

- The DK Basu judgement since 1987 is crucial in dealing with issue of custodial deaths.
- The judgement has origin from a letter complaint in 1986, which was converted into PIL.
- 4 crucial and comprehensive judgments — in 1996, twice in 2001 and in 2015 — lay down over 20 commandments, forming the complete structure of this judgement.

Details of judgment:

First 11 commandments in 1996, focused on vital processual safeguards:

- All officials must carry name tags and full identification, arrest memo must be prepared, containing all details regarding time and place of arrest, attested by one family member or respectable member of the locality.
- The location of arrest must be intimated to one family or next friend, details notified to the nearest legal aid organisation and arrestee must be made known of DK Basu judgement.
- All such compliances must be recorded in the police register, arrestee must get periodical medical examination, inspection memo must be signed by arrestee also and all such information must be centralised in a central police control room.
- Breach to be culpable with severe departmental action and additionally contempt also, and this would all be in addition to, not substitution of, any existing remedy.
- All of the above preventive and punitive measures could go with, and were not alternatives to, full civil monetary damage claims for constitutional tort.

8 other intermediate orders till 2015 sought:
Precise detailed compliance reports of above orders to be submitted by all states and UT and any delayed responses looked into by special sub-committees appointed by state human rights body.

- Also where no SHRC existed, the chief justice of the high courts to monitor it administratively.
- It emphasised that existing simple but potent powers for magisterial inquiries under the CrPC were lackadaisical and must be completed in four months, unless sessions court judges recorded reasons for extension.
- It also directed SHRCs to be set up expeditiously in each part of India.

The third and last phase of judgment ended in 2015:

- Stern directions were given to set up SHRCs and also fill up large vacancies in existing bodies.
- The power of setting up human rights courts under Section 30 of the NHRC Act was directed to be operationalized.
- All prisons had to have CCTVs within one year.
- Non-official visitors would do surprise checks on prisons and police stations.
- Prosecutions and departmental action to be made unhesitatingly mandated.

Where do we lack?

- In operationalising the spirit of DK Basu judgment, in punitive measures, in last mile implementation, in breaking intra-departmental solidarity with errant policemen and in ensuring swift, efficacious departmental coercive action plus criminal prosecution.
- A 1985 Law Commission report directing enactment of section 114-B into our Evidence Act, raising a rebuttable presumption of culpability against the police if anyone in their custody dies or is found with torture, has still not become law, despite a bill introduced as late as 2017.
- We still have abysmally deplorable rates of even initiating prosecutions against accused police officers. Actual convictions are virtually non-existent.

Consider the question “Custodial torture is an anathema to democracy. Examine the issues related to custodial torture and how is it against the basic fundamental rights? What steps should be taken to prevent such acts by the police functionaries?”

Conclusion

Monitoring and implementation of DK Basu by independent and balanced civil society individuals at each level, under court supervision, is sufficient to minimise this scourge. It is high time we take actions in this direction.
Need for Police reforms in India

Part of: GS-II- Governance POLICE REFORMS (PT-MAINS-PERSONALITY TEST)

Context: The Police system in India and its sorry state once again came to the fore recently when a father-Son duo, namely P Jeyaraj (58) and Fenix (31) respectively, died in Police custody in Tamil Nadu. The relatives and protestors fear this to be a case of police brutality. The reason for their arrest was that they kept their shop open beyond permitted time (restrictions placed in the light of COVID-19).

Historical Background

- The Police System is a colonial legacy. The first Police commission was set up in 1857 soon after the mutiny. First Indian Police Act was enacted in 1861-(PT)
- Post – independence, we are still governed majorly by Indian Police Act (IPA) of 1861 which was drafted as a direct consequence of the Revolt of 1857.
- Sir A H L Curzon commission was established in 1902-03 for Police Reforms and to look into issues arising because of Indian police Act 1861. It recommended the appointment of local people at officer level in the police system.
- National Police Committee, 1978 was the first commission at the national level after independence.
- It had a broad term of reference covering the police organization, its role, functionality, accountability, relations with the public etc.
- It produced eight reports including Model Police Act, between 1979-81. But the majority of recommendations of NCP have remained unimplemented.
Major issues with Police in India

- **Risk to life**: The risk to life in Police is very high. Policemen are killed in India in the performance of duties than in any other country of the world. There’s no indication that in future the risk element would be less.

- **Police Infrastructure**: The weaponry, vehicles etc. used by police force at lower level is obsolete and is unmatched with the modern weaponry used by the criminals and anti-social elements.

- **Qualifications and training of police personnels**: Police training methods have been out dated and aspects of human rights are largely ignored in training modules. Training of police officials is heavily biased in favour of higher level officials. 94% of the total training expenditure is on IPS officers’ training.

- **Unscientific criminal investigation techniques** and lack of training in Human rights lead to inhuman techniques of investigation like the third degree which consists of hammering iron nails in the body, beating the soles of the feet, stretching apart the legs in opposite direction, hitting private part and other draconian acts.

- **Huge vacancies**: With the phenomenal expansion of the geographic area to be policed and the increase in the number of lives to be guarded, the Indian police, more than in many western democracies, have been stretched and outnumbered. There are only about 140 policemen per 100,000 people, a very poor ratio when compared to other modern democracies.

- **Over-burden**: Police force is over-burdened especially at lower levels where constabulary is forced to work continuously for 14-16 hours, 7 days a week. It adversely impacts their performance.

- **Arduous nature of duties and working conditions**: The nature of the duties is very uncertain and the police itself say that policemen are on duty all the time – it’s a violation of Human Rights.

- **Politicization of Police**: Politicization of a police force is a major problem as it affects the autonomy of police force making them to subserve the interests of political executive at the cost of ordinary citizens.

- **CID at the state level has failed to perform because of political cases led by the ruling parties against their opponents and because of excessive political interference by political executive.**

- **Lack of coordination between centre and states** is a matter related to maintenance of law & order results in ineffective functioning of police force. The dual command at district and state levels have resulted in the problem of co-ordination between the civil servants and police officials because of ego clashes and inconceivable personal differences.
Ineffectiveness against new forms of crimes: Police force is not in the position to tackle present days’ problems of cyber-crimes, global terrorism, naxalism because of its structural weaknesses. Aversion towards usage of technology among police personnel

Underutilisation of funds for modernisation: Both centre and states allocate funds for modernisation of state police forces. These funds are typically used for strengthening police infrastructure, by way of construction of police stations, purchase of weaponry, communication equipment and vehicles. However, there has been a persistent problem of underutilisation of modernisation funds.

Prevailing Corruption: The pay scales of police personnel especially at the lower levels are very low and they are forced to adopt corrupt means to earn their livelihood. Prevalence of Rank system within the police force results in abuse of power by top level executive over lower level personnel.

Committee related to police reforms

- **Gore committee on police training in 1971-73**: The main thrust of the Committee's recommendations was towards enlarging the content of police training from law and order and crime prevention to a greater sensitivity and understanding of human behaviour.
- **National police commission 1977**: Major recommendations were centered on the problem of insulating the police from illegitimate political and bureaucratic interference.
- **In 2000, the Padmanabhaiah Committee** on Police Reforms was constituted to study, inter alia, recruitment procedures for the police force, training, duties and responsibilities, police officers' behaviour, police investigations and prosecution.
- The Police Act Drafting Committee (PADC or Soli Sorabjee Committee) that drafted a new model police bill to replace the colonial 1861 Police Act.

Supreme Court Judgments:

- The 2006 verdict of the Supreme Court in the Prakash Singh vs Union of India case was the landmark in the fight for police reforms in India. The Court provide following directives to kick-start reforms:
  - Constitute a **State Security Commission (SSC)** to ensure that state government does not exercise unwarranted influence or pressure on the police. The main functions of the SSC were supposed to include drafting broad policy guidelines, evaluating the performance of the police and
NITI Aayog suggested the following reforms:

State level legislative reforms:

- States should be encouraged, with fiscal incentives, to introduce ‘The Model Police Act of 2015’ as it modernizes the mandate of the police.

Administrative and operational reform

- A Task Force must be created under the MHA to identify non-core functions that can be outsourced to save on manpower and help in reducing the workload of the police.
- Functions such as serving court summons and antecedents and addresses verification for passport applications or job verifications can be outsourced to private agents or government departments.
- The states should be encouraged to ensure that the representation of women in the police force is increased.
- India should launch a common nation-wide contact for attending to urgent security needs of the citizens.
- NITI Aayog also suggests moving police as well as public order to the Concurrent List to tackle increasing inter-state crime and terrorism under a unified framework.

Best Practices: Janamaithri Suraksha in Kerala: This project is an initiative of the Kerala Police to facilitate greater accessibility, close interaction and better understanding between the police and local communities. For example, Beat Constables are required to know at least one family member of every family living...
in his beat area, and allocate some time to meet with people outside the police station every week. Janamaithri Suraksha Committees are also formed with municipal councillors, representatives of residents' associations, local media, high schools and colleges, retired police officers, etc. to facilitate the process.

Meira Paibi (Torch-bearers) in Assam: The women of the Manipuri Basti in Guwahati help with improving the law and order problem in their area, by tackling drug abuse among the youth. They light their torches and go around the basti guarding the entry and exit points, to prevent the youth of the area from going out after sunset.

Solutions:

- Need to strengthen **Criminal Justice System and grassroots level policing institutions.**
- More investment is needed in the recruitment procedure.
- **Better training, better pay and allowances and creating a system that rewards initiatives need to be incorporate.**
- Increase budget expenditure on police. Improving police infrastructure.
- **Independent Complaints Authority.** Need to adopt latest IT-enabled services.
- Improve Citizen police participation like **bhagidari in Delhi and janamaitri suraksha in Kerala**
- Strengthen its **investigative capabilities and emergency response infrastructure.**
- Police should be made more gender sensitive. **33% women reservation in police should be implemented**
- There is need for broader political awareness about the need for police reform. Some states like Kerala and Telangana have tried to take the process forward.
- PM Modi, at the Guwahati Conference of the Directors of General Police in 2014, enunciated the concept of **SMART Police-a police** which should be sensitive, mobile, alert, reliable and techno-savvy.

Source: TH

---

**Micro Food Processing Enterprises Scheme**
Micro Food Processing Enterprises Scheme

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the *Ministry of Food Processing Industries (MoFPI)* has launched the *PM Formalization of Micro Food Processing Enterprises (PM FME) scheme* as a part of ‘Atmanirbhar Bharat Abhiyan’.

The Scheme is expected to generate a total investment of Rs. 35,000 crore and 9 lakh skilled and semi-skilled employment.

**Features:**

**One District One Product (ODOP) Approach:** The States would identify food products for districts keeping in view the existing clusters and availability of raw material.

The ODOP could be a perishable produce based or cereal based or a food item widely produced in an area. *E.g.* mango, potato, pickle, millet based products, fisheries, poultry, etc.

**Other Focus Areas:**

- Waste to wealth products, minor forest products and *Aspirational Districts*.
- **Capacity building and research:** Academic and research institutions under MoFPI along with State Level Technical Institutions would be provided support for training of units, product development, appropriate packaging and machinery for micro units.

**Financial Support:** Existing individual micro food processing units desirous of upgrading their units can **avail credit-linked capital subsidy at 35% of the eligible project cost with a maximum ceiling of Rs.10 lakh per unit.**

Support would be provided through credit linked grants at 35% for development of common infrastructure including common processing facility, lab, warehouse, etc. through FPOs/SHGs/cooperatives or state owned agencies or private enterprise.

A seed capital (initial funding) of Rs. 40,000- per *Self Help Group (SHG)* member.
would be provided for working capital and purchase of small tools.

Duration: It will be implemented over a period of **five years from 2020-21 to 2024-25**.

Funding Details:

- It is a **centrally sponsored scheme** with an outlay of Rs. 10,000 crore.
- The expenditure under the scheme would be shared in **60:40 ratio** between Central and State Governments, in **90:10 ratio** with North Eastern and Himalayan States, **60:40 ratio** with UTs with legislature and **100%** by Centre for other UTs.

**Need:**

- The unorganized food processing sector comprising nearly 25 lakh units contributes to **74% of employment** in the **food processing sector**.
- Nearly **66% of these units are located in rural areas** and about **80% of them are family-based enterprises** supporting livelihood of rural households and minimizing their migration to urban areas. These units largely fall within the category of micro enterprises.
- The unorganised food processing sector faces a number of challenges which limit their performance and their growth. The **challenges** include lack of access to modern technology & equipment, training, access institutional credit, lack of basic awareness on quality control of products; and lack of branding & marketing skills etc.

Source: PIB
Legal principles to reduce custodial deaths

Part of: GS-II- Governance POLICE REFORMS (PT-MAINS-PERSONALITY TEST)

Understanding the background of problem

- In wake of custodial deaths in Tamil Nadu, the debate on Roman dilemma: “Who will guard the guardians” rises again. Torture is anathema to democracy and cannot be tolerated in a civilized society.
- Answer to prevention of torture can be found in multiple sources like Royal Commissions in the UK, Law Commission report and Police Commission reports in India and also Supreme Court’s progressive case law, like Joginder Kumar (1994) and Nilabati Behera (1993).
- However, the basic loophole which exists even today is that most torture is done before the arrest is recorded by the police. Safeguards obviously kick in only after the arrest is shown. This is a perennial, insoluble dilemma and all devious police forces globally use it.

Supreme Court judgement in DK Basu case

- The DK Basu judgment since 1987 is crucial in dealing with issue of custodial deaths.
- The judgement has origin from a letter complaint in 1986, which was converted into PIL.
- 4 crucial and comprehensive judgments — in 1996, twice in 2001 and in 2015 — lay down over 20 commandments, forming the complete structure of this judgement.

Details of judgment:

First 11 commandments in 1996, focused on vital processual safeguards:

- All officials must carry name tags and full identification, arrest memo must be prepared, containing all details regarding time and place of arrest, attested by one family member or respectable member of the locality.
- The location of arrest must be intimated to one family or next friend, details notified to the nearest legal aid organisation and arrestee must be made known of DK Basu judgement.
- All such compliances must be recorded in the police register, arrestee must get periodical medical examination, inspection memo must be signed by arrestee also and all such information must be centralised in a central police control room.
- Breach to be culpable with severe departmental action and additionally contempt also, and this would all be in addition to, not substitution of, any existing remedy.
- All of the above preventive and punitive measures could go with, and were not alternatives to, full civil monetary damage claims for constitutional tort.

8 other intermediate orders till 2015 sought:
Precise detailed compliance reports of above orders to be submitted by all states and UT and any delayed responses looked into by special sub-committees appointed by state human rights body.

Also where no SHRC existed, the chief justice of the high courts to monitor it administratively.

It emphasised that existing simple but potent powers for magisterial inquiries under the CrPC were lackadaisical and must be completed in four months, unless sessions court judges recorded reasons for extension.

It also directed SHRCs to be set up expeditiously in each part of India.

The third and last phase of judgment ended in 2015:

- Stern directions were given to set up SHRCs and also fill up large vacancies in existing bodies.
- The power of setting up human rights courts under Section 30 of the NHRC Act was directed to be operationalized.
- All prisons had to have CCTVs within one year.
- Non-official visitors would do surprise checks on prisons and police stations.
- Prosecutions and departmental action to be made unhesitatingly mandated.

Where do we lack?

- In operationalising the spirit of DK Basu judgment, in punitive measures, in last mile implementation, in breaking intra-departmental solidarity with errant policemen and in ensuring swift, efficacious departmental coercive action plus criminal prosecution.
- A 1985 Law Commission report directing enactment of section 114-B into our Evidence Act, raising a rebuttable presumption of culpability against the police if anyone in their custody dies or is found with torture, has still not become law, despite a bill introduced as late as 2017.
- We still have abysmally deplorable rates of even initiating prosecutions against accused police officers. Actual convictions are virtually non-existent.

Consider the question “Custodial torture is an anathema to democracy. Examine the issues related to custodial torture and how is it against the basic fundamental rights? What steps should be taken to prevent such acts by the police functionaries?”

Conclusion

Monitoring and implementation of DK Basu by independent and balanced civil society individuals at each level, under court supervision, is sufficient to minimise this scourge. It is high time we take actions in this direction.
Need for Police reforms in India

Part of: GS-II- Governance POLICE REFORMS (PT-MAINS-PERSONALITY TEST)

Context: The Police system in India and its sorry state once again came to the fore recently when a father-Son duo, namely P Jeyaraj (58) and Fenix (31) respectively, died in Police custody in Tamil Nadu. The relatives and protestors fear this to be a case of police brutality. The reason for their arrest was that they kept their shop open beyond permitted time (restrictions placed in the light of COVID-19).

Historical Background

- The Police System is a colonial legacy. The first Police commission was set up in 1857 soon after the mutiny. First Indian Police Act was enacted in 1861-(PT)
- Post – independence, we are still governed majorly by Indian Police Act (IPA) of 1861 which was drafted as a direct consequence of the Revolt of 1857.
- Sir A H L Curzon commission was established in 1902-03 for Police Reforms and to look into issues arising because of Indian police Act 1861. It recommended the appointment of local people at officer level in the police system.
- National Police Committee, 1978 was the first commission at the national level after independence.
- It had a broad term of reference covering the police organization, its role, functionality, accountability, relations with the public etc.
- It produced eight reports including Model Police Act, between 1979-81. But the majority of recommendations of NCP have remained unimplemented.
Major issues with Police in India

- **Risk to life**: The risk to life in Police is very high. Policemen are killed in India in the performance of duties than in any other country of the world. There’s no indication that in future the risk element would be less.

- **Police Infrastructure**: The weaponry, vehicles etc. used by police force at lower level is obsolete and is unmatched with the modern weaponry used by the criminals and anti-social elements.

- **Qualifications and training of police personnels**: Police training methods have been out dated and aspects of human rights are largely ignored in training modules.
  
  Training of police officials is heavily biased in favour of higher level officials. 94% of the total training expenditure is on IPS officers’ training.

- **Unscientific criminal investigation techniques** and lack of training in Human rights lead to inhuman techniques of investigation like the third degree which consists of hammering iron nails in the body, beating the soles of the feet, stretching apart the legs in opposite direction, hitting private part and other draconian acts.

- **Huge vacancies**: With the phenomenal expansion of the geographic area to be policed and the increase in the number of lives to be guarded, the Indian police, more than in many western democracies, have been stretched and outnumbered. There are only about 140 policemen per 100,000 people, a very poor ratio when compared to other modern democracies.

- **Over-burden**: Police force is over-burdened especially at lower levels where constabulary is forced to work continuously for 14-16 hours, 7 days a week. It adversely impacts their performance.

- **Arduous nature of duties and working conditions**: The nature of the duties is very uncertain and the police itself say that policemen are on duty all the time – it’s a violation of Human Rights.

- **Politicization of Police**: Politicization of a police force is a major problem as it affects the autonomy of police force making them to subserve the interests of political executive at the cost of ordinary citizens.

- **CID at the state level has failed to perform** because of political cases led by the ruling parties against their opponents and because of excessive political interference by political executive.

- **Lack of coordination between centre and states** is a matter related to maintenance of law & order results in ineffective functioning of police force. The dual command at district and state levels have resulted in the problem of co-ordination between the civil servants and police officials because of ego clashes and inconceivable personal differences.
Ineffectiveness against new forms of crimes: Police force is not in the position to tackle present day's problems of cyber-crimes, global terrorism, naxalism because of its structural weaknesses. Aversion towards usage of technology among police personnel.

Underutilisation of funds for modernisation: Both centre and states allocate funds for modernisation of state police forces. These funds are typically used for strengthening police infrastructure, by way of construction of police stations, purchase of weaponry, communication equipment and vehicles. However, there has been a persistent problem of underutilisation of modernisation funds.

Prevailing Corruption: The pay scales of police personnel especially at the lower levels are very low and they are forced to adopt corrupt means to earn their livelihood. Prevalence of Rank system within the police force results in abuse of power by top level executive over lower level personnel.

Committee related to police reforms

- **Gore committee on police training in 1971-73**: The main thrust of the Committee's recommendations was towards enlarging the content of police training from law and order and crime prevention to a greater sensitivity and understanding of human behaviour.
- **National police commission 1977**: Major recommendations were centered on the problem of insulating the police from illegitimate political and bureaucratic interference.
- **In 2000, the Padmanabhaiah Committee** on Police Reforms was constituted to study, inter alia, recruitment procedures for the police force, training, duties and responsibilities, police officers' behaviour, police investigations and prosecution.
- The Police Act Drafting Committee (PADC or Soli Sorabjee Committee) that drafted a new model police bill to replace the colonial 1861 Police Act.

Supreme Court Judgments:

- The 2006 verdict of the Supreme Court in the Prakash Singh vs Union of India case was the landmark in the fight for police reforms in India. The Court provided following directives to kick-start reforms:
  - Constitute a State Security Commission (SSC) to ensure that state government does not exercise unwarranted influence or pressure on the police. The main functions of the SSC were supposed to include drafting broad policy guidelines, evaluating the performance of the police and...
preparing an annual report to be placed before the legislature.

- Ensure that the DGP is appointed through the merit-based transparent process and secure a minimum tenure of two years.
- Police officers on operational duties (including SP and SHO) are also provided a minimum tenure of two year.
- Separate the investigation and law and order functions of the police.
- Set up a Police Establishment Board (PEB) to decide transfers, postings, promotions and other service related matters of police.
- Set up a Police Complaints Authority (PCA) at state level to inquire into public complaints against police officers above the rank of Deputy Superintendent of Police.
- Set up a National Security Commission (NSC) at the union level to prepare a panel for selection and placement of Chiefs of the Central Police Organizations (CPO) with a minimum tenure of two years.

NITI Aayog suggested the following reforms:

State level legislative reforms:

- States should be encouraged, with fiscal incentives, to introduce ‘ The Model Police Act of 2015’ as it modernizes the mandate of the police.

Administrative and operational reform

- A Task Force must be created under the MHA to identify non-core functions that can be outsourced to save on manpower and help in reducing the workload of the police.
- Functions such as serving court summons and antecedents and addresses verification for passport applications or job verifications can be outsourced to private agents or government departments.
- The states should be encouraged to ensure that the representation of women in the police force is increased.
- India should launch a common nation-wide contact for attending to urgent security needs of the citizens.
- NITI Aayog also suggests moving police as well as public order to the Concurrent List to tackle increasing inter-state crime and terrorism under a unified framework.

Best Practices: Janamaithri Suraksha in Kerala: This project is an initiative of the Kerala Police to facilitate greater accessibility, close interaction and better understanding between the police and local communities. For example, Beat Constables are required to know at least one family member of every family living
in his beat area, and allocate some time to meet with people outside the police station every week. Janamaithri Suraksha Committees are also formed with municipal councillors, representatives of residents’ associations, local media, high schools and colleges, retired police officers, etc. to facilitate the process.

**Meira Paibi (Torch-bearers) in Assam**: The women of the Manipuri Basti in Guwahati help with improving the law and order problem in their area, by tackling drug abuse among the youth. They light their torches and go around the basti guarding the entry and exit points, to prevent the youth of the area from going out after sunset.

**Solutions:**

- Need to strengthen **Criminal Justice System and grassroots level policing institutions**.
- More investment is needed in the recruitment procedure.
- **Better training, better pay and allowances and creating a system that rewards initiatives need to be incorporate.**
- Increase budget expenditure on police. Improving police infrastructure.
- **Independent Complaints Authority.** Need to adopt latest IT-enabled services.
- Improve Citizen police participation like **bhagidari in delhi and janamaitri suraksha in kerala**
- Strengthen its **investigative capabilities and emergency response infrastructure.**
- Police should be made more gender sensitive. **33% women reservation in police should be implemented.**
- There is need for broader political awareness about the need for police reform. Some states like **Kerala and Telangana have tried to take the process forward.**
- **PM Modi, at the Guwahati Conference of the Directors of General Police in 2014, enunciated the concept of SMART Police-a police which should be sensitive, mobile, alert, reliable and techno-savvy.**

Source: TH

---

**Micro Food Processing Enterprises Scheme**
Micro Food Processing Enterprises Scheme

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the Ministry of Food Processing Industries (MoFPI) has launched the PM Formalization of Micro Food Processing Enterprises (PM FME) scheme as a part of ‘Atmanirbhar Bharat Abhiyan’.

The Scheme is expected to generate a total investment of Rs. 35,000 crore and 9 lakh skilled and semi-skilled employment.

Features:

One District One Product (ODOP) Approach: The States would identify food products for districts keeping in view the existing clusters and availability of raw material.

The ODOP could be a perishable produce based or cereal based or a food item widely produced in an area. E.g. mango, potato, pickle, millet based products, fisheries, poultry, etc.

Other Focus Areas:

- Waste to wealth products, minor forest products and Aspirational Districts.
- Capacity building and research: Academic and research institutions under MoFPI along with State Level Technical Institutions would be provided support for training of units, product development, appropriate packaging and machinery for micro units.

Financial Support: Existing individual micro food processing units desirous of upgrading their units can avail credit-linked capital subsidy at 35% of the eligible project cost with a maximum ceiling of Rs.10 lakh per unit.

Support would be provided through credit linked grants at 35% for development of common infrastructure including common processing facility, lab, warehouse, etc. through FPOs/SHGs/cooperatives or state owned agencies or private enterprise.

A seed capital (initial funding) of Rs. 40,000- per Self Help Group (SHG) member.
would be provided for working capital and purchase of small tools.

**Duration:** It will be implemented over a period of **five years from 2020-21 to 2024-25.**

**Funding Details:**
- It is a centrally sponsored scheme with an outlay of Rs. 10,000 crore.
- The expenditure under the scheme would be shared in 60:40 ratio between Central and State Governments, in 90:10 ratio with North Eastern and Himalayan States, 60:40 ratio with UTs with legislature and 100% by Centre for other UTs.

**Need:**
- The unorganized food processing sector comprising nearly 25 lakh units contributes to **74% of employment** in the **food processing sector.**
- Nearly **66% of these units are located in rural areas** and about **80% of them are family-based enterprises** supporting livelihood of rural households and minimizing their migration to urban areas. These units largely fall within the category of micro enterprises.
- The unorganized food processing sector faces a number of challenges which limit their performance and their growth. The **challenges** include lack of access to modern technology & equipment, training, access institutional credit, lack of basic awareness on quality control of products; and lack of branding & marketing skills etc.

Source: PIB
Integrated Disease Surveillance Programme

- The Integrated Disease Surveillance Programme has been activated as a response to the Covid-19 pandemic.
- The Integrated Disease Surveillance Project was launched by the Ministry of Health and Family Welfare, in assistance with the World Bank, in 2004.
- It continued as the Integrated Disease Surveillance Programme (IDSP) during 12th Plan (2012–17) under the National Health Mission with a domestic budget.
- Under it, a Central Surveillance Unit (CSU) at Delhi, State Surveillance Units (SSU) at all State/Union Territories (UTs) head quarters and District Surveillance Units (DSU) at all Districts have been established.

Objectives:

- To strengthen/maintain decentralized laboratory based and IT enabled disease surveillance systems for epidemic prone diseases to monitor disease trends.
- To detect and respond to outbreaks in the early rising phase through trained Rapid Response Teams (RRTs).

Programme Components:

- Integration and decentralization of surveillance activities through establishment of surveillance units at Centre, State and District level.
- Human Resource Development – Training of State Surveillance Officers (SSOs), District Surveillance Officers (DSOs), RRT and other medical and paramedical staff on principles of disease surveillance.
- Use of Information Communication Technology for collection, collation, compilation, analysis and dissemination of data.
- Strengthening of public health laboratories.
- Inter sectoral Coordination for zoonotic diseases.
- Helps in Controlling the Disease Outbreak:
  - Data is collected on epidemic prone diseases on a weekly basis.
  - The weekly data gives information on the disease trends and seasonality of diseases.
  - The information is collected on three specified reporting formats, namely “S” (suspected cases), “P” (presumptive cases) and “L” (laboratory confirmed cases).
cases) filled by Health Workers, Clinicians and Laboratory staff respectively. Whenever there is a rising trend of illnesses in any area, it is investigated by the RRT to diagnose and control the outbreak.

**IDSP Portal:**

The IDSP portal is a one stop portal which has facilities for data entry, view reports, outbreak reporting, data analysis, training modules and resources related to disease surveillance.

---

**Core’s contraction: On slowing economy**

**Context**

# Output in the **eight core industries** suffered an overall contraction for a third straight month in May, **shrinking 23.4%**, as the pandemic-induced lockdown kept large parts of the economy shuttered, the **Commerce Ministry’s provisional figures show**.

**Core Sector Data**

# Of the eight, all but one posted declines in production compared with a year earlier, with **six sectors witnessing double-digit drops**.

# **Except fertilizers**, all other sectors have shown decline.

# **Steel and cement were the worst hit**, slumping **48.4% and 22.2%**, respectively, as construction activity and infrastructure projects remained mostly stalled.
# Refinery products, with the largest weight in the index contributing 28%, contracted 21.3% as the curbs on vehicular movement stymied demand for automobile fuels.

# And crude oil and natural gas continued their slide adding to the problems dogging India’s hydrocarbon exploration and production industry.

# Coal production also fell for a second straight month, declining 14%, as the lack of demand for electricity from the nation’s factories depressed power production as well as the need for the key thermal plant fuel.

# Output of electricity fell 15.6%, a slight improvement from April’s 23% slump, aided by the partial easing of restrictions and peak summer consumption by households.

# The only silver lining came from the fertilizer industry, as production rose 7.5% reversing the slump seen in the preceding two months and signalling robust activity in the agricultural sector at the start of the kharif season.

# A promising and early start to this year’s monsoon bodes well for the crucial farm income-dependent rural economy.

# The above average quantity and improved spatial distribution of rainfall in June have spurred a sharp jump in kharif sowing, with the area sown as on June 26 more than doubling compared with a year earlier to 315.6 lakh hectares.

# Also, there is a danger to the farm sector, especially in western, central and northern India this year from locust swarms.

# The Food and Agriculture Organization had in its June 27 update warned that India would need to remain on high alert through July for the possible arrival of swarms from northern Africa.

# The latest PMI data from researcher IHS Markit also paints a less than promising outlook for manufacturing, which contracted again in June albeit at a softer pace.

United Nations Convention on the Law of the Sea (UNCLOS) 1982, also known as Law of the Sea divides marine areas into five main zones namely- Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ) and the High Seas.

UNCLOS is the only international convention which stipulates a framework for state jurisdiction in maritime spaces.

It provides a different legal status to different maritime zones.

It provides the backbone for offshore governance by coastal states and those navigating the oceans. It not only zones coastal states’ offshore areas but also provides specific guidance for states’ rights and responsibilities in the five concentric zones.

Baseline:

- It is the low-water line along the coast as officially recognized by the coastal state.

Internal Waters:

- Internal waters are waters on the landward side of the baseline from which the breadth of the territorial sea is measured.
- Each coastal state has full sovereignty over its internal waters as like its land territory. Examples of internal waters include bays, ports, inlets, rivers and even lakes that are connected to the sea.
- There is no right of innocent passage through internal waters.
- The innocent passage refers to the passing through the waters which are not prejudicial to peace and security. However, the nations have the right to suspend the same.

Territorial Sea:
The territorial sea extends seaward up to 12 nautical miles (nm) from its baselines. A nautical mile is based on the circumference of the earth and is equal to one minute of latitude. It is slightly more than a land measured mile (1 nautical mile = 1.1508 land miles or 1.85 km).
The coastal states have sovereignty and jurisdiction over the territorial sea. These rights extend not only on the surface but also to the seabed, subsoil, and even airspace.
But the coastal states' rights are limited by the innocent passage through the territorial sea.

**Contiguous Zone:**
- The contiguous zone extends seaward up to 24 nm from its baselines.
- It is an intermediary zone between the territorial sea and the high seas.
- The coastal state has the right to both prevent and punish infringement of fiscal, immigration, sanitary, and customs laws within its territory and territorial sea.
- Unlike the territorial sea, the contiguous zone only gives jurisdiction to a state on the ocean's surface and floor. It does not provide air and space rights.

**Exclusive Economic Zone (EEZ):**
- Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that extends seaward up to 200 nm from its baselines.
- Within its EEZ, a coastal state has:
  - Sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or nonliving, of the seabed and subsoil.
  - Rights to carry out activities like the production of energy from the water, currents and wind.
- Unlike the territorial sea and the contiguous zone, the EEZ only allows for the above-mentioned resource rights. It does not give a coastal state the right to prohibit or limit freedom of navigation or overflight, subject to very limited exceptions.

**High Seas:**
- The ocean surface and the water column beyond the EEZ are referred to as the high seas.
- It is considered as “the common heritage of all mankind” and is beyond any national jurisdiction.
States can conduct activities in these areas as long as they are for peaceful purposes, such as transit, marine science, and undersea exploration.

Source: TH/WEB
14 routes identified for private trains by Southern Railway

- The Indian Railway has planned to offer 14 routes of 16 sets of trains in the Southern Railway for which Request for Quotations (RFQs) was issued on Wednesday after giving in-principle approval for public private partnership (PPP).
- A senior official of the Southern Railway said that the PPP mode, similar to the opening of the airways for private operators, would see Indian railways competing with private train operators.
- Though the number of train sets have been fixed at 16, the number of trains to be operated on private routes would be decided later, he added.

New Routes

- The eight routes originating from Chennai are Coimbatore, Kanniyakumari, Madurai, Tiruchi, Tirunelveli, Mumbai, Mangaluru, and New Delhi.
- Similarly, two routes passing through Chennai would be the Puducherry-Secunderabad and Kochuveli-Guwahati.
- The two routes to be privatised outside Chennai division are Tirunelveli-Coimbatore and Kanniyakumari-Ernakulam.
- Two trains with Chennai as destination and to be operated by Jaipur and Howrah clusters are in the route map. In the Jaipur cluster, a private train from Jodhpur to Chennai and in the Howrah cluster, a private train from Howrah to Chennai would be operated.
- The railway official said though the routes would be privatised, the trains would be operated by the loco pilots and guards of the Indian Railways.

Unions oppose decision

- Railway employees' unions have flayed the Centre for having invited bids from private players to operate 105 trains.
- Southern Railway Mazdoor Union accused the Centre of misusing the COVID-19 lockdown to promote its privatisation policy.
- “Since we cannot mobilise people for major protests under the lockdown conditions, the Centre is going ahead with its anti-people policies,” according
to SRMU Madurai divisional secretary, J.M. Rafi.

- Already **Indian Railway** has asked to close down economically unviable branch lines and also to convert hundreds of long-distance passenger trains into express trains.
- Dakshin Railway Employees’ Union Madurai divisional secretary, R. Sankaranarayanan, said that operation of private trains would lead to manifold increase in passenger fare. Besides, the private players would not entertain concessions for senior citizens, differently abled persons, students and others.
- He added that three lakh posts lying vacant in Indian Railways would never be filled.
- He alleged that the newly-introduced rail-hostesses in Delhi-Lucknow *Tejas Express* that was handed over to a private player were not paid their salaries at all.
- But, instead the Government was trying to sell the profit-making sectors of the railway system, which would indirectly further weaken the economy of Indian Railways.

### Privatisation of Indian Railways

- After privatisation of the *Tejas Express* (to be run by the IRCTC), the government is currently in the process of forming a **task force** to draw a blueprint for handing over operations of as many as **150 trains and a total of 50 railway stations** to private operators.
- The **Bibek Debroy committee** recommended that the rail industry needs to be liberalized by allowing the entry of private operators to provide services.

### Need for the Privatisation of Railways

- **Low Quality of Service, Catering and Punctuality**: Indian Railways deserves the credit for serving the largest democracy in the world, but it faces criticism, particularly in case of aspects like service, catering, and punctuality.
- **Low Internal Revenue**: The problem of cross-subsidization has severely affected the internal revenue generation of the Indian Railways.
  - Cross subsidization: Money earned through freight traffic is diverted to meet the shortfalls in passenger revenue, and thus the development of freight traffic infrastructure suffers.
- **Increasing Number of Accidents**: Repeated railway accidents have further
raised questions on government ownership of railways.

Therefore, for long privatisation of railways has been projected as a possible solution to these issues.

Advantages of Privatisation of Railways

- **Improved Infrastructure**: Privatisation will lead to better infrastructure which in turn would result in improved amenities for travelers.
  - Currently, Indian Railways is marred by mismanagement in the form of stinking washrooms, lack of water supply and dirty platforms, it is expected that a private company will ensure better amenities.
- **Normalization of prices** due to the competition: Improvement in quality of services has to be matched up by a rise in charges paid by the travelers.
- **Improved Security**: Private participation can lead to better accountability and monitoring, which can keep a check on rising accidents in railways.
- **Better Technological Innovation**: Private participation can lead to the infusion of modern technology and capacity building of Indian railways.

Disadvantages of Privatisation of Indian Railways

- **Limited Coverage**: An advantage of Indian Railways being government-owned is that it provides nation-wide connectivity irrespective of profit.
  - Privatisation of railways would mean the railways will become a profit-making enterprise, this would lead to the elimination of railways routes that are less popular.
  - Thus, the privatisation of railways can have a negative impact on connectivity and further increase the rural-urban divide.
- **Lesser Inclusive**: Hike in fares can render the railways out of reach for lower-income groups.
- **Issue of Accountability**: The privatisation of Indian Railways is not easy, as it covers every part of India and runs for 24×7 hours.
  - The whole railway system cannot be handled by a single party or coordination will be very difficult if area wise given to private parties.
- **Impact on the Economy**: Indian Railways is the backbone of India, it
provides low fare transportation to agricultural and industrial trade.
• Therefore, privatisation of Indian railways shall definitely affect the Indian economy at large.
• It is difficult to privatize a portion of the railways’ operations as it is strongly vertically integrated.
• Vertical integration of railways means ownership and maintenance of the rail and associated infrastructure, all is vested under the Ministry of Railways.

Note: In Britain, the railways are privatized but there is no much effectiveness, so Britain is again planning to re-nationalize the railways.

Way Forward

• The Tejas Express that will be run by IRCTC, is a kind of Pseudo-privatisation.
• Since IRCTC is a subsidiary of the Indian Railways.
• Hence, there is not much real privatisation there, to begin with.
• Therefore, real privatisation will happen when full-fledged private firms bid for various tasks.
• Privatisation of railways operations will require a new institutional framework where infrastructure will remain as a government’s monopoly while there would be a market of service providers.
• It is important to modernize the railways, so measures must be taken to reimburse the social costs speedily so that resources of the railways is better allocated and facilities are upgraded from time to time.
• Core Railways functions can be Corporatized rather than privatized.
  • Corporatization refers to the restructuring or transformation of a state-owned asset or organization into a corporation. These organizations typically have a board of directors, management, and shareholders.
  • However, unlike publicly traded companies, the government is the company's only shareholder, and the shares in the company are not publicly traded.
• The peripheral function of railways (cleanliness, ticket disposal, traveler’s amenities), must be privatized.

Important Recommendations of the Bibek Debroy Committee
Transition to commercial accounting: The process of accounting in Indian Railways is very complicated. The financial statements of Indian Railways need to be re-drawn, consistent with principles and norms nationally and internationally accepted.

The non-core function of railways must be privatized: These activities include running hospitals and schools, catering, real estate development, including housing, construction and maintenance of infrastructure, manufacturing locomotives, coaches, wagons and their parts.

Expansion of Indian Railways Manufacturing Company: According to Debroy, wagons are already produced by the private sector. Coaches and locomotives could follow. Unless they are freed from their constraints, the existing production units will be unable to face this competition.

Encouraging private entry: Private entry into running both freight and passenger trains in competition with Indian railways should be allowed and private participation.

Independent regulator: Shift regulatory responsibility from the government to an independent regulator as the private sector will only come in if there is fair and open access to railway infrastructure.

Source: TH

Drugs and Clinical Trials Rules, 2019

Part of: GS-II/IV- Governance and Ethics (PT-MAINS-PERSONALITY TEST)

In NEWS: COVEX and PANTAJLI CASE (BABA RAMDEV)

The Union Ministry for Health and Family Welfare has notified the Drugs and Clinical Trials Rules, 2019 with an aim to promote clinical research in the country. The new rules will change the regulatory landscape for the approval of new drugs and conduct of clinical trials in the country.
These rules will be applicable to all new drugs, ethics committee and investigational drugs applicable for human use, bioequivalence studies and clinical trial in India.

Features of New Rules

- The new rules aim to promote clinical research in India by providing for a predictable, transparent and effective regulation for clinical trials and by ensuring faster accessibility of new drugs to the Indian population.
- New rules have reduced the time for approving applications, which has now come down to 30 days for drugs manufactured in India and 90 days for those developed outside the country.
- In case of no communication from Drugs Controller General of India, the application will be deemed to have been approved.
- Drug Controller General of India will decide the compensation in cases of death and permanent disability or other injury to a trial subject.
- The requirement of a local clinical trial may be waived for approval of a new drug if it is approved and marketed in any of the countries specified by the Drugs Controller General with the approval of the government.
- Ethics committee will monitor the trials and decide on the amount of compensation in cases of adverse events.
- It has been mandated that in case of injury to the clinical trial subject, medical management will be provided as long as required as per the opinion of the investigator.
- New drugs approved for use in select developed markets will be automatically allowed in India provided global trials include Indian patients.
- This waiver would also extend to drugs that receive these marketing approvals even while a trial is underway in India.
- New rules have removed regulations on tests conducted on animals in case of drugs approved and marketed for more than two years in well-regulated overseas drug markets.

Clinical Trials

- A clinical trial is a systematic study to generate data for discovering or verifying the clinical and pharmacological profile (including pharmacodynamic and pharmacokinetic) or adverse effects of a new drug on humans.
- It is the only way of establishing the safety and efficacy of any drug before its introduction in the market for human use and is preceded by animal trials where the efficacy and side effects are observed in animals and an estimated
It is important for anyone preparing a trial of a new therapy in humans that the specific aims, problems and risks or benefits of a particular therapy be thoroughly considered and that the chosen options be scientifically sound and ethically justified.

Phases of Clinical Trials

Clinical trials are carried out in four phases. Clinical trials of drugs developed in India have to undergo all **four phases** of trials in India.

- **Phase I or clinical pharmacology trials or “first in man” study:** This is the first time where the new drug is administered to a small number, a minimum of 2 healthy, informed volunteers for each dose under the close supervision of a doctor. The purpose is to determine whether the new compound is tolerated by the patient's body and behaves in the predicted way.
- **Phase II or exploratory trials:** During this phase, the medicine is administered to a group of approximately 10-12 informed patients in 3 to 4 centers to determine its effect and also to check for any unacceptable side effects.
- **Phase III or confirmatory trials:** Purpose is to obtain sufficient evidence about the efficacy and safety of the drug in a larger number of patients, generally in comparison with a standard drug and/or a placebo as appropriate. In this phase, the group is between 1000-3000 subjects. If the results are favorable, the data is presented to the licensing authorities for a commercial license to market the drug for use by the patient population for the specified and approved indication.
- **Phase IV trials or post-marketing phase:** Phase of surveillance after the medicine is made available to doctors, who start prescribing it. The effects are monitored on thousands of patients to help identify any unforeseen side effects.

Regulatory Mechanism in India

- Clinical trials in India are governed by the acts: **Drugs and Cosmetics Act, 1940, Medical Council of India Act, 1956 and Central Council for Indian Medicine Act, 1970.**
- **Prerequisites of conducting a clinical trial in India are:**
  - Permission from the Drugs Controller General, India (DCGI)
  - Approval from respective Ethics Committee where the study is planned
  - Mandatory registration on the ICMR maintained website
The Central Drugs Standard Control Organisation (CDSCO)

- CDSCO is under Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India is the National Regulatory Authority (NRA) of India.
- The Drugs & Cosmetics Act, 1940 and Rules 1945 have entrusted various responsibilities to central & state regulators for regulation of drugs & cosmetics.
- It envisages uniform implementation of the provisions of the Act & Rules made there under for ensuring the safety, rights and well being of the patients by regulating the drugs and cosmetics.
- CDSCO is constantly striving upon to bring out transparency, accountability and uniformity in its services in order to ensure safety, efficacy and quality of the medical product manufactured, imported and distributed in the country.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials.
- It also lays down the standards for Drugs and has control over the quality of imported Drugs in the country.
- It is also responsible for coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.
- Further CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine etc.

Key Issues with Clinical Trials

- 2013 Amendments to the Drugs and Cosmetics Act led to better protection of vulnerable groups but presence of ambiguous language is a concern.
- The big problem plaguing clinical research is an over-representation of low-income groups among trial subjects.
- Sometimes Clinical Research Organisations (CROs) recruit them selectively and exploit their ignorance. Their only reward from the trial is financial.
- Many times consent of the participants in the clinical trials is not taken.
- In most cases ethics committee is not constituted and people on such committees are not well trained.
- There is lack of independence for ethics committee working.
- There is need to register with Clinical Trials Registry of India for all clinical trials conducted in India. But registration is mostly done for positive trial
cases. So there is lack of transparency.
- There are no well developed international standards dealing with clinical trials. India is a signatory of the Declaration of Helsinki but that is voluntary in nature and lack regulatory mechanisms.
- Three tier approval mechanisms has also led to delays in approval.
- Collusion between drug companies and doctors.
- Compensation for participating in research as well as research related injury is a major bone of contention these days.
- Moreover, regulatory failure and unethical clinical trials are also major issues.

Ethical Considerations
- The ethical issues in clinical research primarily involves:
  - Protection of Rights
  - Safety of subjects
  - Well being of the research participants
  - Informed consent and Voluntary Agreement of the participant.
  - Maintain privacy of the participant.
  - Accountability and transparency while conducting trials.
  - Research and trial details should be in public domain.

Significance of New Rules
- Near 70 million population in India suffer from rare disorders and many of which still not curable and their treatment is also very high.
- Moreover, the research in India is more skewed towards non-communicable diseases. So, clinical trials in this field will bring much anticipated balance.
- The new rules and are expected to promote clinical research in the country through a transparent process yielding faster approvals.
- The new rules state that any drug discovered in India, or research and development of the drug has been done in India, and which is proposed to be manufactured and marketed in the country, will be deemed approved for clinical trials within 30 working days by Central Licensing Authority (CLA).
- In the event that there is no communication from the CLA to applicant within the stipulated time, then the permission to conduct clinical trial shall be assumed to have been granted.
- Removal of the compensation clause should be considered as a welcome move for all the subjects participating in clinical trials in India. Earlier there was no clarity and there were long and cumbersome legal hassles which created a question mark on the safety of trials.
- Besides the above change, the drug companies considering India as a market for running local clinical trials get additional benefits if the drugs are approved and marketed in the European Union, the UK, Australia, Canada,
Japan and the US.

- The DCGI would now accept the data generated outside the country thereby making the process easier and application time shorter.
- Based on research the total number of clinical trials registered till Q1 2018 in India, the market might grow upto 8.5-9 per cent from 2019-2021 and then may pick up faster (2022-2026 to around >12 per cent, if the rules implemented in 2019, yields results in 2019-20 and saves time and cost for the multinational companies.
- Foreign companies based out of the US and Europe who have been eyeing China as a trial market are yet to gain confidence and are closely watching the scenario, post the new rule in 2019.
- Apart from this the new rules will end the unnecessary repetition of trials and speed up the availability of new drugs in the country, lower the cost of drugs and will improve the ease of doing business for drug makers.

Criticism of New Regulations

- Monopolistic tendencies in the CRO market remains unaddressed.
- As India has the vast ethnic diversity the need of bridging trials for ethnically diverse populations to check drug suitability population is not addressed.
- Waiver should be only for drugs required urgently for national emergency.
- To prove a injury due to the trial is problematic and it is prone to manipulation.

Way Forward

- To reap the benefits of clinical trials, our objective should be to bring about more clinical research in the country while maintaining high standards to ensure patient safety and accuracy of data.
- A clinical trial should be planned and conducted by a trained investigator following the latest rules and regulations with meticulous record keeping and reporting.
- It is crucial to maintain highest standards, as any compromise may jeopardize public confidence and participation in the clinical trials and may ultimately affect the availability of safe and effective products.
- With digital revolution touching all the major metros and mini-metros, patients can be monitored real time.
- Compared to markets like Indonesia where commuting is an issue, or African countries where communication is a major problem or Western Europe where the cost of trials are expensive and patients have limited health issues, but language is major barrier; India offers infrastructure, easy policies (in 2019)
and the government has propensity to facilitate more companies considering Indian market as a ground for clinical trial.

- More and more mid and SME in the CRO segment should be incentivised to promote healthy competition and break down the monopoly. This will directly bring down the cost of conducting trials in India.
- Unless closely nurtured, this industry can lose its way and get entangled in the complexity of trials.

Q. What are clinical trials? What are the issues with respect to conducting clinical trials in India? Present the ethical issues involved.

Covaxin

Part of: GS-III- S&T (PT-MAINS-PERSONALITY TEST)

The Central Drugs Standard Control Organisation (CDSCO) has granted approval to Bharat Biotech to conduct human clinical trials for ‘Covaxin’, making it the first indigenous Covid-19 vaccine candidate to receive this approval.

- Covaxin has been developed by the company Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR). It is an inactivated vaccine manufactured in the company’s Bio-Safety Level 3 (BSL-3) High Containment facility located in Hyderabad (Telangana).
- The permission was granted after the company submitted results from pre-clinical studies of the vaccine that demonstrated its safety and immune response. Phase I and II clinical trials will start across India in July 2020.

ImpPoints
Clinical trials in humans are classified into three phases: phase I, phase II, and phase III and in certain countries formal regulatory approval is required to undertake any of these studies.

The phase I clinical studies carry out initial testing of a vaccine in small numbers (e.g. 20) of healthy adults, to test the properties of a vaccine, its tolerability, and, if appropriate, clinical laboratory and pharmacological parameters. Phase I studies are primarily concerned with safety.

Phase II studies involve larger numbers of subjects and are intended to provide preliminary information about a vaccine’s ability to produce its desired effect (usually immunogenicity) in the target population and its general safety.

Extensive phase III trials are required to fully assess the protective efficacy and safety of a vaccine. The phase III clinical trial is the pivotal study on which the decision on whether to grant the licence is based and sufficient data have to be obtained to demonstrate that a new product is safe and effective for the purpose intended.

An application for market authorization may be submitted to the National Regulatory Authority (NRA) on the basis of the data from phase III testing and if approved, the vaccine then becomes commercially available in that particular country.

- The Central Drugs Standard Control Organisation (CDSCO) under Directorate General of Health Services, Ministry of Health & Family Welfare is the National Regulatory Authority (NRA) of India.
- According to the World Health Organisation (WHO), out of 200 Covid-19 vaccine candidates, 15 have entered clinical trials.
  - AstraZeneca is the world’s leading Covid-19 vaccine candidate and has reached the final stage in terms of development. It is being developed by researchers at the University Of Oxford (UK).
  - US Firm Moderna’s vaccine (MRNA-1273) will go into phase III clinical trials in July.

Source: TH
14 routes identified for private trains by Southern Railway

- The Indian Railway has planned to offer 14 routes of 16 sets of trains in the Southern Railway for which Request for Quotations (RFQs) was issued on Wednesday after giving in-principle approval for public private partnership (PPP).
- A senior official of the Southern Railway said that the PPP mode, similar to the opening of the airways for private operators, would see Indian railways competing with private train operators.
- Though the number of train sets have been fixed at 16, the number of trains to be operated on private routes would be decided later, he added.

New Routes

- The eight routes originating from Chennai are Coimbatore, Kanniyakumari, Madurai, Tiruchi, Tirunelveli, Mumbai, Mangaluru, and New Delhi.
- Similarly, two routes passing through Chennai would be the Puducherry-Secunderabad and Kochuveli-Guwahati.
- The two routes to be privatised outside Chennai division are Tirunelveli-Coimbatore and Kanniyakumari-Ernakulam.
- Two trains with Chennai as destination and to be operated by Jaipur and Howrah clusters are in the route map. In the Jaipur cluster, a private train from Jodhpur to Chennai and in the Howrah cluster, a private train from Howrah to Chennai would be operated.
- The railway official said though the routes would be privatised, the trains would be operated by the loco pilots and guards of the Indian Railways.

Unions oppose decision

- Railway employees’ unions have flayed the Centre for having invited bids from private players to operate 105 trains.
- Southern Railway Mazdoor Union accused the Centre of misusing the COVID-19 lockdown to promote its privatisation policy.
- “Since we cannot mobilise people for major protests under the lockdown conditions, the Centre is going ahead with its anti-people policies,” according
Privatisation of Indian Railways

- After privatisation of the Tejas Express (to be run by the IRCTC), the government is currently in the process of forming a task force to draw a blueprint for handing over operations of as many as 150 trains and a total of 50 railway stations to private operators.
- The Bibek Debroy committee recommended that the rail industry needs to be liberalized by allowing the entry of private operators to provide services.

Need for the Privatisation of Railways

- Low Quality of Service, Catering and Punctuality: Indian Railways deserves the credit for serving the largest democracy in the world, but it faces criticism, particularly in case of aspects like service, catering, and punctuality.
- Low Internal Revenue: The problem of cross-subsidization has severely affected the internal revenue generation of the Indian Railways.
  - Cross subsidization: Money earned through freight traffic is diverted to meet the shortfalls in passenger revenue, and thus the development of freight traffic infrastructure suffers.
- Increasing Number of Accidents: Repeated railway accidents have further
raised questions on government ownership of railways.

Therefore, for long privatisation of railways has been projected as a possible solution to these issues.

Advantages of Privatisation of Railways

- **Improved Infrastructure**: Privatisation will lead to better infrastructure which in turn would result in improved amenities for travelers.
  - Currently, Indian Railways is marred by mismanagement in the form of stinking washrooms, lack of water supply and dirty platforms, it is expected that a private company will ensure better amenities.
- **Normalization of prices** due to the competition: Improvement in quality of services has to be matched up by a rise in charges paid by the travelers.
- However, the issue of price rise will be solved when private players are allowed to enter the sector since the move would foster competition and hence lead to overall betterment in the quality of services.
- **Improved Security**: Private participation can lead to better accountability and monitoring, which can keep a check on rising accidents in railways.
- **Better Technological Innovation**: Private participation can lead to the infusion of modern technology and capacity building of Indian railways.

Disadvantages of Privatisation of Indian Railways

- **Limited Coverage**: An advantage of Indian Railways being government-owned is that it provides nation-wide connectivity irrespective of profit.
  - Privatisation of railways would mean the railways will become a profit-making enterprise, this would lead to the elimination of railways routes that are less popular.
  - Thus, the privatisation of railways can have a negative impact on connectivity and further increase the rural-urban divide.
- **Lesser Inclusive**: Hike in fares can render the railways out of reach for lower-income groups.
- **Issue of Accountability**: The privatisation of Indian Railways is not easy, as it covers every part of India and runs for 24×7 hours.
  - The whole railway system cannot be handled by a single party or coordination will be very difficult if area wise given to private parties.
- **Impact on the Economy**: Indian Railways is the backbone of India, it
provides **low fare transportation** to agricultural and industrial trade.  
- Therefore, privatisation of Indian railways shall definitely affect the Indian economy at large.  
- It is difficult to privatize a portion of the railways’ operations as it is strongly vertically integrated.  
- Vertical integration of railways means ownership and maintenance of the rail and associated infrastructure, all is vested under the Ministry of Railways.

Note: In Britain, the railways are privatized but there is no much effectiveness, so **Britain is again planning to re-nationalize the railways.**

**Way Forward**

- The Tejas Express that will be run by IRCTC, is a kind of Pseudo-privatisation.  
- Since IRCTC is a subsidiary of the Indian Railways.  
- Hence, there is not much real privatisation there, to begin with.  
- Therefore, real privatisation will happen when full-fledged private firms bid for various tasks.  
- Privatisation of railways operations will require a new institutional framework where **infrastructure will remain as a government’s monopoly** while there would be a market of **service providers.**
- It is important to modernize the railways, so measures must be taken to **reimburse the social costs** speedily so that resources of the railways is better allocated and facilities are upgraded from time to time.  
- Core Railways functions can be ** Corporatized** rather than privatized.  
  - Corporatization refers to the **restructuring or transformation of a state-owned asset** or organization into a **corporation.** These organizations typically have a **board of directors, management, and shareholders.**  
  - However, unlike publicly traded companies, the government is the company's only shareholder, and the shares in the company are not publicly traded.  
- The peripheral function of railways (cleanliness, ticket disposal, traveler’s amenities), must be privatized.

**Important Recommendations of the Bibek Debroy Committee**
**UPSC "PT" DNA (Daily News Analysis)**

- **Transition to commercial accounting**: The process of accounting in Indian Railways is very complicated.
  - The financial statements of Indian Railways need to be re-drawn, consistent with **principles and norms nationally** and internationally accepted.
- **The non-core function of railways must be privatized**: These activities include running **hospitals and schools**, **catering**, **real estate development**, **including housing**, **construction and maintenance of infrastructure**, **manufacturing locomotives**, **coaches**, **wagons** and their parts.
- **Expansion of Indian Railways Manufacturing Company**: According to Debroy, wagons are already produced by the private sector. Coaches and locomotives could follow. Unless they are freed from their constraints, the existing production units will be unable to face this competition.
- **Encouraging private entry**: Private entry into running **both freight and passenger trains** in competition with Indian railways should be allowed and private participation.
- **Independent regulator**: Shift regulatory responsibility from the government to an **independent regulator** as the private sector will only come in if there is fair and open access to railway infrastructure.

Source: TH

---

**Drugs and Clinical Trials Rules, 2019**

**GS-II | 04 July, 2020**

**Drugs and Clinical Trials Rules, 2019**

Part of: GS-II/IV- Governance and Ethics (PT-MAINS-PERSONALITY TEST)

In **NEWS**: COVEX and PANTAJLI CASE (BABA RAMDEV)

The **Union Ministry for Health and Family Welfare has notified the Drugs and Clinical Trials Rules, 2019** with an aim to promote clinical research in the country. The **new rules will change the regulatory landscape for the approval of new drugs and conduct of clinical trials in the country**.
These rules will be applicable to all new drugs, ethics committee and investigational drugs applicable for human use, bioequivalence studies and clinical trial in India.

Features of New Rules

- The new rules aim to promote clinical research in India by providing for a predictable, transparent and effective regulation for clinical trials and by ensuring faster accessibility of new drugs to the Indian population.
- New rules have reduced the time for approving applications, which has now come down to 30 days for drugs manufactured in India and 90 days for those developed outside the country.
- In case of no communication from Drugs Controller General of India, the application will be deemed to have been approved.
- Drug Controller General of India will decide the compensation in cases of death and permanent disability or other injury to a trial subject.
- The requirement of a local clinical trial may be waived for approval of a new drug if it is approved and marketed in any of the countries specified by the Drugs Controller General with the approval of the government.
- Ethics committee will monitor the trials and decide on the amount of compensation in cases of adverse events.
- It has been mandated that in case of injury to the clinical trial subject, medical management will be provided as long as required as per the opinion of the investigator.
- New drugs approved for use in select developed markets will be automatically allowed in India provided global trials includes Indian patients.
- This waiver would also extend to drugs that receive these marketing approvals even while a trial is underway in India.
- New rules have removed regulations on tests conducted on animals in case of drugs approved and marketed for more than two years in well-regulated overseas drug markets.

Clinical Trials

- A clinical trial is a systematic study to generate data for discovering or verifying the clinical and pharmacological profile (including pharmacodynamic and pharmacokinetic) or adverse effects of a new drug on humans.
- It is the only way of establishing the safety and efficacy of any drug before its introduction in the market for human use and is preceded by animal trials where the efficacy and side effects are observed in animals and an estimated
drug dose is established.
- It is important for anyone preparing a trial of a new therapy in humans that the specific aims, problems and risks or benefits of a particular therapy be thoroughly considered and that the chosen options be scientifically sound and ethically justified.

Phases of Clinical Trials

Clinical trials are carried out in four phases. Clinical trials of drugs developed in India have to undergo all four phases of trials in India.

- **Phase I or clinical pharmacology trials or “first in man” study:** This is the first time where the new drug is administered to a small number, a minimum of 2 healthy, informed volunteers for each dose under the close supervision of a doctor. The purpose is to determine whether the new compound is tolerated by the patient's body and behaves in the predicted way.
- **Phase II or exploratory trials:** During this phase, the medicine is administered to a group of approximately 10-12 informed patients in 3 to 4 centers to determine its effect and also to check for any unacceptable side effects.
- **Phase III or confirmatory trials:** Purpose is to obtain sufficient evidence about the efficacy and safety of the drug in a larger number of patients, generally in comparison with a standard drug and/or a placebo as appropriate. In this phase, the group is between 1000-3000 subjects. If the results are favorable, the data is presented to the licensing authorities for a commercial license to market the drug for use by the patient population for the specified and approved indication.
- **Phase IV trials or post-marketing phase:** Phase of surveillance after the medicine is made available to doctors, who start prescribing it. The effects are monitored on thousands of patients to help identify any unforeseen side effects.

Regulatory Mechanism in India

- Clinical trials in India are governed by the acts: Drugs and Cosmetics Act, 1940, Medical Council of India Act, 1956 and Central Council for Indian Medicine Act, 1970.
- **Prerequisites of conducting a clinical trial in India are:**
  - Permission from the Drugs Controller General, India (DCGI)
  - Approval from respective Ethics Committee where the study is planned
  - Mandatory registration on the ICMR maintained website
The Central Drugs Standard Control Organisation (CDSCO)

- CDSCO is under Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India is the National Regulatory Authority (NRA) of India.
- The Drugs & Cosmetics Act, 1940 and Rules 1945 have entrusted various responsibilities to central & state regulators for regulation of drugs & cosmetics.
- It envisages uniform implementation of the provisions of the Act & Rules made there under for ensuring the safety, rights and well being of the patients by regulating the drugs and cosmetics.
- CDSCO is constantly striving upon to bring out transparency, accountability and uniformity in its services in order to ensure safety, efficacy and quality of the medical product manufactured, imported and distributed in the country.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials.
- It also lays down the standards for Drugs and has control over the quality of imported Drugs in the country
- It is also responsible for coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.
- Further CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine etc.

Key Issues with Clinical Trials

- 2013 Amendments to the Drugs and Cosmetics Act led to better protection of vulnerable groups but presence of ambiguous language is a concern.
- The big problem plaguing clinical research is an over-representation of low-income groups among trial subjects.
- Sometimes Clinical Research Organisations (CROs) recruit them selectively and exploit their ignorance. Their only reward from the trial is financial.
- Many times consent of the participants in the clinical trials is not taken.
- In most cases ethics committee is not constituted and people on such committees are not well trained.
- There is lack of independence for ethics committee working.
- There is need to register with Clinical Trials Registry of India for all clinical trials conducted in India. But registration is mostly done for positive trial
There are no well developed international standards dealing with clinical trials. India is a signatory of the Declaration of Helsinki but that is voluntary in nature and lacks regulatory mechanisms.

Three tier approval mechanisms has also led to delays in approval.

Collusion between drug companies and doctors.

Compensation for participating in research as well as research related injury is a major bone of contention these days.

Moreover, regulatory failure and unethical clinical trials are also major issues.

**Ethical Considerations**

- The ethical issues in clinical research primarily involves:
  - Protection of Rights
  - Safety of subjects
  - Well being of the research participants
  - Informed consent and Voluntary Agreement of the participant.
  - Maintain privacy of the participant.
  - Accountability and transparency while conducting trials.
  - Research and trial details should be in public domain.

**Significance of New Rules**

- Near 70 million population in India suffer from rare disorders and many of which still not curable and their treatment is also very high.
- Moreover, the research in India is more skewed towards non-communicable diseases. So, clinical trials in this field will bring much anticipated balance.
- The new rules and are expected to promote clinical research in the country through a transparent process yielding faster approvals.
- The new rules state that any drug discovered in India, or research and development of the drug has been done in India, and which is proposed to be manufactured and marketed in the country, will be deemed approved for clinical trials within 30 working days by Central Licensing Authority (CLA).
- In the event that there is no communication from the CLA to applicant within the stipulated time, then the permission to conduct clinical trial shall be assumed to have been granted.
- Removal of the compensation clause should be considered as a welcome move for all the subjects participating in clinical trials in India. Earlier there was no clarity and there were long and cumbersome legal hassles which created a question mark on the safety of trials.
- Besides the above change, the drug companies considering India as a market for running local clinical trials get additional benefits if the drugs are approved and marketed in the European Union, the UK, Australia, Canada,
Japan and the US.
- The DCGI would now accept the data generated outside the country thereby making the process easier and application time shorter.
- Based on research the total number of clinical trials registered till Q1 2018 in India, the market might grow upto 8.5-9 per cent from 2019-2021 and then may pick up faster (2022-2026 to around >12 per cent, if the rules implemented in 2019, yields results in 2019-20 and saves time and cost for the multinational companies.
- Foreign companies based out of the US and Europe who have been eyeing China as a trial market are yet to gain confidence and are closely watching the scenario, post the new rule in 2019.
- Apart from this the new rules will end the unnecessary repetition of trials and speed up the availability of new drugs in the country, lower the cost of drugs and will improve the ease of doing business for drug makers.

Criticism of New Regulations

- Monopolistic tendencies in the CRO market remains unaddressed.
- As India has the vast ethnic diversity the need of bridging trials for ethnically diverse populations to check drug suitability population is not addressed.
- Waiver should be only for drugs required urgently for national emergency.
- To prove a injury due to the trial is problematic and it is prone to manipulation.

Way Forward

- To reap the benefits of clinical trials, our objective should be to bring about more clinical research in the country while maintaining high standards to ensure patient safety and accuracy of data.
- A clinical trial should be planned and conducted by a trained investigator following the latest rules and regulations with meticulous record keeping and reporting.
- It is crucial to maintain highest standards, as any compromise may jeopardize public confidence and participation in the clinical trials and may ultimately affect the availability of safe and effective products.
- With digital revolution touching all the major metros and mini-metros, patients can be monitored real time.
- Compared to markets like Indonesia where commuting is an issue, or African countries where communication is a major problem or Western Europe where the cost of trials are expensive and patients have limited health issues, but language is major barrier; India offers infrastructure, easy policies (in 2019)
and the government has propensity to facilitate more companies considering Indian market as a ground for clinical trial.

- More and more mid and SME in the CRO segment should be incentivised to promote healthy competition and break down the monopoly. This will directly bring down the cost of conducting trials in India.
- Unless closely nurtured, this industry can lose its way and get entangled in the complexity of trials.

Q. What are clinical trials? What are the issues with respect to conducting clinical trials in India? Present the ethical issues involved.

Source: PIB

---

**Covaxin**

Part of: GS-III- S&T (PT-MAINS-PERSONALITY TEST)

The Central Drugs Standard Control Organisation (CDSCO) has granted approval to Bharat Biotech to conduct human clinical trials for ‘Covaxin’, making it the first indigenous Covid-19 vaccine candidate to receive this approval.

- Covaxin has been developed by the company Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR). It is an inactivated vaccine manufactured in the company’s Bio-Safety Level 3 (BSL-3) High Containment facility located in Hyderabad (Telangana).
- The permission was granted after the company submitted results from pre-clinical studies of the vaccine that demonstrated its safety and immune response. Phase I and II clinical trials will start across India in July 2020.

ImpPoints
Clinical trials in humans are classified into three phases: phase I, phase II and phase III and in certain countries formal regulatory approval is required to undertake any of these studies.

- The phase I clinical studies carry out initial testing of a vaccine in small numbers (e.g. 20) of healthy adults, to test the properties of a vaccine, its tolerability, and, if appropriate, clinical laboratory and pharmacological parameters. Phase I studies are primarily concerned with safety.

- Phase II studies involve larger numbers of subjects and are intended to provide preliminary information about a vaccine’s ability to produce its desired effect (usually immunogenicity) in the target population and its general safety.

- Extensive phase III trials are required to fully assess the protective efficacy and safety of a vaccine. The phase III clinical trial is the pivotal study on which the decision on whether to grant the licence is based and sufficient data have to be obtained to demonstrate that a new product is safe and effective for the purpose intended.

- An application for market authorization may be submitted to the National Regulatory Authority (NRA) on the basis of the data from phase III testing and if approved, the vaccine then becomes commercially available in that particular country.
  - The Central Drugs Standard Control Organisation (CDSCO) under Directorate General of Health Services, Ministry of Health & Family Welfare is the National Regulatory Authority (NRA) of India.

- According to the World Health Organisation (WHO), out of 200 Covid-19 vaccine candidates, 15 have entered clinical trials.
  - AstraZeneca is the world’s leading Covid-19 vaccine candidate and has reached the final stage in terms of development. It is being developed by researchers at the University Of Oxford (UK).
  - US Firm Moderna’s vaccine (MRNA-1273) will go into phase III clinical trials in July.

Source: TH
Recently, the government has launched Drug Discovery Hackathon 2020 (DDH2020), a first of its kind national initiative for supporting the drug discovery process. The objective is to identify drug candidates against SARS-CoV-2 (Covid-19) by in-silico drug discovery.

In-Silico Drug Discovery

- In-Silico is an expression used to mean “performed on computer or via computer simulation.”
- In-Silico drug discovery process is thus the identification of the drug target molecule by employing bioinformatics tools. Drug target molecules generally include DNA, RNA and proteins such as receptors, enzymes etc.
- Identification of drug target molecules help in knowing their pharmacological relevance to the disease under investigation.

**Bioinformatics** is the application of computational technology (such as Artificial Intelligence/Machine Learning) to handle the rapidly growing repository of information related to molecular biology.

Other Points

- **Joint Initiative:** DDH2020 is a joint initiative of the Ministry of Human Resource Development (MHRD), All India Council for Technical Education (AICTE) and the Council of Scientific and Industrial Research (CSIR) and supported by partners like Centre for Development of Advanced Computing (CDAC), MyGov and private players.
- **Participants:** Researchers/Faculty across the world, students studying in India and abroad.

Functioning:

It will primarily focus on computational aspects of drug discovery and will have three Tracks.

- **Track-1** will deal with computational modelling for drug design or identifying ‘lead’ compounds from existing databases that may have
Track-2 will encourage participants to develop new tools and algorithms using data analytics and AI/ML approach for predicting drug-like compounds with minimal toxicity and maximal specificity and selectivity.

Track 3 will only deal with novel and out-of-the-box ideas in this field. Participants will submit their ideas online after which the CSIR and other labs will work towards executing them.

Source: PIB

Russia - Constitutional Amendments

Part of: GS-II- IR- Russia (PT-MAINS-PERSONALITY TEST)

The Russian citizens have supported a set of constitutional amendments including continuation of presidency by Vladimir Putin in a recently held referendum in the country.

The referendum also included clauses related to the reorganisation of the government, introducing a higher minimum pension and wages, a ban on gay marriage, restricting top officials from holding dual citizenship, enshrining “faith in God” as a core value and emphasising the primacy of the Constitution over international treaties and rulings.

A referendum is a direct and universal vote in which an entire electorate is invited to vote on a particular proposal and can have nationwide or local forms. It supports direct democracy.

The referendum was originally planned for April 2020 but was delayed due to the coronavirus outbreak

Background:
Mr. Putin became President for the first time in 2000. After completing his two terms, he swapped the presidency with Mr. Dmitry Medvedev. During the Medvedev presidency, Mr. Putin remained the centre of power as Prime Minister.

Mr. Medvedev served one term and stepped aside for Mr. Putin to assume the presidency again. Thus, Mr. Putin is now into the second term of his second stint as President, which will expire in 2024.

If Mr. Putin stays in power for two more terms, he will be the longest serving Russian leader since Peter the Great.

The Tsar, who built the Russian Empire, was in power for 43 years until his death in 1725.

Imp Points

Clause for Continuation of Presidency Term:

- The Russian Constitution bars more than two consecutive presidential terms.
- The new Constitution doesn’t change the two-term limit in theory, but in practice, it resets Mr Putin’s terms so that it will be the first election under the new Constitution for him, to be held in 2024.
- According to the referendum, the current President of Russia Vladimir Putin can stay in power for two more six-year terms (until 2036) after his term expires in 2024.

Significance

- The amendments have enhanced the powers of the State Council, an advisory body. Overall, the changes will help to tighten his grip over Russia.
- The proposed changes had already been approved by Parliament and the Supreme Court but it was put to vote to gain legitimacy and popular approval.
- The preliminary results released by the Election Commission showed that almost 78% of voters endorsed the amendments, while 21% voted against them. Some 65% voters had turned up to cast their ballots.

Challenge

- According to the International Monetary Fund (IMF), the economy hasn’t expanded in dollar terms for a decade. The Fund estimates the Gross
Domestic Product (GDP) to shrink by 6.6% in 2020.
- The pandemic affecting local businesses and the falling oil prices reducing exports revenue.
- In foreign policy, Russia’s relationship with the West remains troublesome. The sanctions imposed on Russia after the annexation of Crimea in 2014 are still in place.
- Though Russia managed to prevent the collapse of the Syrian regime after its intervention in the civil war, the Syrian crisis is far from resolved.
- Russia also faces allegations of interference in the elections of other countries.

Earlier, Mr. Putin had inherited a Russia that was in an economic free fall. Now Mr. Putin needs to rebuild the state and the economy and restore some of the country’s lost global clout.

Source: TH

Dharma Chakra Day

The Ministry of Culture, Government of India in partnership with International Buddhist Confederation (IBC) will celebrate the upcoming Asadha Poornima on 4th July, 2020 as Dharma Chakra Day.

The festivities would start off with chanting of prayers at Sarnath, Varanasi (U.P.) which will be livestreamed, following which the opening event will be shifted to the Rashtrapati Bhavan.

- The auspicious day of Asadha Poornima falls on the first full moon day of the month of Asadha as per Indian sun calendar.
- It is also known as Esala Poya in Sri Lanka and Asanha Bucha in Thailand. It is the second most sacred day for Buddhists after the Buddha Poornima or Vesak.
- The day marks Buddha’s first teaching after attaining Enlightenment to the first five ascetic disciples (pañcavargika) on the full-moon day of

- This teaching of Dhamma Cakka- PavattanaSutta (Pali) or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the First Turning of Wheels of Dharma and comprised of the Four Noble Truths and Noble Eightfold Path.
- The Rainy Season retreat (Varsha Vassa) for the Monks and Nuns also starts with this day lasting for three lunar months from July to October, during which they remain in a single place, generally in their temples (Viharas/Chaityas) dedicated to intensive meditation.
- The day is also observed as Guru Poornima by both Buddhists and Hindus as a day to mark reverence to their Gurus.

Guru Purnima

- According to the Hindu calendar, Guru Purnima generally falls on a full-moon day in the Hindu month of Ashad.
- It is dedicated to Maharshi Veda Vyasa, the sage who is believed to have edited the sacred Hindu text, the Vedas and created the 18 Puranas, Mahabharata and the Srimad Bhagavatam.
- For Buddhists, the festival marks the first sermon of Lord Buddha, which is said to have been delivered at Sarnath, Uttar Pradesh, on this very day.
- It is also believed to mark the onset of monsoons.

Buddhism and Diplomacy

- Buddhism has become an important tool in contemporary geopolitics particularly in Asia, and it has become increasingly evident that whoever controls the Buddhist discourse and activities will sway influence in Asia.
- The celebration of Dharma Chakra Day is being pushed as an event to show India’s strong Buddhist heritage amid tensions with China. It will see the virtual participation of leaders from major Buddhist countries, except China.
- The timing of the event is particularly important, because this is when both countries would like to resurrect their linkages with others. To show that like-minded countries are coming together sends across a message. What is however important is that one has to put in sustained effort at this, and have a relook at India-China policy with strategic cultural moves.
- The Central Tibetan Administration has asked Tibetan Buddhists to participate in the online event in large numbers to “support and appreciate” the effort.
The Central Tibetan Administration (CTA) is an organisation headquartered in McLeod Ganj, Dharamshala, India. It is also referred to as the Tibetan Government in Exile which has never been recognized by China. The position of the CTA is that Tibet is a distinct nation with a long history of independence and it considers China's administration of Tibet as illegitimate military occupation. In addition to political advocacy, it administers a network of schools and other cultural activities for Tibetans in India.

Meanwhile, the People’s Republic of China (PRC)’s World Buddhist Forum (WBF) has been hosting congregations of Buddhist monks since 2005. China's extensive infrastructure investment in Lumbini, Buddha's birthplace in Nepal, is also seen as a strategic move to claim the Buddhist legacy.

While Buddhism might have vanished from India as a religion practised by many people, it is still a critical part of India’s civilisational ethos.

There should be more Buddhist corridor including Ladakh, Himachal Pradesh and Arunachal Pradesh, apart from Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat and Andhra Pradesh. There could be nodal centres for people-to-people exchanges for those who come from South Korea, Taiwan and other countries. Although no other country can take Buddhist leadership away from India, the status of Buddhism in India is quite different now.

India has not been promoting its own Buddhist streams or strengthening the original Buddhism. Promoting anything else or any other brand than its own limits a genuine outreach. Promoting anything else becomes a subject of contestation, and the essence of using Buddhism as a diplomatic card gets lost.

Conclusion

There are also hundreds of millions of Chinese who have a deep devotion towards Buddhism. India needs to reach out to those Chinese constituencies too, for long term gains. After all, India conquered the hearts and minds of Chinese for 200 years without sending a single troop to China.

Source: PIB
Meta-analysis does not support continued use of point-of-care serological tests for COVID-19

Serological test

- Serological tests to detect antibodies against novel coronavirus (SARS-CoV-2) could improve diagnosis of COVID-19 and be useful tools for epidemiological surveillance.

Epidemiology

- It is the branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health.

- These have been seen as a tool to issue immunity passports or certificates so that already-infected people can move around freely. There has been increasing number of serological tests, and many are being marketed for point-of-care use.

What is point-of-care testing?

- Point-of-care testing (POCT or bedside testing) is defined as medical diagnostic testing at or near the point of care—that is, at the time and place of patient care.
- This contrasts with the historical pattern in which testing was wholly or mostly confined to the medical laboratory, which entailed sending off specimens away from the point of care and then waiting hours or days to learn the results, during which time care
A systematic review and meta-analysis of 40 studies of antibody testing for novel coronavirus (SARS-CoV-2) has found “major weaknesses” in the evidence base for serological tests. The “evidence does not support the continued use of existing point-of-care serological tests for COVID-19”, says a study published in The British Medical Journal.

Risk of bias

- The evidence is “particularly weak” for point-of-care serological tests.
- The study warns: “Our findings should also give pause to governments that are contemplating the use of serological tests — in particular, point-of-care tests — to issue immunity certificates or passports.”

Primary outcomes

- The primary outcome of the analysis was to evaluate the overall sensitivity and specificity based on the method of serological testing — ELISA, lateral flow immunoassays (LFIAs), or chemiluminescent immunoassays (CLIAs), and immunoglobulin class (IgG, IgM or both).
- The study found high risk of patient selection bias in 98% (48/49 studies) of assessments, and high or unclear risk of bias from performance or interpretation of the serological test in 73% (36/49) of studies. Only as little as 10% (4/40) of studies included outpatients.

What is pooled sensitivity?

- Pooling of results is a Meta-analysis method used to combine the results of different studies in order to get qualitative analysis. Usually used when the size of study is too small to evaluate the effect or relationship. So, pooling results will increase the power of statistical analyses.
Source: TH
Drug Discovery Hackathon

Recently, the government has launched Drug Discovery Hackathon 2020 (DDH2020), a first of its kind national initiative for supporting the drug discovery process. The objective is to identify drug candidates against SARS-CoV-2 (Covid-19) by in-silico drug discovery.

In-Silico Drug Discovery

- In-Silico is an expression used to mean “performed on computer or via computer simulation.”
- In-Silico drug discovery process is thus the identification of the drug target molecule by employing bioinformatics tools. Drug target molecules generally include DNA, RNA and proteins such as receptors, enzymes etc.
- Identification of drug target molecules help in knowing their pharmacological relevance to the disease under investigation.

**Bioinformatics** is the application of computational technology (such as Artificial Intelligence/Machine Learning) to handle the rapidly growing repository of information related to molecular biology.

Other Points

- **Joint Initiative:** DDH2020 is a joint initiative of the Ministry of Human Resource Development (MHRD), All India Council for Technical Education (AICTE) and the Council of Scientific and Industrial Research (CSIR) and supported by partners like Centre for Development of Advanced Computing (CDAC), MyGov and private players.
- **Participants:** Researchers/Faculty across the world, students studying in India and abroad.

Functioning:

It will primarily focus on computational aspects of drug discovery and will have three Tracks.

- **Track-1** will deal with computational modelling for drug design or identifying ‘lead’ compounds from existing databases that may have
the potential to inhibit SARS-CoV-2.

- **Track-2** will encourage participants to develop new tools and algorithms using data analytics and AI/ML approach for predicting drug-like compounds with minimal toxicity and maximal specificity and selectivity.

- **Track 3** will only deal with novel and out-of-the-box ideas in this field.

Participants will submit their ideas online after which the CSIR and other labs will work towards executing them.

Source: PIB

---

**Russia - Constitutional Amendments**

GS-II | 05 July, 2020

The Russian citizens have supported a set of constitutional amendments including continuation of presidency by Vladimir Putin in a recently held referendum in the country.

The referendum also included clauses related to the reorganisation of the government, introducing a higher minimum pension and wages, a ban on gay marriage, restricting top officials from holding dual citizenship, enshrining “faith in God” as a core value and emphasising the primacy of the Constitution over international treaties and rulings.

A referendum is a direct and universal vote in which an entire electorate is invited to vote on a particular proposal and can have nationwide or local forms. It supports direct democracy.

The referendum was originally planned for April 2020 but was delayed due to the coronavirus outbreak.

**Background:**
Mr. Putin became President for the first time in 2000. After completing his two terms, he swapped the presidency with Mr. Dmitry Medvedv. During the Medvedv presidency, Mr. Putin remained the centre of power as Prime Minister.

Mr. Medvedv served one term and stepped aside for Mr. Putin to assume the presidency again. Thus, Mr. Putin is now into the second term of his second stint as President, which will expire in 2024.

If Mr. Putin stays in power for two more terms, he will be the longest serving Russian leader since Peter the Great.

The Tsar, who built the Russian Empire, was in power for 43 years until his death in 1725.

**Imp Points**

**Clause for Continuation of Presidency Term:**

- The Russian Constitution bars more than two consecutive presidential terms.
- The new Constitution doesn’t change the two-term limit in theory, but in practice, it resets Mr Putin’s terms so that it will be the first election under the new Constitution for him, to be held in 2024.
- According to the referendum, the current President of Russia Vladimir Putin can stay in power for two more six-year terms (until 2036) after his term expires in 2024.

**Significance**

- The amendments have enhanced the powers of the State Council, an advisory body. Overall, the changes will help to tighten his grip over Russia.
- The proposed changes had already been approved by Parliament and the Supreme Court but it was put to vote to gain legitimacy and popular approval.
- The preliminary results released by the Election Commission showed that almost 78% of voters endorsed the amendments, while 21% voted against them. Some 65% voters had turned up to cast their ballots.

**Challenge**

- According to the International Monetary Fund (IMF), the economy hasn’t expanded in dollar terms for a decade. The Fund estimates the Gross
Domestic Product (GDP) to shrink by 6.6% in 2020.
- The pandemic affecting local businesses and the falling oil prices reducing exports revenue.
- In foreign policy, Russia’s relationship with the West remains troublesome. The sanctions imposed on Russia after the annexation of Crimea in 2014 are still in place.
- Though Russia managed to prevent the collapse of the Syrian regime after its intervention in the civil war, the Syrian crisis is far from resolved.
- Russia also faces allegations of interference in the elections of other countries.

Earlier, Mr. Putin had inherited a Russia that was in an economic free fall. Now Mr. Putin needs to rebuild the state and the economy and restore some of the country’s lost global clout.

Source: TH

Dharma Chakra Day
GS-I | 05 July, 2020

Dharma Chakra Day

The Ministry of Culture, Government of India in partnership with International Buddhist Confederation (IBC) will celebrate the upcoming Asadha Poornima on 4th July, 2020 as Dharma Chakra Day.

The festivities would start off with chanting of prayers at Sarnath, Varanasi (U.P.) which will be livestreamed, following which the opening event will be shifted to the Rashtrapati Bhavan.

- The auspicious day of Asadha Poornima falls on the first full moon day of the month of Asadha as per Indian sun calendar.
- It is also known as Esala Poya in Sri Lanka and Asanha Bucha in Thailand. It is the second most sacred day for Buddhists after the Buddha Poornima or Vesak.
- The day marks Buddha’s first teaching after attaining Enlightenment to the first five ascetic disciples (pañcavargika) on the full-moon day of
Asadha at ‘Deer Park’, ?i?ipatana in the current day Sarnath, near Varanasi, India.

- This teaching of Dhamma Cakka- PavattanaSutta (Pali) or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the First Turning of Wheels of Dharma and comprised of the Four Noble Truths and Noble Eightfold Path.
- The Rainy Season retreat (Varsha Vassa) for the Monks and Nuns also starts with this day lasting for three lunar months from July to October, during which they remain in a single place, generally in their temples (Viharas/Chaityas) dedicated to intensive meditation.
- The day is also observed as Guru Poornima by both Buddhists and Hindus as a day to mark reverence to their Gurus.

Guru Purnima

- According to the Hindu calendar, Guru Purnima generally falls on a full-moon day in the Hindu month of Ashad.
- It is dedicated to Maharshi Veda Vyasa, the sage who is believed to have edited the sacred Hindu text, the Vedas and created the 18 Puranas, Mahabharata and the Srimad Bhagavatam.
- For Buddhists, the festival marks the first sermon of Lord Buddha, which is said to have been delivered at Sarnath, Uttar Pradesh, on this very day.
- It is also believed to mark the onset of monsoons.

Buddhism and Diplomacy

- Buddhism has become an important tool in contemporary geopolitics particularly in Asia, and it has become increasingly evident that whoever controls the Buddhist discourse and activities will sway influence in Asia.
- The celebration of Dharma Chakra Day is being pushed as an event to show India’s strong Buddhist heritage amid tensions with China. It will see the virtual participation of leaders from major Buddhist countries, except China.
- The timing of the event is particularly important, because this is when both countries would like to resurrect their linkages with others. To show that like-minded countries are coming together sends across a message. What is however important is that one has to put in sustained effort at this, and have a relook at India-China policy with strategic cultural moves.
- The Central Tibetan Administration has asked Tibetan Buddhists to participate in the online event in large numbers to “support and appreciate” the effort.
The Central Tibetan Administration (CTA) is an organisation headquartered in McLeod Ganj, Dharamshala, India. It is also referred to as the Tibetan Government in Exile which has never been recognized by China.

The position of the CTA is that Tibet is a distinct nation with a long history of independence and it considers China's administration of Tibet as illegitimate military occupation. In addition to political advocacy, it administers a network of schools and other cultural activities for Tibetans in India.

Meanwhile, the People’s Republic of China (PRC)'s World Buddhist Forum (WBF) has been hosting congregations of Buddhist monks since 2005. China's extensive infrastructure investment in Lumbini, Buddha's birthplace in Nepal, is also seen as a strategic move to claim the Buddhist legacy.

While Buddhism might have vanished from India as a religion practised by many people, it is still a critical part of India's civilisational ethos.

There should be more Buddhist corridor including Ladakh, Himachal Pradesh and Arunachal Pradesh, apart from Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat and Andhra Pradesh. There could be nodal centres for people-to-people exchanges for those who come from South Korea, Taiwan and other countries. Although no other country can take Buddhist leadership away from India, the status of Buddhism in India is quite different now.

India has not been promoting its own Buddhist streams or strengthening the original Buddhism. Promoting anything else or any other brand than its own limits a genuine outreach. Promoting anything else becomes a subject of contestation, and the essence of using Buddhism as a diplomatic card gets lost.

Conclusion

There are also hundreds of millions of Chinese who have a deep devotion towards Buddhism. India needs to reach out to those Chinese constituencies too, for long term gains. After all, India conquered the hearts and minds of Chinese for 200 years without sending a single troop to China.
Meta-analysis does not support continued use of point-of-care serological tests for COVID-19

**Serological test**

- Serological tests to detect antibodies against novel coronavirus (SARS-CoV-2) could improve diagnosis of COVID-19 and be useful tools for epidemiological surveillance.

**Epidemiology**

- It is the branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health.

- These have been seen as a tool to issue *immunity passports* or certificates so that already-infected people can move around freely. 

  There has been increasing number of serological tests, and many are being marketed for point-of-care use.

**What is point-of-care testing?**

- Point-of-care testing (POCT or bedside testing) is defined as medical diagnostic testing at or near the point of care—that is, at the time and place of patient care.
- This contrasts with the historical pattern in which testing was wholly or mostly confined to the medical laboratory, which entailed sending off specimens away from the point of care and then waiting hours or days to learn the results, during which time care
A systematic review and meta-analysis of 40 studies of antibody testing for novel coronavirus (SARS-CoV-2) has found “major weaknesses” in the evidence base for serological tests.

The “evidence does not support the continued use of existing point-of-care serological tests for COVID-19”, says a study published in The British Medical Journal.

Risk of bias

- The evidence is “particularly weak” for point-of-care serological tests.
- The study warns: “Our findings should also give pause to governments that are contemplating the use of serological tests — in particular, point-of-care tests — to issue immunity certificates or passports.”

Primary outcomes

- The primary outcome of the analysis was to evaluate the overall sensitivity and specificity based on the method of serological testing — ELISA, lateral flow immunoassays (LFIAs), or chemiluminescent immunoassays (CLIAs), and immunoglobulin class (IgG, IgM or both).
- The study found high risk of patient selection bias in 98% (48/49 studies) of assessments, and high or unclear risk of bias from performance or interpretation of the serological test in 73% (36/49) of studies. Only as little as 10% (4/40) of studies included outpatients.

What is pooled sensitivity?

- Pooling of results is a Meta-analysis method used to combine the results of different studies in order to get qualitative analysis. Usually used when the size of study is too small to evaluate the effect or relationship. So, pooling results will increase the power of statistical analyses.
Source: TH
10 ELEMENTS OF Good Journalism

Bill Kovach and Tom Rosenstiel spelt out 10 elements common to good journalism. They are:

1) Journalism’s first obligation is to the truth;
2) Its first loyalty is to citizens;
3) Its essence is a discipline of verification;
4) Its practitioners must maintain an independence from those they cover;
5) It must serve as an independent monitor of power;
6) It must provide a forum for public criticism and compromise;
7) It must strive to keep the significant interesting and relevant;
8) It must keep the news comprehensive and proportional,
9) Its practitioners must be allowed to exercise their personal conscience; and
10) Citizens, too, have rights and responsibilities when it comes to the news.

Source: TH
10 ELEMENTS OF Good Journalism

Bill Kovach and Tom Rosenstiel spelt out 10 elements common to good journalism. They are:

1) Journalism’s first obligation is to the truth;
2) Its first loyalty is to citizens;
3) Its essence is a discipline of verification;
4) Its practitioners must maintain an independence from those they cover;
5) It must serve as an independent monitor of power;
6) It must provide a forum for public criticism and compromise;
7) It must strive to keep the significant interesting and relevant;
8) It must keep the news comprehensive and proportional,
9) Its practitioners must be allowed to exercise their personal conscience; and
10) Citizens, too, have rights and responsibilities when it comes to the news.

Source: TH
MGNREGA and annual work limit

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

About MGNREGA

The Mahatma Gandhi National Rural Employment Guarantee Act, earlier known as the National Rural Employment Guarantee Act was passed on 7th September 2005 to augment employment generation and social security in India. It covers all districts of India except the ones with 100% urban population.

Key objectives:

1. Generation of paid rural employment of not less than 100 days for each worker who volunteers for unskilled labour.
2. Proactively ensuring social inclusion by strengthening livelihood base of rural poor.
3. Creation of durable assets in rural areas such as wells, ponds, roads and canals.
4. Reduce urban migration from rural areas.
5. Create rural infrastructure by using untapped rural labour.

The following are the eligibility criteria for receiving the benefits under MGNREGA scheme:

1. Must be Citizen of India to seek NREGA benefits.
2. Job seeker has completed 18 years of age at the time of application.
3. The applicant must be part of a local household (i.e. application must be made with local Gram Panchayat).
4. Applicant must volunteer for unskilled labour.

Key facts related to the scheme:

1. The Ministry of Rural Development (MRD), Govt of India is monitoring the entire implementation of this scheme in association with state governments.
2. Individual beneficiary oriented works can be taken up on the cards of Scheduled Castes and Scheduled Tribes, small or marginal farmers or beneficiaries of land reforms or beneficiaries under the Indira Awaas Yojana of the Government of India.
3. Within 15 days of submitting the application or from the day work is
demanded, wage employment will be provided to the applicant.

4. **Right to get unemployment allowance** in case employment is not provided within fifteen days of submitting the application or from the date when work is sought.

5. **Social Audit of MGNREGA works is mandatory**, which lends to accountability and transparency.

6. The Gram Sabha is the principal forum for wage seekers to raise their voices and make demands.

7. It is the Gram Sabha and the Gram Panchayat which approves the shelf of works under MGNREGA and fix their priority.

**Role of Gram Sabha:**

1. It determines the order of priority of works in the meetings of the Gram Sabha keeping in view potential of the local area, its needs, local resources.
2. Monitor the execution of works within the GP.

**Roles of Gram Panchayat:**

1. Receiving applications for registration
2. Verifying registration applications
3. Registering households
4. Issuing Job Cards (JCs)
5. Receiving applications for work
6. Issuing dated receipts for these applications for work
7. Allotting work within fifteen days of submitting the application or from the date when work is sought in the case of an advance application.
8. Identification and planning of works, developing shelf of projects including determination of the order of their priority.

**Responsibilities of State Government in MGNREGA:**

1. Frame Rules on matters pertaining to State responsibilities under Section 32 of the Act
2. Develop and notify the Rural Employment Guarantee Scheme for the State.
3. Set up the State Employment Guarantee Council (SEGC).
4. Set up a State level MGNREGA implementation agency/mission with adequate number of high calibre professionals.
5. Set up a State level MGNREGA social audit agency/directorate with adequate number of people with knowledge on MGNREGA processes and demonstrated commitment to social audit.

In NEWS:
According to the central scheme database of the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA), at least 1.4 lakh poor rural households have completed their quota of 100 days of work for the first three months of the year. Therefore, they will not be eligible for further benefits under the rural employment guarantee scheme for the rest of the year.

Related Data:

- Overall, 23 lakh households have already completed 60 days of work.
- Another seven lakh households have completed 80 days and are on the verge of running out of work.
- With almost 60,000 households which have completed 100 days of work, Chhattisgarh has the highest rate among States, followed by Andhra Pradesh with almost 24,500 households in this category.
- However, Andhra Pradesh maintains its own database showing that 8.6% of all beneficiary households in the State have already completed 100 days of work.

Related Issues:

- Impact of Covid-19 pandemic: Due to Covid-19, the nationwide lockdown has resulted in thousands of unemployed migrant workers returning to their villages and now dependent on MGNREGA wages.
- Increase in Demand for Work: The demand for MGNREGA work almost doubled in June as there is no other work available for many people.
- Construction sector, which usually absorbs a large number of workers, has also collapsed.
- Monsoon Season: In many areas, monsoon is the hungry season and many people are desperate for work and dependent on MGNREGA wages.
- It is also expected that in December the situation would be worse especially for women, elderly and disabled and tribals when agriculture work is over and there will be no work from MGNREGA.

Solutions:

- Expansion of the Scheme: The MGNREGA scheme contains a provision for an expansion of the scheme to allow for 150 days of work per household for districts affected by drought or other natural disaster.
- Given that Covid-19 was declared a national disaster, this provision may be implemented immediately across the country.
- Change in limit: The limit should be imposed per adult individual rather...
than per household.

- **Increase in Wage:** There is a demand for an increase to 200 days per individual at a daily wage rate of ₹600. The current wage rate of Rs. 200 per day does not even match up to minimum wage rates in most States.
- **Farming:** Getting employment from the Agriculture and farms is an option which can be provided to the migrants. Eg. Migrants workers being deployed in the Litchi farms of Bihar.

**Government Initiatives:** It was announced in March that the workers under the MGNREGA would get a hike of Rs. 2000 each on an average. **Garib Kalyan Rojgar Abhiyan** was started to provide employment to migrant labourers who returned home during the lockdown. The scheme covers six states — Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha. It has as a provision to grant 125 days of employment to migrants.

**Conclusion**

Gram panchayats need to be provided with adequate resources, powers, and responsibilities to sanction works: provide work on demand, and authorise wage payments to tackle the crisis of the migrant workers. MGNREGA has come to the nation’s aid in combating growing poverty. Even programmes like **Swacchh Bharat** and **Pradhan Mantri Awas Yojana** are being merged to leverage its utility, reach and value.

Therefore, it needs an urgent extension for those who have already completed the work limits. **Initiatives must be taken to impart skills** in the workers so that they can take alternative livelihoods during such situations.

Source: TH

---

**China's Security Law on Hong Kong**

**China's Security Law on Hong Kong**

---

**China's Security Law on Hong Kong**

---

**China's Security Law on Hong Kong**

---

**China's Security Law on Hong Kong**
Recently, several countries have proposed measures to protect Hong Kong residents fleeing potential political persecution from China's new National Security Law. China’s new security law criminalizes what it deems secession, subversion, terrorism, and collusion with a foreign country.

Taiwan’s Response:
It has opened the Taiwan-Hong Kong Services and Exchange Office in order to help facilitate asylum for people fleeing Hong Kong. Taiwan was the first state which pledged to support Hong Kong residents seeking asylum, in May 2020. China also claims Taiwan to be part of China and threatens to use force to take over the island. China has proposed to Taiwan that it follow the “one country, two systems” model to unite with China. But the Taiwanese reject any idea of uniting with mainland China.

United Kingdom’s Response:
It has described the security law as a clear and serious violation of the 1984 Sino-British Joint Declaration under which it handed back its colony to China in 1997. Under the Joint Declaration, China had promised to maintain Hong Kong’s capitalist and more open political system for 50 years under "one country, two systems".

Since the handover, Hong Kong residents have accused China of overstepping its authority. The Umbrella Movement was a series of protests in 2014 that called for more transparent elections for the city’s chief executive. In 2019 protests erupted in Hong Kong over a proposed bill to allow extradition to mainland China.

It has decided to offer British citizenship to around three million residents of Hong Kong. It is also rethinking its provisional decision to allow Huawei (China’s Company) to be involved in the development of Britain’s 5G infrastructure.
Other Country’s Response

- **The USA** has passed a **Bipartisan Bill** to sanction Chinese officials who violate Hong Kong's freedoms. It is also planning to bring the **Hong Kong Safe Harbor Act**, which would open up a route for asylum for Hong Kong’s frontline activists in immediate danger.
- **Australia** is considering offering Hong Kong residents **temporary protection visas** that will allow refugees to live in the country for up to three years.
- **Japan** said that it is **seriously concerned** about China’s decision toward Hong Kong.
- **India** has been keeping a close watch on recent developments in Hong Kong.

Chinese Reaction to Global Response:

- It has said that the **security law issue is purely China's internal affairs**, and no foreign country has the right to interfere.
- It has condemned the UK’s citizenship offer to Hong Kongers and **warned the UK for serious consequences**.
- It considers all residents living in Hong Kong, including those with British National Overseas passports, as Chinese nationals.
- It has said that the UK’s U-turn on its **Huawei decision would damage the UK’s image as an open, business-friendly environment**.
- It has **accused Taiwan administration** of nurturing a separatist plot in Hong Kong and warned for a **military response**.

New Security Law in Hong Kong

- Basic Law allows **Hong Kong to enjoy executive, legislative and independent judicial power**, including that of final adjudication, **barring matters of defence and foreign affairs**.
- Under **Article 23 of the Basic Law**, Hong Kong has to enact a national **security law** “to prohibit any act of treason, secession, sedition, subversion against the Central People’s Government, or theft of state secrets, to prohibit foreign political organizations or bodies from conducting political activities in the Region, and to prohibit political organizations or bodies of the Region from establishing ties with foreign political organizations or bodies.”
- **Article 23** aims at **preserving national security** but it will also allow China’s national security organs to formally **operate and set up institutions in Hong Kong**.
Basic law makes it clear that only Hong Kong’s Legislative Council (LegCo) can make and repeal laws. Beijing wants LegCo to pass the new legislation as soon as possible because it is afraid that if LegCo comes under the control of democrats after elections later in 2020, it will be hard to implement the legislation. Democrats are against this law as it curbs the autonomy of Hong Kong as SAR. However, Beijing can bypass LegCo if it chooses to and make the national security law applicable to Hong Kong by inserting this legislation in Annex III of the Basic Law. Under Article 18 of Basic Law, national laws can be applied in Hong Kong if they are placed in Annex III, and must be confined to defence, foreign affairs and matters outside the limits of autonomy of the region. Once listed in Annex III, national laws can be enforced in the city by way of promulgation (automatically being put into effect) or by legislating locally in the SAR.

Basic Law

- Hong Kong was formerly a British colony and was handed over to mainland China in 1997, becoming one of its Special Administrative Regions (SAR).
- It is governed by a mini-constitution called the Basic Law, which affirms the principle of “one country, two systems”.
- The constitutional document is a product of the 1984 Sino-British Joint Declaration, under which China promised to honour Hong Kong’s liberal policies, system of governance, independent judiciary, and individual freedoms for a period of 50 years from 1997.

Background

- Since 1997, Hong Kong residents have protested many times to protect their Basic Law freedoms.
- In 2003, the first major pro-democracy protest took place when the Hong Kong government first tried to enact the national security law.
- In 2014, over one lakh city residents took part in the Umbrella Revolution to protest against China’s denial of democratic reforms.
- In 2019, the largest protest till now, took place against a proposed extradition law, and continued with pro-democracy marches even after the legislation was withdrawn.
- Impact of the Protests:
  - The protests were seen as an affront by mainland China after which
the government started adopting a more hardline approach to foreign policy and internal security issues.

- The Hong Kong unrest also impacted Taiwan which led to the victory of the Democratic Progressive Party, which openly opposes joining China. China considers the island states as its own but Taiwan opposes the view.

**Criticism**

- The draft law has been criticised by democratic parties in Hong Kong as it undermines the “one country, two systems” model that gives the SAR a high degree of autonomy.
- Hong Kong’s freedoms will be compromised as the law could effectively bring the city under full control of mainland China.
- The new law would ban seditious activities that target mainland Chinese rule, as well as punish external interference in Hong Kong affairs. This will lead to the revival of the protests.

Source: IE

---

Indian Railways & Renewable Energy

Indian Railways & Renewable Energy

Part of: GS-III- Environment (PT-MAINS-PERSONALITY TEST)

The Indian Railways has decided to be self-reliant for its energy needs by utilizing its vacant lands for Renewable Energy (RE) projects. It will utilize solar energy for meeting its traction (action of drawing or pulling something over a surface) power requirements.

**ImpPoints**

- In January 2020, it was announced that the entire network of the Indian
Railways will run on electricity by 2024 and become a net-zero emission network by 2030.

- Indian Railways is adopting an innovative concept of installation of solar projects along operational railway lines. This will help in:
  - Preventing encroachment.
  - Enhancing the speed and safety of trains.
  - Reduction of infrastructure costs due to direct injection of solar power into the traction network.

Railway Energy Management Company Limited (REMCL) is working continuously to further proliferate the use of solar energy on mega-scale.

- With these mega initiatives, Indian Railways is leading India’s fight against climate challenge and is taking significant steps towards meeting its ambitious goal of being a net-zero carbon emissions organisation and meeting India’s Intended Nationally Determined Contributions (INDC) targets.
- This would also help in making Indian Railways a complete ‘Green mode’ of transportation and ‘Atmanirbhar (energy self-sufficient transport organisation)’.

Achievements:

- Energy procurement from various solar projects like 3 MWp solar plant set up at Modern Coach Factory (MCF) Raebareli (Uttar Pradesh).
- About 100 MWp rooftop solar systems on various stations and buildings of Railways.
- A project of 1.7 MWp near Bina Traction Sub Station, Bina (Madhya Pradesh) connected directly to Overhead Traction System (OTS) will be commissioned shortly. This is the first of its kind project in the world authorised by Indian Railways in collaboration with Bharat Heavy Electricals Limited (BHEL). BHEL is one of the seven Maharatna companies. The project was undertaken by BHEL under its Corporate Social Responsibility (CSR) scheme.
- It involves the adoption of innovative technology for converting Direct Current (DC) to single-phase Alternating Current (AC) for feeding directly to Railway’s overhead traction system.
- It can produce approximately 25 lakh units of energy annually and will save around Rs. 1.37 crore for Railways every year.
Overhead Traction System

- **Traction system** causes the propulsion of a vehicle in which tractive or driving force is obtained from various devices such as diesel engine drives, steam engine drives, electric motors, etc.
- When this **power supply is drawn from an overhead line system**, it is called an Overhead Traction System.

Railway Energy Management Company Limited

- It was incorporated on 16th August 2013 under the **Companies Act 1956** as a **joint venture company** of Ministry of Railways.
- **Objective**: To tap the business potential in the energy sector including green energy, power trading etc. by setting up renewable energy wind power projects, etc.

Source: PIB

---

**New National Logistics Law**

**GS-III | 08 July, 2020**

The Ministry of Commerce and Industry is considering replacing the **Multimodal Transportation of Goods Act, 1993 (MMTG)** with a **National Logistics Efficiency and Advancement Predictability and Safety Act (NLEAPS)**. MMTG provides for the regulation of multimodal transportation of goods from any place in India to any place outside India.

**Multimodal transportation refers** to a combination of more than one mode of movement, such as **rail, road or sea**, for **end-to-end delivery of goods**. It was introduced to **facilitate the exporters** and give them a sense of security in transporting their goods.

- **Aim**: NLEAPS aims to **streamline the logistics ecosystem** in the country, with a view to promote growth of the sector.
Modernise and formalise the logistics services and promote the sector, which is key for the smooth movement of goods.
- To reduce the logistics cost from the present 14% of the Gross Domestic Product (GDP) to less than 10% of GDP.

Reason Behind New Law:
- The new law tends to define various participants of the logistics sector and create a light regulatory ecosystem.
- There is no clear definition of the logistics sector in the MMTG.
- The logistics sector with a market size of USD 160 billion is complex, with more than 20 government agencies, 40 partnering agencies, 37 export promotion councils, 500 certifications and 10,000 commodities.

Benefit:
Effective implementation of the Act would help provide an impetus to trade, enhance export competitiveness, and improve India’s ranking in the Logistics Performance Index and Ease of Doing Business.

Logistics Performance Index (LPI)
The Logistics Performance Index (LPI), developed by the World Bank Group, is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.

The logistics performance (LPI) is the weighted average of the country’s scores on the six key dimensions:
- Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs.
- Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology).
- Ease of arranging competitively priced shipments.
- Competence and quality of logistics services (e.g., transport operators, customs brokers).
- Ability to track and trace consignments.
- Timeliness of shipments in reaching destinations within the scheduled or expected delivery time.
Performance Assessment of Highways

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the National Highways Authority of India (NHAI) has decided to undertake performance assessment and ranking of the highways in the country. The assessment activity majorly intended to improve the quality of roads in the country.

Parameters for Assessment:

- The criteria for the assessment have been broadly categorised in three main heads namely, Highway Efficiency (45%), Highway Safety (35%) and User Services (20%).
- Additionally, important parameters like operating speed, time taken at toll plaza, road signages, road markings, accident rate, illumination, availability of Advanced Traffic Management System (ATMS), functionality of structures, cleanliness, plantation, wayside amenities and customer satisfaction will also be considered while conducting the assessment.
- Apart from overall ranking of all the corridors, separate ranking for Build-Operate-Transfer (BOT), Hybrid Annuity Model (HAM) and Engineering, Procurement, and Construction (EPC) projects will also be done.

- **BOT** is a conventional PPP model in which a private partner is responsible to design, build, operate (during the contracted period) and transfer back the facility to the public sector.
- In the case of **HAM**, the central government bears 40% of the project cost and the remaining amount is arranged by the developer.
- Under the **EPC model**, the cost is completely borne by the government.
The score obtained by each Corridor in each of the parameters will provide feedback and corrective recourse for higher standards of operation, better safety and user experience to improve existing highways.

It will also help in identifying and filling gaps of design, standards, practices, guidelines and contract agreements for other NHAI projects.

The ranking for BOT, HAM and EPC projects is expected to bring out operational efficiency and ensure high quality maintenance of roads.

On the basis of outcome of the assessment, the authority will undertake a comprehensive analysis and decide on the level of intervention required to enhance the overall service quality.

**National Highway Authority of India**

- National Highways Authority of India (NHAI) was set up under NHAI Act, 1988.
- It is under the administrative control of the Ministry of Road Transport and Highways.
- It has been entrusted with the National Highways Development Project, along with other minor projects for development, maintenance and management. **National Highways Development Project (NHDP) is a project to upgrade, rehabilitate and widen major highways in India to a higher standard.** The project was started in 1998.
- NHAI maintains the National Highways network to global standards and cost effective manner and promotes economic well being and quality of life of the people.

**PT-SHOT**

National Highways Development Programme (NHDP) was launched in 1998 with the objective of developing roads of international standards which facilitate smooth flow of traffic. It envisages creation of roads with enhanced safety features, better riding surface, grade separator and other salient features. **National Highways constitute only 2% of the total road length in the country but carry 40% of the total traffic.**
NHDP is being implemented by National Highways Authority of India (NHAI), an organisation under the aegis of Ministry of Road, Transport and Highways. The programme is being implemented in the following **seven phases**;

- **Phase I:** Phase I consists of Golden Quadrilateral network comprising a total length of 5,846 km which connects the four major cities of Delhi, Chennai, Mumbai & Kolkata and 981 km of North-South and East-West corridor. NS-EW corridor connects Srinagar in the north to Kanyakumari in the south and Silchar in the east to Porbandar in the west. Phase I also includes improving connectivity to ports.
- **Phase II:** Phase II covers 6,161 km of the NS-EW corridor (The total NS-EW corridor consists of 7,142 km) and 486 km of other NHs.
- **Phase III:** Four-laning of 12,109 km of high density national highways connecting state capitals and places of economic, commercial and tourist importance.
- **Phase IV:** Upgradation of 20,000 km of single-lane roads to two-lane standards with paved shoulders.
- **Phase V:** Six-laning of 6,500 km of four-laned highways.
- **Phase VI:** Construction of 1,000 km of expressways connecting major commercial and industrial townships.
- **Phase VII:** Construction of ring roads, by-passes, underpasses, flyovers, etc. comprising 700 km of road network.

Source: PIB

**World Bank's Support to India**

GW-III | 08 July, 2020

**World Bank's Support to India**

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

**World Bank**

- With 189 member countries, the World Bank Group is a unique global partnership which consists of five development institutions.
- **International Bank for Reconstruction and Development (IBRD)** provides
loans, credits, and grants.

- **International Development Association (IDA)** provides low- or no-interest loans to low-income countries.
- **The International Finance Corporation (IFC)** provides investment, advice, and asset management to companies and governments.
- **The Multilateral Guarantee Agency (MIGA)** insures lenders and investors against political risk such as war.
- **The International Centre for the Settlement of Investment Disputes (ICSID)** settles investment-disputes between investors and countries. India is not a member of ICSID.

**In NEWS**

Recently, the **World Bank (WB)** and the **Government of India** has signed the **USD 750 million agreement** for an **Emergency Response Programme** for Micro, Small, and Medium Enterprises (MSMEs).

Emergency Response Programmes are dedicated towards **enhancing the resilience of communities and livelihoods** in order to address fragility, poverty and vulnerability to conflict and disaster.

**Financial Support:**

- The USD 750 million loan which is being granted from the **International Bank for Reconstruction and Development (IBRD** - a part of the WB group), has a maturity of 19 years including a 5-year grace period.
- The WB groups and its private sector arm – **the International Finance Corporation (IFC)**, will support the government’s initiatives to protect the **MSME sector** which is severely impacted by the **Covid-19 crisis**.
- Covid-19 pandemic has severely impacted the MSME sector leading to loss of livelihoods and **employment**.
- Earlier, the World Bank has committed to support India’s emergency Covid-19 response, including the new MSME project with **USD 2.75 billion**. The first **USD 1 billion emergency support was announced in April 2020 for immediate support to India’s health sector**.
- Another **USD 1 billion project was approved in May** to increase cash transfers and food benefits to the poor and vulnerable, including a more consolidated delivery platform – accessible to both rural and urban populations.

**Significance:**
Unlocking Liquidity: Considering the current uncertainties, lenders remain concerned about borrowers’ ability to repay – resulting in limited flow of credit.

Therefore, the program will support the government's efforts to channel liquidity to the MSME sector by de-risking lending from banks and Non-Banking Financial Companies (NBFCs) to MSMEs through a range of instruments, including credit guarantees.

Strengthening NBFCs and SFBs: The programme will address the urgent and varied needs of the MSMEs by improving the funding capacity of key market-oriented channels of credit, such as the NBFCs and Small Finance Bank (SFBs). This will support the government’s refinance facility for NBFCs. In parallel, the IFC would provide direct support to SFBs through loans and equity.

Enabling Financial Innovations: Currently only about 8% of MSMEs are served by formal credit channels. The program will incentivize and mainstream the use of fintech and digital financial services in MSME lending and payments.

Way forward

The MSME sector is central to India’s growth and job creation and will be key to the pace of India’s economic recovery, post Covid-19. The financial support by the World Bank is a part of reforms that are needed to propel the MSME sector over time. Indian government has announced Rs.3-lakh crore collateral-free assistance or sovereign credit guarantee under Atmanirbhar Bharat Abhiyan.

However, the immediate need is to ensure that the liquidity infused into the system by the government is accessed by MSMEs. Equally important is to strengthen the overall financing ecosystem for MSMEs.

Source: PIB
The Ministry of Labour and Employment has started offering free online career skills training through its National Career Service (NCS) project for job-seekers registered with it.

- The training will assist the learners in enhancing personality development with modules on corporate etiquette, improving interpersonal skills, making impactful presentations including other necessary soft skills demanded by the industry today.
- The training module is available in Hindi and English on the NCS portal.
- The course has been launched in partnership with TCSiON (a unit of Tata Consultancy Services).

**Launch:**

- It is a Five Year Mission Mode Project launched by the Prime Minister on 20th July, 2015.
- It is within the umbrella of the e-governance plan.
- It is a one-stop solution that provides a wide array of employment and career related services to the citizens of India.

**Implemented By:** Directorate General of Employment, Ministry of Labour & Employment.

**Three Pillars:** The NCS project reaches out to the people of this country through its three essential pillars i.e.

- a well designed ICT based portal which is NCS portal,
- Country wide set up of Model Career Centers and Interlinkage with all the states through employment exchanges.

**Services Provided:**

- The digital centralized portal provides a wide range of career related services including job search, job matching, rich career content, career counselling, information on Job Fairs, services of local service providers like drivers, plumbers, etc. for households and various other services.
- This portal also facilitates registration of Job Seekers, Employers, Skill Providers, Career Counsellors, Local Service Providers (LSP’s), Career Centers, Placement Organisations, Households (for availing the services of the LSP’s) and Government Department.

**Registration on the Portal:**

- NCS does not charge any fees for registration on the portal and its
About 1 crore job seekers and 54,000 employers are registered on the portal.

Source: PIB

Context: Indian Oil, NTPC and SDMC have signed an MoU to develop a waste-to-energy facility at Delhi’s Okhla landfill site using gasification technology.

About SATAT initiative:

- The initiative is aimed at providing a Sustainable Alternative Towards Affordable Transportation (SATAT) as a developmental effort that would benefit both vehicle-users as well as farmers and entrepreneurs.
- Compressed Bio-Gas plants are proposed to be set up mainly through independent entrepreneurs.

How it works?

- CBG produced at these plants will be transported through cascades of cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative.
- The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure, carbon-dioxide, etc., to enhance returns on investment.
- This initiative is expected to generate direct employment for 75,000 people and produce 50 million tonnes of bio-manure for crops.

Benefits:

- Responsible waste management, reduction in carbon emissions and pollution.
- Additional revenue source for farmers. 3. Boost to entrepreneurship, rural economy and employment.
- Support to national commitments in achieving climate change goals.
- Reduction in import of natural gas and crude oil.
• Buffer against crude oil/gas price fluctuations.

Source: PIB
MGNREGA and annual work limit

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

About MGNREGA

The Mahatma Gandhi National Rural Employment Guarantee Act, earlier known as the National Rural Employment Guarantee Act was passed on 7th September 2005 to augment employment generation and social security in India. It covers all districts of India except the ones with 100% urban population.

Key objectives:

1. Generation of paid rural employment of not less than 100 days for each worker who volunteers for unskilled labour.
2. Proactively ensuring social inclusion by strengthening livelihood base of rural poor.
3. Creation of durable assets in rural areas such as wells, ponds, roads and canals.
4. Reduce urban migration from rural areas.
5. Create rural infrastructure by using untapped rural labour.

The following are the eligibility criteria for receiving the benefits under MGNREGA scheme:

1. Must be Citizen of India to seek NREGA benefits.
2. Job seeker has completed 18 years of age at the time of application.
3. The applicant must be part of a local household (i.e. application must be made with local Gram Panchayat).
4. Applicant must volunteer for unskilled labour.

Key facts related to the scheme:

1. The Ministry of Rural Development (MRD), Govt of India is monitoring the entire implementation of this scheme in association with state governments.
2. Individual beneficiary oriented works can be taken up on the cards of Scheduled Castes and Scheduled Tribes, small or marginal farmers or beneficiaries of land reforms or beneficiaries under the Indira Awaas Yojana of the Government of India.
3. Within 15 days of submitting the application or from the day work is
demanded, wage employment will be provided to the applicant.

4. **Right to get unemployment allowance** in case employment is not provided within fifteen days of submitting the application or from the date when work is sought.

5. **Social Audit of MGNREGA works is mandatory**, which lends to accountability and transparency.

6. The Gram Sabha is the principal forum for wage seekers to raise their voices and make demands.

7. It is the Gram Sabha and the Gram Panchayat which approves the shelf of works under MGNREGA and fix their priority.

**Role of Gram Sabha:**

1. It determines the order of priority of works in the meetings of the Gram Sabha keeping in view potential of the local area, its needs, local resources.
2. Monitor the execution of works within the GP.

**Roles of Gram Panchayat:**

1. Receiving applications for registration
2. Verifying registration applications
3. Registering households
4. Issuing Job Cards (JCs)
5. Receiving applications for work
6. Issuing dated receipts for these applications for work
7. Allotting work within fifteen days of submitting the application or from the date when work is sought in the case of an advance application.
8. Identification and planning of works, developing shelf of projects including determination of the order of their priority.

**Responsibilities of State Government in MGNREGA:**

1. Frame Rules on matters pertaining to State responsibilities under Section 32 of the Act ii) Develop and notify the Rural Employment Guarantee Scheme for the State.
2. Set up the State Employment Guarantee Council (SEGC).
3. Set up a State level MGNREGA implementation agency/ mission with adequate number of high calibre professionals.
4. Set up a State level MGNREGA social audit agency/directorate with adequate number of people with knowledge on MGNREGA processes and demonstrated commitment to social audit.
5. Establish and operate a State Employment Guarantee Fund (SEGF).

**In NEWS:**
According to the central scheme database of the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA), at least 1.4 lakh poor rural households have completed their quota of 100 days of work for the first three months of the year. Therefore, they will not be eligible for further benefits under the rural employment guarantee scheme for the rest of the year.

Related Data:
- Overall, 23 lakh households have already completed 60 days of work.
- Another seven lakh households have completed 80 days and are on the verge of running out of work.
- With almost 60,000 households which have completed 100 days of work, Chhattisgarh has the highest rate among States, followed by Andhra Pradesh with almost 24,500 households in this category.
- However, Andhra Pradesh maintains its own database showing that 8.6% of all beneficiary households in the State have already completed 100 days of work.

Related Issues:
- Impact of Covid-19 pandemic: Due to Covid-19, the nationwide lockdown has resulted in thousands of unemployed migrant workers returning to their villages and now dependent on MGNREGA wages.
- Increase in Demand for Work: The demand for MGNREGA work almost doubled in June as there is no other work available for many people.
- Construction sector, which usually absorbs a large number of workers, has also collapsed.
- Monsoon Season: In many areas, monsoon is the hungry season and many people are desperate for work and dependent on MGNREGA wages.
  - It is also expected that in December the situation would be worse especially for women, elderly and disabled and tribals when agriculture work is over and there will be no work from MGNREGA.

Solutions:
- Expansion of the Scheme: The MGNREGA scheme contains a provision for an expansion of the scheme to allow for 150 days of work per household for districts affected by drought or other natural disaster.
- Given that Covid-19 was declared a national disaster, this provision may be implemented immediately across the country.
- Change in limit: The limit should be imposed per adult individual rather
Increase in Wage: There is a demand for an increase to 200 days per individual at a daily wage rate of ?600. The current wage rate of Rs. 200 per day does not even match up to minimum wage rates in most States.

Farming: Getting employment from the Agriculture and farms is an option which can be provided to the migrants. Eg. Migrants workers being deployed in the Litchi farms of Bihar.

Government Initiatives: It was announced in March that the workers under the MGNREGA would get a hike of Rs. 2000 each on an average. Garib Kalyan Rojgar Abhiyan was started to provide employment to migrant labourers who returned home during the lockdown. The scheme covers six states — Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha. It has as a provision to grant 125 days of employment to migrants.

Conclusion

Gram panchayats need to be provided with adequate resources, powers, and responsibilities to sanction works: provide work on demand, and authorise wage payments to tackle the crisis of the migrant workers. MGNREGA has come to the nation’s aid in combating growing poverty. Even programmes like Swacchh Bharat and Pradhan Mantri Awas Yojana are being merged to leverage its utility, reach and value.

Therefore, it needs an urgent extension for those who have already completed the work limits. Initiatives must be taken to impart skills in the workers so that they can take alternative livelihoods during such situations.

Source: TH

China's Security Law on Hong Kong
Recently, several countries have proposed measures to protect Hong Kong residents fleeing potential political persecution from China's new National Security Law. China’s new security law criminalizes what it deems secession, subversion, terrorism, and collusion with a foreign country.

Taiwan’s Response:

It has opened the Taiwan-Hong Kong Services and Exchange Office in order to help facilitate asylum for people fleeing Hong Kong. Taiwan was the first state which pledged to support Hong Kong residents seeking asylum, in May 2020. China also claims Taiwan to be part of China and threatens to use force to take over the island. China has proposed to Taiwan that it follow the “one country, two systems” model to unite with China. But the Taiwanese reject any idea of uniting with mainland China.

United Kingdom’s Response:

It has described the security law as a clear and serious violation of the 1984 Sino-British Joint Declaration under which it handed back its colony to China in 1997. Under the Joint Declaration, China had promised to maintain Hong Kong’s capitalist and more open political system for 50 years under "one country, two systems".

Since the handover, Hong Kong residents have accused China of overstepping its authority. The Umbrella Movement was a series of protests in 2014 that called for more transparent elections for the city’s chief executive. In 2019 protests erupted in Hong Kong over a proposed bill to allow extradition to mainland China.

It has decided to offer British citizenship to around three million residents of Hong Kong. It is also rethinking its provisional decision to allow Huawei (China’s Company) to be involved in the development of Britain’s 5G infrastructure.
Other Country’s Response

- **The USA** has passed a **Bipartisan Bill** to sanction Chinese officials who violate Hong Kong’s freedoms. It is also planning to bring the **Hong Kong Safe Harbor Act**, which would open up a route for asylum for Hong Kong’s frontline activists in immediate danger.
- **Australia** is considering offering Hong Kong residents **temporary protection visas** that will allow refugees to live in the country for up to three years.
- **Japan** said that it is **seriously concerned** about China’s decision toward Hong Kong.
- **India** has been keeping a close watch on recent developments in Hong Kong.

Chinese Reaction to Global Response:

- It has said that the **security law issue is purely China’s internal affairs**, and no foreign country has the right to interfere.
- It has condemned the UK’s citizenship offer to Hong Kongers and **warned the UK for serious consequences**.
- It considers all residents living in Hong Kong, including those with British National Overseas passports, as Chinese nationals.
- It has said that the UK’s U-turn on its **Huawei decision would damage the UK’s image as an open, business-friendly environment**.
- It has **accused Taiwan administration** of nurturing a separatist plot in Hong Kong and warned for a **military response**.

New Security Law in Hong Kong

- Basic Law allows **Hong Kong** to enjoy **executive, legislative and independent judicial power**, including that of final adjudication, **barring matters of defence and foreign affairs**.
- Under **Article 23 of the Basic Law**, Hong Kong has to enact a national **security law** “to prohibit any act of treason, secession, sedition, subversion against the Central People’s Government, or theft of state secrets, to prohibit foreign political organizations or bodies from conducting political activities in the Region, and to prohibit political organizations or bodies of the Region from establishing ties with foreign political organizations or bodies.”
- **Article 23** aims at **preserving national security** but it will also allow China’s national security organs to formally **operate and set up institutions in Hong Kong**.
Basic law makes it clear that only Hong Kong’s Legislative Council (LegCo) can make and repeal laws.

Beijing wants LegCo to pass the new legislation as soon as possible because it is afraid that if LegCo comes under the control of democrats after elections later in 2020, it will be hard to implement the legislation.

Democrats are against this law as it curbs the autonomy of Hong Kong as SAR.

However, Beijing can bypass LegCo if it chooses to and make the national security law applicable to Hong Kong by inserting this legislation in Annex III of the Basic Law.

Under Article 18 of Basic Law, national laws can be applied in Hong Kong if they are placed in Annex III, and must be confined to defence, foreign affairs and matters outside the limits of autonomy of the region.

Once listed in Annex III, national laws can be enforced in the city by way of promulgation (automatically being put into effect) or by legislating locally in the SAR.

Basic Law

Hong Kong was formerly a British colony and was handed over to mainland China in 1997, becoming one of its Special Administrative Regions (SAR).

It is governed by a mini-constitution called the Basic Law, which affirms the principle of “one country, two systems”.

The constitutional document is a product of the 1984 Sino-British Joint Declaration, under which China promised to honour Hong Kong’s liberal policies, system of governance, independent judiciary, and individual freedoms for a period of 50 years from 1997.

Background

Since 1997, Hong Kong residents have protested many times to protect their Basic Law freedoms.

In 2003, the first major pro-democracy protest took place when the Hong Kong government first tried to enact the national security law.

In 2014, over one lakh city residents took part in the Umbrella Revolution to protest against China’s denial of democratic reforms.

In 2019, the largest protest till now, took place against a proposed extradition law, and continued with pro-democracy marches even after the legislation was withdrawn.

Impact of the Protests:
- The protests were seen as an affront by mainland China after which
the government started adopting a more hardline approach to foreign policy and internal security issues.

- The Hong Kong unrest also impacted Taiwan which led to the victory of the Democratic Progressive Party, which openly opposes joining China. China considers the island states as its own but Taiwan opposes the view.

Criticism

- The draft law has been criticised by democratic parties in Hong Kong as it undermines the “one country, two systems” model that gives the SAR a high degree of autonomy.
- Hong Kong’s freedoms will be compromised as the law could effectively bring the city under full control of mainland China.
- The new law would ban seditious activities that target mainland Chinese rule, as well as punish external interference in Hong Kong affairs. This will lead to the revival of the protests.

Source: IE

Indian Railways & Renewable Energy

GS-III | 08 July, 2020

Indian Railways & Renewable Energy

Part of: GS-III- Environment (PT-MAINS-PERSONALITY TEST)

The Indian Railways has decided to be self-reliant for its energy needs by utilizing its vacant lands for Renewable Energy (RE) projects. It will utilize solar energy for meeting its traction (action of drawing or pulling something over a surface) power requirements.

ImpPoints

- In January 2020, it was announced that the entire network of the Indian
Railways will run on electricity by 2024 and become a net-zero emission network by 2030.

- Indian Railways is adopting an innovative concept of installation of solar projects along operational railway lines. This will help in:
  - Preventing encroachment.
  - Enhancing the speed and safety of trains.
  - Reduction of infrastructure costs due to direct injection of solar power into the traction network.

Railway Energy Management Company Limited (REMCL) is working continuously to further proliferate the use of solar energy on mega-scale.

- With these mega initiatives, Indian Railways is leading India’s fight against climate challenge and is taking significant steps towards meeting its ambitious goal of being a net-zero carbon emissions organisation and meeting India’s Intended Nationally Determined Contributions (INDC) targets.
- This would also help in making Indian Railways a complete ‘Green mode’ of transportation and ‘Atmanirbhar (energy self-sufficient transport organisation)’.

Achievements:

- Energy procurement from various solar projects like 3 MWp solar plant set up at Modern Coach Factory (MCF) Raebareli (Uttar Pradesh).
- About 100 MWp rooftop solar systems on various stations and buildings of Railways.
- A project of 1.7 MWp near Bina Traction Sub Station, Bina (Madhya Pradesh) connected directly to Overhead Traction System (OTS) will be commissioned shortly.
  - This is the first of its kind project in the world authorised by Indian Railways in collaboration with Bharat Heavy Electricals Limited (BHEL). BHEL is one of the seven Maharatna companies. The project was undertaken by BHEL under its Corporate Social Responsibility (CSR) scheme.
  - It involves the adoption of innovative technology for converting Direct Current (DC) to single-phase Alternating Current (AC) for feeding directly to Railway’s overhead traction system.
  - It can produce approximately 25 lakh units of energy annually and will save around Rs. 1.37 crore for Railways every year.
Overhead Traction System

- **Traction system** causes the propulsion of a vehicle in which tractive or driving force is obtained from various devices such as diesel engine drives, steam engine drives, electric motors, etc.
- When this **power supply is drawn from an overhead line system**, it is called an Overhead Traction System.

Railway Energy Management Company Limited

- It was incorporated on **16th August 2013** under the **Companies Act 1956** as a **joint venture company** of Ministry of Railways.
- **Objective**: To tap the business potential in the energy sector including green energy, power trading etc. by setting up renewable energy wind power projects, etc.

Source: PIB

---

New National Logistics Law

GS-III | 08 July, 2020

The Ministry of Commerce and Industry is considering replacing the **Multimodal Transportation of Goods Act, 1993 (MMTG)** with a **National Logistics Efficiency and Advancement Predictability and Safety Act (NLEAPS)**. MMTG provides for the regulation of multimodal transportation of goods from any place in India to any place outside India.

**Multimodal transportation refers** to a combination of more than one mode of movement, such as **rail, road or sea, for end-to-end delivery of goods**. It was introduced to facilitate the exporters and give them a sense of security in transporting their goods.

- **Aim**: NLEAPS aims to **streamline the logistics ecosystem** in the country, with a view to promote growth of the sector.
Modernise and formalise the logistics services and promote the sector, which is key for the smooth movement of goods.

- To reduce the logistics cost from the present 14% of the Gross Domestic Product (GDP) to less than 10% of GDP.

Reason Behind New Law:

- The new law tends to define various participants of the logistics sector and create a light regulatory ecosystem.
- There is no clear definition of the logistics sector in the MMTG.
- The logistics sector with a market size of USD 160 billion is complex, with more than 20 government agencies, 40 partnering agencies, 37 export promotion councils, 500 certifications and 10,000 commodities.

Benefit:
Effective implementation of the Act would help provide an impetus to trade, enhance export competitiveness, and improve India’s ranking in the Logistics Performance Index and Ease of Doing Business.

Logistics Performance Index (PT)
The Logistics Performance Index (LPI), developed by the World Bank Group, is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.

The logistics performance (LPI) is the weighted average of the country’s scores on the six key dimensions:

- Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs.
- Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology).
- Ease of arranging competitively priced shipments.
- Competence and quality of logistics services (e.g., transport operators, customs brokers).
- Ability to track and trace consignments.
- Timeliness of shipments in reaching destinations within the scheduled or expected delivery time.
India ranked 44th on the LPI in 2018.

Source: PIB

Performance Assessment of Highways

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the National Highways Authority of India (NHAI) has decided to undertake performance assessment and ranking of the highways in the country. The assessment activity majorly intended to improve the quality of roads in the country.

Parameters for Assessment:

- The criteria for the assessment have been broadly categorised in three main heads namely, Highway Efficiency (45%), Highway Safety (35%) and User Services (20%).
- Additionally, important parameters like operating speed, time taken at toll plaza, road signages, road markings, accident rate, illumination, availability of Advanced Traffic Management System (ATMS), functionality of structures, cleanliness, plantation, wayside amenities and customer satisfaction will also be considered while conducting the assessment.
- Apart from overall ranking of all the corridors, separate ranking for Build-Operate-Transfer (BOT), Hybrid Annuity Model (HAM) and Engineering, Procurement, and Construction (EPC) projects will also be done.
- **BOT** is a conventional PPP model in which a private partner is responsible to design, build, operate (during the contracted period) and transfer back the facility to the public sector.
- In the case of **HAM**, the central government bears 40% of the project cost and the remaining amount is arranged by the developer.
- **Under the EPC model**, the cost is completely borne by the government. The
ranking of the corridors will be dynamic and the operators will get the opportunity to improve upon their ranking by improving the services on that corridor.

Significance:

- The score obtained by each Corridor in each of the parameters will provide feedback and corrective recourse for higher standards of operation, better safety and user experience to improve existing highways.
- It will also help in identifying and filling gaps of design, standards, practices, guidelines and contract agreements for other NHAI projects.
- The ranking for BOT, HAM and EPC projects is expected to bring out operational efficiency and ensure high quality maintenance of roads.
- On the basis of outcome of the assessment, the authority will undertake a comprehensive analysis and decide on the level of intervention required to enhance the overall service quality.

National Highway Authority of India

- National Highways Authority of India (NHAI) was set up under NHAI Act, 1988.
- It is under the administrative control of the Ministry of Road Transport and Highways.
- It has been entrusted with the National Highways Development Project, along with other minor projects for development, maintenance and management. National Highways Development Project (NHDP) is a project to upgrade, rehabilitate and widen major highways in India to a higher standard. The project was started in 1998.
- NHAI maintains the National Highways network to global standards and cost effective manner and promotes economic well being and quality of life of the people.

PT-SHOT

National Highways Development Programme (NHDP) was launched in 1998 with the objective of developing roads of international standards which facilitate smooth flow of traffic. It envisages creation of roads with enhanced safety features, better riding surface, grade separator and other salient features. National Highways constitute only 2% of the total road length in the country but carry 40% of the total traffic.
NHDP is being implemented by National Highways Authority of India (NHAI), an organisation under the aegis of Ministry of Road, Transport and Highways. The programme is being implemented in the following seven phases:

- **Phase I**: Phase I consists of Golden Quadrilateral network comprising a total length of 5,846 km which connects the four major cities of Delhi, Chennai, Mumbai & Kolkata and 981 km of North-South and East-West corridor. NS-EW corridor connects Srinagar in the north to Kanyakumari in the south and Silchar in the east to Porbandar in the west. Phase I also includes improving connectivity to ports.
- **Phase II**: Phase II covers 6,161 km of the NS-EW corridor (The total NS-EW corridor consists of 7,142 km) and 486 km of other NHs.
- **Phase III**: Four-laning of 12,109 km of high density national highways connecting state capitals and places of economic, commercial and tourist importance.
- **Phase IV**: Upgradation of 20,000 km of single-lane roads to two-lane standards with paved shoulders.
- **Phase V**: Six-laning of 6,500 km of four-laned highways.
- **Phase VI**: Construction of 1,000 km of expressways connecting major commercial and industrial townships.
- **Phase VII**: Construction of ring roads, by-passes, underpasses, flyovers, etc. comprising 700 km of road network.

Source: PIB
loans, credits, and grants.

- **International Development Association (IDA)** provides low- or no-interest loans to low-income countries.
- **The International Finance Corporation (IFC)** provides investment, advice, and asset management to companies and governments.
- **The Multilateral Guarantee Agency (MIGA)** insures lenders and investors against political risk such as war.
- **The International Centre for the Settlement of Investment Disputes (ICSID)** settles investment disputes between investors and countries. India is not a member of ICSID.

In NEWS

Recently, the **World Bank (WB)** and the **Government of India** has signed the **USD 750 million agreement for an Emergency Response Programme for Micro, Small, and Medium Enterprises (MSMEs)**.

Emergency Response Programmes are dedicated towards **enhancing the resilience of communities and livelihoods** in order to address fragility, poverty and vulnerability to conflict and disaster.

**Financial Support:**

- The USD 750 million loan which is being granted from the **International Bank for Reconstruction and Development (IBRD)** - a part of the WB group, has a maturity of 19 years including a 5-year grace period.
- The WB groups and its private sector arm – **the International Finance Corporation (IFC)**, will support the government’s initiatives to protect the **MSME sector** which is severely impacted by the **Covid-19** crisis.
- **Covid-19 pandemic** has severely impacted the MSME sector leading to loss of livelihoods and employment.
- Earlier, the World Bank has committed to support India’s emergency Covid-19 response, including the new MSME project with **USD 2.75 billion**. The first **USD 1 billion emergency support was announced in April 2020** for immediate support to **India’s health sector**.
- Another **USD 1 billion project was approved in May** to increase cash transfers and food benefits to the poor and vulnerable, including a more consolidated delivery platform – accessible to both rural and urban populations.

**Significance:**
Unlocking Liquidity: Considering the current uncertainties, lenders remain concerned about borrowers’ ability to repay – resulting in limited flow of credit.

Therefore, the program will support the government’s efforts to channel liquidity to the MSME sector by de-risking lending from banks and Non-Banking Financial Companies (NBFCs) to MSMEs through a range of instruments, including credit guarantees.

Strengthening NBFCs and SFBs: The programme will address the urgent and varied needs of the MSMEs by improving the funding capacity of key market-oriented channels of credit, such as the NBFCs and Small Finance Bank (SFBs). This will support the government’s refinance facility for NBFCs. In parallel, the IFC would provide direct support to SFBs through loans and equity.

Enabling Financial Innovations: Currently only about 8% of MSMEs are served by formal credit channels. The program will incentivize and mainstream the use of fintech and digital financial services in MSME lending and payments.

Way forward

The MSME sector is central to India’s growth and job creation and will be key to the pace of India’s economic recovery, post Covid-19. The financial support by the World Bank is a part of reforms that are needed to propel the MSME sector over time. Indian government has announced Rs.3-lakh crore collateral-free assistance or sovereign credit guarantee under Atmanirbhar Bharat Abhiyan.

However, the immediate need is to ensure that the liquidity infused into the system by the government is accessed by MSMEs. Equally important is to strengthen the overall financing ecosystem for MSMEs.

Source: PIB
The Ministry of Labour and Employment has started offering free online career skills training through its National Career Service (NCS) project for job-seekers registered with it.

- The training will assist the learners in enhancing personality development with modules on corporate etiquette, improving interpersonal skills, making impactful presentations including other necessary soft skills demanded by the industry today.
- The training module is available in Hindi and English on the NCS portal.
- The course has been launched in partnership with TCSiON (a unit of Tata Consultancy Services).

Launch:

- It is a Five Year Mission Mode Project launched by the Prime Minister on 20th July, 2015.
- It is within the umbrella of the e-governance plan.
- It is a one-stop solution that provides a wide array of employment and career related services to the citizens of India.

Implemented By: Directorate General of Employment, Ministry of Labour & Employment.

Three Pillars: The NCS project reaches out to the people of this country through its three essential pillars i.e.

- a well designed ICT based portal which is NCS portal,
- Country wide set up of Model Career Centers and
- Interlinkage with all the states through employment exchanges.

Services Provided:

- The digital centralized portal provides a wide range of career related services including job search, job matching, rich career content, career counselling, information on Job Fairs, services of local service providers like drivers, plumbers, etc. for households and various other services.
- This portal also facilitates registration of Job Seekers, Employers, Skill Providers, Career Counsellors, Local Service Providers (LSP’s), Career Centers, Placement Organisations, Households (for availing the services of the LSP’s) and Government Department.

Registration on the Portal:

- NCS does not charge any fees for registration on the portal and its
About 1 crore job seekers and 54,000 employers are registered on the portal.

Source: PIB

SATAT Initiative
GS-III | 08 July, 2020

Context: Indian Oil, NTPC and SDMC have signed an MoU to develop a waste-to-energy facility at Delhi’s Okhla landfill site using gasification technology.

About SATAT initiative:

- The initiative is aimed at providing a Sustainable Alternative Towards Affordable Transportation (SATAT) as a developmental effort that would benefit both vehicle-users as well as farmers and entrepreneurs.
- Compressed Bio-Gas plants are proposed to be set up mainly through independent entrepreneurs.

How it works?

- CBG produced at these plants will be transported through cascades of cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative.
- The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure, carbon-dioxide, etc., to enhance returns on investment.
- This initiative is expected to generate direct employment for 75,000 people and produce 50 million tonnes of bio-manure for crops.

Benefits:

- Responsible waste management, reduction in carbon emissions and pollution.
- Additional revenue source for farmers. 3. Boost to entrepreneurship, rural economy and employment.
- Support to national commitments in achieving climate change goals.
- Reduction in import of natural gas and crude oil.
Buffer against crude oil/gas price fluctuations.

Source: PIB
PARIS commitment: Climate Change COP21

Part of: GS-III- Climate CHANGE (PT-MAINS-PERSONALITY TEST)

In 2015 COP21, also known as the 2015 Paris Climate Conference, for the first time in over 20 years of UN negotiations, aimed at keeping global warming below 2°C.

The key vision of Paris Agreement was to keep global temperatures “well below” 2.0C (3.6F) above pre-industrial times and “seek to limit” even more, to 1.5C.

- It pledged to curb emissions. Before the conference started, more than 180 countries had submitted pledges to cut or curb their carbon emissions (intended nationally defined contributions, or INDCs, in the UN jargon). The INDCs were recognized under the agreement, but are not legally binding.
- A long-term global goal for net zero emissions: Countries have promised to try to bring global emissions down from peak levels as soon as possible. More significantly, they pledged “to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century”.
- The deal includes loss and damage, a mechanism for addressing the financial losses vulnerable countries face from climate impacts such as extreme weather.
- Raising money to bring in necessary changes. Finance to help developing countries adapt to climate change and transition to clean energy was an important point in the negotiations. This part of the deal has been made non-legally binding on developed countries.

What is COP 24- Katowice?

- COP24 is the informal name for the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).
- In accordance with a decision of the 22nd Session of the Conference of the Parties to the Climate Convention (COP22) in Marrakesh in November 2016, Poland was selected to host this event within the
framework of the Eastern European Group (EEG).

Agenda of COP24

- **Determining the accounting standards of the whole process**: to devise a process of measurement to calculate countries achievements. This agenda will not face much difficulty because with time there has been a gradual convergence of opinion.
- **MRE- Monitoring, Review, Evaluation**: This agenda has always been a bone of contention because many countries fear that this provision might become intrusive.
- **Institutional structure for technology**: a world body which will see the adequate transfer of technologies from the ‘Haves’ to the ‘Have-nots’.
- **Institutional structure for finance**: to see the flow of finance from the developed to the developing and underdeveloped countries.

Key Issues

- Many developing countries are reluctant to give up coal and hence weaken the commitment. The discussion is around the logistics to implement the Paris Agreement. However, the chief concern is that the Paris Agreement which talks of keeping temperature rise below 2 degrees is grossly inadequate.
- The IPCC report of 2018 has cautioned that human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate.
- Keeping this trajectory, a report suggested that by the end of the century the temperature rise can be as high as 3 to 4 degree Celsius.
- Another concern is the decision of US. As the largest emitter of Carbon dioxide, the US withdrawal from the Agreement is a mighty set back. Besides, China’s peaking period is 2030, and many experts say that by the time China lowers its emission it will be too late.
- The most important challenge is the transfer of technology and finance to the developing and underdeveloped countries. The industrialized countries are reluctant to share either of the resources without a tradeoff. On the other hand, the rest of the world has limited resources to purchase such sophisticated technologies.
- The effects of climate change have begun to surface. Migration related to climate change has destabilized many countries and have also led to the emergence of new populist movements.
Way Forward

- Most importantly, environmental ethics should take precedence over other issues like national and strategic interest or economic interest.
- COP24 would demonstrate how climate neutrality can be reached by using innovation and a technique for CO2 sequestration by soils and forests. Such innovative techniques have to be adopted and practiced.
- The Nationally Determined Contributions (NDCs) ought to be ambitious and the countries should not only commit to larger goals but achieve the same in time.
- Alternative sources of energy have to be explored. India’s Solar Alliance is a positive step in this direction. The transition of the vehicles from fossil fuel to electric or hybrid is the need of the hour.
- Adequate finance and technologies should be transferred from developed countries to developing countries. In the long run, it would yield rich dividends. Long-term, low-interest loans can be one solution. In this regard the World Bank’s commitment of $200 billion over the next five years is noteworthy.

Source: PIB
Objective

- According to Article 2, the Convention’s ultimate objective is “to achieve, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”.
- This objective is qualified in that it “should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.

Institutional Arrangements

The Conference of the Parties (COP)

Article 7.2 defines the COP as the “supreme body” of the Convention, as it is its highest decision-making authority. The climate change process revolves around the annual sessions of the COP.

COP President and Bureau

The office of the COP President normally rotates among the five United Nations regional groups. The President is usually the environment minister of his or her home country. S/he is elected by acclamation immediately after the opening of a COP session. Their role is to facilitate the work of the COP and promote agreements among Parties.

The work of the COP and each subsidiary body is guided by an elected Bureau. To ensure continuity, it serves not only during sessions, but between sessions as well.

Subsidiary Bodies (SBs)

The Convention establishes two permanent subsidiary bodies (SBs), namely the Subsidiary Body for Scientific and Technological Advice (SBSTA), by Article 9, and the Subsidiary Body for Implementation (SBI), by Article 10. These bodies advise the COP.

The SBSTA’s task is to provide the COP “with timely advice on scientific and
technological matters relating to the Convention”. The SBI’s task is to assist the COP “in the assessment and review of the effective implementation of the Convention”

The Secretariat

The secretariat, also known as the Climate Change Secretariat, services the COP, the SBs, the Bureau and other bodies established by the COP.

Other Bodies

Other bodies have been set up by the COP to undertake specific tasks. These bodies report back to the COP when they complete their work.

COP 1 established two ad hoc groups to conduct negotiations on specific issues.

COP 11 established the “Dialogue” to exchange experiences and analyse strategic approaches for long-term cooperative action to address climate change.

Timeline of Important Events

1979
First World Climate Conference (WCC)

1988
IPCC established

1990
In November IPCC and second WCC call for global treaty on climate change and in December UN General Assembly Negotiations on a Framework Convention Begin.

1992

1994
UNFCCC enters into force

1995
COP 1 (Berlin, Germany)

1996
August
The UNFCCC secretariat relocates from Geneva to its current home in Bonn (Germany), paving the way for the city to become an international sustainability hub and home to 18 UN organizations.

1997
COP 3 (Kyoto, Japan)

Kyoto Protocol adopted- The Protocol legally binds developed countries to emission reduction targets.

1998
Buenos Aires Plan of Action
The COP 6-2 took place from 16 to 27 July 2001 in Bonn, Germany. A major breakthrough is achieved at the second part of the sixth Conference of the Parties meeting in Bonn, with governments reaching a broad political agreement on the operational rulebook for the 1997 Kyoto Protocol.

2001
COP 7 (Marrakesh, Morocco)
Resulted in the Marrakesh Accords, setting the stage for ratification of the Kyoto Protocol. This formalized the agreement on operational rules for International Emissions Trading, the Clean Development Mechanism and Joint Implementation along with a compliance regime and accounting procedures.

2002
COP 8 (New Delhi, India)
Delhi Declaration. The Delhi Declaration focuses on the development needs of the poorest countries and the need for technology transfer for mitigating climate change.

2005
February 16
Entry of Kyoto Protocol into force with the Russian Federation ratification to the Kyoto Protocol, sealing its entry into force.

2005
COP11/CMP1 (December)
The first Meeting of the Parties to the Kyoto Protocol (MOP 1) takes place in Montreal.

2006
In January the Clean Development Mechanism, a key mechanism under the Kyoto Protocol, opens for business.
The CDM is one of the Flexible Mechanisms defined in the Kyoto Protocol that provides for emissions reduction projects which generate Certified Emission Reduction units (CERs) which may be traded in emissions trading schemes.

2007
COP13
Parties agreed on the Bali Road Map and Bali action plan, which charted the way towards a post-2012 outcome. The Plan has five main categories: shared vision, mitigation, adaptation, technology and financing.

2008
COP 14, Poznan (Poland)
The launch of the Adaptation Fund under the Kyoto Protocol and The Poznan Strategic Programme on Technology Transfer.

2009
COP15 (Copenhagen)
Copenhagen Accord drafted. Developed countries pledge up to USD 30 billion in fast-start finance for the period 2010-2012.

2010
COP 16 (Cancun)
Resulted in the Cancun Agreements, a comprehensive package by governments to assist developing nations in dealing with climate change.
The Green Climate Fund, the Technology Mechanism and the Cancun Adaptation Framework are established.

2011
COP 17 (Durban)
Governments commit to a new universal climate change agreement by 2015 for the period beyond 2020. (Resulted in the Paris Agreement of 2015)

2012
COP18/CMP8 (Doha)
The Doha Amendment to the Kyoto Protocol is adopted.
COP18 also launched a second commitment period of the Kyoto Protocol.

2013
COP19/CMP9 (Warsaw)
Key decisions adopted include:
- Further advancing the Green Climate Fund and Long-Term Finance,

2015
COP 21 (Paris)
Paris Agreement adopted. It aims:
- To keep global temperatures "well below" 2.0°C (3.6°F) above pre-industrial times and "endeavor to limit" them even more, to 1.5°C
- Rich countries should help poorer nations by providing "climate finance" to adapt to climate change and switch to renewable energy.
The agreement requires rich nations to maintain a $100bn a year funding pledge beyond 2020.

2016
COP22 (Marrakech)
A crucial outcome of the Marrakech climate conference was
- To move forward on writing the rule book of the Paris Agreement.
- Launched the Marrakech Partnership for Climate Action.

2017
COP23, Bonn (Germany)
Countries continued to negotiate the finer details of how the agreement will work from 2020 onwards.

First set of negotiations since the US, under the presidency of Donald Trump, announced its intention earlier this year to withdraw from the Paris deal.

It was the first COP to be hosted by a small-island developing state with Fiji taking up the presidency, even though it was being held in Bonn.

2018 COP 24, Katowice (Poland)
2019 COP25, Madrid Spain (Earlier: Chile)
2021 COP26, Glasgow, United Kingdom

Organized by UK and Italy
President Alok Sharma

Shortcomings

- **Non-inclusive:** Most scientists agree the most dangerous environmental air pollutants today are microscopic particulates that come from car engines and combustion-based power plants, but these pollutants are largely ignored by the Kyoto Protocol.
- **Slow progress:** It took a long time for COP to bring Russia to agree into participating in the Kyoto Protocol. (until 2005)
- UNFCCC failed to persuade USA to ratify the Kyoto protocol thereby keeping one of the largest emitter of greenhouse gases away from commitments.
- **Unsustainable targets:** The world reached at almost 1degree Celsius warming post industrialization and the Paris contributions are not enough to maintain 2 degree Celsius levels.
- **Unsatisfactory Response:** Many countries argued for a tougher target of 1.5C - including leaders of low-lying countries that face unsustainable sea levels rises in a warming world.
- **Financial Constraints:** The agreement requires rich nations to maintain a $100bn a year funding pledge beyond 2020, which is not enough as highlighted by several pacific island countries.
- **Non-binding agreement:** The US withdrawal from the 2015 Paris climate agreement, citing, that the deal punished" the US and would cost millions of American jobs", has created new barriers and more pressure on rest of the nations in achieving the targets of Paris agreement. As part of the US withdrawal, USA has stopped the payment of the extra $2bn that had been
promised in to the Green Climate Fund.

- **No enforcement mechanism:** Under the Paris agreement, each country determines, plans, and reports its own efforts to mitigate global warming. The only penalty for non-compliance is a so-called “name and shame” — or “name and encourage” — system whereby countries that fall out of compliance are called out and encouraged to improve.

**Achievements**

- Kyoto protocol only required wealthy nations to cut emissions, which was a bone of contention; however this anomaly was corrected with the signing of Paris agreement in 2015.
- UNFCCC initiatives helped create Public awareness regarding climate change, which is much higher today than in the late 90s.
- Although climate science in the late 90s was certainly strong enough—to negotiate an international treaty, it is hard to deny that the scientific understanding of the climate crisis has improved considerably over the past two decades in which UNFCCC played a significant role.
- UNFCCC has enabled planning and implementation of concrete adaptation activities under the National Adaptations Programme of Action (NAPAs) and the Nairobi work programme.
- UNFCCC helped create innovative ideas in mitigating climate change like the Clean Development mechanism (CDM) under which developing country’s projects that reduce emissions earn credits that can be sold to countries or companies with a commitment to reduce emissions.
- Since the establishment of UNFCCC national governments have encouraged and increased cooperation on the development and transfer of technology.
- UNFCCC efforts support the developing countries in combating climate change by providing a platform for finance, technology transfers, discussions, global partnerships, etc.

Source: WEB

---

National Action Plan on Climate Change

GS-III | 09 July,2020

National Action Plan on Climate Change
The National Action Plan on Climate Change (NAPCC) was launched in 2008 by the Prime Minister’s Council on Climate Change. It aims at creating awareness among the representatives of the public, different agencies of the government, scientists, industry and the communities on the threat posed by climate change and the steps to counter it.

There are 8 national missions forming the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-

- National Solar Mission
- National Mission for Enhanced Energy Efficiency
- National Mission on Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the Himalayan Ecosystem
- National Mission for A Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change

Salient Features

NAPCC is guided by following principles-

- **Protection** of poor and vulnerable sections of society through inclusive and sustainable development strategy, sensitive to climate change.
- **Achievements of national growth** through qualitative changes enhancing ecological sustainability.
- **Deployment of appropriate technologies** for both adaptation and mitigation of GreenHouse Gases emissions extensively and at an accelerated pace.

GreenHouse Gases (GHG)

These are gases that absorb and emit radiant energy within the thermal infrared range. Primary GHGs are water vapour, carbondiaoxide, methane, nitrous oxide and ozone.

Earth’s surface temperature would be ?18 °C instead of the present average of 15 °C without GHGs. GHGs create Green House Effect which is the process by which radiation from a planet's atmosphere warms the planet's surface.
Regulatory and voluntary mechanisms to promote sustainable development and engineering new and innovative forms of market. Effective implementation of plans using unique linkages like civil society and local governments through public-private partnership.

Invite international cooperation for research, development, sharing and transfer of data and technologies enabled by sufficient funding and backed up by a global IPR regime under the United Nations Framework Convention on Climate Change (UNFCCC).

Approach

- NAPCC addresses the country’s critical and urgent needs by directionally shifting the development path and enhancing the current and planned programmes and technologies.
- It identifies measures that promote our developmental goals and co-benefits by addressing climate change also.

UNFCCC Secretariat (UN Climate Change)

- It was established in 1992 when countries adopted the UNFCCC.
- Located in Bonn, Germany.
- Focuses on facilitating intergovernmental climate change negotiations.
- Provides technical expertise and assistance on analysis and review of climate change reports presented by the parties.
- Plays a crucial role in implementation of the Kyoto Protocol and the Paris Agreement.

The Jawaharlal Nehru National Solar Mission

- Governed by Ministry of New and Renewable Energy.
- It was launched in 2010 with the primary aim of achieving grid parity by 2022 and with coal-based thermal power by 2030.
- Aims to increase the share of solar energy in India’s energy mix.
- It takes the measures of increasing R&D efforts, promoting decentralised distribution of energy by creating cheaper and more convenient solar power systems.
- Emphasis on manufacturing solar panels at the local level and to tie up local research with international efforts.
- Seeks to reduce the absolute cost of solar energy to bring it down and make it affordable.

Functions and Goals
Making solar water heaters mandatory in buildings to promote the already proven and commercially viable solar heating systems.

By the remote village electrification programme, using solar power as an off-grid solution to provide power to the power deprived poor.

Creating conditions for research and application in the field of solar technology and support & facilitate the already on-going R&D projects.

The ultimate objective is to develop a solar industry in India, capable of delivering solar energy competitively again the fossil fuel options.

It is hoped that by the end of the third phase, 2022, India should have installed 20,000 MW of solar power.

National Mission for Enhanced Energy Efficiency

- Governed by the Ministry of Power.
- It creates a market based mechanism to enhance cost effectiveness of improvements on energy efficiency. Switching to cleaner fuels, commercially viable technology transfers, capacity building needs etc are the way forward for this mission.
- Development with energy efficiency as a key criterion.

Functions and Goals

- Spread awareness about the efficacy and efficiency of energy efficient products and create demand.
- Ensure adequate supply of energy efficient products, goods, and services by forming a cadre of energy professionals.
- Create financing platforms which can make risk guarantee funds, financial derivatives of performance contracts.
- Formulate well thought out evaluation and monitoring mechanisms to capture energy savings in a transparent manner.
- Overcome market failures through regulatory and policy measures.
- Key areas to work upon are Energy, Efficiency, Equity and Environment.

National Mission on Sustainable Habitat

- Governed by the Ministry of Urban Development.
- Manifold agenda mission because it looks at energy efficiency within buildings, waste disposal from these buildings and betters the public transport system.
- Plans to make urban areas more climate friendly and less susceptible to climate change by a multi-pronged approach to mitigate and adapt to it.

Functions and Goals-
To create and adopt a more holistic approach for solid and liquid waste management, ensuring their full potential for energy generation (conversion of solid waste into energy), recycling, reusing and composting.

To encourage alternative transport systems and establish fuel efficiency standards and reduce fuel consumed per passenger travel by the provision of pedestrian pathways.

To provide for adoption and creation of alternative technologies mitigating climate change and to encourage community involvement for it.

Creation of one building code for the entire nation.

A system to enforce law and order.

Establish financial incentives based on green rating.

Reduce need for pumping of water, proper treatment of waste water and use of better designed toilets.

Promote use of natural gas and alternative & renewable fuels.

Comprehensive urban renewal master plan proposals with sustainable designs.

A master plan is a dynamic long-term planning document that provides a conceptual layout to guide future growth and development.

Better enforcement of Urban Development Plan Formulation and Implementation (UDPFI) guidelines.

National Water Mission


Ensures better integrated water resource management leading to water conservation, less wastage, equitable distribution forming better policies.

Looks into the issues of groundwater and surface water management, domestic and industrial water management, improvement of water storage capacities and protection of wetlands.

Functions and Goals

Review and data collection on the network of hydrological, automatic weather and automated rain gauge stations.

Expeditiously implement water projects in climate sensitive regions.

Promotion of water purification and desalination techniques.

Enactment of a bill for the regulation and management of groundwater sources.

Research in water use efficiency in industry, agriculture and domestic
sectors.
- Providing **incentives for water neutral & positive technologies.**
- **Review National Water Policy** to include **integrated water resources** management, **evaporation management** and **basin level** management.
- Water data base in the public domain and the assessment of impact of climate change on water resource
- **Promotion of citizen and state action** for water conservation, augmentation and preservation.
- More focused attention to **over-exploited** areas.
- **Improving water use efficiency by 20%** through regulatory and pricing mechanisms.

**National Mission for Sustaining the Himalayan Ecosystem**

- Governed by the **Department of Science and Technology.**
- Created to **protect the Himalayan ecosystem.** The mandate is to evolve measures to **sustain and safeguard the Himalayan glaciers, mountain ecosystems, biodiversity and wildlife conservation & protection.**

**Functions and Goals**

- **Human and knowledge capacities**- appointing trained personnel who can capture, store and apply knowledge relating to vulnerability and changes in the region.
- **Institutional capacities**- creating capability to conduct long term observations, studies to understand and warn of changes in the Himalayan ecosystem
- **Evidence based policy building and governance**- creating a platform for Himalayan states and the Centre to interact with various bodies.
- **Continuous self learning for balancing** between forces of Nature and actions of mankind by creating strong linkages with community based organisations.
- Establishing of a **modern centre of Glaciology**, standardisation of data collection to ensure interoperability and mapping of natural resources in the area.
- **Identification and training of experts and specialists** in the area relevant to sustaining the Himalayan ecosystem.

**National Mission for Green India**

- Governed by the **Ministry of Environment, Forest and Climate Change.**
- It has the **mandate of reviving degraded forest land** with a focus
on increasing forest cover & density and conserving biodiversity.

- Works towards reducing fragmentation of forests, enhancing private public partnerships for plantations, improving schemes based on joint forestry management etc.
- Makes plans to tackle the challenges posed by climate change.

Functions and Goals

- Enhancing carbon sinks in sustainably managed forests.
- Enhancing the resilience of vulnerable species and ecosystems to adapt to climate change.
- Enabling forest dependent communities to adapt to climate variability.
- Double the area to be taken up for afforestation.
- Increase greenhouse gas removals by Indian forests.
- Enhance resilience of forests and ecosystems falling under the mission.

National Mission for Sustainable Agriculture

- Governed by the Ministry of Agriculture.
- It works towards devising strategies to make Indian agriculture less susceptible to climate change.
- It would identify and develop new crop varieties, use traditional and modern agricultural techniques.
- This mission sees dry land agriculture, risk management, access to information and use of biotechnology as areas of intervention.

Functions and Goals

- Strengthening agricultural insurance, develop a system based on Geographic Information System (GIS) and remote sensing to map soil resource and land use.
- Providing information and collation of off-season crops and preparation of state-level agro-climatic atlases.
- Strategise to evolve low input agriculture with enhanced water and nitrogen efficient crops.
- Nutritional strategies to manage heat stress in dairy animals.
- Using of micro irrigation systems.
- Promotion of agricultural techniques like minimum tillage, organic farming and rain water conservation.
- Capacity building of farmers and other stakeholders.
- Production of bio-fertilizer, compost along with subsidies for chemical fertilizers.
- Strengthening of National Agricultural Insurance Scheme.

National Mission on Strategic Knowledge for Climate Change
Governed by the Department of Science and Technology.
- It identifies challenges and requisite responses to climate change. This will be done through open international collaboration and would ensure sufficient funding for this research.
- There is a need for strong strategic knowledge system on climate change.


- The aim of the mission is to push sustainable development of the renewable energy sector.
- The national mission will aim at improving energy efficiency in traditional biomass consuming industries, seek to develop a bio-energy city project and provide logistics support to biomass processing units.
- It will also propose a GIS-based National Biomass Resource Atlas to map potential biomass regions in the country.
- According to estimates, biomass from agro and agro-industrial residue can potentially generate 25,000 MW of power in India.

**Functions and Goals**

- Develop regional climate science.
- Leverage international cooperation.
- The efforts undertaken here would feed into the Indian National Network for Climate Change Assessment (INCCA) which is a stock taking exercise conducted every two years as part of the national obligations under UNFCCC.
- Creation of a data generation and sharing system by mapping resources on knowledge relevant to climate change.
- Identifying knowledge gaps and inspiring from global technological trends to select and test technologies.
- Creating new centres dedicated to climate research within existing institutional framework.

**Achievements**

- The World Wide Fund for Nature-India (WWF) feels that the National Action Plan is fairly comprehensive and has cross-sectoral links through the eight National Level Missions. The focal point is India’s impetus on following on a low carbon energy path without impending economic growth and quality of life of people.
- NAPCC brings a balanced perspective on mitigation and adaptation through some new dimensions like creation of National Mission...
Challenges and Suggestions

- India has the potential to do things differently because it is in an early stage of development and it contributes very little to the changing climatic conditions. It can leapfrog to a low carbon economy by using high-end and emerging technologies.
- The plan report makes no commitment to cut the country’s carbon emission which should have been an integral part of it.
- The focal point of NAPCC seems to be solar power mission only and the government’s efforts to maximise the solar energy seemingly approve it. Equal emphasis on all missions with equal imgs would have enabled the country to yield fast and visible results.
- Missions related to sustainable habitat, water, and agriculture and forestry are multi-sectoral, overlapping, multi-departmental, advisory and very slow moving in nature. Several ongoing activities are in principle aligned with the objectives of these missions which should either be integrated with the missions or scrapped to save the time and cost.
- Another challenge is the monitoring systems, which are either ineffective or absent. Progress reports for NSM, NMEE, and NWM are currently available but mapping of progress for other missions has been difficult due to their cross-cutting nature.
- Ministries are required to report progress and have regular meetings with the PM’s Council on Climate Change.
- Finally, it can be said that institutional, systemic and process barriers—including financial constraints, inter-ministerial coordination, lack of technical expertise and project clearance delays—stand as major challenges in the efficient implementation of the missions.
- The cross-cutting subjects of the missions have not yielded any positive results on grounds yet so a new approach is needed to solve this and bring the agenda of climate change to the mainstream.
- While these challenges have drawn criticisms, they also provide us with the opportunity for discussion on the approaches to deal with climate change in India and understand the best way ahead to mainstream climate change.

Way Forward

- Recognising that climate change is a global challenge, the plan promises that India will engage actively in multilateral negotiations in the UN Framework on Strategic Knowledge for Climate Change as this would ensure exchange of knowledge and informed research in India.
It is now clear that initiatives to prevent climate change have been started but, most importantly, these initiatives must be continuous and sustainable and every individual of every country will need to contribute to prevent climate change.

By releasing the NAPCC, the Indian government has shown its commitment to address climate change issues and also sent a positive message to the public, industries, and civil society about the government’s concern to address the climate change issue through concerted action.

Issues related to the awareness regarding global warming and climate change among the general population and the issue related to agriculture and health hazards due to climate change must be addressed strongly and effectively.

Source: PIB

Virtual Climate Action

Virtual Climate Action

Part of: GS-III- Climate change (PT-MAINS-PERSONALITY TEST)

Recently, the 4th edition of the virtual Ministerial on Climate Action was organised to advance discussions on implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).

The Ministerial:

- It was co-chaired by European Union, China and Canada.
- The participating countries exchanged their views on how they are aligning economic recovery plans amid Covid-19, with the Paris Agreement.
- India highlighted that developed country parties have not fulfilled their
promise for extending financial and technological support to developing countries as envisaged under UNFCCC and its Paris Agreement.

India hopes that in the remaining 5 months of 2020, the promised amount will be mobilized and delivered, for further strengthening climate actions in developing countries.

- The developed countries had promised to provide USD 1 trillion by 2020.

India’s Efforts in Combating Climate Change:

- India has provided 80 million LPG connections under the Pradhan Mantri Ujjwala Yojana (PMUY) in rural areas, providing the people with clean cooking fuel and a healthy environment.
- It has distributed more than 360 million LED bulbs under the UJALA scheme, which has led to energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO2 per year.
- India has also shifted from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norm from 1st April 2020 which was earlier to be adopted by 2024.
- It had levied a coal cess as part of one of the most explicit green initiatives.
- Under Smart Cities Mission, Climate Smart Cities Assessment Framework 2019 has been launched which intends to provide a clear roadmap for cities and urban India towards combating climate change through adoption of both mitigation and adaptation measures.

Achievements of India in Combating Climate Change:

- India has achieved a reduction of 21% in emission intensity of its Gross Domestic Product (GDP) between 2005 and 2014, thereby on its way to achieving its voluntary target under its Intended Nationally Determined Contributions (INDC).
- India had pledged to cut emission intensity of its GDP by 33-35% by 2030 below 2005 levels.
- Its renewable energy installed capacity has increased by 226% in the last 5 years and stands more than 87 gigawatts (GW).
- India has a target of installing 175 GW of renewable power capacity by 2022 under its INDC.
- The share of non-fossil sources in installed capacity of electricity generation increased from 30.5% in March 2015 to 37.7% in May 2020.
- It has further announced the aspirational target of increasing its renewable energy capacity to 450 GW.
India has pledged to increase the share of non-fossil fuels-based electricity to 40% by 2030 under INDC.
- India’s total forest and tree cover is 8,07,276 sq. km. which is 24.56% of the total geographical area of the country.
- India has agreed to enhance its forest cover which will absorb 2.5 to 3 billion tonnes of CO2 by 2030.

Paris Agreement- COP 21
- Conference of Parties (COP) 21, also known as the Paris Climate Conference is a landmark environmental accord that was adopted in 2015 to address climate change and its negative impacts.
- It aims to reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to well below 2°C above pre-industrial levels, while pursuing means to limit the increase to 1.5°C.
- Countries have promised to try to bring global emissions down from peak levels as soon as possible. However, the USA has withdrawn from the agreement.
- The deal includes loss and damage, a mechanism for addressing the financial losses vulnerable countries face from climate impacts such as extreme weather.
- Raising money to help developing countries adapt to climate change and transition to clean energy was an important point in the agreement.
- This part of the deal has been made non-legally binding on developed countries.
- Before the conference started, more than 180 countries had submitted pledges to cut their carbon emissions (Intended Nationally Determined Contributions, or INDCs). The INDCs were recognized under the agreement, but are not legally binding.

Conclusion

India has to make a huge effort to achieve its target of 175 GW of renewable power capacity by 2022. It is way behind its target. The funding commitment made by developed countries has become more important due to the economic challenge posed by Covid-19 pandemic.

Source: PIB
According to a report published by the United Nations Environment Programme (UNEP) and the International Livestock Research Institute (ILRI), about 60% of known infectious diseases in humans and 75% of all emerging infectious diseases are zoonotic.

**The report was released on 6th July 2020, observed as ‘World Zoonoses Day’. It focuses on the context and nature of potential future zoonotic disease outbreaks, during the Covid-19 pandemic by identifying the anthropogenic (changes in environment due to human activity) factors.

Zoonoses or Zoonotic Disease:

It is a disease that passes into the human population from an animal source directly or through an intermediary species.

Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections. Examples of zoonoses include HIV-AIDS, Ebola, Malaria, and the current Covid-19 disease.

Anthropogenic Factors:

- **Increased Use of Wildlife:** Exploitation of wildlife for hunting, harvesting of wild animals for meat and research or medical purposes can bring humans in closer contact with wild animals, thus increasing the risk of zoonotic disease emergence.
- **Changes in Food Supply Chains:** The popularity of food products with animal source and the need for immediate delivery to consumers is driving major changes in the food supply chain.
- **Increased Demand for Animal Protein:** This has encouraged the intensification and industrialisation of animal production, wherein a large number of genetically similar animals are bred in for higher productivity.
- **Intense and Unsustainable Farming:** Intensive farm settings...
cause animals to be raised in close proximity to each other characterised by poor waste management. This makes them more vulnerable to infections, which can further lead to emergence of zoonotic diseases.

- **Use of Antimicrobials:** High use of antimicrobials in farm settings is contributing to the burden of AntiMicrobial Resistance (AMR).

Antimicrobial resistance is the resistance acquired by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections. As a result, standard treatments become ineffective, infections persist and may spread to others.

**Recommendations:**

- **One Health Approach:** One Health is a multisectoral and transdisciplinary approach with the goal of achieving optimal health outcomes by recognizing the interconnection between people, animals, plants, and their shared environment. It aids a coordinated response to future pandemics and is a key to zoonoses risk reduction and control.

- **Expanding Scientific Enquiry:** This is a crucial element of AMR containment efforts since waste from intensive farms using antimicrobials paves way for AMR determinants (e.g. antibiotic residues, resistant bacteria) in the environment.

- **Strengthening Monitoring:** It would help in regulating practices associated with zoonotic diseases.

- **Sustainable Land Management Practices:** It would help in developing alternatives for food security and livelihoods that do not rely on the destruction of habitats and biodiversity. It would also enhance sustainable co-existence of agriculture and wildlife.

- **Identifying Key Drivers:** It would encourage management and control measures for emerging zoonotic diseases in animal husbandry.

**United Nations Environment Programme**

- The UNEP is a leading global environmental authority established on 5th June 1972.

- **Functions:** It sets the global environmental agenda, promotes the sustainable development within the United Nations system, and serves as an authoritative advocate for global environment protection.

- **Major Reports:** Emission Gap Report, Global Environment Outlook,
### Frontiers, Invest into Healthy Planet.

- **Major Campaigns:** Beat Pollution, UN75, World Environment Day, Wild for Life.
- **Headquarters:** Nairobi, Kenya

### International Livestock Research Institute

The ILRI is an *international agricultural research institute* formed in 1994 through the merger of the International Livestock Centre for Africa and the International Laboratory for Research on Animal Diseases situated in Nairobi, Kenya.

**Functions:**
It focuses on **building sustainable livestock** pathways out of poverty in low-income countries. It works with partners worldwide to help poor people keep their farm animals alive and productive and find profitable markets for their animal products.

**Headquarters:** Nairobi, Kenya

The report is one of the first to focus on the environmental side of the zoonotic dimension of disease outbreaks during the Covid-19. There is an **immediate need to invest in in-depth understanding of environmental linkages with zoonotic diseases** and monitoring of such diseases in human-dominated environments.

There is an urgency for adoption of sustainable **methods of food production** and to **reduce dependence on intensive systems** to preserve health and ecosystems.

Source: DTE
Countering America’s Adversaries through Sanctions Act: CAATSA is a United States federal law that imposed sanctions on Iran, North Korea, and Russia. It includes sanctions against countries that engage in significant transactions with Russia's defense and intelligence sectors.

Recently, the USA has reiterated its position and asked all its allies and partners, including India, to stop transactions with Russia. It can risk triggering sanctions under the Countering America’s Adversaries through Sanctions Act (CAATSA).

- **USA’s Stand:** The USA has reiterated its position on CAATSA in the context of India’s planned jet fighter deal with Russia at an estimated Rs. 18,148 crore. Recently, the Defence Acquisition Council had approved the procurement of 21 MiG-29 fighter jets for the Indian Air Force (IAF), an upgrade for 59 of these Russian aircraft and the acquisition of 12 Su-30 MKI aircraft.
- India could also face USA sanctions for purchasing the S-400 Triumf missile defense system from Russia under the CAATSA.
- The USA suspended Turkey from its F-35 aircraft programme and barred it from purchasing the jet, following Turkey’s purchase of the S-400 from Russia. However, this was done without invoking CAATSA.
- **Major Defence Partner:** The USA recognised India as a Major Defence Partner in 2016.
- The designation allows India to buy more advanced and sensitive technologies from America at par with that of the USA’s closest allies and partners.
- **Issues with Purchase from Adversary:** The USA fears that acquisitions by countries like India on significant systems would either expose or put at risk platforms and its technologies to an adversary.
- It has declared that the S-400 purchase by Turkey from Russia has put a risk to its F-35 aircraft system.
- **Waiver Criteria under CAATSA:** The USA President was given the authority in 2018 to waive CAATSA sanctions on a case-by-case basis. However, the USA has repeatedly stated that India should not assume it will get a waiver.

**The S-400 is known as Russia’s most advanced long-range surface-to-air missile defence system.** China was the first foreign buyer to seal a government-to-government deal with Russia in 2014 for the system.
The defence procurement for India has become significant amid deadly clashes with China on Line of Actual Control (LAC). Russia is an all weather defence partner of India. However, India needs to balance its relation with both Russia and USA, so that its national interest is not compromised.

Source: TH

Freedoms of the Air
GS-II | 09 July, 2020

Freedoms of the Air

It is recognised by the ICAO

1. First Freedom of the Air - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to fly across its territory without landing (also known as a First Freedom Right).

2. Second Freedom of the Air - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to land in its territory for non-traffic purposes (also known as a Second Freedom Right).

3. Third Freedom of The Air - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier (also known as a Third Freedom Right).

4. Fourth Freedom of The Air - the right or privilege, in respect of scheduled international air services, granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier (also known as a Fourth Freedom Right).
5. **Fifth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State (also known as a Fifth Freedom Right).

ICAO characterizes all "freedoms" beyond the Fifth as "so-called" because only the first five "freedoms" have been officially recognized as such by international treaty.

6. **Sixth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier, traffic moving between two other States (also known as a Sixth Freedom Right). The so-called Sixth Freedom of the Air, unlike the first five freedoms, is not incorporated as such into any widely recognized air service agreements such as the "Five Freedoms Agreement".

7. **Seventh Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State, of transporting traffic between the territory of the granting State and any third State with no requirement to include on such operation any point in the territory of the recipient State, i.e. the service need not connect to or be an extension of any service to/from the home State of the carrier.

8. **Eighth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting State on a service which originates or terminates in the home country of the foreign carrier or (in connection with the so-called Seventh Freedom of the Air) outside the territory of the granting State (also known as a Eighth Freedom Right or "consecutive cabotage").

9. **Ninth Freedom of The Air** - the right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State (also known as a Ninth Freedom Right or
Recently, the USA has announced that F-1 and M-1 visa holders who are planning to take online only models will not be allowed to stay in the USA. Many universities in the USA are planning to shift all their classes online for the fall semester due to Covid-19 pandemic. Fall semester starts in late August and ends in late December or early January whereas the Spring semester begins in January and ends in early May.

***F-1 visas are issued to study in the USA for full-time students whereas M-1 visas are issued to students engaging in vocational or non-academic studies.***

The announcement comes weeks after the USA President suspended H1-B highly skilled worker visas through the end of the year. Most of these visas go to Indian citizens each year.

Announcements Made:

- The students outside the USA planning to take all courses online in the fall semester would not be permitted entry into the country.
- The USA would not issue visas to students who are going to take all their classes online due to the pandemic.
- It also stated that the active students under F-1 and M-1 visas in such programs must depart the country or take other measures, such as transferring to a school with in-person instruction to remain in lawful
status.

- The USA regulations do not allow students in F-1 status to be in online classes but normally F-1 students are allowed to take one class or three credit hours online.

Affected Population:

- There were more than one million international students in the United States for the 2018-19 academic year. That accounted for 5.5% of the total USA’s higher education population.
- Also, international students contributed $44.7 billion to the USA’s economy in 2018.
- India is the second largest source of the foreign students in the USA after China.
- The largest number of international students come from China, followed by India, South Korea, Saudi Arabia and Canada.

Consequences:

If alternative measures are not opted then these students may face immigration consequences including, but not limited to, the initiation of removal proceedings. It is a difficult situation for students as international travel already faces disruption due to Covid-19.

Available Alternatives: Affected students may switch to visitor status but it is not a long term solution as visitor status is short term and there is no guarantee that it will be approved.

Considering the unprecedented pandemic scenario, the USA can amend the regulation for F-1 and M-1 students. The one-size-fits-all approach will create more havoc and complexities not only in USA administration but also in diplomatic relations with countries like India and China.

Source: TH
Equalisation Levy

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the Central government has stated that it will not extend the deadline for payment of equalisation levy by non-resident e-commerce players, even though a majority of them are yet to deposit the first installment of the tax.

**The equalization levy** is aimed at taxing foreign companies which have a significant local client base in India but are billing them through their offshore units, effectively escaping the country's tax system. The step has come in the backdrop of the United States Trade Representative (USTR) investigations into taxes adopted or under consideration by 10 nations, including India, on revenues of American digital service companies like Netflix, Airbnb etc.

Background for Equalization Levy:

Equalisation levy at 6% has been in force since 2016 on payment exceeding Rs 1 lakh a year to a non-resident service provider for online advertisements.

It is now applicable for e-commerce companies that are sourcing revenue from Indian customers without having tangible presence here in the country.

The amendments to the Finance Act, 2020 had expanded the ambit of the equalisation levy for non-resident e-commerce operators involved in supply of services, including online sale of goods and provision of services, with the levy at the rate of 2% effective April 1, 2020.

The tax applies on e-commerce transactions on websites such as Amazon.com. Google in particular as the tax applies on advertising revenue earned overseas if those ads target customers in India.

Changes in Challan ITNS 285:

The income tax department has modified challan ITNS 285 (relating to payment of equalisation levy) to enable payment of the first installment by non-resident e-
commerce operators. The challan also seeks mandatory PAN and provides for ‘Outside India’ option while seeking address.

Penalties Involved:

The non-payment could result in a penalty equal to the amount of equalisation levy, along with interest. The late-payment would attract interest at the rate of 1% per month or part of the month.

As India is racing towards becoming a digital giant and should be negotiated to avoid any hurdles in its implementation. Further, there needs to be international consensus on taxation on a digital economy.

Source: TH

National Gene Bank

Part of: GS-III- Bio-diversity (PT-MAINS-PERSONALITY TEST)

Recently, the National Medicinal Plants Board (NMPB) under the Ministry of AYUSH and the National Bureau of Plant Genetic Resources (NBPGR) under the Ministry of Agriculture & Farmers’ Welfare have signed a Memorandum of Understanding (MoU). The purpose of this MoU is to conserve the Medicinal and Aromatic Plants Genetic Resources (MAPGRs) in the National Gene Bank (NGB).

Establishment: The National Gene Bank was notified in 1996-97.

Hosted By: National Bureau of Plant Genetic Resources (NBPGR), New Delhi.

Purpose: To conserve the Plant Genetic Resources (PGR) for future generations in the form of seeds, genomic resources, pollen etc.

Functioning:
The NGB has four kinds of facilities, namely, Seed Genebank (-18°C), Cryogenebank (-170°C to -196°C), In vitro Genebank (25°C), and Field Genebank, to cater to long-term as well as medium-term conservation. It stores different crop groups such as cereals, millets, medicinal and aromatic plants and narcotics, etc.

Other Facilities: (PT SHOT)

The Svalbard Global Seed Vault in Norway houses the world’s largest collection of seeds.

India’s seed vault is at Chang La (Ladakh) in the Himalayas.

National Animal Gene Bank, established at the National Bureau of Animal Genetic Resources (NBAGR - Karnal, Haryana), has the objective of conserving the indigenous livestock biodiversity. NBAGR is one of the Indian Council of Agricultural Research (ICAR) institutes.

National Medicinal Plants Board

- In order to promote the medicinal plants sector, the Government of India set up the National Medicinal Plants Board (NMPB) on 24th November 2000.
- Currently the board is working under the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy).
- The primary mandate of NMPB is to develop an appropriate mechanism for coordination between various ministries/ departments/ organizations and implementation of support policies/programs for overall (conservation, cultivation, trade and export) growth of medicinal plants sector both at the Central /State and International level.

National Bureau of Plant Genetic Resources

- The ‘National Bureau of Plant Introduction’ was renamed as ‘National Bureau of Plant Genetic Resources’ (NBPGR) in January 1977.
- It is one of the Indian Council of Agricultural Research (ICAR) Institutes. ICAR is an autonomous organisation under the Ministry of Agriculture & Farmers’ Welfare.
- It is a nodal organisation in India for management of Plant Genetic Resources (PGR).
- It has played a pivotal role in the improvement of various crop plants and diversification and development of agriculture in India through germplasm.
introduction from various institutes/organizations located in foreign countries and germplasm collection from within the country and abroad and conservation thereof.

***Germplasm is a live information source for all the genes present in the respective plant, which can be conserved for long periods and regenerated whenever it is required in the future.

The NBPGR has linkage with National Active Germplasm Sites (NAGS) for the management of active germplasm of field and horticultural crops. NAGS are located at NBPGR regional stations, other crop-based ICAR institutes or State Agricultural Universities.

It is headquartered in New Delhi and has 10 regional stations.

Source: PIB
In 2015 COP21, also known as the 2015 Paris Climate Conference, for the first time in over 20 years of UN negotiations, aimed at keeping global warming below 2°C.

The key vision of Paris Agreement was to keep global temperatures “well below” 2.0C (3.6F) above pre-industrial times and “seek to limit” even more, to 1.5C.

- It pledged to curb emissions. Before the conference started, more than 180 countries had submitted pledges to cut or curb their carbon emissions (intended nationally defined contributions, or INDCs, in the UN jargon). The INDCs were recognized under the agreement, but are not legally binding.
- A long-term global goal for net zero emissions: Countries have promised to try to bring global emissions down from peak levels as soon as possible. More significantly, they pledged “to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century”.
- The deal includes loss and damage, a mechanism for addressing the financial losses vulnerable countries face from climate impacts such as extreme weather.
- Raising money to bring in necessary changes. Finance to help developing countries adapt to climate change and transition to clean energy was an important point in the negotiations. This part of the deal has been made non-legally binding on developed countries.

What is COP 24- Katowice?

- COP24 is the informal name for the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).
- In accordance with a decision of the 22nd Session of the Conference of the Parties to the Climate Convention (COP22) in Marrakesh in November 2016, Poland was selected to host this event within the
Agenda of COP24

- **Determining the accounting standards of the whole process**: to devise a process of measurement to calculate countries achievements. This agenda will not face much difficulty because with time there has been a gradual convergence of opinion.
- **MRE- Monitoring, Review, Evaluation**: This agenda has always been a bone of contention because many countries fear that this provision might become intrusive.
- **Institutional structure for technology**: a world body which will see the adequate transfer of technologies from the ‘Haves’ to the ‘Have-nots’.
- **Institutional structure for finance**: to see the flow of finance from the developed to the developing and underdeveloped countries.

Key Issues

- Many developing countries are reluctant to give up coal and hence weaken the commitment. The discussion is around the logistics to implement the Paris Agreement. However, the chief concern is that the Paris Agreement which talks of keeping temperature rise below 2 degrees is grossly inadequate.
- The IPCC report of 2018 has cautioned that human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate.
- Keeping this trajectory, a report suggested that by the end of the century the temperature rise can be as high as 3 to 4 degree Celsius.
- Another concern is the decision of US. As the largest emitter of Carbon dioxide, the US withdrawal from the Agreement is a mighty set back. Besides, China’s peaking period is 2030, and many experts say that by the time China lowers its emission it will be too late.
- The most important challenge is the transfer of technology and finance to the developing and underdeveloped countries. The industrialized countries are reluctant to share either of the resources without a tradeoff. On the other hand, the rest of the world has limited resources to purchase such sophisticated technologies.
- The effects of climate change have begun to surface. Migration related to climate change has destabilized many countries and have also led to the emergence of new populist movements.
Way Forward

- Most importantly, environmental ethics should take precedence over other issues like national and strategic interest or economic interest.
- COP24 would demonstrate how climate neutrality can be reached by using innovation and a technique for CO2 sequestration by soils and forests. Such innovative techniques have to be adopted and practiced.
- The Nationally Determined Contributions (NDCs) ought to be ambitious and the countries should not only commit to larger goals but achieve the same in time.
- Alternative sources of energy have to be explored. India’s Solar Alliance is a positive step in this direction. The transition of the vehicles from fossil fuel to electric or hybrid is the need of the hour.
- Adequate finance and technologies should be transferred from developed countries to developing countries. In the long run, it would yield rich dividends. Long-term, low-interest loans can be one solution. In this regard the World Bank’s commitment of $200 billion over the next five years is noteworthy.

Source: PIB

UNFCCC

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

The UNFCCC, signed in 1992 at the United Nations Conference on Environment and Development also known as the Earth Summit, the Rio Summit or the Rio Conference. The UNFCCC entered into force on March 21, 1994, and has been ratified by 197 countries.

The WMO and UNEP established the Intergovernmental Panel on Climate Change (IPCC) in 1988, to assess the magnitude and timing of changes, estimate their impacts, present strategies for how to respond and to provide an
Objective

- According to Article 2, the Convention’s ultimate objective is “to achieve, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”.
- This objective is qualified in that it “should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.

Institutional Arrangements

The Conference of the Parties (COP)

Article 7.2 defines the COP as the “supreme body” of the Convention, as it is its highest decision-making authority. The climate change process revolves around the annual sessions of the COP.

COP President and Bureau

The office of the COP President normally rotates among the five United Nations regional groups. The President is usually the environment minister of his or her home country. S/he is elected by acclamation immediately after the opening of a COP session. Their role is to facilitate the work of the COP and promote agreements among Parties.

The work of the COP and each subsidiary body is guided by an elected Bureau. To ensure continuity, it serves not only during sessions, but between sessions as well.

Subsidiary Bodies (SBs)

The Convention establishes two permanent subsidiary bodies (SBs), namely the Subsidiary Body for Scientific and Technological Advice (SBSTA), by Article 9, and the Subsidiary Body for Implementation (SBI), by Article 10. These bodies advise the COP.

The SBSTA’s task is to provide the COP “with timely advice on scientific and
technological matters relating to the Convention”. The SBI’s task is to assist the COP “in the assessment and review of the effective implementation of the Convention”

The Secretariat

The secretariat, also known as the Climate Change Secretariat, services the COP, the SBs, the Bureau and other bodies established by the COP.

Other Bodies

Other bodies have been set up by the COP to undertake specific tasks. These bodies report back to the COP when they complete their work.

COP 1 established two ad hoc groups to conduct negotiations on specific issues.

COP 11 established the “Dialogue” to exchange experiences and analyse strategic approaches for long-term cooperative action to address climate change.

Timeline of Important Events
The COP 6-2 took place from 16 to 27 July 2001 in Bonn, Germany. A major breakthrough is achieved at the second part of the sixth Conference of the Parties meeting in Bonn, with governments reaching a broad political agreement on the operational rulebook for the 1997 Kyoto Protocol.

2001

COP 7 (Marrakesh, Morocco)

Resulted in the Marrakesh Accords, setting the stage for ratification of the Kyoto Protocol. This formalized the agreement on operational rules for International Emissions Trading, the Clean Development Mechanism and Joint Implementation along with a compliance regime and accounting procedures.

2002

COP 8 (New Delhi, India) Delhi Declaration. The Delhi Declaration focuses on the development needs of the poorest countries and the need for technology transfer for mitigating climate change.

2005

(February 16) Entry of Kyoto Protocol into force with the Russian Federation ratification to the Kyoto Protocol, sealing its entry into force.

2005

COP11/CMP1 (December)

The first Meeting of the Parties to the Kyoto Protocol (MOP 1) takes place in Montreal.

2006

In January the Clean Development Mechanism, a key mechanism under the Kyoto Protocol, opens for business. The CDM is one of the Flexible Mechanisms defined in the Kyoto Protocol that provides for emissions reduction projects which generate Certified Emission Reduction units (CERs) which may be traded in emissions trading schemes.

2007

COP13

Parties agreed on the Bali Road Map and Bali action plan, which charted the way towards a post-2012 outcome. The Plan has five main categories: shared vision, mitigation, adaptation, technology and financing.

2008

COP 14, Poznan (Poland)

The launch of the Adaptation Fund under the Kyoto Protocol and The Poznan Strategic Programme on Technology Transfer.

2009

COP15 (Copenhagen)
Copenhagen Accord drafted. Developed countries pledge up to USD 30 billion in fast-start finance for the period 2010-2012.

2010
COP 16 (Cancun)
Resulted in the Cancun Agreements, a comprehensive package by governments to assist developing nations in dealing with climate change.

The Green Climate Fund, the Technology Mechanism and the Cancun Adaptation Framework are established.

2011
COP 17 (Durban)
Governments commit to a new universal climate change agreement by 2015 for the period beyond 2020. (Resulted in the Paris Agreement of 2015)

2012
COP18/CMP8 (Doha)
The Doha Amendment to the Kyoto Protocol is adopted. COP18 also launched a second commitment period of the Kyoto Protocol.

2013
COP19/CMP9 (Warsaw)
Key decisions adopted include:
- Further advancing the Green Climate Fund and Long-Term Finance,

2015
COP 21 (Paris)
Paris Agreement adopted. It aims:
- To keep global temperatures "well below" 2.0C (3.6F) above pre-industrial times and "endeavor to limit" them even more, to 1.5C
- Rich countries should help poorer nations by providing "climate finance" to adapt to climate change and switch to renewable energy.
- The agreement requires rich nations to maintain a $100bn a year funding pledge beyond 2020.

2016
COP22 (Marrakech)
A crucial outcome of the Marrakech climate conference was To move forward on writing the rule book of the Paris Agreement.
- Launched the Marrakech Partnership for Climate Action.

2017
COP23, Bonn (Germany)
Countries continued to negotiate the finer details of how the agreement will work from 2020 onwards. First set of negotiations since the US, under the presidency of Donald Trump, announced its intention earlier this year to withdraw from the Paris deal. It was the first COP to be hosted by a small-island developing state with Fiji taking up the presidency, even though it was being held in Bonn.

2018 COP 24, Katowice (Poland)
2019 COP 25, Madrid Spain (Earlier: Chile)
2021 COP 26, Glasgow, United Kingdom

Organized by UK and Italy

President Alok Sharma

Shortcomings

- Non-inclusive: Most scientists agree the most dangerous environmental air pollutants today are microscopic particulates that come from car engines and combustion-based power plants, but these pollutants are largely ignored by the Kyoto Protocol.
- Slow progress: It took a long time for COP to bring Russia to agree into participating in the Kyoto Protocol. (until 2005)
- UNFCCC failed to persuade USA to ratify the Kyoto protocol thereby keeping one of the largest emitter of greenhouse gases away from commitments.
- Unsustainable targets: The world reached at almost 1 degree Celsius warming post industrialization and the Paris contributions are not enough to maintain 2 degree Celsius levels.
- Unsatisfactory Response: Many countries argued for a tougher target of 1.5C - including leaders of low-lying countries that face unsustainable sea levels rises in a warming world.
- Financial Constraints: The agreement requires rich nations to maintain a $100bn a year funding pledge beyond 2020, which is not enough as highlighted by several pacific island countries.
- Non-binding agreement: The US withdrawal from the 2015 Paris climate agreement, citing, that the deal punished" the US and would cost millions of American jobs", has created new barriers and more pressure on rest of the nations in achieving the targets of Paris agreement. As part of the US withdrawal, USA has stopped the payment of the extra $2bn that had been
promised in to the Green Climate Fund.

- **No enforcement mechanism:** Under the Paris agreement, each country determines, plans, and reports its own efforts to mitigate global warming. The only penalty for non-compliance is a so-called “name and shame” — or “name and encourage” — system whereby countries that fall out of compliance are called out and encouraged to improve.

**Achievements**

- Kyoto protocol only required wealthy nations to cut emissions, which was a bone of contention; however this anomaly was corrected with the signing of Paris agreement in 2015.
- UNFCCC initiatives helped create Public awareness regarding climate change, which is much higher today than in the late 90s.
- Although climate science in the late 90s was certainly strong enough—to negotiate an international treaty, it is hard to deny that the scientific understanding of the climate crisis has improved considerably over the past two decades in which UNFCCC played a significant role.
- UNFCCC has enabled planning and implementation of concrete adaptation activities under the National Adaptations Programme of Action (NAPAs) and the Nairobi work programme.
- UNFCCC helped create innovative ideas in mitigating climate change like the Clean Development mechanism (CDM) under which developing country’s projects that reduce emissions earn credits that can be sold to countries or companies with a commitment to reduce emissions.
- Since the establishment of UNFCCC national governments have encouraged and increased cooperation on the development and transfer of technology.
- UNFCCC efforts support the developing countries in combating climate change by providing a platform for finance, technology transfers, discussions, global partnerships, etc.

Source: WEB

---

**National Action Plan on Climate Change**

GS-III | 09 July, 2020

**National Action Plan on Climate Change**
The National Action Plan on Climate Change (NAPCC) was launched in 2008 by the Prime Minister’s Council on Climate Change. It aims at creating awareness among the representatives of the public, different agencies of the government, scientists, industry and the communities on the threat posed by climate change and the steps to counter it.

There are 8 national missions forming the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-

- National Solar Mission
- National Mission for Enhanced Energy Efficiency
- National Mission on Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the Himalayan Ecosystem
- National Mission for A Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change

Salient Features

NAPCC is guided by following principles-

- Protection of poor and vulnerable sections of society through inclusive and sustainable development strategy, sensitive to climate change.
- Achievements of national growth through qualitative changes enhancing ecological sustainability.
- Deployment of appropriate technologies for both adaptation and mitigation of GreenHouse Gases emissions extensively and at an accelerated pace.

GreenHouse Gases (GHG)

These are gases that absorb and emit radiant energy within the thermal infrared range. Primary GHGs are water vapour, carbon dioxide, methane, nitrous oxide and ozone.

Earth’s surface temperature would be ?18 °C instead of the present average of 15 °C without GHGs. GHGs create Green House Effect which is the process by which radiation from a planet's atmosphere warms the planet's surface.
Regulatory and voluntary mechanisms to promote sustainable development and engineering new and innovative forms of market. Effective implementation of plans using unique linkages like civil society and local governments through public-private partnership.

Invite international cooperation for research, development, sharing and transfer of data and technologies enabled by sufficient funding and backed up by a global IPR regime under the United Nations Framework Convention on Climate Change (UNFCCC).

Approach

- NAPCC addresses the country’s critical and urgent needs by directionally shifting the development path and enhancing the current and planned programmes and technologies.
- It identifies measures that promote our developmental goals and co-benefits by addressing climate change also.

UNFCCC Secretariat (UN Climate Change)

- It was established in 1992 when countries adopted the UNFCCC.
- Located in Bonn, Germany.
- Focuses on facilitating intergovernmental climate change negotiations.
- Provides technical expertise and assistance on analysis and review of climate change reports presented by the parties.
- Plays a crucial role in implementation of the Kyoto Protocol and the Paris Agreement.

The Jawaharlal Nehru National Solar Mission

- Governed by Ministry of New and Renewable Energy.
- It was launched in 2010 with the primary aim of achieving grid parity by 2022 and with coal-based thermal power by 2030.
- Aims to increase the share of solar energy in India’s energy mix.
- It takes the measures of increasing R&D efforts, promoting decentralised distribution of energy by creating cheaper and more convenient solar power systems.
- Emphasis on manufacturing solar panels at the local level and to tie up local research with international efforts.
- Seeks to reduce the absolute cost of solar energy to bring it down and make it affordable.

Functions and Goals
Making solar water heaters mandatory in buildings to promote the already proven and commercially viable solar heating systems.

- By the remote village electrification programme, using solar power as an off-grid solution to provide power to the power deprived poor.
- Creating conditions for research and application in the field of solar technology and support & facilitate the already on-going R&D projects.
- The ultimate objective is to develop a solar industry in India, capable of delivering solar energy competitively against the fossil fuel options.
- It is hoped that by the end of the third phase, 2022, India should have installed 20,000 MW of solar power.

National Mission for Enhanced Energy Efficiency

- Governed by the Ministry of Power.
- It creates a market based mechanism to enhance cost effectiveness of improvements on energy efficiency. Switching to cleaner fuels, commercially viable technology transfers, capacity building needs etc are the way forward for this mission.
- Development with energy efficiency as a key criterion.

Functions and Goals

- Spread awareness about the efficacy and efficiency of energy efficient products and create demand.
- Ensure adequate supply of energy efficient products, goods, and services by forming a cadre of energy professionals.
- Create financing platforms which can make risk guarantee funds, financial derivatives of performance contracts.
- Formulate well thought out evaluation and monitoring mechanisms to capture energy savings in a transparent manner.
- Overcome market failures through regulatory and policy measures.

National Mission on Sustainable Habitat

- Governed by the Ministry of Urban Development.
- Manifold agenda mission because it looks at energy efficiency within buildings, waste disposal from these buildings and betters the public transport system.
- Plans to make urban areas more climate friendly and less susceptible to climate change by a multi-pronged approach to mitigate and adapt to it.

Functions and Goals:
To create and adopt a more holistic approach for solid and liquid waste management, ensuring their full potential for energy generation (conversion of solid waste into energy), recycling, reusing and composting.

To encourage alternative transport systems and establish fuel efficiency standards and reduce fuel consumed per passenger travel by the provision of pedestrian pathways.

To provide for adoption and creation of alternative technologies mitigating climate change and to encourage community involvement for it.

Creation of one building code for the entire nation.

A system to enforce law and order.

Establish financial incentives based on green rating.

Reduce need for pumping of water, proper treatment of waste water and use of better designed toilets.

Promote use of natural gas and alternative & renewable fuels.

Comprehensive urban renewal master plan proposals with sustainable designs.

A master plan is a dynamic long-term planning document that provides a conceptual layout to guide future growth and development.

- Better enforcement of Urban Development Plan Formulation and Implementation (UDPFI) guidelines.

National Water Mission

- Ensures better integrated water resource management leading to water conservation, less wastage, equitable distribution forming better policies.
- Looks into the issues of groundwater and surface water management, domestic and industrial water management, improvement of water storage capacities and protection of wetlands.

Functions and Goals

- Review and data collection on the network of hydrological, automatic weather and automated rain gauge stations.
- Expeditiously implement water projects in climate sensitive regions.
- Promotion of water purification and desalination techniques.
- Enactment of a bill for the regulation and management of groundwater sources.
- Research in water use efficiency in industry, agriculture and domestic
sectors.

- Providing incentives for water neutral & positive technologies.
- Review National Water Policy to include integrated water resources management, evaporation management and basin level management.
- Water data base in the public domain and the assessment of impact of climate change on water resource
- Promotion of citizen and state action for water conservation, augmentation and preservation.
- More focused attention to over-exploited areas.
- Improving water use efficiency by 20% through regulatory and pricing mechanisms.

National Mission for Sustaining the Himalayan Ecosystem

- Governed by the Department of Science and Technology.
- Created to protect the Himalayan ecosystem. The mandate is to evolve measures to sustain and safeguard the Himalayan glaciers, mountain ecosystems, biodiversity and wildlife conservation & protection.

Functions and Goals

- Human and knowledge capacities- appointing trained personnel who can capture, store and apply knowledge relating to vulnerability and changes in the region.
- Institutional capacities- creating capability to conduct long term observations, studies to understand and warn of changes in the Himalayan ecosystem
- Evidence based policy building and governance- creating a platform for Himalayan states and the Centre to interact with various bodies.
- Continuous self learning for balancing between forces of Nature and actions of mankind by creating strong linkages with community based organisations.
- Establishing of a modern centre of Glaciology, standardisation of data collection to ensure interoperability and mapping of natural resources in the area.
- Identification and training of experts and specialists in the area relevant to sustaining the Himalayan ecosystem.

National Mission for Green India

- Governed by the Ministry of Environment, Forest and Climate Change.
- It has the mandate of reviving degraded forest land with a focus
on increasing forest cover & density and conserving biodiversity.

- Works towards reducing fragmentation of forests, enhancing private public partnerships for plantations, improving schemes based on joint forestry management etc.
- Makes plans to tackle the challenges posed by climate change.

Functions and Goals

- Enhancing carbon sinks in sustainably managed forests.
- Enhancing the resilience of vulnerable species and ecosystems to adapt to climate change.
- Enabling forest dependent communities to adapt to climate variability.
- Double the area to be taken up for afforestation.
- Increase greenhouse gas removals by Indian forests.
- Enhance resilience of forests and ecosystems falling under the mission.

National Mission for Sustainable Agriculture

- Governed by the Ministry of Agriculture.
- It works towards devising strategies to make Indian agriculture less susceptible to climate change.
- It would identify and develop new crop varieties, use traditional and modern agricultural techniques.
- This mission sees dry land agriculture, risk management, access to information and use of biotechnology as areas of intervention.

Functions and Goals

- Strengthening agricultural insurance, develop a system based on Geographic Information System (GIS) and remote sensing to map soil resource and land use.
- Providing information and collation of off-season crops and preparation of state-level agro-climatic atlases.
- Strategise to evolve low input agriculture with enhanced water and nitrogen efficient crops.
- Nutritional strategies to manage heat stress in dairy animals.
- Using of micro irrigation systems.
- Promotion of agricultural techniques like minimum tillage, organic farming and rain water conservation.
- Capacity building of farmers and other stakeholders.
- Production of bio-fertilizer, compost along with subsidies for chemical fertilizers.
- Strengthening of National Agricultural Insurance Scheme.

National Mission on Strategic Knowledge for Climate Change
Governed by the Department of Science and Technology. It identifies challenges and requisite responses to climate change. This will be done through open international collaboration and would ensure sufficient funding for this research. There is a need for strong strategic knowledge system on climate change.


- The aim of the mission is to push sustainable development of the renewable energy sector.
- The national mission will aim at improving energy efficiency in traditional biomass consuming industries, seek to develop a bio-energy city project and provide logistics support to biomass processing units.
- It will also propose a GIS-based National Biomass Resource Atlas to map potential biomass regions in the country.
- According to estimates, biomass from agro and agro-industrial residue can potentially generate 25,000 MW of power in India.

Functions and Goals

- Develop regional climate science.
- Leverage international cooperation.
- The efforts undertaken here would feed into the Indian National Network for Climate Change Assessment (INCCA) which is a stock taking exercise conducted every two years as part of the national obligations under UNFCCC.
- Creation of a data generation and sharing system by mapping resources on knowledge relevant to climate change.
- Identifying knowledge gaps and inspiring from global technological trends to select and test technologies.
- Creating new centres dedicated to climate research within existing institutional framework.

Achievements

- The World Wide Fund for Nature-India (WWF) feels that the National Action Plan is fairly comprehensive and has cross-sectoral links through the eight National Level Missions. The focal point is India’s impetus on following on a low carbon energy path without impending economic growth and quality of life of people.
- NAPCC brings a balanced perspective on mitigation and adaptation through some new dimensions like creation of National Mission.
Challenges and Suggestions

- India has the potential to do things differently because it is in an *early stage* of development and it *contributes very little to the changing climatic conditions*. It can leapfrog to a *low carbon economy* by using *high-end and emerging technologies*.
- The plan report makes no commitment to cut the country’s *carbon emission* which should have been an integral part of it.
- The *focal point* of NAPCC seems to be solar power mission only and the government’s efforts to maximise the solar energy seemingly approve it. *Equal emphasis on all missions with equal imgs* would have enabled the country to yield fast and visible results.
- Missions related to sustainable habitat, water, and agriculture and forestry are *multi-sectoral, overlapping, multi-departmental, advisory and very slow moving* in nature. Several ongoing activities are in principle aligned with the objectives of these missions which should *either be integrated* with the missions or *scrapped* to save the time and cost.
- Another challenge is the monitoring systems, which are *either ineffective or absent*. Progress reports for NSM, NMEEE, and NWM are currently available but mapping of progress for other missions has been difficult due to their cross-cutting nature.
- Ministries are *required to report progress and have regular meetings* with the PM’s Council on Climate Change.
- Finally, it can be said that *institutional, systemic and process barriers*— including *financial constraints, inter-ministerial coordination, lack of technical expertise and project clearance delays*—stand as *major challenges* in the efficient implementation of the missions.
- The cross-cutting subjects of the missions have *not yielded any positive results* on grounds yet so a *new approach is needed* to solve this and bring the agenda of climate change to the mainstream.
- While these challenges have drawn criticisms, they also provide us with the opportunity for discussion on the approaches to deal with climate change in India and understand the best way ahead to mainstream climate change.

Way Forward

- Recognising that climate change is a global challenge, the plan promises that India will *engage actively in multilateral negotiations* in the UN Framework
Convention on Climate Change, in a positive, constructive and forward-looking manner.

- It is now clear that initiatives to prevent climate change have been started but, most importantly, these initiatives must be continuous and sustainable and every individual of every country will need to contribute to prevent climate change.
- By releasing the NAPCC, the Indian government has shown its commitment to address climate change issues and also sent a positive message to the public, industries, and civil society about the government's concern to address the climate change issue through concerted action.
- Issues related to the awareness regarding global warming and climate change among the general population and the issue related to agriculture and health hazards due to climate change must be addressed strongly and effectively.

Source: PIB

Virtual Climate Action

Virtual Climate Action

Part of: GS-III- Climate change (PT-MAINS-PERSONALITY TEST)

Recently, the 4th edition of the virtual Ministerial on Climate Action was organised to advance discussions on implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).

The Ministerial:

- It was co-chaired by European Union, China and Canada.
- The participating countries exchanged their views on how they are aligning economic recovery plans amid Covid-19, with the Paris Agreement.
- India highlighted that developed country parties have not fulfilled their
India hopes that in the remaining 5 months of 2020, the promised amount will be mobilized and delivered, for further strengthening climate actions in developing countries.

- The developed countries had promised to provide USD 1 trillion by 2020.

**India’s Efforts in Combating Climate Change:**

- India has **provided 80 million LPG connections** under the **Pradhan Mantri Ujjwala Yojana (PMUY)** in rural areas, providing the people with clean cooking fuel and a healthy environment.

- It has **distributed more than 360 million LED bulbs** under the **UJALA scheme**, which has led to energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO2 per year.

- India has also **shifted from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norm** from 1st April 2020 which was earlier to be adopted by 2024.

- It **had levied a coal cess** as part of one of the most explicit green initiatives.

- Under **Smart Cities Mission, Climate Smart Cities Assessment Framework 2019** has been launched which intends to provide a clear roadmap for cities and urban India towards combating climate change through adoption of both mitigation and adaptation measures.

**Achievements of India in Combating Climate Change:**

- India has **achieved a reduction of 21% in emission intensity of its Gross Domestic Product (GDP) between 2005 and 2014**, thereby on its way to achieving its voluntary target under its **Intended Nationally Determined Contributions (INDC)**.

- India had pledged to cut emission intensity of its GDP by 33-35% by 2030 below 2005 levels.

- Its **renewable energy installed capacity has increased** by 226% in the last 5 years and stands more than 87 gigawatts (GW).

- India has a target of installing 175 GW of renewable power capacity by 2022 under its INDC.

- The **share of non-fossil sources** in installed capacity of electricity generation increased from 30.5% in March 2015 to 37.7% in May 2020.

- It has further announced the aspirational target of increasing its renewable energy capacity to **450 GW**.
India has pledged to increase the share of non-fossil fuels-based electricity to 40% by 2030 under INDC. India’s total forest and tree cover is 8,07,276 sq. km. which is 24.56% of the total geographical area of the country. India has agreed to enhance its forest cover which will absorb 2.5 to 3 billion tonnes of CO2 by 2030.

Paris Agreement- COP 21

- Conference of Parties (COP) 21, also known as the Paris Climate Conference is a landmark environmental accord that was adopted in 2015 to address climate change and its negative impacts.
- It aims to reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to well below 2°C above pre industrial levels, while pursuing means to limit the increase to 1.5°C.
- Countries have promised to try to bring global emissions down from peak levels as soon as possible. However, the USA has withdrawn from the agreement.
- The deal includes loss and damage, a mechanism for addressing the financial losses vulnerable countries face from climate impacts such as extreme weather.
- Raising money to help developing countries adapt to climate change and transition to clean energy was an important point in the agreement.
- This part of the deal has been made non-legally binding on developed countries.
- Before the conference started, more than 180 countries had submitted pledges to cut their carbon emissions (Intended Nationally Determined Contributions, or INDCs). The INDCs were recognized under the agreement, but are not legally binding.

Conclusion

India has to make a huge effort to achieve its target of 175 GW of renewable power capacity by 2022. It is way behind its target. The funding commitment made by developed countries has become more important due to the economic challenge posed by Covid-19 pandemic.

Source: PIB
According to a report published by the United Nations Environment Programme (UNEP) and the International Livestock Research Institute (ILRI), about 60% of known infectious diseases in humans and 75% of all emerging infectious diseases are zoonotic.

**The report was released on 6th July 2020, observed as ‘World Zoonoses Day’. It focuses on the context and nature of potential future zoonotic disease outbreaks, during the Covid-19 pandemic by identifying the anthropogenic (changes in environment due to human activity) factors.**

**Zoonoses or Zoonotic Disease:**

It is a disease that passes into the human population from an animal source directly or through an intermediary species.

Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections. Examples of zoonoses include HIV-AIDS, Ebola, Malaria, and the current Covid-19 disease.

**Anthropogenic Factors:**

- **Increased Use of Wildlife:** Exploitation of wildlife for hunting, harvesting of wild animals for meat and research or medical purposes can bring humans in closer contact with wild animals, thus increasing the risk of zoonotic disease emergence.
- **Changes in Food Supply Chains:** The popularity of food products with animal source and the need for immediate delivery to consumers is driving major changes in the food supply chain.
- **Increased Demand for Animal Protein:** This has encouraged the intensification and industrialisation of animal production, wherein a large number of genetically similar animals are bred in for higher productivity.
- **Intense and Unsustainable Farming:** Intensive farm settings
cause animals to be raised in close proximity to each other characterised by poor waste management. This makes them more vulnerable to infections, which can further lead to emergence of zoonotic diseases.

- **Use of Antimicrobials:** High use of antimicrobials in farm settings is contributing to the burden of AntiMicrobial Resistance (AMR).

Antimicrobial resistance is the resistance acquired by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections. As a result, standard treatments become ineffective, infections persist and may spread to others.

**Recommendations:**

- **One Health Approach:** One Health is a multisectoral and transdisciplinary approach with the goal of achieving optimal health outcomes by recognizing the interconnection between people, animals, plants, and their shared environment. It aids a coordinated response to future pandemics and is a key to zoonoses risk reduction and control.

- **Expanding Scientific Enquiry:** This is a crucial element of AMR containment efforts since waste from intensive farms using antimicrobials paves way for AMR determinants (e.g. antibiotic residues, resistant bacteria) in the environment.

- **Strengthening Monitoring:** It would help in regulating practices associated with zoonotic diseases.

- **Sustainable Land Management Practices:** It would help in developing alternatives for food security and livelihoods that do not rely on the destruction of habitats and biodiversity. It would also enhance sustainable co-existence of agriculture and wildlife.

- **Identifying Key Drivers:** It would encourage management and control measures for emerging zoonotic diseases in animal husbandry.

**United Nations Environment Programme**

- The UNEP is a leading global environmental authority established on 5th June 1972.
- **Functions:** It sets the global environmental agenda, promotes the sustainable development within the United Nations system, and serves as an authoritative advocate for global environment protection.
- **Major Reports:** Emission Gap Report, Global Environment Outlook,
Frontiers, Invest into Healthy Planet.

- **Major Campaigns:** Beat Pollution, UN75, World Environment Day, Wild for Life.
- **Headquarters:** Nairobi, Kenya

### International Livestock Research Institute

The ILRI is an **international agricultural research institute** formed in 1994 through the merger of the International Livestock Centre for Africa and the International Laboratory for Research on Animal Diseases situated in Nairobi, Kenya.

**Functions:**

It focuses on **building sustainable livestock** pathways out of poverty in low-income countries. It works with partners worldwide to help poor people keep their farm animals alive and productive and find profitable markets for their animal products.

**Headquarters:** Nairobi, Kenya

The report is one of the first to focus on the environmental side of the zoonotic dimension of disease outbreaks during the Covid-19. There is an immediate need to invest in in-depth understanding of environmental linkages with zoonotic diseases and monitoring of such diseases in human-dominated environments.

There is an urgency for adoption of sustainable **methods of food production** and to reduce dependence on intensive systems to preserve health and ecosystems.

Source: DTE
Countering America’s Adversaries through Sanctions Act: CAATSA is a United States federal law that imposed sanctions on Iran, North Korea, and Russia. It includes sanctions against countries that engage in significant transactions with Russia's defense and intelligence sectors.

Recently, the USA has reiterated its position and asked all its allies and partners, including India, to stop transactions with Russia. It can risk triggering sanctions under the Countering America’s Adversaries through Sanctions Act (CAATSA).

- **USA’s Stand:** The USA has reiterated its position on CAATSA in the context of India’s planned jet fighter deal with Russia at an estimated Rs. 18,148 crore. Recently, the Defence Acquisition Council had approved the procurement of 21 MiG-29 fighter jets for the Indian Air Force (IAF), an upgrade for 59 of these Russian aircraft and the acquisition of 12 Su-30 MKI aircraft.
- India could also face USA sanctions for purchasing the **S-400 Triumf missile defense system** from Russia under the CAATSA.
- The **USA suspended Turkey from its F-35 aircraft programme** and barred it from purchasing the jet, following Turkey’s purchase of the S-400 from Russia. However, this was done without invoking CAATSA.
- **Major Defence Partner:** The USA recognised India as a **Major Defence Partner** in 2016.
- The designation allows India to buy more advanced and sensitive technologies from America at par with that of the USA’s closest allies and partners.
- **Issues with Purchase from Adversary:** The USA fears that acquisitions by countries like India on significant systems would either expose or put at risk platforms and its technologies to an adversary.
- It has declared that the S-400 purchase by Turkey from Russia has put a risk to its F-35 aircraft system.
- **Waiver Criteria under CAATSA:** The USA President was given the authority in 2018 to waive CAATSA sanctions on a case-by-case basis. However, the USA has repeatedly stated that India should not assume it will get a waiver.

**The S-400 is known as Russia’s most advanced long-range surface-to-air missile defence system.** China was the first foreign buyer to seal a government-to-government deal with Russia in 2014 for the system.
The defence procurement for India has become significant amid deadly clashes with China on Line of Actual Control (LAC). Russia is an all weather defence partner of India. However, India needs to balance its relation with both Russia and USA, so that its national interest is not compromised.

Source: TH

Freedoms of the Air
GS-II | 09 July, 2020

Freedoms of the Air

It is recognised by the ICAO

1. **First Freedom of the Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to fly across its territory without landing (also known as a First Freedom Right).

2. **Second Freedom of the Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to land in its territory for non-traffic purposes (also known as a Second Freedom Right).

3. **Third Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier (also known as a Third Freedom Right).

4. **Fourth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier (also known as a Fourth Freedom Right).
5. **Fifth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State (also known as a Fifth Freedom Right).

ICAO characterizes all "freedoms" beyond the Fifth as "so-called" because only the first five "freedoms" have been officially recognized as such by international treaty.

6. **Sixth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier, traffic moving between two other States (also known as a Sixth Freedom Right). The so-called Sixth Freedom of the Air, unlike the first five freedoms, is not incorporated as such into any widely recognized air service agreements such as the "Five Freedoms Agreement".

7. **Seventh Freedom of The Air** - the right or privilege, in respect of scheduled international air services, granted by one State to another State, of transporting traffic between the territory of the granting State and any third State with no requirement to include on such operation any point in the territory of the recipient State, i.e. the service need not connect to or be an extension of any service to/from the home State of the carrier.

8. **Eighth Freedom of The Air** - the right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting State on a service which originates or terminates in the home country of the foreign carrier or (in connection with the so-called Seventh Freedom of the Air) outside the territory of the granting State (also known as a Eighth Freedom Right or "consecutive cabotage").

9. **Ninth Freedom of The Air** - the right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State (also known as a Ninth Freedom Right or
Recently, the USA has announced that F-1 and M-1 visa holders who are planning to take online only models will not be allowed to stay in the USA. Many universities in the USA are planning to shift all their classes online for the fall semester due to Covid-19 pandemic.

Fall semester starts in late August and ends in late December or early January whereas the Spring semester begins in January and ends in early May.

***F-1 visas are issued to study in the USA for full-time students whereas M-1 visas are issued to students engaging in vocational or non-academic studies.

The announcement comes weeks after the USA President suspended H1-B highly skilled worker visas through the end of the year. Most of these visas go to Indian citizens each year.

Announcements Made:

- The students outside the USA planning to take all courses online in the fall semester would not be permitted entry into the country.
- The USA would not issue visas to students who are going to take all their classes online due to the pandemic.
- It also stated that the active students under F-1 and M-1 visas in such programs must depart the country or take other measures, such as transferring to a school with in-person instruction to remain in lawful
The USA regulations do not allow students in F-1 status to be in online classes but normally F-1 students are allowed to take one class or three credit hours online.

Affected Population:

- There were more than one million international students in the United States for the 2018-19 academic year. That accounted for 5.5% of the total USA’s higher education population.
- Also, international students contributed $44.7 billion to the USA's economy in 2018.
- India is the second largest source of the foreign students in the USA after China.
- The largest number of international students come from China, followed by India, South Korea, Saudi Arabia and Canada.

Consequences:

If alternative measures are not opted then these students may face immigration consequences including, but not limited to, the initiation of removal proceedings. It is a difficult situation for students as international travel already faces disruption due to Covid-19.

Available Alternatives: Affected students may switch to visitor status but it is not a long term solution as visitor status is short term and there is no guarantee that it will be approved.

Considering the unprecedented pandemic scenario, the USA can amend the regulation for F-1 and M-1 students. The one-size-fits-all approach will create more havoc and complexities not only in USA administration but also in diplomatic relations with countries like India and China.

Source: TH
Equalisation Levy

Part of: GS-III- Economy (PT-MAINS-PERSONALITY TEST)

Recently, the Central government has stated that it will not extend the deadline for payment of equalisation levy by non-resident e-commerce players, even though a majority of them are yet to deposit the first instalment of the tax.

**The equalisation levy is aimed at taxing foreign companies which have a significant local client base in India but are billing them through their offshore units, effectively escaping the country's tax system.** The step has come in the backdrop of the United States Trade Representative (USTR) investigations into taxes adopted or under consideration by 10 nations, including India, on revenues of American digital service companies like Netflix, Airbnb etc.

Background for Equalization Levy:

Equalisation levy at 6% has been in force since 2016 on payment exceeding Rs 1 lakh a year to a non-resident service provider for online advertisements.

It is now applicable for e-commerce companies that are sourcing revenue from Indian customers without having tangible presence here in the country.

The amendments to the Finance Act, 2020 had expanded the ambit of the equalisation levy for non-resident e-commerce operators involved in supply of services, including online sale of goods and provision of services, with the levy at the rate of 2% effective April 1, 2020.

The tax applies on e-commerce transactions on websites such as Amazon.com. Google in particular as the tax applies on advertising revenue earned overseas if those ads target customers in India.

Changes in Challan ITNS 285:

The income tax department has modified challan ITNS 285 (relating to payment of equalisation levy) to enable payment of the first installment by non-resident e-
commerce operators. The challan also seeks mandatory PAN and provides for ‘Outside India’ option while seeking address.

Penalties Involved:

The non-payment could result in a penalty equal to the amount of equalisation levy, along with interest. The late-payment would attract interest at the rate of 1% per month or part of the month.

As India is racing towards becoming a digital giant and should be negotiated to avoid any hurdles in its implementation. Further, there needs to be international consensus on taxation on a digital economy.

Source: TH

---

National Gene Bank
National Gene Bank

Part of: GS-III- Bio-diversity (PT-MAINS-PERSONALITY TEST)

Recently, the National Medicinal Plants Board (NMPB) under the Ministry of AYUSH and the National Bureau of Plant Genetic Resources (NBPGR) under the Ministry of Agriculture & Farmers’ Welfare have signed a Memorandum of Understanding (MoU). The purpose of this MoU is to conserve the Medicinal and Aromatic Plants Genetic Resources (MAPGRs) in the National Gene Bank (NGB).

Establishment: The National Gene Bank was notified in 1996-97.

Hosted By: National Bureau of Plant Genetic Resources (NBPGR), New Delhi.

Purpose: To conserve the Plant Genetic Resources (PGR) for future generations in the form of seeds, genomic resources, pollen etc.

Functioning:
The NGB has four kinds of facilities, namely, Seed Genebank (-18°C), Cryogenebank (-170°C to -196°C), In vitro Genebank (25°C), and Field Genebank, to cater to long-term as well as medium-term conservation. It stores different crop groups such as cereals, millets, medicinal and aromatic plants and narcotics, etc.

Other Facilities: (PT SHOT)

The Svalbard Global Seed Vault in Norway houses the world’s largest collection of seeds.

India’s seed vault is at Chang La (Ladakh) in the Himalayas.

National Animal Gene Bank, established at the National Bureau of Animal Genetic Resources (NBAGR - Karnal, Haryana), has the objective of conserving the indigenous livestock biodiversity. NBAGR is one of the Indian Council of Agricultural Research (ICAR) institutes.

National Medicinal Plants Board

- In order to promote the medicinal plants sector, the Government of India set up the National Medicinal Plants Board (NMPB) on 24th November 2000.
- Currently the board is working under the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy).
- The primary mandate of NMPB is to develop an appropriate mechanism for coordination between various ministries/ departments/ organizations and implementation of support policies/programs for overall (conservation, cultivation, trade and export) growth of medicinal plants sector both at the Central /State and International level.

National Bureau of Plant Genetic Resources

- The ‘National Bureau of Plant Introduction’ was renamed as ‘National Bureau of Plant Genetic Resources’ (NBPGR) in January 1977.
- It is one of the Indian Council of Agricultural Research (ICAR) Institutes. ICAR is an autonomous organisation under the Ministry of Agriculture & Farmers’ Welfare.
- It is a nodal organisation in India for management of Plant Genetic Resources (PGR).
- It has played a pivotal role in the improvement of various crop plants and diversification and development of agriculture in India through germplasm
introduction from various institutes/organizations located in foreign countries and germplasm collection from within the country and abroad and conservation thereof.

***Germplasm is a live information source for all the genes present in the respective plant, which can be conserved for long periods and regenerated whenever it is required in the future.

The NBPGR has linkage with National Active Germplasm Sites (NAGS) for the management of active germplasm of field and horticultural crops. NAGS are located at NBPGR regional stations, other crop-based ICAR institutes or State Agricultural Universities.

It is headquartered in New Delhi and has 10 regional stations.

Source: PIB
India’s Trade Surplus

GS-Paper- 3 Economy TRADE

The Reserve Bank of India (RBI) has released India’s balance of payments data for the January-March quarter of 2019-20.

During this quarter, India has managed a current account surplus, which is around 0.1% of the GDP. This surplus is largely driven by a lower trade deficit.

Data from the Commerce Ministry show that for April and May 2020, India’s trade balance has improved. This surplus is due to the invisibles, emanating mainly out of services exports and remittances. Due to this surplus, India’s substantial trade deficit turns into a moderate current account deficit.

Why does India mostly have a trade deficit?

- Inability to export more and import less can be held responsible. Lack of export dynamism in comparison with its East Asian neighbours.
- Large imports of oil, gold, and electronics have chronically inflated our import bills. Thus, any news of a reduction in trade deficit is greeted with an expectation that it may represent dynamism of the Indian economy.

Current trends:

The World Trade Organisation’s (WTO) trade data show that the Covid crisis has had a severe impact on international trade. As the world went into a lockdown, it severely affected economic activities everywhere.

Estimates by the WTO suggest that for the second quarter of 2020, the global trade is likely to suffer a year-on-year drop of around 18.5%. [Second quarter of 2020 - A period when the lockdown was in place]

This is one of the steepest falls in international trade on record. Along with the lockdown, the WTO attributes this decline to the growing geopolitical and trade tensions.

What are the current trends in Indian trade?
India’s trade also suffered. India’s merchandise trade has gone down in April 2020, before recovering in May. [Merchandise trade = Exports + Imports]

Compared to May 2019, India’s total merchandise trade declined around a 45% in May 2020. Merchandise exports declined by around 36.3%. Merchandise imports suffered a decline by more than 51%.

An improvement in trade performance is seen in May 2020, compared to April 2020. However, it is possible that some of the increases in May are due to the release of held-up consignments at the ports.

What is the impact on trade in services?

The impact on trade in services is much less severe. After all, services trade in India is dominated by IT/ITES exports, which are less susceptible to disruptions in logistics.

When compared with January and February 2020, the average trade in services has declined in April and May. As the Covid-19 crisis has led to a complete shutdown of some major service sectors like airlines, this moderate decline in services trade is a relief.

Overall, India’s trade balance in April and May 2020 has turned positive. However, this improvement in trade balance has been driven mainly by a sharper decline in imports. This is a warning sign for the economy, as the decline in imports points towards a contraction of demand in the real economy.

A decline in imports (May 2020) was led by a sharp decline in imports of gold, petroleum goods, coal, electronics and machineries. Declining petroleum prices and rising gold prices have affected the import patterns. The sharp decline in imports of fuel and machinery indicate a severe demand slowdown in the economy. Covid-19 is going to have a heavy toll on the economy.

Source: IE
Lithium

Lithium, a light element commonly used today in communication device technology. It was first produced in the Big Bang, around 13.7 billion years ago when the universe came into being, along with other elements. The present abundance of lithium in the universe is only four times the original (Big Bang) value.

It is actually destroyed in the stars. The Sun, for instance, has about a factor of 100 lower amount of lithium than the Earth.

Helium Flash in Stars

A forty-year-old puzzle regarding the production of lithium in stars has been solved by Indian researchers-BHARAT KUMAR. Stars, as per known mechanisms of evolution, actually destroy lithium as they evolve into red giants.

Planets were known to have more lithium than their stars as is the case with the Earth-Sun pair. However, leading to a contradiction, some stars were found that were lithium-rich.

When stars grow beyond their Red Giant stage into what is known as the Red Clump stage, they produce lithium in what is known as a Helium Flash and this is what enriches them with lithium.

Source: TH

Gold Bonds and Gold monetization

GS-III | 10 July, 2020

Investing in Gold Bonds

GS-PAPER-3 Economics-Investment (PT-MAINS)

Fourth tranche of sovereign gold bonds 2020-21 are opened for subscription.
Gold bonds:

The government introduced the gold bonds scheme in 2015. The scheme was introduced to wean away investors from the physical gold market. These bonds have a maturity period of eight years. But, the investors have the option to exit after the fifth year. Funds raised through such issuances form part of the government’s overall borrowings in a year.

What are the benefits of buying gold bonds?

- Gold bonds offer investors twin benefits of price appreciation along with a fixed 2.5% coupon per year. Interest earned on these gold bonds is added to the holders’ income. Interest earned on these bonds is taxed according to their slab rate.
- Any capital gains on these bonds at maturity are tax free.
- This makes them far more attractive than owning physical gold. To offer greater liquidity, the bonds are listed on stock exchanges within a fortnight of issuance, and can be traded. Gold bonds appear attractive when gold prices spike. This leads to greater investor interest in this asset class.

Why price rise??

Much before Covid-19’s impact led to a crash in global stock markets, gold prices had started their upward glide. The global spread of Covid-19 has raised concerns on global growth over the last three or four months.

Negative growth rates and fears of a global recession have pushed central banks and big investors to take shelter in gold. There is nearly 40% crash in benchmark equity indices in the US between February and March 2020. This has forced the US Federal Reserve to announce a record liquidity injection and bond-buying programme of more than $3 trillion.

In India why it has been rising!!!

- Since India mostly imports gold, the depreciation of rupee with regard to dollar makes gold costlier in India.
- Domestic factors such as concerns over the country’s fiscal health and a higher demand for gold also pushes up prices.
- In India, the RBI has cut policy rates by 115 basis points over the last
three months, and brought down the repo rate to 4%. [Repo rate - The rate at which the RBI lends to commercial banks]

- The RBI has also announced liquidity injection in the economy. Any expansion in the paper currency tends to push up gold prices.

Will gold prices continue to rise???

Gold is an efficient tool to hedge against inflation and economic uncertainties. It is also more liquid when compared with real estate and many debt instruments. Generally, after any major economic crash and recession, gold prices continue their upward run. Market analysts feel that gold could overtake its previous peak of around $1,900 per ounce in the global market.

Can one invest now?

In India, there is a sharp decline in interest rates over the last year alongside high volatility in the equity markets. This has brought investors’ focus towards gold.

A cut in interest rates by the RBI has led to a decline in interest rates on small savings and term deposit rates of banks. **SBI is currently offering an interest of 2.7% on savings bank deposits, and 5.4% on 5-10 year term deposits.** Experts say that it makes good sense for investors to invest in gold.

Can the price of gold crash?

- Given the economic uncertainty, gold would touch a new all-time high.
- In India, prices will be supported by any further weakness in rupee.
- **Key events that could stall the rise of gold are,**
  1. Sudden sale of gold holdings by central banks to tide over the economic crisis,
  2. Crisis in other risk assets prompting investors to compensate their losses through sale of gold ETFs (Exchange Traded funds).

Gold Monetisation Scheme

In a move to revive the flagging Gold Monetisation Scheme, the **Reserve Bank of India (RBI)** has made it easier for depositors to hand over their holdings of Gold.

- **RBI has liberalised the GMS, 2015,** allowing depositors to directly deposit their bullion with either banks, refiners or Collection and Purity Testing Centres (CPTCs). Earlier, the Banks, CPTCs and Refineries had to sign a
Temples, High Network Individuals (HNIs) and entities like fund houses, trusts and even government entities would now find it easier to deal directly with banks instead of CPTCs.

Gold Monetisation Scheme

- The scheme was launched in November 2015 along with sovereign gold bonds and India gold coins.
- It facilitates the depositors of gold to earn interest on their metal accounts. Once the gold is deposited in metal account, it starts earning interest on the same.
- Under the scheme, a depositor gets 2.25% interest annually for a short-term deposit of one year to three years. Medium- and long-term deposits get 2.5% interest rate.
- **Objective:** To mobilize the gold held by households and institutions in the country to put this gold into productive use and in the long run to reduce the current account deficit by reducing the country’s reliance on imports of gold to meet the domestic demand.
- Along with GMS, a Sovereign Gold Bond Scheme (an alternative to purchasing metal gold) and development of Indian Gold Coin, were also announced.
- **Banks may accept the deposit of gold at designated branches,** especially from larger depositors.
- The RBI also further relaxed norms under the scheme by which banks, at their discretion, can, allow the depositors to deposit their gold directly with the refiners.
  - This suits the temples also, as it is estimated that they may be holding around 4,000 tonnes of gold and are capable of depositing gold in tonnes under the scheme.
- Several depositors had earlier complained that banks are not taking an interest in accepting deposits under the GMS in many cities even from large depositors. Banks had hardly publicised that they run the GMS.
  - The RBI has stated that **banks have to identify branches in all states** and union territories where they can accept deposits.
  - All designated banks have now been mandated by the RBI to **give adequate publicity to the scheme through their branches**, websites and other channels.

**Background**
The GMS scheme had been able to garner only 16 tonnes of gold as deposits in the last four years. This was largely because of banks’ apathy towards it and also due to practical difficulties of banks in dealing with collection-hallmarking centres.

- The current scheme mandates that customers have to first approach the CPTCs which are approved by the Bureau of Indian Standards.
- These centres had issued depositors purity certificate on gold deposited, and based on the centres’ certificate, a bank was supposed to open a deposit account and credit gold.
- CPTCs sent the gold to a refinery which gave the final purity certificate and converted the yellow metal into bars.

Source: BS

---

**Issue of Caste in America and Elsewhere**

GS-PAPER-2 Governance – Caste (Mains and I.V)

What is the issue?

A lawsuit has been filed in California against Cisco Systems for allowing caste discrimination against a Dalit Indian-origin employee. In this context, here is an overview of the issue of caste in America and elsewhere, outside the Indian subcontinent.

Earlier references to 'caste' in America?

- In 1913, A K Mozumdar, an immigrant from Bengal to Washington, applied to become an American citizen. US citizenship at the time was determined by race, and given only to whites. Mozumdar argued that as a “high-caste Hindu” of “Aryan descent”, he shared racial origins with Caucasians. His application was accepted and he became the first South Asian American to become a US citizen.
- In 1923, a similar argument that claimed caste was a way to whiteness
was put forward by Bhagat Singh Thind. Thind was a Sikh writer who had served in the US Army during World War I. In his petition, he argued that he was technically “white”, given his “pure Aryan blood”. **He argued that the high-caste Hindoo “regards the aboriginal Indian Mongoloid in the same manner as the American regards the "Negro", speaking from a matrimonial standpoint**. [Hindoo was a blanket term used then for all Indian immigrants.] Thind’s arguments were rejected in the US Supreme Court. It decided that he was not white, and hence not eligible for citizenship. A few months later, Mozumdar became the first Indian to lose his citizenship as a consequence of that judgment.

What happened after 1965?

The **1965 Immigration and Nationality Act came into place as a result of the civil rights campaign in the US.** The Act overturned restrictions of race and colour. It thus allowed a whole generation of Indian skilled labour (mostly upper-caste) to be a part of the American dream. But importantly, soon, many “lower-caste” Indians also followed.

This was significantly because they accessed educational opportunities in technical institutions via reservations at home. With this, Dalit discrimination started in the US.

One such example is of the **REC Warangal-educated Sujatha Gidla.** Gidla’s 2017 book ‘Ants Among Elephants: An Untouchable Family and the Making of Modern India’, was published in the US to great acclaim. In New York, she recalls facing discrimination from many Indians. Gidla recounts, a Brahmin bank cashier “wouldn’t accept money from my hands. She would demand that I place it on the counter.”

**2015 California textbook debate?**

In **2015, the California board of education asked scholars to help it come up with a framework for history and social science textbooks.** It was part of a regular evaluation.

Following that, there was a bitter contest over several aspects of Indian history. This included caste and the critique of caste embedded in religions such as Buddhism and Sikhism as well.
The suggestions of the South Asian Histories for All Coalition (SAHFAC), a collective of scholars and historians, were met with opposition. The Hindu American Foundation and other Hindu groups mainly objected. They opposed narratives that portrayed “Hindu civilisation” negatively, and warned they might lead to the bullying of Hindu children.

However, the SAHFAC objected to -

1. altering contentious portions of Indian history relating to caste atrocities
2. the attempt to erase the word “Dalit” from history textbooks as demanded
3. the attempt, allegedly, to portray Muslims as oppressors

How prevalent is caste discrimination in the U.S.?

- While the stories of Dalit families are compelling, there is no data about caste in the U.S., and this is a drawback. So, in 2018, Equality Labs (an advocacy group for the “caste-oppressed” in California) carried out a survey to fill this gap. It surveyed South Asian-Americans on their experience of caste.
- It showed that 67% of Dalits faced caste discrimination at the workplace, 40% in schools, and 40% at temples. [That report was cited in the present lawsuit filed against Cisco Systems.]

Is anti-caste movement possible in the U.S.?

An anti-caste movement taking root in the US is practically hard. Notably, of Indian immigrants, 90% are Brahmins and 1.5% is Dalits. Indians in America are a minority, and Dalits among them are a minority. Issues of such a tiny community making a big enough impact to be called a movement is less likely.

However, a Dalit consciousness has been present in the US from the 1970s or 1980s, away from the bright lights of media activism. People have resisted in private and in public in their own ways. Even hiding one’s caste is a way of fighting caste as Yengde (who works with community-based Ambedkarite organisations in the US) says.

What was the Dalits' demand for the 2001 UN Conference against Racism?

The UN Conference Against Racism, Racial Discrimination, Xenophobia and Related Intolerance was held in Durban, South Africa, in 2001. In the lead-up
to the conference, Dalit groups had demanded that the conference also take a stand against the “hidden apartheid” in India.

Since the 1990s, these groups had had some success in lobbying international organisations on caste. The universal language and promise of human rights was used to broaden the framework to see the discrimination.

Specifically, the definition of racial discrimination as “exclusion based on race, colour and descent” was used to acknowledge caste. Notably, in 1999, a report by Human Rights Watch, ‘Broken People: Caste Violence against India’s Untouchables’, focussed international attention on the issue.

India’s stance?

Omar Abdullah, then India’s Minister of State for External Affairs said at the conference, the following:

a. We are firmly of the view that the issue of caste is not an appropriate subject for discussion at this conference.

b. We are here to ensure that states do not condone or encourage regressive social attitudes.

c. We are not here to engage in social engineering within member states.

What are the conflicting views in this regard?

- Indian government’s position has consistently been that caste should not be equated with race. It opines that caste should not be raised in committees that deal with race.
- Caste is an issue that India has been trying to address through constitutional measures. So, it does not deny caste, but believes that the issue of race should not get diluted by confusing it with other discriminations.
- On the other hand, Dalits argue that tackling caste needed much more than framing constitutional provisions and legislation. The attempt at the conference was to raise a global consensus, to legitimise anti-caste ideologies.
- The Indian government took a position that it needed no interference from the UN. But Dalits view it not as an interference.
- They assert that the UN was only pushing to collectively uphold the value that all humans, irrespective of caste, are equal, and some measures are to be taken for that. Strongly opposing the move by Dalit activists and groups, Indian government insisted that caste and race are two dissimilar and
anomalous entities.

- But given the anti-apartheid position and programme of affirmative action, these conflicting views and the events at Durban were an embarrassment for India. These are just glimpses of the close to two decades' efforts at various levels to get institutions overseas to recognise the 'peculiar challenge of caste'.
- This system of inequality and oppression that is unique to the Indian subcontinent evidently finds reflections in varied forms elsewhere too. It has a long way to go before its presence is acknowledged and protections offered to the oppressed.

Caste Discrimination - California Lawsuit against Cisco Systems

A lawsuit has been filed in California against Cisco Systems, a tech multinational company, for allowing caste discrimination against a Dalit Indian-origin employee.

What is the case about?

- The California Department of Fair Employment and Housing filed a lawsuit against Cisco Systems. It was filed against Cisco and two “upper-caste” Indian managers. It accused Cisco Systems of allowing caste discrimination against a Dalit Indian-origin employee at its San Jose headquarters.
- The department’s director said that it was unacceptable for workplace conditions and opportunities to be determined by a hereditary social status determined by birth. It was also said that the employers must be prepared to prevent, remedy, and deter unlawful conduct against workers because of caste.

What is the American law in this regard?

- The American law does not recognise caste.
- The lawsuit was filed under the federal Civil Rights Law 1964.
- The Law bars discrimination only on the basis of race, colour, religion, sex and national origin.
- However, in choosing to litigate, the California government is attempting to expand the ambit of discrimination to include caste.
- It is the first civil rights case in the US where a governmental entity is suing
What is the significance?

- For close to two decades now, attempts have been ongoing at various levels.
- There were efforts to get institutions overseas to recognise the peculiar challenge of caste.
- The caste system of inequality and oppression is unique to the Indian subcontinent.
- It is naturally recognised by the Constitution of India.
- But in California, the Cisco case is a potential game-changer.
- The lack of having caste as an explicit category has made the prosecutors to keep the issue of caste within protections of religion, race, and ancestry.
- So the present case is expected to set a precedent.
- It will open the door for more such civil rights litigation.
- Silicon Valley, California has a global footprint.
- So, whatever is legislated there will have an impact on company workplaces in India and elsewhere too.
- The now widespread #BlackLivesMatter movement is spotlighting all kinds of discrimination.
- Amidst this, the case against Cisco becomes extremely significant.

Source: IE
India’s Trade Surplus

GS-Paper- 3 Economy TRADE

The Reserve Bank of India (RBI) has released India’s balance of payments data for the January-March quarter of 2019-20.

During this quarter, India has managed a current account surplus, which is around 0.1% of the GDP. This surplus is largely driven by a lower trade deficit.

Data from the Commerce Ministry show that for April and May 2020, India’s trade balance has improved. This surplus is due to the invisibles, emanating mainly out of services exports and remittances. Due to this surplus, India’s substantial trade deficit turns into a moderate current account deficit.

Why does India mostly have a trade deficit?

- **Inability to export more** and import less can be held responsible. Lack of export dynamism in comparison with its East Asian neighbours.
- **Large imports of oil, gold, and electronics** have chronically inflated our import bills. Thus, any news of a reduction in trade deficit is greeted with an expectation that it may represent dynamism of the Indian economy.

Current trends:

The World Trade Organisation’s (WTO) trade data show that the Covid crisis has had a severe impact on international trade. As the world went into a lockdown, it severely affected economic activities everywhere.

Estimates by the WTO suggest that for the second quarter of 2020, the global trade is likely to suffer a year-on-year drop of around 18.5%. [Second quarter of 2020 - A period when the lockdown was in place]

This is one of the steepest falls in international trade on record. Along with the lockdown, the WTO attributes this decline to the growing geopolitical and trade tensions.

What are the current trends in Indian trade?
India’s trade also suffered. India’s merchandise trade has gone down in April 2020, before recovering in May. [Merchandise trade = Exports + Imports]

- Compared to May 2019, India’s total merchandise trade declined around a 45% in May 2020. Merchandise exports declined by around 36.3%. Merchandise imports suffered a decline by more than 51%.

- An improvement in trade performance is seen in May 2020, compared to April 2020. However, it is possible that some of the increases in May are due to the release of held-up consignments at the ports.

**What is the impact on trade in services?**

- The impact on trade in services is much less severe. After all, services trade in India is dominated by IT/ITES exports, which are less susceptible to disruptions in logistics.
- When compared with January and February 2020, the average trade in services has declined in April and May. As the Covid-19 crisis has led to a complete shutdown of some major service sectors like airlines, this moderate decline in services trade is a relief.

Overall, India’s trade balance in April and May 2020 has turned positive. However, this improvement in trade balance has been driven mainly by a sharper decline in imports. This is a warning sign for the economy, as the decline in imports points towards a contraction of demand in the real economy.

A decline in imports (May 2020) was led by a sharp decline in imports of gold, petroleum goods, coal, electronics and machineries. Declining petroleum prices and rising gold prices have affected the import patterns. The sharp decline in imports of fuel and machinery indicate a severe demand slowdown in the economy. Covid-19 is going to have a heavy toll on the economy.

Source: IE

**Lithium**

GS-III | 10 July, 2020
Lithium

Lithium, a light element commonly used today in communication device technology. It was first produced in the Big Bang, around 13.7 billion years ago when the universe came into being, along with other elements. The present abundance of lithium in the universe is only four times the original (Big Bang) value.

It is actually destroyed in the stars. The Sun, for instance, has about a factor of 100 lower amount of lithium than the Earth.

Helium Flash in Stars

A forty-year-old puzzle regarding the production of lithium in stars has been solved by Indian researchers-BHARAT KUMAR. Stars, as per known mechanisms of evolution, actually destroy lithium as they evolve into red giants.

Planets were known to have more lithium than their stars as is the case with the Earth-Sun pair. However, leading to a contradiction, some stars were found that were lithium-rich.

When stars grow beyond their Red Giant stage into what is known as the Red Clump stage, they produce lithium in what is known as a Helium Flash and this is what enriches them with lithium.

Source: TH

Gold Bonds and Gold monetization
GS-III | 10 July, 2020

Investing in Gold Bonds

GS-PAPER-3 Economics-Investment (PT-MAINS)

Fourth tranche of sovereign gold bonds 2020-21 are opened for subscription.
Gold bonds:

The government introduced the gold bonds scheme in 2015. The scheme was introduced to wean away investors from the physical gold market. These bonds have a maturity period of eight years. But, the investors have the option to exit after the fifth year. Funds raised through such issuances form part of the government’s overall borrowings in a year.

What are the benefits of buying gold bonds?

- Gold bonds offer investors twin benefits of price appreciation along with a fixed 2.5% coupon per year. Interest earned on these gold bonds is added to the holders’ income. Interest earned on these bonds is taxed according to their slab rate.
- Any capital gains on these bonds at maturity are tax free.
- This makes them far more attractive than owning physical gold. To offer greater liquidity, the bonds are listed on stock exchanges within a fortnight of issuance, and can be traded. Gold bonds appear attractive when gold prices spike. This leads to greater investor interest in this asset class.

Why price rise??

Much before Covid-19’s impact led to a crash in global stock markets, gold prices had started their upward glide. The global spread of Covid-19 has raised concerns on global growth over the last three or four months.

Negative growth rates and fears of a global recession have pushed central banks and big investors to take shelter in gold. There is nearly 40% crash in benchmark equity indices in the US between February and March 2020. This has forced the US Federal Reserve to announce a record liquidity injection and bond-buying programme of more than $3 trillion.

In India why it has been rising!!!

- Since India mostly imports gold, the depreciation of rupee with regard to dollar makes gold costlier in India.
- Domestic factors such as concerns over the country’s fiscal health and a higher demand for gold also pushes up prices.
- In India, the RBI has cut policy rates by 115 basis points over the last
three months, and brought down the repo rate to 4%. [Repo rate - The rate at which the RBI lends to commercial banks]

- The RBI has also announced liquidity injection in the economy. Any expansion in the paper currency tends to push up gold prices.

Will gold prices continue to rise???

Gold is an efficient tool to hedge against inflation and economic uncertainties. It is also more liquid when compared with real estate and many debt instruments. Generally, after any major economic crash and recession, gold prices continue their upward run. Market analysts feel that gold could overtake its previous peak of around $1,900 per ounce in the global market.

Can one invest now?

In India, there is a sharp decline in interest rates over the last year alongside high volatility in the equity markets. This has brought investors’ focus towards gold.

A cut in interest rates by the RBI has led to a decline in interest rates on small savings and term deposit rates of banks. **SBI is currently offering an interest of 2.7% on savings bank deposits, and 5.4% on 5-10 year term deposits.** Experts say that it makes good sense for investors to invest in gold.

Can the price of gold crash?

- Given the economic uncertainty, gold would touch a new all-time high.
- In India, prices will be supported by any further weakness in rupee.
- **Key events that could stall the rise of gold are,**
  1. Sudden sale of gold holdings by central banks to tide over the economic crisis,
  2. Crisis in other risk assets prompting investors to compensate their losses through sale of gold ETFs (Exchange Traded funds).

Gold Monetisation Scheme

In a move to revive the flagging Gold Monetisation Scheme, the **Reserve Bank of India (RBI)** has made it easier for depositors to hand over their holdings of Gold.

- **RBI has liberalised the GMS, 2015,** allowing depositors to directly deposit their bullion with either banks, refiners or Collection and Purity Testing Centres (CPTCs). Earlier, the Banks, CPTCs and Refineries had to sign a
Gold Monetisation Scheme

- The scheme was launched in November 2015 along with sovereign gold bonds and India gold coins.
- It facilitates the depositors of gold to earn interest on their metal accounts. Once the gold is deposited in metal account, it starts earning interest on the same.
- Under the scheme, a depositor gets 2.25% interest annually for a short-term deposit of one year to three years. Medium- and long-term deposits get 2.5% interest rate.
- **Objective:** To mobilize the gold held by households and institutions in the country to put this gold into productive use and in the long run to reduce the current account deficit by reducing the country’s reliance on imports of gold to meet the domestic demand.
- Along with GMS, a Sovereign Gold Bond Scheme (an alternative to purchasing metal gold) and development of Indian Gold Coin, were also announced.

- **Banks may accept the deposit of gold at designated branches,** especially from larger depositors.
- The RBI also further relaxed norms under the scheme by which banks, at their discretion, can, allow the depositors to deposit their gold directly with the refiners.
  - This suits the temples also, as it is estimated that they may be holding around 4,000 tonnes of gold and are capable of depositing gold in tonnes under the scheme.
- Several depositors had earlier complained that banks are not taking an interest in accepting deposits under the GMS in many cities even from large depositors. Banks had hardly publicised that they run the GMS.
  - The RBI has stated that banks have to identify branches in all states and union territories where they can accept deposits.
  - All designated banks have now been mandated by the RBI to give adequate publicity to the scheme through their branches, websites and other channels.

Background
The GMS scheme had been able to garner only 16 tonnes of gold as deposits in the last four years. This was largely because of banks’ apathy towards it and also due to practical difficulties of banks in dealing with collection-hallmarking centres.

- The current scheme mandates that customers have to first approach the CPTCs which are approved by the Bureau of Indian Standards.
- These centres had issued depositors purity certificate on gold deposited, and based on the centres’ certificate, a bank was supposed to open a deposit account and credit gold.
- CPTCs sent the gold to a refinery which gave the final purity certificate and converted the yellow metal into bars.

Source: BS

Issue of Caste in America and Elsewhere

GS-I | 10 July, 2020

Issue of Caste in America and Elsewhere

GS-PAPER-2 Governance – Caste (Mains and I.V)

What is the issue?

A lawsuit has been filed in California against Cisco Systems for allowing caste discrimination against a Dalit Indian-origin employee. In this context, here is an overview of the issue of caste in America and elsewhere, outside the Indian subcontinent.

Earlier references to 'caste' in America?

- In 1913, A.K Mozumdar, an immigrant from Bengal to Washington, applied to become an American citizen. US citizenship at the time was determined by race, and given only to whites. Mozumdar argued that as a “high-caste Hindu” of “Aryan descent”, he shared racial origins with Caucasians. His application was accepted and he became the first South Asian American to become a US citizen.
- In 1923, a similar argument that claimed caste was a way to whiteness
was put forward by Bhagat Singh Thind. Thind was a Sikh writer who had served in the US Army during World War I. In his petition, he argued that he was technically “white”, given his “pure Aryan blood”. He argued that the high-caste Hindoo “regards the aboriginal Indian Mongoloid in the same manner as the American regards the "Negro", speaking from a matrimonial standpoint”. [Hindoo was a blanket term used then for all Indian immigrants.] Thind’s arguments were rejected in the US Supreme Court. It decided that he was not white, and hence not eligible for citizenship. A few months later, Mozumdar became the first Indian to lose his citizenship as a consequence of that judgment.

What happened after 1965?

The 1965 Immigration and Nationality Act came into place as a result of the civil rights campaign in the US. The Act overturned restrictions of race and colour. It thus allowed a whole generation of Indian skilled labour (mostly upper-caste) to be a part of the American dream. But importantly, soon, many “lower-caste” Indians also followed.

This was significantly because they accessed educational opportunities in technical institutions via reservations at home. With this, Dalit discrimination started in the US.

One such example is of the REC Warangal-educated Sujatha Gidla. Gidla’s 2017 book ‘Ants Among Elephants: An Untouchable Family and the Making of Modern India’, was published in the US to great acclaim. In New York, she recalls facing discrimination from many Indians. Gidla recounts, a Brahmin bank cashier “wouldn’t accept money from my hands. She would demand that I place it on the counter.”

2015 California textbook debate?

In 2015, the California board of education asked scholars to help it come up with a framework for history and social science textbooks. It was part of a regular evaluation.

Following that, there was a bitter contest over several aspects of Indian history. This included caste and the critique of caste embedded in religions such as Buddhism and Sikhism as well.
The suggestions of the South Asian Histories for All Coalition (SAHFAC), a collective of scholars and historians, were met with opposition. The Hindu American Foundation and other Hindu groups mainly objected. They opposed narratives that portrayed “Hindu civilisation” negatively, and warned they might lead to the bullying of Hindu children.

However, the SAHFAC objected to -

i. altering contentious portions of Indian history relating to caste atrocities
ii. the attempt to erase the word “Dalit” from history textbooks as demanded
iii. the attempt, allegedly, to portray Muslims as oppressors

How prevalent is caste discrimination in the U.S.?

• While the stories of Dalit families are compelling, there is no data about caste in the U.S, and this is a drawback. So, in 2018, Equality Labs (an advocacy group for the “caste-oppressed” in California) carried out a survey to fill this gap. It surveyed South Asian-Americans on their experience of caste.
  • It showed that 67% of Dalits faced caste discrimination at the workplace, 40% in schools, and 40% at temples. [That report was cited in the present lawsuit filed against Cisco Systems.]

Is anti-caste movement possible in the U.S.?

An anti-caste movement taking root in the US is practically hard. Notably, of Indian immigrants, 90% are Brahmins and 1.5% is Dalits. Indians in America are a minority, and Dalits among them are a minority. Issues of such a tiny community making a big enough impact to be called a movement is less likely.

However, a Dalit consciousness has been present in the US from the 1970s or 1980s, away from the bright lights of media activism. People have resisted in private and in public in their own ways. Even hiding one’s caste is a way of fighting caste as Yengde (who works with community-based Ambedkarite organisations in the US) says.

What was the Dalits’ demand for the 2001 UN Conference against Racism?

The UN Conference Against Racism, Racial Discrimination, Xenophobia and Related Intolerance was held in Durban, South Africa, in 2001. In the lead-up
to the conference, Dalit groups had demanded that the conference also take a stand against the “hidden apartheid” in India.

Since the 1990s, these groups had had some success in lobbying international organisations on caste. The universal language and promise of human rights was used to broaden the framework to see the discrimination.

Specifically, the definition of racial discrimination as “exclusion based on race, colour and descent” was used to acknowledge caste. Notably, in 1999, a report by Human Rights Watch, ‘Broken People: Caste Violence against India’s Untouchables’, focussed international attention on the issue.

India’s stance?

Omar Abdullah, then India’s Minister of State for External Affairs said at the conference, the following:

a. We are firmly of the view that the issue of caste is not an appropriate subject for discussion at this conference.
b. We are here to ensure that states do not condone or encourage regressive social attitudes.
c. We are not here to engage in social engineering within member states.

What are the conflicting views in this regard?

- Indian government’s position has consistently been that caste should not be equated with race. It opines that caste should not be raised in committees that deal with race.
- Caste is an issue that India has been trying to address through constitutional measures. So, it does not deny caste, but believes that the issue of race should not get diluted by confusing it with other discriminations.
- On the other hand, Dalits argue that tackling caste needed much more than framing constitutional provisions and legislation. The attempt at the conference was to raise a global consensus, to legitimise anti-caste ideologies.
- The Indian government took a position that it needed no interference from the UN. But Dalits view it not as an interference.
- They assert that the UN was only pushing to collectively uphold the value that all humans, irrespective of caste, are equal, and some measures are to be taken for that. Strongly opposing the move by Dalit activists and groups, Indian government insisted that caste and race are two dissimilar and
But given the anti-apartheid position and programme of affirmative action, these conflicting views and the events at Durban were an embarrassment for India. These are just glimpses of the close to two decades' efforts at various levels to get institutions overseas to recognise the 'peculiar challenge of caste'.

This system of inequality and oppression that is unique to the Indian subcontinent evidently finds reflections in varied forms elsewhere too. It has a long way to go before its presence is acknowledged and protections offered to the oppressed.

Caste Discrimination - California Lawsuit against Cisco Systems

A lawsuit has been filed in California against Cisco Systems, a tech multinational company, for allowing caste discrimination against a Dalit Indian-origin employee.

What is the case about?

- The California Department of Fair Employment and Housing filed a lawsuit against Cisco Systems. It was filed against Cisco and two “upper-caste” Indian managers. It accused Cisco Systems of allowing caste discrimination against a Dalit Indian-origin employee at its San Jose headquarters.
- The department’s director said that it was unacceptable for workplace conditions and opportunities to be determined by a hereditary social status determined by birth. It was also said that the employers must be prepared to prevent, remedy, and deter unlawful conduct against workers because of caste.

What is the American law in this regard?

- The American law does not recognise caste.
- The lawsuit was filed under the federal Civil Rights Law 1964.
- The Law bars discrimination only on the basis of race, colour, religion, sex and national origin.
- However, in choosing to litigate, the California government is attempting to expand the ambit of discrimination to include caste.
- It is the first civil rights case in the US where a governmental entity is suing anomalous entities.
What is the significance?

- For close to two decades now, attempts have been ongoing at various levels.
- There were efforts to get institutions overseas to recognise the peculiar challenge of caste.
- The caste system of inequality and oppression is unique to the Indian subcontinent.
- It is naturally recognised by the Constitution of India.
- But in California, the Cisco case is a potential game-changer.
- The lack of having caste as an explicit category has made the prosecutors to keep the issue of caste within protections of religion, race, and ancestry.
- So the present case is expected to set a precedent.
- It will open the door for more such civil rights litigation.
- Silicon Valley, California has a global footprint.
- So, whatever is legislated there will have an impact on company workplaces in India and elsewhere too.
- The now widespread #BlackLivesMatter movement is spotlighting all kinds of discrimination.
- Amidst this, the case against Cisco becomes extremely significant.

Source: IE
External Commercial Borrowings

External commercial borrowing (ECBs) are loans made by non-resident lenders in foreign currency to Indian borrowers. They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings).

The debtors can be the government, corporations or citizens of that country. The debt includes money owed to private commercial banks, foreign governments, or international financial institutions such as IMF and World Bank. For telecom sector, infrastructure and Greenfield projects, funding up to 50% (through ECB) is allowed.

Recently, RBI issued a guideline stating that all eligible borrowers can raise ECB up to USD 750 million or equivalent per financial year under the automatic route (earlier it was applicable only to corporate companies). The Department of Economic Affairs, Ministry of Finance, along with RBI, monitors and regulates ECB guidelines and policies. U.S. dollar-denominated debt remains largest component of the external debt.

The Sahoo Committee report on ECB

- The Sahoo Committee was set up in 2013, to develop a framework for access to domestic and overseas capital markets.
- The Committee made an assessment of the currency risk by Indian firms undertaking ECB.
- The Committee noted that the possibility of market failure can be ameliorated, by requiring firms that borrow in foreign currency to hedge their exchange risk exposure.
- The present complex array of controls on foreign currency borrowing should be done away with.
- The Indian domestic rupee debt market is a viable alternative to foreign borrowing for financing Indian firms and does not entail any market failure.
policy should aim at removal of all impediments to the development of the domestic rupee debt market.

**Change in ECB norms:**

- It has been decided, in consultation with the Government of India, to liberalize some aspects of the ECB policy including policy on Rupee denominated bonds.
- As per the extant norms, **ECB up to USD 50 million or its equivalent can be raised by eligible borrowers with minimum average maturity period of 3 years**
- It has been now decided to allow eligible ECB borrowers who are into manufacturing sector to raise ECB up to USD 50 million or its equivalent with minimum average maturity period of 1 year itself.
- **Presently, Indian banks, subject to applicable prudential norms, can act as arranger and underwriter for RDB (Rupee Denominated Bond) issued overseas and in case of underwriting an issue, their holding cannot be more than 5 per cent of the issue size after 6 months of issue.**
- It has now been decided to permit Indian banks to participate as arrangers/underwriters/market makers/traders in RDBs issued overseas subject to applicable prudential norms.
- The minimum average maturity requirement for ECBs (external commercial borrowings) in the infrastructure space raised by eligible borrowers has been reduced to three years from earlier five years.
- Additionally, the average maturity requirement for mandatory hedging (an investment to reduce the risk of adverse price movements in an asset) has been reduced to five years from earlier ten years.

**Advantage of ECBs:**

- ECBs provide opportunity to borrow large volume of funds
- The funds are available for relatively long term
- Interest rate are also lower compared to domestic funds
- ECBs are in the form of foreign currencies. Hence, they enable the corporate to have foreign currency to meet the import of machineries
- Corporate can raise ECBs from internationally recognized sources such as banks, export credit agencies, international capital markets

**Disadvantages**

- The growing importance of ECBs in the composition of external debt is a cause
of concern for the Indian economy. Availability of funds at a cheaper rate may bring in lax attitude on the company’s side resulting in excessive borrowing.

- This eventually results in higher debt on the balance sheet which may affect many financial ratios adversely.
- Higher debt on the company’s balance sheet is usually viewed negatively by the rating agencies.
- This may result in a possible downgrade by rating agencies which eventually might increase the cost of debt.
- Effect on earnings due to interest expense payments.
- Since the repayment of the principal and the interest needs to be made in foreign currency, it exposes the company to interest and currency fluctuations.
- Companies may have to incur hedging costs or assume exchange rate risk which if goes against may end up negative for the borrowers.

**Is it Enough?**

- Largely, rupee depreciation is based on a number of external factors which India couldn’t control like U.S Fed rate hike, spiralling trade war between USA and China, and because of election year and the related uncertainty about results in India etc. But, tweaking of ECB norms is a small step in the direction of correcting rupee fall further and also it will help the Indian companies working abroad to attract foreign currency more.

Source: TH

**Committee on Criminal Law Reform**

**GS-II | 11 July, 2020**

**Committee on Criminal Law Reform**

- The committee has been constituted under **Ranbir Singh** and several other
The committee would be gathering opinions online by consulting with experts and collating material for their report to the government. The consultation exercise would start on 4th July 2020 and go on for the next three months.

**Background of Criminal Justice System:**

- The codification of criminal laws in India was done during the British rule, which more or less remains the same even in the 21st century.
- Lord Thomas Babington Macaulay is said to be the chief architect of codifications of criminal laws in India.
- Criminal law in India is governed by Indian Penal Code, 1860, Code of Criminal Procedure, 1973, and Indian Evidence Act, 1872, etc.

**Need for Reforms:**

- Colonial Era Laws: The criminal justice system is a replica of the British colonial jurisprudence, which was designed with the purpose of ruling the nation and not serving the citizens.
- Ineffectiveness: The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but nowadays the system has become a tool of harassment of common people.
- Pendency of Cases: According to Economic Survey 2018-19, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualisation of the maxim “Justice delayed is justice denied.”
- Huge Undertrials: India has one of the world’s largest number of undertrial prisoners.
- According to NCRB -Prison Statistics India (2015), 67.2% of our total prison population comprises undertrial prisoners.
- Investigation: Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.
- Madhav Menon Committee: It submitted its report in 2007, suggesting various recommendations on reforms in the CJSI.
  - The Committee had opined that the existing system “weighed in favour of the accused and did not adequately focus on justice to the victims of crime.”
  - It has provided various recommendations to be made in the CJSI, which were not implemented.
Way Forward

- India needs to draft a clear policy that should inform the changes to be envisaged in the existing criminal laws.
- It also needs to make simultaneous improvements in the police, prosecution, judiciary and in prisons.
- The focus of reform should be on reformatory justice in order to bring all around peace in the society.

New national security law for Hong Kong

GS-PAPER-2 IR China

China has unveiled a new national security law for Hong Kong. The new law was passed by the Chinese parliament unanimously. It was subsequently made a part of Hong Kong’s Basic Law. The law will greatly expand Beijing’s power in Hong Kong.

New law target protesters?

The new law has widely defined some offences which punishes the protesters with harsh punishments. The offences include Secession, Subversion, Terrorist Activities, and Collusion with a Foreign Country or with External Elements to Endanger National Security.

All four offences can invite life imprisonment as the maximum punishment, followed by lesser penalties. The law allows the prosecution of persons who are not the residents of Hong Kong for committing an offence under the law outside the city. This allows the prosecution of foreigners who involve in city politics.

What are the changes made?
The mainland China will establish a new department in Hong Kong called the ‘Office for Safeguarding National Security’. With Beijing’s approval, the Office would be able to take over jurisdiction from Hong Kong’s law courts,

- If a case is complex due to the involvement of a foreign country or external elements,
- If a serious situation makes the local application of the security law difficult, or due to the occurrence of a major and imminent threat to national security.

In cases that are taken over by the Office, prosecutors as well as adjudicators will be appointed by mainland China. For these cases, Chinese procedural laws would apply. Under the new law, the power of interpretation of criminal statutes has been vested in the Standing Committee of the Chinese parliament.

If a trial involves “State secrets” or “public order”,

- It could be closed to the media and the public;
- Only the judgment would be delivered in open court.

What are the changes made to the Police Force?

- The Hong Kong Police Force will have a separate department to deal with national security matters.
- The city’s Justice Department will have to form a specialised prosecution division. The police will have sweeping powers to investigate certain offences.
- Upon the Chief Executive’s approval, the police will have the power to investigate or tap phones.
- These powers have traditionally required prior court approval.

New Committee formed:

- A new body called the ‘Committee for Safeguarding National Security’ will be formed with Hong Kong’s Chief Executive at its helm. The Committee will be immune from judicial scrutiny.
- It will have a Beijing-appointed national security adviser. It will be responsible for formulating national security policies among other tasks.

How is Hong Kong governed?

- A former British colony, Hong Kong was handed over to mainland
China in 1997, becoming one of its Special Administrative Regions. It is governed by a mini-constitution called the Basic Law. The Basic Law affirms the principle of “one country, two systems”. It upholds liberal policies, system of governance, independent judiciary, and individual freedoms of Hong Kong for 50 years from 1997.

Why this security law was enacted by China, not Hong Kong?

- Under Article 23 of the Basic Law, Hong Kong was supposed to enact the national security law on its own. However, when the city government tried to enact the law in 2003, the issue became a rallying point for massive protests.
- Ever since, the government steered clear of introducing the law again. The other way of implementing the law was by its inclusion in Annex III of the Basic Law.
- Annex III is a list of legislations confined to those relating to defence and foreign affairs, and other matters outside the limits of the Region’s autonomy.
- Adding a law to this list causes it to be enforced in the city by way of promulgation - meaning automatically being put into effect. Beijing chose this route.

Source: TH

World Investment Report
GS-II | 11 July, 2020

World Investment Report

GS-Paper-2 International organisation (PT-MAINS)

The United Nations Conference on Trade and Development (UNCTAD) released its World Investment Report.

It projected that the Foreign direct investment (FDI) to the developing Asian economies could drop by as much as 45%. FDI is falling and the immediate picture for many countries is not looking pretty. One sector that is expected to
Digital services have become critical to every 21st century economy. They are filling gaps when national or global emergencies interrupt more traditional modes of commerce. They enable access to and delivery of a wide array of products across multiple sectors.

Even in the midst of the pandemic, investments in digital services continue to flow at record levels globally.

What determines the flow of FDI?

- India is an ideal destination for increased FDI flows in the digital services sector.
- India offers undeniable potential for innovative homegrown start-ups because of its huge and increasingly digitised population.
- However, Indian government policies will be key determinants in how quickly the Indian economy attracts new investment. They will also determine how India can foster Indian innovation, and expands its exporting prowess.

Measures:

- There are three pending reform measures under consideration that may affect India’s growth trajectory in digital services for years to come. They are the Personal Data Protection Bill (PDPB), the e-commerce policy, and the Information Technology Act Amendments.
- Approaches in these reforms emphasise a focus on protecting the domestic market for domestic companies and prioritising government access to data. It may be difficult to reconcile these approaches in India.
- There is uncertainty about when these changes will be completed and implemented. The course of the India-U.S. trade relationship is uncertain, as signs of progress are continually interrupted new restrictions.

The bilateral relationship is an important factor in realising the potential for greater trade and investment in digital services. India and the U.S. are yet to conclude negotiation on a bilateral trade agreement that could address some digital services issues. The US initiated a Section 301 review of whether digital services taxes in 10 countries constitute unfair trade measures, including India’s equalisation levy.
Way forward:

- India resumes its efforts to put into place a new architecture for digital services and pursues opportunities to attract new investment.
- Therefore, the government and stakeholders might consider the full range of implications for the long-term. **India will be the host of the G20 nations in 2022.**
- It is clear that post-COVID-19 international cooperation and approaches to good governance in the digital sphere will be top-priority initiatives. The steps India takes now could well establish itself as a true global leader.

Source: TH

---

World Population 2020 Report

GS-Paper-2 I.O Population report

It was developed during the initial stages of the pandemic by UNFPA. The report examines the issue of missing women by studying sex ratio imbalances at birth as a result of gender-biased sex selection as well as excess female mortality due to deliberate neglect of girls because of a culture of son preference.

Titled ‘Against my will: defying the practices that harm women and girls and undermine equality’.

It highlights at least 19 human rights violations against women and focuses on the three most prevalent ones, Female Genital Mutilation (FGM), extreme bias against daughters, in favour of sons and child marriage.

According to the report

- One in 9 females below the age of 5 die due to postnatal sex selection
- One in 3 girls missing globally due to sex selection, both pre- and post-natal.
However, the advent of technology and increased access to ultrasound imaging ensured that parents didn’t have to wait for the **birth of their girl child to kill her but could terminate a fetus upon knowing its gender**. This resulted in the number of girls missing due to female feticide exceeding those that were missing because of postnatal sex selection.

**DATA**

**Global Data:**

The number of **missing women** has more than doubled over the past 50 years, who were at 61 million in 1970.

**Missing females/women:** These are women missing from the population at given dates due to the cumulative effect of postnatal and prenatal sex selection in the past. The phrase was coined by **Amartya Sen**.

In Afghanistan, Bangladesh and Pakistan **excess female mortality** of girls below 5 years of age was under 3%.

**Excess female mortality:**

It is the difference between observed and expected mortality of the girl child or avoidable death of girls during childhood. According to estimates averaged over a five year period (2013-17), annually, there were 1.2 million missing female births, at a global level.

**India Specific Data:**

One in three girls missing globally due to sex selection, both pre- and post-natal, are from India, i.e. 46 million out of the total 142 million.

India has the **highest rate of excess female deaths** at 13.5 per 1,000 female births or one in nine deaths of females below the age of 5 due to postnatal sex selection.

In India, **around 460,000 girls went missing at birth, which means they were not born due to sex-selection biases, each year between 2013 and 2017.**
India (40%) along with China (50%) account for around 90% of the estimated 1.2 million girls lost annually to female foeticide.

Female Genital Mutilation: It involves the partial or total removal of external female genitalia or other injuries to the female genital organs for non-medical reasons.

The practise has no health benefits for girls and women and can cause severe bleeding, problems in urinating, cysts, infections, as well as complications in childbirth and increased risk of newborn deaths.

An estimated 4.1 million girls will be subjected to female genital mutilation in 2020.

Extreme Bias against Daughters, in favour of sons: An extreme and continuing preference for sons over daughters in some countries has fuelled gender-biased sex selection or extreme neglect which leads to girls’ death as children, resulting in missing females.

The report examines the issue of missing women by studying sex ratio imbalances at birth as a result of gender-biased sex selection as well as excess female mortality.

The advent of technology and increased access to ultrasound imaging allow parents to terminate a foetus after knowing its gender.

Due to this, the number of girls missing due to female foeticide exceed those that are missing because of postnatal sex selection.

These skewed numbers change the population proportions and result in ‘marriage squeeze’.

Marriage squeeze: It happens when prospective grooms far outnumber prospective brides, which further results in human trafficking for marriage as well as child marriages.

These violations result in fewer choices for females and putting them under the sexual, economic and legal control of men, curbing their human rights.

Child Marriage: Every day, around 33,000 girls under age 18 are forced into...
marriage, usually to much older men. In India, child marriage is directly linked to poverty, poor education and geographic location and the rural and urban divide.

Covid-19 Induced Challenges:

The **economic disruptions and income-loss** because of the Covid-19 pandemic are likely to increase **violence against girls and women** due to intensified unwantedness of daughters and gender discrimination. The Covid-19 pandemic **threatens to reverse the progress** made in ending some harmful practices worldwide.

In India, Covid-19 has **reduced access to contraception and abortion services**, which is likely to lead to an increase in unwanted pregnancies and unsafe abortions.

**Initiatives Appreciated:**

The report pointed out that successful education-related interventions include the provision of cash transfers conditional on school attendance or support to cover the costs of school fees, books, uniforms and supplies. The report took note of the successful cash-transfer initiative such as ‘Apni Beti Apna Dhan’ in India.

**United Nations Population Fund**

- It is a *subsidiary organ* of the UN General Assembly and works as a *sexual and reproductive health agency*.
- It was *established as a trust fund* in 1967 and began operations in 1969.
- In 1987, it was *officially renamed* the United Nations Population Fund but the original abbreviation, ‘UNFPA’ for the United Nations Fund for Population Activities was retained.
- The UN Economic and Social Council (ECOSOC) establishes its mandate.
- UNFPA is *not supported by the UN budget*, instead, it is *entirely supported by* voluntary contributions of donor governments, intergovernmental organizations, the private sector, foundations and individuals.
- UNFPA works directly to tackle **Sustainable Development Goals** on health (SDG3), education (SDG4) and gender equality (SDG5).

**Way Forward**

People must **protect** women and girls by enforcing laws against practices like...
child marriage and female mutilation and also by changing attitudes and norms. The problem should be tackled by eliminating the root causes, especially gender-biased norms.

People must foster **respect** for women and girls, by changing attitudes and practices that commoditize them. Governments must **fulfil** their obligations under human rights treaties that require the elimination of these practices and rituals. Countries that have ratified international treaties such as the **Convention on the Rights of the Child**, have a duty to end the harm, whether it’s inflicted on girls by family members, religious communities, health-care providers, commercial enterprises or State institutions themselves.

Source: TH

---

**USA-CHINA 5G Issue**

**GS-Paper-2 International issue (Mains)**

The **US Federal Communications Commission (US FCC)** designated Chinese telecom vendors Huawei and ZTE as national security threats.

**US banned Huawei and ZTE?**

The first official action on these **Chinese telecom equipment makers** was taken based on **House Intelligence Committee’s report (2012)**. The report said that both the companies posed a risk to national security.

It also said that the US businesses should avoid buying equipment from them. On most occasions, the US had accused Huawei and ZTE of working in ways that were contrary to national security or foreign policy interests.

**Why ban?**

**Huawei is the world’s largest maker of telecom equipment and the second...**
largest maker of mobile phone parts. It has been at the forefront of innovation that allowed many companies to build large telecom infrastructure at very low costs.

ZTE has tied up with several big corporations to manufacture their patented equipment in China at very low costs. A ban on both Huawei and ZTE could mean an increase of up to 30% in cost of telecom equipment across the board. Apart from hardware, Huawei has also been trying to make inroads into the software and operating systems (OS) industry.

How it impact India?

This decision could put pressure on India to take similar action. Equipment market - The low cost equipment from Huawei or ZTE could provide some relief to domestic telcos.

Huawei was a major equipment supplier to companies like Vodafone Idea and Airtel during the initial rollout of the 4G services in India. Over the years, Huawei has made inroads into nearly 25% of the total telecom equipment market in India.

4G expansion - Now, Department of Telecommunications said that it would rework the 4G network expansion tenders of BSNL and MTNL. This would bar global vendors like Huawei and ZTE from participating.

5G trials - In 2019, the telecom minister said that all players, including Huawei, were permitted to participate in 5G trials in India. To allay security fears, Huawei had said it was ready to sign a no backdoor agreement with the government. Under the agreement, Huawei would vouch that it did not gain access to any Indian customer’s equipment under any circumstance.

Barring Huawei and ZTE from even bidding in the 5G auctions could mean equipment as much as 30% costlier.

Source: TH

World Population Prospects
World Population Prospects

According to ‘The World Population Prospects 2019’ published by the Population Division of the UN Department of Economic and Social Affairs, India is projected to surpass China as the world’s most populous country by 2027.

- Through the end of the century (between 2019 and 2050) India (with an estimated population of 1.37 billion) is expected to remain the world’s most populous country, followed by China, Nigeria, United States of America, and Pakistan.
- The global population is projected to increase by another 2 billion people by 2050.
- Aging of the world's population will also spike due to increasing life expectancy and falling fertility levels. By 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%).
- Aging will result in a decline in the proportion of the working age population that in turn will exert pressure on social security systems. Europe and North America will have a much higher number of aging population.
- Many countries are experiencing a reduction in population size (between 2019 and 2050, many countries will experience populations shrink by at least 1%).
- Populations shrink can be attributed to sustained low levels of fertility and, in some cases, high rates of emigration.
- In countries like Bangladesh, Nepal and the Philippines out-migration plays a key in population change (outflow of migrant workers).
- In some instances, out-migration could also be caused by violence, lack of security or wars as in Myanmar, Syria and Venezuela.
- Many of the fastest growing populations are in the poorest countries, where population growth brings additional challenges in the effort to eradicate poverty, achieve greater equality, combat hunger and malnutrition and strengthen the coverage and quality of health and education systems to ensure that no one is left behind.

Source: TH
Measles and Rubella

GS-Paper-3 Health and Children

Recently, the Maldives and Sri Lanka have become the first two countries in the World Health Organisation’s South-East Asian Region (WHO SEAR) to have eliminated both measles and rubella ahead of the 2023 deadline. In September 2019, member countries of WHO SEAR set 2023 as the target for the elimination of measles and rubella.

The announcement came after the 5th meeting of the SEAR Verification Commission for Measles and Rubella Elimination. The Commission comprises 11 independent international experts in the fields of epidemiology, virology and public health.

Bhutan, DPR Korea and Timor-Leste are countries in the region which have eliminated measles. Bangladesh, Bhutan, Maldives, Nepal, Sri Lanka and Timor-Leste have controlled Rubella.

Criteria:
A country is verified as having eliminated measles and rubella when there is no evidence of endemic transmission of the respective viruses for over three years in the presence of a well-performing surveillance system.

The Maldives reported its last endemic case of measles in 2009 and of rubella in October 2015. Sri Lanka reported the last endemic case of measles in May 2016 and of rubella in March 2017.

Steps Taken:

- All countries in the region introduced two doses of measles-containing vaccine and at least one dose of rubella-containing vaccine in their routine immunisation programme.
- Since 2017, nearly 500 million additional children have been
vaccinated with measles and rubella-containing vaccines.

- **Surveillance** for measles and rubella has been strengthened further.
- The announcement comes amidst the Covid-19 pandemic and the success demonstrates the importance of joint efforts.
- Globally, more than half of all countries reported moderate-to-severe disruptions or a total suspension of vaccination services in March and April.
- Regionally, both immunisation coverage and surveillance were impacted. However, SEAR countries made coordinated efforts to resume immunisation and surveillance activities.

### Measles

- It is a **highly contagious viral disease** and is a cause of death among young children globally.
- It is particularly **dangerous for children** from the economically weaker background, as it attacks malnourished children and those with reduced immunity.
- It can cause **serious complications**, including blindness, encephalitis, severe diarrhoea, ear infection and pneumonia.

### Rubella

- It is also called **German Measles**.
- Rubella is a **contagious, generally mild viral infection** that occurs most often in children and young adults.
- Rubella infection in pregnant women may cause death or congenital defects known as **Congenital Rubella Syndrome (CRS)** which causes irreversible birth defects.

### Measures and Vaccinations

- The **Measles and Rubella Initiative** is a global program which aims at eliminating both these diseases.
- The **vaccine** for the diseases are provided in the form of measles-rubella (MR), measles-mumps-rubella (MMR) or measles-mumps-rubella-varicella (MMRV) combination.

### India and Measles

Despite the availability of a safe and effective vaccine since the 1960s, both
measles and rubella are major public health concerns in India.

More than 1.3 million children acquire measles infection and around 49000 infected children die each year, contributing nearly 36% to the global figures.

Rubella infection in pregnant women may cause fetal death or congenital defects. It leads to the development of birth defects in almost 40,000 children annually in the country.

Government initiatives:

Measles-Rubella Vaccination

The Ministry of Health and Family Welfare launched the MR Vaccination program in 2017. The MR campaign targets around 41 crore children across the country, the largest ever in any campaign.

All children aged between 9 months and less than 15 years are given a single shot of MR vaccination irrespective of their previous measles/rubella vaccination status or measles/rubella disease status. MR vaccines are provided free-of-cost across the states. Other Initiatives include Universal Immunization Programme (UIP), Mission Indradhanush and Intensified Mission Indradhanush.

Source: BL
External Commercial Borrowings

External commercial borrowing (ECBs) are loans made by non-resident lenders in foreign currency to Indian borrowers. They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings).

The debtors can be the government, corporations or citizens of that country. The debt includes money owed to private commercial banks, foreign governments, or international financial institutions such as IMF and World Bank. For telecom sector, infrastructure and Greenfield projects, funding up to 50% (through ECB) is allowed.

Recently, RBI issued a guideline stating that all eligible borrowers can raise ECB up to USD 750 million or equivalent per financial year under the automatic route (earlier it was applicable only to corporate companies). The Department of Economic Affairs, Ministry of Finance, along with RBI, monitors and regulates ECB guidelines and policies. U.S. dollar-denominated debt remains largest component of the external debt.

The Sahoo Committee report on ECB

• The Sahoo Committee was set up in 2013, to develop a framework for access to domestic and overseas capital markets.

• The Committee made an assessment of the currency risk by Indian firms undertaking ECB.

• The Committee noted that the possibility of market failure can be ameliorated, by requiring firms that borrow in foreign currency to hedge their exchange risk exposure.

• The present complex array of controls on foreign currency borrowing should be done away with.

• The Indian domestic rupee debt market is a viable alternative to foreign borrowing for financing Indian firms and does not entail any market failure. • The
policy should aim at removal of all impediments to the development of the domestic rupee debt market.

Change in ECB norms:

- It has been decided, in consultation with the Government of India, to liberalize some aspects of the ECB policy including policy on Rupee denominated bonds.
- As per the extant norms, ECB up to USD 50 million or its equivalent can be raised by eligible borrowers with minimum average maturity period of 3 years.
- It has been now decided to allow eligible ECB borrowers who are into manufacturing sector to raise ECB up to USD 50 million or its equivalent with minimum average maturity period of 1 year itself.
- Presently, Indian banks, subject to applicable prudential norms, can act as arranger and underwriter for RDB (Rupee Denominated Bond) issued overseas and in case of underwriting an issue, their holding cannot be more than 5 per cent of the issue size after 6 months of issue.
- It has now been decided to permit Indian banks to participate as arrangers/underwriters/market makers/traders in RDBs issued overseas subject to applicable prudential norms.
- The minimum average maturity requirement for ECBs (external commercial borrowings) in the infrastructure space raised by eligible borrowers has been reduced to three years from earlier five years.
- Additionally, the average maturity requirement for mandatory hedging (an investment to reduce the risk of adverse price movements in an asset) has been reduced to five years from earlier ten years.

Advantage of ECBs:

- ECBs provide opportunity to borrow large volume of funds
- The funds are available for relatively long term
- Interest rate are also lower compared to domestic funds
- ECBs are in the form of foreign currencies. Hence, they enable the corporate to have foreign currency to meet the import of machineries
- Corporate can raise ECBs from internationally recognized sources such as banks, export credit agencies, international capital markets

Disadvantages:

- The growing importance of ECBs in the composition of external debt is a cause
of concern for the Indian economy. Availability of funds at a cheaper rate may bring in lax attitude on the company’s side resulting in excessive borrowing.

- This eventually results in higher debt on the balance sheet which may affect many financial ratios adversely.

- Higher debt on the company’s balance sheet is usually viewed negatively by the rating agencies.

- This may result in a possible downgrade by rating agencies which eventually might increase the cost of debt.

- Effect on earnings due to interest expense payments.

- Since the repayment of the principal and the interest needs to be made in foreign currency, it exposes the company to interest and currency fluctuations.

- Companies may have to incur hedging costs or assume exchange rate risk which if goes against may end up negative for the borrowers.

Is it Enough?

- Largely, rupee depreciation is based on a number of external factors which India couldn’t control like U.S Fed rate hike, spiralling trade war between USA and China, and because of election year and the related uncertainty about results in India etc. But, tweaking of ECB norms is a small step in the direction of correcting rupee fall further and also it will help the Indian companies working abroad to attract foreign currency more.

Source: TH

Committee on Criminal Law Reform

GS-II | 11 July, 2020

Committee on Criminal Law Reform

- The committee has been constituted under Ranbir Singh and several other
The committee would be gathering opinions online by consulting with experts and collating material for their report to the government. The consultation exercise would start on 4th July 2020 and go on for the next three months.

**Background of Criminal Justice System:**

- The codification of criminal laws in India was done during the British rule, which more or less remains the same even in the 21st century.
- Lord Thomas Babington Macaulay is said to be the chief architect of codifications of criminal laws in India.
- Criminal law in India is governed by Indian Penal Code, 1860, Code of Criminal Procedure, 1973, and Indian Evidence Act, 1872, etc.

**Need for Reforms:**

- Colonial Era Laws: The criminal justice system is a replica of the British colonial jurisprudence, which was designed with the purpose of ruling the nation and not serving the citizens.
- Ineffectiveness: The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but nowadays the system has become a tool of harassment of common people.
- Pendency of Cases: According to Economic Survey 2018-19, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualisation of the maxim “Justice delayed is justice denied.”
- Huge Undertrials: India has one of the world’s largest number of undertrial prisoners.
- According to NCRB -Prison Statistics India (2015), 67.2% of our total prison population comprises undertrial prisoners.
- Investigation: Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.
- Madhav Menon Committee: It submitted its report in 2007, suggesting various recommendations on reforms in the CJSI.
  - The Committee had opined that the existing system “weighed in favour of the accused and did not adequately focus on justice to the victims of crime.”
  - It has provided various recommendations to be made in the CJSI, which were not implemented.
Way Forward

- India needs to draft a clear policy that should inform the changes to be envisaged in the existing criminal laws.
- It also needs to make simultaneous improvements in the police, prosecution, judiciary and in prisons.
- The focus of reform should be on reformatory justice in order to bring all around peace in the society.

Source: TH

New national security law for Hong Kong

GS-II | 11 July, 2020

New national security law for Hong Kong

GS-PAPER-2 IR China

China has unveiled a new national security law for Hong Kong. The new law was passed by the Chinese parliament unanimously. It was subsequently made a part of Hong Kong’s Basic Law. The law will greatly expand Beijing’s power in Hong Kong.

New law target protesters?

The new law has widely defined some offences which punishes the protesters with harsh punishments. The offences include Secession, Subversion, Terrorist Activities, and Collusion with a Foreign Country or with External Elements to Endanger National Security.

All four offences can invite life imprisonment as the maximum punishment, followed by lesser penalties. The law allows the prosecution of persons who are not the residents of Hong Kong for committing an offence under the law outside the city. This allows the prosecution of foreigners who involve in city politics.

What are the changes made?
The mainland China will establish a new department in Hong Kong called the ‘Office for Safeguarding National Security’. With Beijing’s approval, the Office would be able to take over jurisdiction from Hong Kong’s law courts,

- If a case is complex due to the involvement of a foreign country or external elements,
- If a serious situation makes the local application of the security law difficult, or due to the occurrence of a major and imminent threat to national security.

In cases that are taken over by the Office, prosecutors as well as adjudicators will be appointed by mainland China. For these cases, Chinese procedural laws would apply. Under the new law, the power of interpretation of criminal statutes has been vested in the Standing Committee of the Chinese parliament.

If a trial involves “State secrets” or “public order”,

- It could be closed to the media and the public;
- Only the judgment would be delivered in open court.

What are the changes made to the Police Force?

- The Hong Kong Police Force will have a separate department to deal with national security matters.
- The city’s Justice Department will have to form a specialised prosecution division. The police will have sweeping powers to investigate certain offences.
- Upon the Chief Executive’s approval, the police will have the power to investigate or tap phones.
- These powers have traditionally required prior court approval.

New Committee formed:

- A new body called the ‘Committee for Safeguarding National Security’ will be formed with Hong Kong’s Chief Executive at its helm. The Committee will be immune from judicial scrutiny.
- It will have a Beijing-appointed national security adviser. It will be responsible for formulating national security policies among other tasks.

How is Hong Kong governed?

- A former British colony, Hong Kong was handed over to mainland...
China in 1997, becoming one of its Special Administrative Regions. It is governed by a mini-constitution called the Basic Law. The Basic Law affirms the principle of “one country, two systems”. It upholds liberal policies, system of governance, independent judiciary, and individual freedoms of Hong Kong for 50 years from 1997.

Why this security law was enacted by China, not Hong Kong?

- Under Article 23 of the Basic Law, Hong Kong was supposed to enact the national security law on its own. However, when the city government tried to enact the law in 2003, the issue became a rallying point for massive protests.
- Ever since, the government steered clear of introducing the law again. The other way of implementing the law was by its inclusion in Annex III of the Basic Law.
- Annex III is a list of legislations confined to those relating to defence and foreign affairs, and other matters outside the limits of the Region’s autonomy.
- Adding a law to this list causes it to be enforced in the city by way of promulgation - meaning automatically being put into effect. Beijing chose this route.

Source: TH

World Investment Report

World Investment Report

GS-Paper-2 International organisation (PT-MAINS)

The United Nations Conference on Trade and Development (UNCTAD) released its World Investment Report.

It projected that the Foreign direct investment (FDI) to the developing Asian economies could drop by as much as 45%. FDI is falling and the immediate picture for many countries is not looking pretty. One sector that is expected to
buck this trend is digital services.

Why digital services?

- Digital services have become critical to every 21st century economy. They are filling gaps when national or global emergencies interrupt more traditional modes of commerce.
- They enable access to and delivery of a wide array of products across multiple sectors.
- Even in the midst of the pandemic, investments in digital services continue to flow at record levels globally.

What determines the flow of FDI?

- India is an ideal destination for increased FDI flows in the digital services sector.
- India offers undeniable potential for innovative homegrown start-ups because of its huge and increasingly digitised population.
- However, Indian government policies will be key determinants in how quickly the Indian economy attracts new investment. They will also determine how India can foster Indian innovation, and expands its exporting prowess.

Measures:

- There are three pending reform measures under consideration that may affect India’s growth trajectory in digital services for years to come. They are the Personal Data Protection Bill (PDPB), the e-commerce policy, and the Information Technology Act Amendments.
- Approaches in these reforms emphasise a focus on protecting the domestic market for domestic companies and prioritising government access to data. It may be difficult to reconcile these approaches in India.
- There is uncertainty about when these changes will be completed and implemented. The course of the India-U.S. trade relationship is uncertain, as signs of progress are continually interrupted new restrictions.

The bilateral relationship is an important factor in realising the potential for greater trade and investment in digital services. India and the U.S. are yet to conclude negotiation on a bilateral trade agreement that could address some digital services issues. The US initiated a Section 301 review of whether digital services taxes in 10 countries constitute unfair trade measures, including India’s equalisation levy.
Way forward:

- India resumes its efforts to put into place a new architecture for digital services and pursues opportunities to attract new investment.
- Therefore, the government and stakeholders might consider the full range of implications for the long-term. **India will be the host of the G20 nations in 2022.**
- It is clear that post-COVID-19 international cooperation and approaches to good governance in the digital sphere will be top-priority initiatives. The steps India takes now could well establish itself as a true global leader.

Source: TH

---

**World Population 2020 Report**  
**GS-II | 11 July, 2020**

**World Population 2020 Report**

GS-Paper-2 I.O Population report

It was developed during the initial stages of the pandemic by UNFPA. The report examines the issue of missing women by studying sex ratio imbalances at birth as a result of gender-biased sex selection as well as excess female mortality due to deliberate neglect of girls because of a culture of son preference.

Titled ‘Against my will: defying the practices that harm women and girls and undermine equality’.

It highlights at least 19 human rights violations against women and focuses on the three most prevalent ones, Female Genital Mutilation (FGM), extreme bias against daughters, in favour of sons and child marriage.

According to the report

- One in 9 females below the age of 5 die due to postnatal sex selection
- **One in 3 girls missing globally due to sex selection, both pre- and post-natal.**
is from India (46 million out of the total 142 million).

However, the advent of technology and increased access to ultrasound imaging ensured that parents didn’t have to wait for the birth of their girl child to kill her but could terminate a fetus upon knowing its gender. This resulted in the number of girls missing due to female feticide exceeding those that were missing because of postnatal sex selection.

### DATA

**Global Data:**

The number of missing women has more than doubled over the past 50 years, who were at 61 million in 1970.

**Missing females/women:** These are women missing from the population at given dates due to the cumulative effect of postnatal and prenatal sex selection in the past. The phrase was coined by Amartya Sen.

In Afghanistan, Bangladesh and Pakistan excess female mortality of girls below 5 years of age was under 3%.

**Excess female mortality:**

It is the difference between observed and expected mortality of the girl child or avoidable death of girls during childhood. According to estimates averaged over a five year period (2013-17), annually, there were 1.2 million missing female births, at a global level.

**India Specific Data:**

One in three girls missing globally due to sex selection, both pre- and post-natal, are from India, i.e. 46 million out of the total 142 million.

India has the highest rate of excess female deaths at 13.5 per 1,000 female births or one in nine deaths of females below the age of 5 due to postnatal sex selection.

In India, around 460,000 girls went missing at birth, which means they were not born due to sex-selection biases, each year between 2013 and 2017.
India (40%) along with China (50%) account for around 90% of the estimated 1.2 million girls lost annually to female foeticide.

Female Genital Mutilation: It involves the partial or total removal of external female genitalia or other injuries to the female genital organs for non-medical reasons.

The practise has no health benefits for girls and women and can cause severe bleeding, problems in urinating, cysts, infections, as well as complications in childbirth and increased risk of newborn deaths.

An estimated 4.1 million girls will be subjected to female genital mutilation in 2020.

Extreme Bias against Daughters, in favour of sons: An extreme and continuing preference for sons over daughters in some countries has fuelled gender-biased sex selection or extreme neglect which leads to girls’ death as children, resulting in missing females.

The report examines the issue of missing women by studying sex ratio imbalances at birth as a result of gender-biased sex selection as well as excess female mortality.

The advent of technology and increased access to ultrasound imaging allow parents to terminate a foetus after knowing its gender.

Due to this, the number of girls missing due to female foeticide exceed those that are missing because of postnatal sex selection.

These skewed numbers change the population proportions and result in ‘marriage squeeze’.

Marriage squeeze: It happens when prospective grooms far outnumber prospective brides, which further results in human trafficking for marriage as well as child marriages.

These violations result in fewer choices for females and putting them under the sexual, economic and legal control of men, curbing their human rights.

Child Marriage: Every day, around 33,000 girls under age 18 are forced into...
marriage, usually to much older men. In India, child marriage is directly linked to poverty, poor education and geographic location and the rural and urban divide.

**Covid-19 Induced Challenges:**

The economic disruptions and income-loss because of the Covid-19 pandemic are likely to increase violence against girls and women due to intensified unwantedness of daughters and gender discrimination. The Covid-19 pandemic threatens to reverse the progress made in ending some harmful practices worldwide.

In India, Covid-19 has reduced access to contraception and abortion services, which is likely to lead to an increase in unwanted pregnancies and unsafe abortions.

**Initiatives Appreciated:**

The report pointed out that successful education-related interventions include the provision of cash transfers conditional on school attendance or support to cover the costs of school fees, books, uniforms and supplies. The report took note of the successful cash-transfer initiative such as ‘Apni Beti Apna Dhan’ in India.

**United Nations Population Fund**

- It is a subsidiary organ of the UN General Assembly and works as a sexual and reproductive health agency.
- It was established as a trust fund in 1967 and began operations in 1969.
- In 1987, it was officially renamed the United Nations Population Fund but the original abbreviation, ‘UNFPA’ for the United Nations Fund for Population Activities was retained.
- The UN Economic and Social Council (ECOSOC) establishes its mandate.
- UNFPA is not supported by the UN budget, instead, it is entirely supported by voluntary contributions of donor governments, intergovernmental organizations, the private sector, foundations and individuals.
- UNFPA works directly to tackle Sustainable Development Goals on health (SDG3), education (SDG4) and gender equality (SDG5).

**Way Forward**

People must protect women and girls by enforcing laws against practices like

---

**United Nations Population Fund**

- It is a subsidiary organ of the UN General Assembly and works as a sexual and reproductive health agency.
- It was established as a trust fund in 1967 and began operations in 1969.
- In 1987, it was officially renamed the United Nations Population Fund but the original abbreviation, ‘UNFPA’ for the United Nations Fund for Population Activities was retained.
- The UN Economic and Social Council (ECOSOC) establishes its mandate.
- UNFPA is not supported by the UN budget, instead, it is entirely supported by voluntary contributions of donor governments, intergovernmental organizations, the private sector, foundations and individuals.
- UNFPA works directly to tackle Sustainable Development Goals on health (SDG3), education (SDG4) and gender equality (SDG5).
child marriage and female mutilation and also by changing attitudes and norms. The problem should be tackled by eliminating the root causes, especially gender-biased norms.

People must foster respect for women and girls, by changing attitudes and practices that commoditize them. Governments must fulfill their obligations under human rights treaties that require the elimination of these practices and rituals. Countries that have ratified international treaties such as the Convention on the Rights of the Child, have a duty to end the harm, whether it’s inflicted on girls by family members, religious communities, health-care providers, commercial enterprises or State institutions themselves.

Source: TH

USA-CHINA 5G Issue

GS-Paper-2 International issue (Mains)

The US Federal Communications Commission (US FCC) designated Chinese telecom vendors Huawei and ZTE as national security threats.

US banned Huawei and ZTE?

The first official action on these Chinese telecom equipment makers was taken based on House Intelligence Committee’s report (2012). The report said that both the companies posed a risk to national security.

It also said that the US businesses should avoid buying equipment from them. On most occasions, the US had accused Huawei and ZTE of working in ways that were contrary to national security or foreign policy interests.

Why ban?

Huawei is the world’s largest maker of telecom equipment and the second
largest maker of mobile phone parts. It has been at the forefront of innovation that allowed many companies to build large telecom infrastructure at very low costs.

ZTE has tied up with several big corporations to manufacture their patented equipment in China at very low costs. A ban on both Huawei and ZTE could mean an increase of up to 30% in cost of telecom equipment across the board. Apart from hardware, Huawei has also been trying to make inroads into the software and operating systems (OS) industry.

How it impact India?

This decision could put pressure on India to take similar action. Equipment market - The low cost equipment from Huawei or ZTE could provide some relief to domestic telcos.

Huawei was a major equipment supplier to companies like Vodafone Idea and Airtel during the initial rollout of the 4G services in India. Over the years, Huawei has made inroads into nearly 25% of the total telecom equipment market in India.

4G expansion - Now, Department of Telecommunications said that it would rework the 4G network expansion tenders of BSNL and MTNL. This would bar global vendors like Huawei and ZTE from participating.

5G trials - In 2019, the telecom minister said that all players, including Huawei, were permitted to participate in 5G trials in India. To allay security fears, Huawei had said it was ready to sign a no backdoor agreement with the government. Under the agreement, Huawei would vouch that it did not gain access to any Indian customer’s equipment under any circumstance.

Barring Huawei and ZTE from even bidding in the 5G auctions could mean equipment as much as 30% costlier.

Source: TH

World Population Prospects
World Population Prospects

According to ‘The World Population Prospects 2019’ published by the Population Division of the UN Department of Economic and Social Affairs, India is projected to surpass China as the world’s most populous country by 2027.

- Through the end of the century (between 2019 and 2050) India (with an estimated population of 1.37 billion) is expected to remain the world’s most populous country, followed by China, Nigeria, United States of America, and Pakistan.
- The global population is projected to increase by another 2 billion people by 2050.
- Aging of the world's population will also spike due to increasing life expectancy and falling fertility levels. By 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%).
- Aging will result in a decline in the proportion of the working age population that in turn will exert pressure on social security systems. Europe and North America will have a much higher number of aging population.
- Many countries are experiencing a reduction in population size (between 2019 and 2050, many countries will experience populations shrink by at least 1%).
- Populations shrink can be attributed to sustained low levels of fertility and, in some cases, high rates of emigration.
- In countries like Bangladesh, Nepal and the Philippines out-migration plays a key in population change (outflow of migrant workers).
- In some instances, out-migration could also be caused by violence, lack of security or wars as in Myanmar, Syria and Venezuela.
- Many of the fastest growing populations are in the poorest countries, where population growth brings additional challenges in the effort to eradicate poverty, achieve greater equality, combat hunger and malnutrition and strengthen the coverage and quality of health and education systems to ensure that no one is left behind.

Source: TH
Measles and Rubella

GS-Paper-3 Health and Children

Recently, the Maldives and Sri Lanka have become the first two countries in the World Health Organisation’s South-East Asian Region (WHO SEAR) to have eliminated both measles and rubella ahead of the 2023 deadline. In September 2019, member countries of WHO SEAR set 2023 as the target for the elimination of measles and rubella.

The announcement came after the 5th meeting of the SEAR Verification Commission for Measles and Rubella Elimination. The Commission comprises 11 independent international experts in the fields of epidemiology, virology and public health.

Bhutan, DPR Korea and Timor-Leste are countries in the region which have eliminated measles. Bangladesh, Bhutan, Maldives, Nepal, Sri Lanka and Timor-Leste have controlled Rubella.

Criteria:
A country is verified as having eliminated measles and rubella when there is no evidence of endemic transmission of the respective viruses for over three years in the presence of a well-performing surveillance system.

The Maldives reported its last endemic case of measles in 2009 and of rubella in October 2015. Sri Lanka reported the last endemic case of measles in May 2016 and of rubella in March 2017.

Steps Taken:

- All countries in the region introduced two doses of measles-containing vaccine and at least one dose of rubella-containing vaccine in their routine immunisation programme.
- Since 2017, nearly 500 million additional children have been
vaccinated with measles and rubella-containing vaccines.
- Surveillance for measles and rubella has been strengthened further.
- The announcement comes amidst the Covid-19 pandemic and the success demonstrates the importance of joint efforts.
- Globally, more than half of all countries reported moderate-to-severe disruptions or a total suspension of vaccination services in March and April.
- Regionally, both immunisation coverage and surveillance were impacted. However, SEAR countries made coordinated efforts to resume immunisation and surveillance activities.

Measles
- It is a highly contagious viral disease and is a cause of death among young children globally.
- It is particularly dangerous for children from the economically weaker background, as it attacks malnourished children and those with reduced immunity.
- It can cause serious complications, including blindness, encephalitis, severe diarrhoea, ear infection and pneumonia.

Rubella
- It is also called German Measles.
- Rubella is a contagious, generally mild viral infection that occurs most often in children and young adults.
- Rubella infection in pregnant women may cause death or congenital defects known as Congenital Rubella Syndrome (CRS) which causes irreversible birth defects.

Measures and Vaccinations
- The Measles and Rubella Initiative is a global program which aims at eliminating both these diseases.
- The vaccine for the diseases are provided in the form of measles-rubella (MR), measles-mumps-rubella (MMR) or measles-mumps-rubella-varicella (MMRV) combination.

India and Measles

Despite the availability of a safe and effective vaccine since the 1960s, both
measles and rubella are major public health concerns in India.

More than 1.3 million children acquire measles infection and around 49000 infected children die each year, contributing nearly 36% to the global figures.

Rubella infection in pregnant women may cause fetal death or congenital defects. It leads to the development of birth defects in almost 40,000 children annually in the country.

Government initiatives:

Measles-Rubella Vaccination

The Ministry of Health and Family Welfare launched the MR Vaccination program in 2017. The MR campaign targets around 41 crore children across the country, the largest ever in any campaign.

All children aged between 9 months and less than 15 years are given a single shot of MR vaccination irrespective of their previous measles/rubella vaccination status or measles/rubella disease status. MR vaccines are provided free-of-cost across the states. Other Initiatives include Universal Immunization Programme (UIP), Mission Indradhanush and Intensified Mission Indradhanush.

Source: BL
Fishermen Issue with Sri Lanka

GS-Paper-2 International relation – Srilanka and India (Mains-I.V)

Recently, Sri Lanka’s northern fishermen have reported a sudden increase in the number of Indian trawlers spotted in its territorial waters. The territorial waters extend seaward up to 12 nautical miles (nm) from baselines of a country.

Fishermen along the northern coast of Jaffna Peninsula have lost their nets worth lakhs of rupees in the sea, after being caught under the large Indian trawlers. These Indian trawlers are known to originate from the Indian State of Tamil Nadu.

International Maritime Boundary Line:

Indian boats have been fishing in the troubled waters for centuries and had a free run of the Bay of Bengal, Palk Bay and the Gulf of Mannar until 1974 and 1976 when treaties were signed between the two countries to demarcate International Maritime Boundary Line (IMBL).

However, the treaties failed to factor in the hardship of thousands of traditional fishermen who were forced to restrict themselves to a meagre area in their fishing forays.

Katchatheevu Island Issue:

The small islet of Katchatheevu, hitherto used by them for sorting their catch and drying their nets, fell on the other side of the IMBL. Fishermen often risk their lives and cross the IMBL rather than return empty-handed, but the Sri Lankan Navy is on alert, and have either arrested or destroyed fishing nets and vessels of those who have crossed the line.

Implementation of Practical Agreements:

Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line. Through these arrangements, it has been possible to deal with the issue of detention of fishermen in a humane manner.
India and Sri Lanka have agreed to set up a Joint Working Group (JWG) on Fisheries between the Ministry of Agriculture and Farmers’ Welfare of India and Ministry of Fisheries and Aquatic Resources Development of Sri Lanka as the mechanism to help find a permanent solution to the fishermen issue.

Threat to Livelihoods:

The Sri lankan fishermen fear that their livelihoods will be hit due to trawlers which are already under strain due to the coronavirus pandemic induced reduction in the export.

Step Taken by Sri Lanka:

In the last couple of years, Sri Lanka has introduced tougher laws banning bottom-trawling, and has also introduced heavy fines for trespassing foreign vessels. The Sri Lankan Navy arrested over 450 Indian fishermen in 2017 and 156 in 2018 on charges of poaching. A total of 210 arrests were made in 2019, while 34 have been made so far in 2020.

Scare of Covid-19:

The Sri Lankan fishermen have been alleging that currently the Sri Lankan Navy is reluctant to arrest the trespassing fishermen from Tamil Nadu now, due to the Covid-19 prevalence in India. However, the Sri Lankan Navy claims to be very vigilant along their borders not just to monitor illegal fishing, but also to take action on any illicit activity such as narcotics trade.

Conclusion

India needs to focus more on its traditional and cultural ties to improve relations with Sri Lanka. Starting ferry services between India and Sri Lanka can improve people to people linkages. Mutual recognition of each other’s concerns and interests can improve the relationship between both countries.

Source: TH
Forest fires and their effect on carbon emissions

- During 2003–2017, a total of 5,20,861 active forest fire events were detected in India, and according to the report of the Forest Survey of India, over 54% of the forest cover in India is exposed to occasional fire.
- The study published in *Science of the Total Environment* used remote sensing–based models to measure primary productivity over an area and also looked at burn indices, which help to demarcate the forest fire burn scars using satellite imagery.

Common index

- “The normalized burn ratio is an effective burn index commonly used to identify burnt regions in large fire zones. In normal conditions, healthy vegetation exhibits a very high reflectance in the near-infrared spectral region and considerably low reflectance in the shortwave infrared spectral region. These conditions get dismantled and reversed if a fire occurs,” explains Srikanta Sannigrahi, the first author of the paper in an email to The Hindu. He is a postdoctoral researcher at University College Dublin, Ireland.

Promising tool

- He adds that the spectral differences between healthy vegetation and burnt forest areas can easily be identified and highlighted by remote sensing burn indices. It can be a promising tool for land resource managers and fire officials.
- The team notes that the States of northeast India, Madhya Pradesh, Odisha, Chhattisgarh, Himachal Pradesh and Uttarakhand are the most fire-prone in India.
- Previous studies using forecasting models and in-situ observations in western Himalaya have shown a sharp increase of carbon monoxide, nitrogen oxides and ozone during high fire activity periods.
- The current paper noted very high to high carbon emissions in the
eastern Himalayan states, western desert region and lower Himalayan region.

- They note that the occurrence of high fire intensity at the low altitude Himalayan hilly regions may be due to the **plant species (pine trees) in the area and proximity to villages.**
- Villages make them more susceptible to anthropogenic activities like forest cover clearance, grazing and so on.
- Studies have shown that the sharp increase in average and **maximum air temperature**, **decline in precipitation**, change in **land-use patterns** have caused the increased episodes of forest fires in most of the Asian countries.

Source: TH

---

**Hagia Sophia: The museum of conflicts**

**GS-I | 12 July, 2020**

**Hagia Sophia: The museum of conflicts**

**Context**

* An **Eastern Orthodox patriarchal cathedral** for about 900 years, an imperial mosque for 482 years and then a museum and a famed tourist spot starting 1935.

* This is the short **history of Hagia Sophia**, the **sixth century Byzantine structure** that has survived natural calamities, imperial invasions, crusades and a World War.

* The architectural marvel in **Istanbul**, which is revered by both eastern **Orthodox Christians and Muslims**, is now being **turned into a mosque by Turkish President Recep Tayyip Erdogan**.

* Hagia Sophia (literally ‘Holy Wisdom’) was built by the Byzantine Emperor, Justinian I, in the first half of the sixth century. This was the third cathedral being built at the site.
* The first one, with a wooden roof, is believed to have been commissioned by Emperor Constantine I in AD 325 on the remains of a pagan temple. This was burned down by rioters in AD 404.

* The **second church, ordered by Constans I**, was also destroyed in a fire during the **Nika riots of AD 532** that saw widespread fire and destruction in Constantinople (today’s Istanbul).

* After establishing order in the city, Justinian found the fire an opportunity to rebuild the cathedral with his stamp on it. The imperial Byzantine power was at its pinnacle under Justinian. The Empire had **conquered much of the historically Roman Mediterranean coast**, including **Italy, Rome and North Africa** (The Byzantine influence would start shrinking after the outbreak of the Justinian Plague, one of the deadliest pandemics in recorded history).

* The basilica, designed by mathematician Anthemius of Tralles and physicist Isidore of Miletu, was completed in five years by more than 10,000 labourers. The Emperor reopened it in AD 537.

**The Ottoman era**

* Barring a few years after the Fourth Crusade, Hagia Sophia had been the cathedral of the Ecumenical Patriarchate of Constantinople until the fall of the city in the 15th century

* In the early 13th century, crusaders looted the building and turned it into a Roman Catholic cathedral. But after the Byzantines recaptured the city from the Venetian crusaders, they restored the cathedral and it continued to remain the seat of the Patriarch until the Ottomans came.

* On May 28, 1453, when Constantinople was under siege and the Ottomans were making steady advances into the Byzantine defence lines, **Emperor Constantine XI** entered the basilica to pray.

* After prayers he returned to the city walls to coordinate the war efforts. But the Byzantine defence lasted only one day. The next day, the **Ottomans, under the command of Mehmed II the Conqueror**, entered the city.

* Mehmed is believed to have been mesmerised by the architectural beauty of the
* The Sultan decided to turn the basilica into a mosque. The Ottomans later commissioned the renowned medieval architect Sinan to renovate the structure.

* They built massive buttresses to support the walls. A mihrab (a semi-circular niche on the wall that indicates the qibla, the direction of Mecca) and a minbar (pulpit) were installed.

* The mosque, called Ayasofya in Turkish, remained the centre of power throughout the Ottoman rule. The Byzantine architecture had also deeply influenced Ottoman construction projects.

* It’s visible on the most major mosques the Ottomans built such as the Blue Mosque, the Sehzade Mosque, the Suleymaniye Mosque, the Rustem Pasha Mosque and the Kilic Ali Pasha Complex.

A secular museum

* After the collapse of the Ottoman Empire following the First World War, secularists, under the leadership of Mustafa Kemal (who was later called Ataturk, the father of Turks), came to power.

* Ataturk, who abolished the Caliphate and launched a strong secularisation drive in the country, closed down Hagia Sophia in 1930, seven years after the foundation of the Turkish republic.

* Five years later, the building was reopened as a museum. Since then, Hagia Sophia, a UNESCO World Heritage site, has been one of the most visited monuments in Turkey, and more importantly, an emblem of Christian-Muslim co-existence. Last year alone, 3.7 million people visited Hagia Sophia.

* Turning the monument back into a mosque has been a growing demand from the Islamist sections of Turkish society.

* On Friday, a Turkish administrative court cancelled the museum status of the monument. Mr. Erdogan moved fast, issuing a decree, transferring the management of Hagia Sophia from the Ministry of Culture to the Directorate of Religious Affairs.
India - Sri Lanka Relations

Paper-2 I.R India and Srilanka (Mains)

In recent years, significant progress in implementation of developmental assistance projects has further cemented the bonds of friendship between the two countries. The relationship between India and Sri Lanka is more than 2,500 years old. Both countries have a legacy of intellectual, cultural, religious and linguistic interaction.

In recent years, the relationship has been marked by close contacts at all levels. Trade and investment have grown and there is cooperation in the fields of infrastructure development, education, culture and defence.

The nearly three-decade long armed conflict between the Sri Lankan forces and the LTTE came to an end in May 2009. During the course of the conflict, India supported the right of the Sri Lankan Government to act against terrorist forces. India’s consistent position has been in favour of a negotiated political settlement, which is acceptable to all communities within the framework of a united Sri Lanka and is consistent with democracy, pluralism and respect for human rights.

Geopolitical Significance of Sri Lanka

Sri Lanka’s location in the Indian Ocean region as an island State has been of strategic geopolitical relevance to several major powers. Started from the British Defence and External Affairs Agreement of 1948, and the Maritime Agreement with USSR of 1962.
Even during the J.R Jayewardene (1978-1989) and Ranasinghe Premadasa (1989-1993) tenures, Sri Lanka was chosen to build the Voice of America transmitting station (suspected of being used for intelligence gathering purposes and electronic surveillance of the Indian Ocean).

It was the massive Chinese involvement during the Rajapaksa tenure that garnered the deepest controversy in recent years. China is building state of the art gigantic modern ports all along the Indian Ocean to the south of it, in Gwadar (Pakistan), Chittagong (Bangladesh, Kyauk Phru (Myanmar) and Hambantota (Sri Lanka). China’s string of pearl’s strategy is aimed at encircling India to establish dominance in the Indian Ocean.

Post 2015, Sri Lanka still relies heavily on China for Port city project and for continuation of Chinese funded infrastructure projects in Sri Lanka. Although the Hambantota harbour is reportedly making losses, it too has potential for development due to its strategic location.

Sri Lanka has a list of highly strategic ports located among busiest sea lanes of communication.

**Sri Lanka’s Colombo Port is the 25th busiest container port in the world and the natural deep water harbor at Trincomalee is the fifth largest natural harbour in the world. Port city of Trincomalee was the main base for Eastern Fleet and British Royal Navy during the Second World War. Sri Lanka’s location can thus serve both commercial and industrial purposes and be used as a military base.**

**Political Relations**

- As a country that emerged from a civil war facing human rights allegations; the domestic politics and international relations of Sri Lanka are heavily geopolitical with foreign powers having vested interests.
- **Political relations between India and Sri Lanka have been marked by high-level exchanges of visits at regular intervals.**
- In February 2015, Sri Lanka’s newly elected President Maithripala Sirisena undertook his first official visit to India, and Modi paid a return visit to Colombo in March 2015. He was the first Indian prime minister to do a stand-alone visit to Sri Lanka in 28 years.
In June 2019, the first overseas visit of Indian Prime Minister to Sri Lanka, in his second term, is an important symbolic gesture reflective of the special relationship between the countries.

- Sri Lanka is a member of regional groupings like BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and SAARC in which India plays a leading role.
- Recently, India has invited leaders of BIMSTEC member countries to attend the swearing-in of Prime Minister Narendra Modi and his council of ministers. This is in line with the government’s focus on its ‘Neighbourhood First’ policy. Sri Lanka has long been in India’s geopolitical orbit, but its relationship with China has strengthened in recent years.
- Former President Rajapaksa took Sri Lanka closer to China and sidelining Indian concerns including over the rehabilitation of Tamils displaced by the long-running Sri Lankan civil war.

History of Civil War

- Sri Lanka has been mired in ethnic conflict since the country, formerly known as Ceylon, became independent from British rule in 1948. A 2001 government census says Sri Lanka’s main ethnic populations are the Sinhalese (82%), Tamil (9.4%), and Sri Lanka Moor (7.9%).
- In the years following independence, the Sinhalese, who resented British favoritism toward Tamils during the colonial period, disenfranchised Tamil migrant plantation workers from India and made Sinhala the official language.
- In 1972, the Sinhalese changed the country’s name from Ceylon to Sri Lanka and made Buddhism the nation’s primary religion.
- As ethnic tension grew, in 1976, the LTTE was formed under the leadership of Velupillai Prabhakaran, and it began to campaign for a Tamil homeland in northern and eastern Sri Lanka, where most of the island’s Tamils reside.
- In 1983, the LTTE ambushed an army convoy, killing thirteen soldiers and triggering riots in which 2,500 Tamils died.
- As ethnic ties have bound southern India and Sri Lanka for more than two millennia. India is a home to more than 60 million of the world’s 77 million Tamils, while about 4 million live in Sri Lanka.
- The Palk Strait, about 40 km (25 miles) wide at its narrowest point, separates the southern Indian state of Tamil Nadu and northern Sri Lanka, traditionally the main Tamil area of the Indian Ocean island.
When war between Sri Lankan Tamils and the Sinhalese majority erupted in 1983, India took an active role. Indo-Sri Lankan Accord was signed in 1987 to provide a political solution to Sri Lanka’s conflict. It proposed the establishment of provincial council system and devolution of power for nine provinces in Sri Lanka (also known as The Thirteenth Amendment). India deployed Indian Peace Keeping Force (IPKF) in Sri Lanka under Operation Pawan to disarm the different militant group. IPKF was later withdrawn after three years amidst escalating violence. The violent conflict was ended in 2009 and at that point of India has agreed to reconstruct the war-torn areas and started many rehabilitation programs. India voted against Sri Lanka in 2009, 2012 and 2013 at the US-sponsored UNHRC resolution to investigate alleged human rights violations in Sri Lanka.

Commercial Relations

- Sri Lanka has long been a priority destination for direct investment from India. 1st FTA India signed.
- Sri Lanka is one of India’s largest trading partners among the SAARC countries. India in turn is Sri Lanka’s largest trade partner globally.
- India’s exports to Sri Lanka amounted to $5.3 billion in 2015-17 whereas its imports from the country were at $743 million.
- Trade between the two countries grew particularly rapidly after the India-Sri Lanka Free Trade Agreement which came into force in March 2000.
- While Sri Lankan exports to India have increased substantially during the past several years since 2000 when ISFTA came into force.
- However, there has been a high growth in India’s exports to Sri Lanka, resulting in a widening of the balance of trade. This is largely because of the lack of export capacity from Sri Lanka to service Indian requirement and also due to increase in imports from India because of competitiveness of our exports.

India-Sri Lanka Free Trade Agreement (ISFTA)

- The main framework for bilateral trade has been provided by the India-Sri Lanka Free Trade Agreement (ISFTA) that was signed in 1998 and entered into force in March 2000.
- The basic premise in signing the ISFTA was asymmetries between the two
In a nutshell, India sought to do more without insisting on strict reciprocity from Sri Lanka. This is reflected in the respective obligations of the two countries under the ISFTA where India agreed to open more tariff lines upfront and within a shorter time span of three years as against smaller and more staggered openings by Sri Lanka which was provided a longer time of eight years. In order to receive ISFTA benefits, the merchandise exported between India and Sri Lanka should comply with the Rules of Origin criteria.

The agreement CEPA (Comprehensive Economic Partnership Agreement) which is yet to be signed between the countries, seeks to build on the momentum generated by the FTA and take the two economies beyond trade in goods towards greater integration and impart renewed impetus and synergy to bilateral economic interaction. NOW ETCA.

The investments are in diverse areas including petroleum retail, IT, financial services, real estate, telecommunication, hospitality & tourism, banking and food processing (tea & fruit juices), metal industries, tires, cement, glass manufacturing, and infrastructure development (railway, power, water supply).

The last few years have also witnessed an increasing trend of Sri Lankan investments into India.

Tourism also forms an important link between India and Sri Lanka and India is the largest source market for Sri Lankan tourism. In tourism, India is the largest contributor with every fifth tourist being from India.

Cultural and Educational Relations

- The Cultural Cooperation Agreement signed by the two Governments on 29 November, 1977, forms the basis for periodic Cultural Exchange Programmes between the two countries.
- The Indian Cultural Centre in Colombo actively promotes awareness of Indian culture by offering classes in Indian music, dance, Hindi and Yoga. Every year, cultural troupes from both countries exchange visits.
- India and Sri Lanka commemorated the 2600th year of the attainment of enlightenment by Lord Buddha (Sambuddhathva Jayanthi) through joint activities.
- The two Governments also celebrated the 150th Anniversary of Anagarika
The India-Sri Lanka Foundation, set up in December 1998 as an intergovernmental initiative, also aims towards enhancement of scientific, technical, educational and cultural cooperation through civil society exchanges and enhancing contact between the younger generations of the two countries.

- Education is an important area of cooperation. India now offers about 290 scholarship slots annually to Sri Lankan students.
- In addition, under the Indian Technical and Economic Cooperation Scheme and the Colombo Plan, India offers 370 slots annually to Sri Lankan nationals.
- Government of India formally launched the e-Tourist Visa (eTV) scheme for Sri Lankan tourists on 14 April 2015 to increase the people to people contact. Subsequently, in a goodwill gesture, the visa fee for eTV was sharply reduced.

Indian Community

- The People of Indian Origin (PIOs) comprise Sindhis, Borahs, Gujaratis, Memons, Parsis, Malayalis and Telugu speaking persons who have settled down in Sri Lanka (most of them after partition) and are engaged in various business ventures.
- Though their numbers are much lesser as compared to Indian Origin Tamils (IOTs), they are economically prosperous and are well placed.
- Each of these communities has their organization which organizes festivals and cultural events.
- The IOTs are mostly employed in either tea or rubber plantations in Central, Uva and Sabaragamuwa Provinces though during the last decade, the younger generation has been migrating to Colombo in search of employment.
- A fair number of IOTs living in Colombo are engaged in business. According to Government census figures (2011), the population of IOTs is about 1.6 million.

Defence and Security Cooperation

- Sri Lanka and New Delhi have long history of security cooperation. In recent years, the two sides have steadily increased their military-to-military relationship.
- India and Sri Lanka conducts joint Military (‘Mitra Shakti’) and Naval exercise (SLINEX). India also provides defence training to Sri Lankan forces.
- A trilateral maritime security cooperation agreement was signed by India, Sri Lanka and the Maldives in 2014.
Lanka and the Maldives to improve surveillance, anti-piracy operations and reducing maritime pollution in Indian Ocean Region.

- In April 2019, India and Sri Lanka also concluded agreement on countering Drug and Human trafficking.
- In the aftermath of the horrific Easter bombings, Sri Lankan Prime Minister thanked the Indian government for all the “help” given.
  - The alerts issued by Indian agencies before the attacks had warned specifically about the use of radicalised suicide bombers attacking churches and the Indian High Commission in Colombo.

Issues and Conflicts

- In recent years, China has extended billions of dollars of loans to the Sri Lankan government for new infrastructure projects, which is not good for India’s strategic depth in Indian Ocean Region.
- Sri Lanka also handed over the strategic port of Hambantota, which is expected to play a key role in China’s Belt and Road Initiative, to China on a 99-year lease.
- The opposition parties and trade unions in Sri Lanka have already dubbed the port deal as a sellout of their country’s national assets to China.
- China has also supplied arms as well as provide huge loans to Sri Lanka for its development.
- China also invested sufficiently in the infrastructure of Sri Lanka, which included building of Colombo international container terminal by China Harbor Corporation.
  - However, the relation between Sri Lanka and India are improving. In order to allay Indian concerns that the Hambantota port will not be used for military purposes, the Sri Lankan government has sought to limit China’s role to running commercial operations at the port while it retains oversight of security operations.
- The two countries have signed civil nuclear cooperation agreement which is Sri Lanka’s first nuclear partnership with any country.
- India is also investing into Sri Lanka’s infrastructure development in the Northern and Eastern provinces.
- India is also planning to build Trincomalee Port to counterweight the Chinese developments at Hambantota Port.

Fishermen issue

- Given the proximity of the territorial waters of both countries, especially in the Palk Straits and the Gulf of Mannar, incidents of straying of fishermen are
Indian boats have been fishing in the troubled waters for centuries and had a free run of the Bay of Bengal, Palk Bay and the Gulf of Mannar until 1974 and 1976 when treaties were signed between the two countries to demarcate International Maritime Boundary Line (IMBL).

However, the treaties failed to factor in the hardship of thousands of traditional fishermen who were forced to restrict themselves to a meagre area in their fishing forays. **The small islet of Katchatheevu, hitherto used by them for sorting their catch and drying their nets, fell on the other side of the IMBL.**

Fishermen often risk their lives and cross the IMBL rather than return empty-handed, but the Sri Lankan Navy is on alert, and have either arrested or destroyed fishing nets and vessels of those who have crossed the line.

Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line.

Through these arrangements, it has been possible to deal with the issue of detention of fishermen in a humane manner.

India and Sri Lanka have agreed to set up a Joint Working Group (JWG) on Fisheries between the Ministry of Agriculture and Farmers Welfare of India and Ministry of Fisheries and Aquatic Resources Development of Sri Lanka as the mechanism to help find a permanent solution to the fishermen issue.

**Way Forward**

- India needs to focus more on its traditional and cultural ties to improve relations with Sri Lanka.
- Starting of ferry services between India and Sri Lanka can improve people to people linkages.
- Mutual recognition of each other's concerns and interests can improve the relationship between both countries.
- As both countries have a democratic setup there is scope for broadening and deepening the ties.
- Both countries should try to work out a permanent solution to the issue of fishermen through bilateral engagements.
- Comprehensive Economic Partnership Agreement (CEPA) must be signed to improve the economic cooperation between both countries.

Source: TH
Fishermen Issue with Sri Lanka

GS-Paper-2 International relation – Sri Lanka and India (Mains-I.V)

Recently, Sri Lanka’s northern fishermen have reported a sudden increase in the number of Indian trawlers spotted in its territorial waters. The territorial waters extend seaward up to 12 nautical miles (nm) from baselines of a country.

Fishermen along the northern coast of Jaffna Peninsula have lost their nets worth lakhs of rupees in the sea, after being caught under the large Indian trawlers. These Indian trawlers are known to originate from the Indian State of Tamil Nadu.

International Maritime Boundary Line:

Indian boats have been fishing in the troubled waters for centuries and had a free run of the Bay of Bengal, Palk Bay and the Gulf of Mannar until 1974 and 1976 when treaties were signed between the two countries to demarcate International Maritime Boundary Line (IMBL).

However, the treaties failed to factor in the hardship of thousands of traditional fishermen who were forced to restrict themselves to a meagre area in their fishing forays.

Katchatheevu Island Issue:

The small islet of Katchatheevu, hitherto used by them for sorting their catch and drying their nets, fell on the other side of the IMBL. Fishermen often risk their lives and cross the IMBL rather than return empty-handed, but the Sri Lankan Navy is on alert, and have either arrested or destroyed fishing nets and vessels of those who have crossed the line.

Implementation of Practical Agreements:

Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line. Through these arrangements, it has been possible to deal with the issue of detention of fishermen in a humane manner.
India and Sri Lanka have agreed to set up a Joint Working Group (JWG) on Fisheries between the Ministry of Agriculture and Farmers’ Welfare of India and Ministry of Fisheries and Aquatic Resources Development of Sri Lanka as the mechanism to help find a permanent solution to the fishermen issue.

Threat to Livelihoods:

The Sri Lankan fishermen fear that their livelihoods will be hit due to trawlers which are already under strain due to the coronavirus pandemic induced reduction in the export.

Step Taken by Sri Lanka:

In the last couple of years, Sri Lanka has introduced tougher laws banning bottom-trawling, and has also introduced heavy fines for trespassing foreign vessels. The Sri Lankan Navy arrested over 450 Indian fishermen in 2017 and 156 in 2018 on charges of poaching. A total of 210 arrests were made in 2019, while 34 have been made so far in 2020.

Scare of Covid-19:

The Sri Lankan fishermen have been alleging that currently the Sri Lankan Navy is reluctant to arrest the trespassing fishermen from Tamil Nadu now, due to the Covid-19 prevalence in India. However, the Sri Lankan Navy claims to be very vigilant along their borders not just to monitor illegal fishing, but also to take action on any illicit activity such as narcotics trade.

Conclusion

India needs to focus more on its traditional and cultural ties to improve relations with Sri Lanka. Starting ferry services between India and Sri Lanka can improve people to people linkages. Mutual recognition of each other’s concerns and interests can improve the relationship between both countries.

Source: TH
Forest fires and their effect on carbon emissions

- During 2003–2017, a total of 5,20,861 active forest fire events were detected in India, and according to the report of the Forest Survey of India, over 54% of the forest cover in India is exposed to occasional fire.
- The study published in *Science of the Total Environment* used remote sensing–based models to measure primary productivity over an area and also looked at *burn indices*, which help to demarcate the *forest fire burn scars* using satellite imagery.

Common index

- “The normalized burn ratio is an effective *burn index* commonly used to identify burnt regions in large fire zones. In normal conditions, healthy vegetation exhibits a very high reflectance in the near-infrared spectral region and considerably low reflectance in the shortwave infrared spectral region. These conditions get dismantled and reversed if a fire occurs,” explains Srikanta Sannigrahi, the first author of the paper in an email to The Hindu. He is a postdoctoral researcher at University College Dublin, Ireland.

Promising tool

- He adds that the *spectral differences* between healthy vegetation and burnt forest areas can easily be identified and highlighted by remote sensing burn indices. It can be a promising tool for land resource managers and fire officials.
- The team notes that the *States of northeast India, Madhya Pradesh, Odisha, Chhattisgarh, Himachal Pradesh* and *Uttarakhand* are the most fire-prone in India.
- Previous studies using forecasting models and in-situ observations in *western Himalaya* have shown a *sharp increase of carbon monoxide, nitrogen oxides and ozone* during high fire activity periods.
- The current paper noted *very high to high carbon emissions* in the
eastern Himalayan states, western desert region and lower Himalayan region.

- They note that the occurrence of high fire intensity at the low altitude Himalayan hilly regions may be due to the **plant species (pine trees) in the area and proximity to villages.**
- Villages make them more susceptible to anthropogenic activities like forest cover clearance, grazing and so on.
- Studies have shown that the sharp increase in average and **maximum air temperature**, **decline in precipitation**, change in **land-use patterns** have caused the increased episodes of forest fires in most of the Asian countries.

Source: TH

---

Hagia Sophia: The museum of conflicts

**Context**

* An **Eastern Orthodox patriarchal cathedral** for about 900 years, an imperial mosque for 482 years and then a museum and a famed tourist spot starting 1935.

* This is the short **history of Hagia Sophia**, the **sixth century Byzantine structure** that has survived natural calamities, imperial invasions, crusades and a World War.

* The architectural marvel in **Istanbul**, which is revered by both eastern **Orthodox Christians and Muslims**, is now being **turned into a mosque by Turkish President Recep Tayyip Erdogan.**

* Hagia Sophia (literally ‘Holy Wisdom’) was built by the Byzantine Emperor, Justinian I, in the first half of the sixth century. This was the third cathedral being built at the site.
The first one, with a wooden roof, is believed to have been commissioned by Emperor Constantine I in AD 325 on the remains of a pagan temple. This was burned down by rioters in AD 404.

* The **second church, ordered by Constans I**, was also destroyed in a fire during the **Nika riots of AD 532** that saw widespread fire and destruction in Constantinople (today’s Istanbul).

* After establishing order in the city, Justinian found the fire an opportunity to rebuild the cathedral with his stamp on it. The imperial Byzantine power was at its pinnacle under Justinian. The Empire had **conquered much of the historically Roman Mediterranean coast**, including **Italy, Rome and North Africa** (The Byzantine influence would start shrinking after the outbreak of the **Justinian Plague, one of the deadliest pandemics in recorded history**).

* The basilica, designed by mathematician Anthemius of Tralles and physicist Isidore of Miletu, was completed in five years by more than 10,000 labourers. The Emperor reopened it in AD 537.

**The Ottoman era**

* Barring a few years after the Fourth Crusade, Hagia Sophia had been the cathedral of the Ecumenical Patriarchate of Constantinople until the fall of the city in the 15th century

* In the early 13th century, crusaders looted the building and turned it into a Roman Catholic cathedral. But after the Byzantines recaptured the city from the Venetian crusaders, they restored the cathedral and it continued to remain the seat of the Patriarch until the Ottomans came.

* On May 28, 1453, when Constantinople was under siege and the Ottomans were making steady advances into the Byzantine defence lines, **Emperor Constantine XI** entered the basilica to pray.

* After prayers he returned to the city walls to coordinate the war efforts. But the Byzantine defence lasted only one day. The next day, the **Ottomans, under the command of Mehmed II the Conqueror**, entered the city.

* Mehmed is believed to have been mesmerised by the architectural beauty of the
* The Sultan decided to turn the basilica into a mosque. The Ottomans later commissioned the renowned *medieval architect Sinan* to renovate the structure.

* They built massive buttresses to support the walls. *A mihrab (a semi-circular niche on the wall that indicates the qibla, the direction of Mecca) and a minbar (pulpit) were installed.*

* The mosque, called Ayasofya in Turkish, remained the centre of power throughout the Ottoman rule. The Byzantine architecture had also deeply influenced Ottoman construction projects.

* It’s visible on the most major mosques the Ottomans built such as the Blue Mosque, the Sehzade Mosque, the Suleymaniye Mosque, the Rustem Pasha Mosque and the Kilic Ali Pasha Complex.

### A secular museum

* After the **collapse of the Ottoman Empire following the First World War**, secularists, under the leadership of **Mustafa Kemal** (who was later called **Ataturk, the father of Turks**), came to power.

* Ataturk, who **abolished the Caliphate and launched a strong secularisation drive in the country**, closed down Hagia Sophia in 1930, seven years after the foundation of the Turkish republic.

* Five years later, the building was reopened as a museum. Since then, **Hagia Sophia, a UNESCO World Heritage site**, has been one of the most visited monuments in Turkey, and more importantly, an emblem of **Christian-Muslim co-existence**. Last year alone, 3.7 million people visited Hagia Sophia.

* Turning the monument back into a mosque has been a growing demand from the **Islamist sections of Turkish society**.

* On Friday, a **Turkish administrative court cancelled the museum status** of the monument. Mr. Erdogan moved fast, issuing a decree, transferring the management of Hagia Sophia from the Ministry of Culture to the Directorate of Religious Affairs.
India - Sri Lanka Relations

Paper-2 I.R India and Srilanka (Mains)

In recent years, significant progress in implementation of developmental assistance projects has further cemented the bonds of friendship between the two countries. The relationship between India and Sri Lanka is more than 2,500 years old. Both countries have a legacy of intellectual, cultural, religious and linguistic interaction.

In recent years, the relationship has been marked by close contacts at all levels. Trade and investment have grown and there is cooperation in the fields of infrastructure development, education, culture and defence.

The nearly three-decade long armed conflict between the Sri Lankan forces and the LTTE came to an end in May 2009. During the course of the conflict, India supported the right of the Sri Lankan Government to act against terrorist forces. India's consistent position has been in favour of a negotiated political settlement, which is acceptable to all communities within the framework of a united Sri Lanka and is consistent with democracy, pluralism and respect for human rights.

Geopolitical Significance of Sri Lanka

Sri Lanka’s location in the Indian Ocean region as an island State has been of strategic geopolitical relevance to several major powers. Started from the British Defence and External Affairs Agreement of 1948, and the Maritime Agreement with USSR of 1962.
Even during the J.R Jayewardene (1978-1989) and Ranasinghe Premadasa (1989-1993) tenures, Sri Lanka was chosen to build the Voice of America transmitting station (suspected of being used for intelligence gathering purposes and electronic surveillance of the Indian Ocean).

It was the massive **Chinese involvement during the Rajapaksa tenure** that garnered the deepest controversy in recent years. China is building state of the art gigantic modern ports all along the Indian Ocean to the south of it, in **Gwadar (Pakistan), Chittagong (Bangladesh), Kyauk Phru (Myanmar) and Hambantota (Sri Lanka)**. China’s string of pearl’s strategy is aimed at encircling India to establish dominance in the Indian Ocean.

Post 2015, **Sri Lanka still relies heavily on China** for Port city project and for continuation of Chinese funded infrastructure projects in Sri Lanka. Although the Hambantota harbour is reportedly making losses, it too has potential for development due to its strategic location.

Sri Lanka has a **list of highly strategic ports located among busiest sea lanes of communication**.

**Sri Lanka’s Colombo Port is the 25th busiest container port in the world and the natural deep water harbor at Trincomalee is the fifth largest natural harbour in the world.** Port city of Trincomalee was the main base for Eastern Fleet and British Royal Navy during the Second World War. Sri Lanka’s location can thus serve both commercial and industrial purposes and be used as a military base.

**Political Relations**

- As a country that emerged from a civil war facing human rights allegations; the domestic politics and international relations of Sri Lanka are heavily geopolitical with foreign powers having vested interests.
- **Political relations between India and Sri Lanka have been marked by high-level exchanges of visits at regular intervals.**
- In February 2015, Sri Lanka’s newly elected President Maithripala Sirisena undertook his first official visit to India, and Modi paid a return visit to Colombo in March 2015. He was the first Indian prime minister to do a stand-alone visit to Sri Lanka in 28 years.
In June 2019, the first overseas visit of Indian Prime Minister to Sri Lanka, in his second term, is an important symbolic gesture reflective of the special relationship between the countries.

Sri Lanka is a member of regional groupings like BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and SAARC in which India plays a leading role.

Recently, India has invited leaders of BIMSTEC member countries to attend the swearing-in of Prime Minister Narendra Modi and his council of ministers. This is in line with the government’s focus on its ‘Neighbourhood First’ policy. Sri Lanka has long been in India’s geopolitical orbit, but its relationship with China has strengthened in recent years.

Former President Rajapaksa took Sri Lanka closer to China and sidelining Indian concerns including over the rehabilitation of Tamils displaced by the long-running Sri Lankan civil war.

History of Civil War

Sri Lanka has been mired in ethnic conflict since the country, formerly known as Ceylon, became independent from British rule in 1948. A 2001 government census says Sri Lanka’s main ethnic populations are the Sinhalese (82%), Tamil (9.4%), and Sri Lanka Moor (7.9%).

In the years following independence, the Sinhalese, who resented British favoritism toward Tamils during the colonial period, disenfranchised Tamil migrant plantation workers from India and made Sinhala the official language.

In 1972, the Sinhalese changed the country’s name from Ceylon to Sri Lanka and made Buddhism the nation’s primary religion.

As ethnic tension grew, in 1976, the LTTE was formed under the leadership of Velupillai Prabhakaran, and it began to campaign for a Tamil homeland in northern and eastern Sri Lanka, where most of the island’s Tamils reside.

In 1983, the LTTE ambushed an army convoy, killing thirteen soldiers and triggering riots in which 2,500 Tamils died.

As Ethnic ties have bound southern India and Sri Lanka for more than two millennia. India is a home to more than 60 million of the world’s 77 million Tamils, while about 4 million live in Sri Lanka.

The Palk Strait, about 40 km (25 miles) wide at its narrowest point, separates the southern Indian state of Tamil Nadu and northern Sri Lanka, traditionally the main Tamil area of the Indian Ocean island.
When war between Sri Lankan Tamils and the Sinhalese majority erupted in 1983, India took an active role.

Indo-Sri Lankan Accord was signed in 1987 to provide a political solution to Sri Lanka’s conflict.

It proposed the establishment of provincial council system and devolution of power for nine provinces in Sri Lanka (also known as The Thirteenth Amendment).

India deployed Indian Peace Keeping Force (IPKF) in Sri Lanka under Operation Pawan to disarm the different militant group.

IPKF was later withdrawn after three years amidst escalating violence.

The violent conflict was ended in 2009 and at that point of India has agreed to reconstruct the war-torn areas and started many rehabilitation programs.


Commercial Relations

- Sri Lanka has long been a priority destination for direct investment from India. 1st FTA India signed.
- Sri Lanka is one of India’s largest trading partners among the SAARC countries. India in turn is Sri Lanka’s largest trade partner globally.
- India’s exports to Sri Lanka amounted to $5.3 billion in 2015-17 whereas its imports from the country were at $743 million.
- Trade between the two countries grew particularly rapidly after the India-Sri Lanka Free Trade Agreement which came into force in March 2000.
- While Sri Lankan exports to India have increased substantially during the past several years since 2000 when ISFTA came into force.
- However, there has been a high growth in India’s exports to Sri Lanka, resulting in a widening of the balance of trade. This is largely because of the lack of export capacity from Sri Lanka to service Indian requirement and also due to increase in imports from India because of competitiveness of our exports.

India-Sri Lanka Free Trade Agreement (ISFTA)

- The main framework for bilateral trade has been provided by the India-Sri Lanka Free Trade Agreement (ISFTA) that was signed in 1998 and entered into force in March 2000.
- The basic premise in signing the ISFTA was asymmetries between the two
economies, local socio-economic sensitivities, safeguard measures to protect domestic interests, and revenue implications so as not to impact high revenue generating tariff lines in the short term.

- In a nutshell, India sought to do more without insisting on strict reciprocity from Sri Lanka.
- This is reflected in the respective obligations of the two countries under the ISFTA where India agreed to open more tariff lines upfront and within a shorter time span of three years as against smaller and more staggered openings by Sri Lanka which was provided a longer time of eight years.
- In order to receive ISFTA benefits, the merchandise exported between India and Sri Lanka should comply with the Rules of Origin criteria.

- The agreement **CEPA (Comprehensive Economic Partnership Agreement)** which is yet to be signed between the countries, seeks to build on the momentum generated by the FTA and take the two economies beyond trade in goods towards greater integration and impart renewed impetus and synergy to bilateral economic interaction. **NOW ETCA.**

- The investments are in diverse areas including petroleum retail, IT, financial services, real estate, telecommunication, hospitality & tourism, banking and food processing (tea & fruit juices), metal industries, tires, cement, glass manufacturing, and infrastructure development (railway, power, water supply).
- The last few years have also witnessed an increasing trend of Sri Lankan investments into India.
- Tourism also forms an important link between India and Sri Lanka and India is the largest source market for Sri Lankan tourism. In tourism, India is the largest contributor with every fifth tourist being from India.

**Cultural and Educational Relations**

- The **Cultural Cooperation Agreement** signed by the two Governments on 29 November, 1977, forms the basis for periodic Cultural Exchange Programmes between the two countries.
- The **Indian Cultural Centre in Colombo** actively promotes awareness of Indian culture by offering classes in Indian music, dance, Hindi and Yoga. Every year, cultural troupes from both countries exchange visits.
- **India and Sri Lanka commemorated the 2600th year of the attainment of enlightenment by Lord Buddha (Sambuddhathva Jayanthi) through joint activities.**
- The two Governments also celebrated the 150th Anniversary of Anagarika
Dharmapala in 2014.

- The *India-Sri Lanka Foundation*, set up in December 1998 as an intergovernmental initiative, also aims towards enhancement of scientific, technical, educational and cultural cooperation through civil society exchanges and enhancing contact between the younger generations of the two countries.
- Education is an important area of cooperation. India now offers about 290 scholarship slots annually to Sri Lankan students.
- In addition, under the *Indian Technical and Economic Cooperation Scheme and the Colombo Plan*, India offers 370 slots annually to Sri Lankan nationals.
- Government of India formally launched the *e-Tourist Visa (eTV) scheme* for Sri Lankan tourists on 14 April 2015 to increase the people to people contact. Subsequently, in a goodwill gesture, the visa fee for eTV was sharply reduced.

**Indian Community**

- The People of Indian Origin (PIOs) comprise Sindhis, Borahs, Gujaratis, Memons, Parsis, Malayalis and Telugu speaking persons who have settled down in Sri Lanka (most of them after partition) and are engaged in various business ventures.
- Though their numbers are much lesser as compared to Indian Origin Tamils (IOTs), they are economically prosperous and are well placed.
- Each of these communities has their organization which organizes festivals and cultural events.
- The IOTs are mostly employed in either tea or rubber plantations in Central, Uva and Sabaragamuwa Provinces though during the last decade, the younger generation has been migrating to Colombo in search of employment.
- A fair number of IOTs living in Colombo are engaged in business. According to Government census figures (2011), the population of IOTs is about 1.6 million.

**Defence and Security Cooperation**

- Sri Lanka and New Delhi have long history of security cooperation. In recent years, the two sides have steadily increased their military-to-military relationship.
- *India and Sri Lanka conducts joint Military ('Mitra Shakti') and Naval exercise (SLINEX)*. India also provides defence training to Sri Lankan forces.
- A trilateral maritime security cooperation agreement was signed by India, Sri
Lanka and the Maldives to improve surveillance, anti-piracy operations and reducing maritime pollution in Indian Ocean Region.

- In April 2019, India and Sri Lanka also concluded agreement on countering Drug and Human trafficking.
- In the aftermath of the horrific Easter bombings, Sri Lankan Prime Minister thanked the Indian government for all the “help” given.
  - The alerts issued by Indian agencies before the attacks had warned specifically about the use of radicalised suicide bombers attacking churches and the Indian High Commission in Colombo.

Issues and Conflicts

- In recent years, **China has extended billions of dollars of loans to the Sri Lankan government for new infrastructure projects, which is not good for India’s strategic depth in Indian Ocean Region.**
- **Sri Lanka also handed over the strategic port of Hambantota,** which is expected to play a key role in China’s Belt and Road Initiative, to China on a 99-year lease.
- The opposition parties and trade unions in Sri Lanka have already dubbed the port deal as a sellout of their country’s national assets to China.
- China has also supplied arms as well as provide huge loans to Sri Lanka for its development.
- China also invested sufficiently in the infrastructure of Sri Lanka, which included building of Colombo international container terminal by China Harbor Corporation.
  - However, the relation between Sri Lanka and India are improving. In order to allay Indian concerns that the Hambantota port will not be used for military purposes, the Sri Lankan government has sought to limit China’s role to running commercial operations at the port while it retains oversight of security operations.
- The two countries have signed civil nuclear cooperation agreement which is Sri Lanka’s first nuclear partnership with any country.
- **India is also investing into Sri Lanka’s infrastructure development in the Northern and Eastern provinces.**
- **India is also planning to build Trincomalee Port to counterweight the Chinese developments at Hambantota Port.**

Fishermen issue

- Given the proximity of the territorial waters of both countries, especially in the Palk Straits and the Gulf of Mannar, incidents of straying of fishermen are
Indian boats have been fishing in the troubled waters for centuries and had a free run of the Bay of Bengal, Palk Bay and the Gulf of Mannar until 1974 and 1976 when treaties were signed between the two countries to demarcate International Maritime Boundary Line (IMBL).

However, the treaties failed to factor in the hardship of thousands of traditional fishermen who were forced to restrict themselves to a meagre area in their fishing forays.

The small islet of Katchatheevu, hitherto used by them for sorting their catch and drying their nets, fell on the other side of the IMBL.

Fishermen often risk their lives and cross the IMBL rather than return empty-handed, but the Sri Lankan Navy is on alert, and have either arrested or destroyed fishing nets and vessels of those who have crossed the line.

Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line.

Through these arrangements, it has been possible to deal with the issue of detention of fishermen in a humane manner.

India and Sri Lanka have agreed to set up a Joint Working Group (JWG) on Fisheries between the Ministry of Agriculture and Farmers Welfare of India and Ministry of Fisheries and Aquatic Resources Development of Sri Lanka as the mechanism to help find a permanent solution to the fishermen issue.

**Way Forward**

- India needs to focus more on its traditional and cultural ties to improve relations with Sri Lanka.
- Starting of ferry services between India and Sri Lanka can improve people to people linkages.
- Mutual recognition of each other's concerns and interests can improve the relationship between both countries.
- As both countries have a democratic setup there is scope for broadening and deepening the ties.
- Both countries should try to work out a permanent solution to the issue of fishermen through bilateral engagements.
- Comprehensive Economic Partnership Agreement (CEPA) must be signed to improve the economic cooperation between both countries.

Source: TH
Disabled are entitled to same benefits of SC/ST quota:
Supreme Court

The Supreme Court, in a significant decision, confirmed that persons suffering from disabilities are also socially backward and entitled to the same benefits of relaxation as Scheduled Caste/Scheduled Tribe candidates in public employment and education.

A three-judge Bench led by Justice Rohinton Nariman upheld a 2012 judgment of the Delhi High Court in Anamol Bhandari (minor) through his father/Natural Guardian v. Delhi Technological University in a significant decision.

“In Anamol Bhandari, the High Court has correctly held that people suffering from disabilities are also socially backward, and are therefore, at the very least, entitled to the same benefits as given to the Scheduled Caste/Scheduled Tribe candidates,” the Supreme Court held in a judgment pronounced on July 8.

Source: TH

Fugitive Economic Offenders Act, 2018

Recently, assets worth Rs. 329.66 crore of the Punjab National Bank (PNB) fraud mastermind Nirav Modi have been confiscated under Section 12(2) and (8) of the Fugitive Economic Offenders Act, 2018.
In this money laundering case, the Enforcement Directorate (ED) has so far attached properties valued at Rs. 2,348 crore. The properties were earlier attached under the Prevention of Money Laundering Act, (PMLA) 2002.

To proactively detect such frauds, the Reserve Bank of India (RBI) is in the process of putting together an exclusive wing for banking fraud oversight. This wing will have teams for meta-data processing and analysis, artificial intelligence analysis units, as well as proactive risk assessment cells.

Fugitive Economic Offenders Act, 2018: It seeks to confiscate properties of economic offenders who have left the country to avoid facing criminal prosecution or refuse to return to the country to face prosecution.

Fugitive economic offender: A person against whom an arrest warrant has been issued for committing an offence listed in the Act and the value of the offence is at least Rs. 100 crore.

Some of the offences listed in the act are:
- Counterfeiting government stamps or currency.
- Cheque dishonour.
- Money laundering.
- Transactions defrauding creditors.

Declaration of a Fugitive Economic Offender:
- After hearing the application, a special court (designated under the PMLA, 2002) may declare an individual as a fugitive economic offender.
- It may confiscate properties which are proceeds of crime, Benami properties and any other property, in India or abroad.
- Upon confiscation, all rights and titles of the property will vest in the central government, free from encumbrances (such as any charges on the property).
- The central government may appoint an administrator to manage and dispose of these properties.

Bar on Filing or Defending Civil Claims:
- The Act allows any civil court or tribunal to prohibit a declared fugitive
economic offender, from filing or defending any civil claim. Further, any company or limited liability partnership where such a person is a majority shareholder, promoter, or a key managerial person, may also be barred from filing or defending civil claims. The authorities may provisionally attach properties of an accused, while the application is pending before the Special Court.

Powers:

The authorities under the PMLA, 2002 will exercise powers given to them under the Fugitive Economic Offenders Act. These powers will be similar to those of a civil court, including the search of persons in possession of records or proceeds of crime, the search of premises on the belief that a person is an FEO and seizure of documents.

Source: TH

Sundarbans Wetlands

Paper-3 Environment and Biodiversity (PT-MAINS)

January 30th 2019 the Indian Sundarban was accorded the status of ‘Wetland of International Importance’ under the Ramsar Convention. It comprises hundreds of islands and a network of rivers, tributaries and creeks in the delta of the Ganga and the Brahmaputra at the mouth of the Bay of Bengal in India and Bangladesh.

Located on the southwestern part of the delta, the Indian Sundarban constitutes over 60% of the country’s total mangrove forest area. It is the 27th Ramsar Site in India, and with an area of 4,23,000 hectares is now the largest protected wetland in the country.

Richness of Sundarbans (PT SHOTS)
The Indian Sundarban met four of the nine criteria required for the status of ‘Wetland of International Importance’ — presence of rare species and threatened ecological communities, biological diversity, significant and representative fish and fish spawning ground and migration path.

The Indian Sundarban, also a UNESCO world heritage site, is home to the Royal Bengal Tiger.

The Ramsar website points out that the Indian Sundarban is also home to a large number of “rare and globally threatened species, such as the critically endangered northern river terrapin (Batagur baska), the endangered Irrawaddy dolphin (Orcaella brevirostris), and the vulnerable fishing cat (Prionailurus viverrinus).

Two of the world’s four horseshoe crab species, and eight of India’s 12 species of kingfisher are also found here. Recent studies claim that the Indian Sundarban is home to 2,626 faunal species and 90% of the country’s mangrove varieties.

Importance of Ramsar recognition

The Ramsar status will help to highlight conservation issues of the Sundarbans at the international level.

The part of the Sundarban delta, which lies in Bangladesh, was accorded the status of a Ramsar site in 1992, and with Indian Sundarban getting it too, international cooperation between the two countries for the protection of this unique ecosystem will increase.

This could lead to a better conservation strategy for flagship species such as the tiger and the northern river terrapin.

Various threats

While the Indian Sundarban is a biodiverse preserve, over four million people live on its northern and northwestern periphery, putting pressure on the ecosystem. Concerns have been raised about natural ecosystems being changed for cultivation of shrimp, crab, molluscs and fish.

The Ramsar Information Sheet lists fishing and harvesting of aquatic resources as a “high impact” actual threat to the wetland. The other threats are from dredging, oil and gas drilling, logging and wood harvesting, hunting and collecting terrestrial animals. Salinity has been categorised as a medium and tourism as a low impact actual threat in the region. Along with anthropogenic
pressures, it is also vulnerable to climate change and requires better management and conservation practices.

In News recently

**Discovery India** and **World Wide Fund (WWF)** India have partnered with the **Government of West Bengal** and local communities in the **Sundarban** to help save the world’s only mangrove **tiger habitat**.

They are working with a vision to create **climate-smart villages** in the Sundarbans.

**Climate Smart Villages** are sites where farmers, researchers, local government and the private sector come together to understand which climate smart agriculture practices are best suited for a particular location.

The project will **use technology** to solve several of the issues faced in the region. This includes building datasets on impacts of climate change on estuarine ecosystem. Through this project, in partnership with the West Bengal Forest Directorate and **Indian Institute of Science Education and Research (IISER) Kolkata**, two Sundarbans ecological observatories will be set up, each featuring data loggers, monitoring buoys and an onsite laboratory.

- **Farmland productivity**: The initiative also focuses on enhancing farmland productivity through low-cost measures and adjusting crop calendars to deal with climate change.
- The initiative will also include work towards securing habitats for tigers and prey species.
- The project at Sundarbans is part of a global movement, **Project CAT (Conserving Acres for Tigers)**, aimed at building healthy habitats for Tigers by conserving six million acres of protected land across four countries.

**Project CAT (Conserving Acres for Tigers)**

- **Discovery Communications** is working with World Wildlife Fund and others to support a worldwide effort to **double the number of tigers in the wild by 2022**.
- It is a mission to ensure a future for tigers and other endangered wildlife by
conserving nearly a million acres of protected land on the border of India and Bhutan.

- Tigers face multiple threats from poaching, habitat loss and fragmentation, conflict with humans and overhunting of their prey species.
- As a large predator, tigers are an umbrella species. They play a key role in maintaining a healthy ecosystem.
- By protecting tigers and their habitat, the others risk animals that share this habitat, like Asian elephants, greater one-horned rhinos, clouded leopards and important prey species are also getting protected.

### Ramsar Convention (PT Shot)

- The Convention on Wetlands of International Importance (better known as the Ramsar Convention) is an international agreement promoting the conservation and wise use of wetlands.
- It is the only global treaty to focus on a single ecosystem.
- The convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Traditionally viewed as a wasteland or breeding ground of disease, wetlands actually provide freshwater and food, and serve as nature's shock absorber.
- Wetlands, critical for biodiversity, are disappearing rapidly, with recent estimates showing that 64% or more of the world’s wetlands have vanished since 1900.
- Major changes in land use for agriculture and grazing, water diversion for dams and canals and infrastructure development are considered to be some of the main causes of loss and degradation of wetlands.

Source: PIB
The Ministry of Home Affairs (MHA) has constituted a national level ‘Committee for the Reform of Criminal Laws’.

What is the committee for?

The criminal law in India comprises -

- the Indian Penal Code of 1860
- the Code of Criminal Procedure that was rewritten in 1973
- the Indian Evidence Act that dates back to 1872

The idea that the current laws governing crime, investigation and trial require meaningful reform has long been in place. There have been several attempts in recent decades to overhaul the body of criminal law. **Given this, the committee’s mandate now is to recommend reforms in the criminal laws in a principled, effective, and efficient manner.**

The reforms should ensure the safety and security of the individual, the community and the nation. It should prioritise the constitutional values of justice, dignity and the inherent worth of the individual.

How does it work?

The committee has several leading legal academicians on board. It would be gathering opinions online, consulting with experts and collating material for their report to the government. Questionnaires have been posted online on the possible reforms.

**The committee has invited experts in the field of criminal law to participate in the exercise through an online consultation mechanism. The consultation exercise would go on for 3 months (starting on 4 July 2020).**

What are the concerns?

- **Timeframe** - Comprehensive legal reform requires careful consideration and a good deal of deliberation. An apparently short timeframe and limited scope for public consultation has thus been raised as concerns. This has caused considerable disquiet among jurists, lawyers and those concerned with the state of criminal justice in the country.
- **Timing** - The Committee has begun its work in the midst of a pandemic. This may not be the ideal time for wide consultations. Activists and lawyers
functioning in the hinterland may be at a particular disadvantage in formulating their opinions.

- **Mandate** - The panel's mandate is also vague and open to multiple interpretations. It is also not clear why the Law Commission has not been vested with this task.
- **Members** - The committee being an all-male, Delhi-based one has led to concerns of lack of diversity.

**Way ahead?**

Reform is best achieved through a cautious and inclusive approach. If at all criminal law is to be reformed, there should be a genuine attempt to reach wide consensus.

The priorities should be on ways to speed up trials, protect witnesses, address the travails of victims, improve investigative mechanisms and, most importantly, eliminate torture.

Source: TH

---

**NATGRID**

**GS-PAPER-3 Internal Security - Terrorism**

The ambitious *National Intelligence Grid (NATGRID)* project wants to link social media accounts to the huge database of records related to immigration entry and exit, banking and telephone details among others.

**About NATGRID:**

- It is an ambitious *counter terrorism programme*.
- It will *utilise technologies* like Big Data and analytics to study and analyse the huge amounts of data from various intelligence and enforcement agencies to *help track suspected terrorists and prevent terrorist attacks*.
It will **connect, in different phases, data providing organisations and users** besides developing a legal structure through which information can be accessed by the law enforcement agencies.

- NATGRID is a post Mumbai 26/11 attack measure.

**Who can access the data?**

The database would be accessible to authorised persons from 11 agencies on a case-to-case basis, and only for professional investigations into suspected cases of terrorism.

**Criticisms:**

- NATGRID is facing opposition on charges of possible violations of privacy and leakage of confidential personal information.
- Its efficacy in preventing terror has also been questioned given that no state agency or police force has access to its database thus reducing chances of immediate, effective action.
- According to few experts, digital databases such as NATGRID can be misused. Over the last two decades, the very digital tools that terrorists use have also become great weapons to fight the ideologies of violence.
- Intelligence agencies have also opposed amid fears that it would impinge on their territory and possibly result in leaks on the leads they were working on to other agencies.

**Why do we need NATGRID?**

- The danger from not having a sophisticated tool like the NATGRID is that it forces the police to rely on harsh and coercive means to extract information in a crude and degrading fashion.
- After every terrorist incident, it goes about rounding up suspects—many of who are innocent. If, instead, a pattern search and recognition system were in place, these violations of human rights would be much fewer.
- Natgrid would also help the Intelligence Bureau keep a tab on persons with suspicious backgrounds.
- The police would have access to all his data and any movement by this person would also be tracked with the help of this data base.

Source: PIB
Disabled are entitled to same benefits of SC/ST quota:
Supreme Court

The Supreme Court, in a significant decision, confirmed that persons suffering from disabilities are also socially backward and entitled to the same benefits of relaxation as Scheduled Caste/Scheduled Tribe candidates in public employment and education. A three-judge Bench led by Justice Rohinton Nariman upheld a 2012 judgment of the Delhi High Court in Anamol Bhandari (minor) through his father/Natural Guardian v. Delhi Technological University in a significant decision. “In Anamol Bhandari, the High Court has correctly held that people suffering from disabilities are also socially backward, and are therefore, at the very least, entitled to the same benefits as given to the Scheduled Caste/Scheduled Tribe candidates,” the Supreme Court held in a judgment pronounced on July 8.

Source: TH

Fugitive Economic Offenders Act, 2018

Fugitive Economic Offenders Act, 2018

Paper-3- Economics (Mains)

Recently, assets worth Rs. 329.66 crore of the Punjab National Bank (PNB) fraud mastermind Nirav Modi have been confiscated under Section 12(2) and (8) of the Fugitive Economic Offenders Act, 2018.
In this **money laundering** case, the **Enforcement Directorate** (ED) has so far attached properties valued at Rs. 2,348 crore. The properties were earlier attached under the **Prevention of Money Laundering Act, (PMLA) 2002**.

To proactively detect such frauds, the **Reserve Bank of India** (RBI) is in the process of putting together an exclusive wing for **banking fraud oversight**. This wing will have teams for meta-data processing and analysis, **artificial intelligence** analysis units, as well as proactive risk assessment cells.

**Fugitive Economic Offenders Act, 2018:** It **seeks to confiscate properties of economic offenders who have left the country** to avoid facing criminal prosecution or refuse to return to the country to face prosecution.

**Fugitive economic offender:** A person against whom an arrest warrant has been issued for committing an offence listed in the Act and the value of the offence is at least Rs. 100 crore.

**Some of the offences listed in the act are:**
- Counterfeiting government stamps or currency.
- Cheque dishonour.
- Money laundering.
- Transactions defrauding creditors.

**Declaration of a Fugitive Economic Offender:**
- After hearing the application, a **special court** (designated under the PMLA, 2002) may declare an individual as a fugitive economic offender.
- It **may confiscate properties** which are proceeds of crime, Benami properties and any other property, in India or abroad.
- Upon confiscation, **all rights and titles of the property will vest in the central government**, free from encumbrances (such as any charges on the property).
- The central government may appoint an administrator to manage and dispose of these properties.

**Bar on Filing or Defending Civil Claims:**
- The Act allows any **civil court or tribunal to prohibit** a declared fugitive
economic offender, from filing or defending any civil claim. Further, any company or limited liability partnership where such a person is a majority shareholder, promoter, or a key managerial person, may also be barred from filing or defending civil claims. The authorities may provisionally attach properties of an accused, while the application is pending before the Special Court.

Powers:

The authorities under the PMLA, 2002 will exercise powers given to them under the Fugitive Economic Offenders Act. These powers will be similar to those of a civil court, including the search of persons in possession of records or proceeds of crime, the search of premises on the belief that a person is an FEO and seizure of documents.

Source: TH

Sundarbans Wetlands

GS-III | 13 July, 2020

Sundarbans Wetlands

Paper-3 Environment and Biodiversity (PT-MAINS)

January 30th 2019 the Indian Sundarban was accorded the status of ‘Wetland of International Importance’ under the Ramsar Convention. It comprises hundreds of islands and a network of rivers, tributaries and creeks in the delta of the Ganga and the Brahmaputra at the mouth of the Bay of Bengal in India and Bangladesh.

Located on the southwestern part of the delta, the Indian Sundarban constitutes over 60% of the country’s total mangrove forest area. It is the 27th Ramsar Site in India, and with an area of 4,23,000 hectares is now the largest protected wetland in the country.

Richness of Sundarbans (PT SHOTS)
The Indian Sundarban met four of the nine criteria required for the status of ‘Wetland of International Importance’ — presence of rare species and threatened ecological communities, biological diversity, significant and representative fish and fish spawning ground and migration path.

The Indian Sundarban, also a UNESCO world heritage site, is home to the Royal Bengal Tiger.

The Ramsar website points out that the Indian Sundarban is also home to a large number of “rare and globally threatened species, such as the critically endangered northern river terrapin (*Batagur baska*), the endangered Irrawaddy dolphin (*Orcaella brevirostris*), and the vulnerable fishing cat (*Prionailurus viverrinus*).

Two of the world’s four horseshoe crab species, and eight of India’s 12 species of kingfisher are also found here. Recent studies claim that the Indian Sundarban is home to 2,626 faunal species and 90% of the country’s mangrove varieties.

**Importance of Ramsar recognition**

- The Ramsar status will help to highlight conservation issues of the Sundarbans at the international level.
- The part of the Sundarban delta, which lies in Bangladesh, was accorded the status of a Ramsar site in 1992, and with Indian Sundarban getting it too, international cooperation between the two countries for the protection of this unique ecosystem will increase.
- This could lead to a better conservation strategy for flagship species such as the tiger and the northern river terrapin.

**Various threats**

While the Indian Sundarban is a biodiverse preserve, over four million people live on its northern and northwestern periphery, putting pressure on the ecosystem. Concerns have been raised about natural ecosystems being changed for cultivation of shrimp, crab, molluscs and fish.

The Ramsar Information Sheet lists fishing and harvesting of aquatic resources as a “high impact” actual threat to the wetland. The other threats are from dredging, oil and gas drilling, logging and wood harvesting, hunting and collecting terrestrial animals. Salinity has been categorised as a medium and tourism as a low impact actual threat in the region. Along with anthropogenic
pressures, it is also vulnerable to climate change and requires better management and conservation practices.

In News recently

Discovery India and World Wide Fund (WWF) India have partnered with the Government of West Bengal and local communities in the Sundarban to help save the world’s only mangrove tiger habitat.

They are working with a vision to create climate-smart villages in the Sundarbans.

Climate Smart Villages are sites where farmers, researchers, local government and the private sector come together to understand which climate smart agriculture practices are best suited for a particular location.

The project will use technology to solve several of the issues faced in the region. This includes building datasets on impacts of climate change on estuarine ecosystem.

Through this project, in partnership with the West Bengal Forest Directorate and Indian Institute of Science Education and Research (IISER) Kolkata, two Sundarbans ecological observatories will be set up, each featuring data loggers, monitoring buoys and an onsite laboratory.

- **Farmland productivity**: The initiative also focuses on enhancing farmland productivity through low-cost measures and adjusting crop calendars to deal with climate change.
- **The initiative will also include work towards securing habitats for tigers and prey species.**
- **The project at Sundarbans is part of a global movement, Project CAT (Conserving Acres for Tigers), aimed at building healthy habitats for Tigers by conserving six million acres of protected land across four countries.**

**Project CAT (Conserving Acres for Tigers)**

- **Discovery Communications** is working with World Wildlife Fund and others to support a worldwide effort to double the number of tigers in the wild by 2022.
- **It is a mission to ensure a future for tigers and other endangered wildlife by**
conserving nearly a million acres of protected land on the border of India and Bhutan.

- Tigers face multiple threats from **poaching, habitat loss and fragmentation, conflict with humans and overhunting** of their prey species.
- As a large predator, tigers are an umbrella species. They play a key role in maintaining a healthy ecosystem.
- By protecting tigers and their habitat, the others risk animals that share this habitat, like Asian elephants, greater one-horned rhinos, clouded leopards and important prey species are also getting protected.

### Ramsar Convention (PT Shot)

- The Convention on Wetlands of International Importance (better known as the Ramsar Convention) is an international agreement promoting the conservation and wise use of wetlands.
- It is the only global treaty to focus on a single ecosystem.
- The convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Traditionally viewed as a wasteland or breeding ground of disease, wetlands actually provide freshwater and food, and serve as nature's shock absorber.
- Wetlands, critical for biodiversity, are disappearing rapidly, with recent estimates showing that 64% or more of the world’s wetlands have vanished since 1900.
- Major changes in land use for agriculture and grazing, water diversion for dams and canals and infrastructure development are considered to be some of the main causes of loss and degradation of wetlands.

Source: PIB

---

Reform of Criminal Laws

GS-II | 13 July, 2020

Reform of Criminal Laws
The Ministry of Home Affairs (MHA) has constituted a national level ‘Committee for the Reform of Criminal Laws’.

What is the committee for?

The criminal law in India comprises -

- the Indian Penal Code of 1860
- the Code of Criminal Procedure that was rewritten in 1973
- the Indian Evidence Act that dates back to 1872

The idea that the current laws governing crime, investigation and trial require meaningful reform has long been in place. There have been several attempts in recent decades to overhaul the body of criminal law. **Given this, the committee's mandate now is to recommend reforms in the criminal laws in a principled, effective, and efficient manner.**

The reforms should ensure the safety and security of the individual, the community and the nation. It should prioritise the constitutional values of justice, dignity and the inherent worth of the individual.

How does it work?

The committee has several leading legal academicians on board. It would be gathering opinions online, consulting with experts and collating material for their report to the government. Questionnaires have been posted online on the possible reforms.

**The committee has invited experts in the field of criminal law to participate in the exercise through an online consultation mechanism. The consultation exercise would go on for 3 months (starting on 4 July 2020).**

What are the concerns?

- **Timeframe** - Comprehensive legal reform requires careful consideration and a good deal of deliberation. An apparently short timeframe and limited scope for public consultation has thus been raised as concerns. This has caused considerable disquiet among jurists, lawyers and those concerned with the state of criminal justice in the country.
- **Timing** - The Committee has begun its work in the midst of a pandemic. This may not be the ideal time for wide consultations. Activists and lawyers
functioning in the hinterland may be at a particular disadvantage in formulating their opinions.

- **Mandate** - The panel’s mandate is also vague and open to multiple interpretations. It is also not clear why the Law Commission has not been vested with this task.
- **Members** - The committee being an all-male, Delhi-based one has led to concerns of lack of diversity.

**Way ahead?**

Reform is best achieved through a cautious and inclusive approach. If at all criminal law is to be reformed, there should be a genuine attempt to reach wide consensus.

The priorities should be on ways to speed up trials, protect witnesses, address the travails of victims, improve investigative mechanisms and, most importantly, eliminate torture.

Source: TH

---

**NATGRID**

**GS-PAPER-3 Internal Security - Terrorism**

The ambitious *National Intelligence Grid (NATGRID)* project wants to link social media accounts to the huge database of records related to immigration entry and exit, banking and telephone details among others.

**About NATGRID:**

- It is an ambitious *counter terrorism programme*.
- It will *utilise technologies* like Big Data and analytics to study and analyse the huge amounts of data from various intelligence and enforcement agencies to *help track suspected terrorists and prevent terrorist attacks*. 
It will connect, in different phases, data providing organisations and users besides developing a legal structure through which information can be accessed by the law enforcement agencies. 

NATGRID is a post Mumbai 26/11 attack measure.

Who can access the data?

The database would be accessible to authorised persons from 11 agencies on a case-to-case basis, and only for professional investigations into suspected cases of terrorism.

Criticisms:

- NATGRID is facing opposition on charges of possible violations of privacy and leakage of confidential personal information.
- Its efficacy in preventing terror has also been questioned given that no state agency or police force has access to its database thus reducing chances of immediate, effective action.
- According to few experts, digital databases such as NATGRID can be misused. Over the last two decades, the very digital tools that terrorists use have also become great weapons to fight the ideologies of violence.
- Intelligence agencies have also opposed amid fears that it would impinge on their territory and possibly result in leaks on the leads they were working on to other agencies.

Why do we need NATGRID?

- The danger from not having a sophisticated tool like the NATGRID is that it forces the police to rely on harsh and coercive means to extract information in a crude and degrading fashion.
- After every terrorist incident, it goes about rounding up suspects—many of who are innocent. If, instead, a pattern search and recognition system were in place, these violations of human rights would be much fewer.
- Natgrid would also help the Intelligence Bureau keep a tab on persons with suspicious backgrounds.
- The police would have access to all his data and any movement by this person would also be tracked with the help of this data base.

Source: PIB
Iran drops India from Chabahar rail project, cites funding delay

- Four years after India and Iran signed an agreement to construct a rail line from Chabahar port to Zahedan, along the border with Afghanistan, the Iranian government has decided to proceed with the construction on its own, citing delays from the Indian side in funding and starting the project.
- Last week, Iranian Transport and Urban Development Minister Mohammad Eslami inaugurated the track-laying process for the 628 km Chabahar-Zahedan line, which will be extended to Zaranj across the border in Afghanistan.
- Iranian Railways will proceed without India’s assistance, using approximately $400 million from the Iranian National Development Fund.
- The development comes as China finalises a massive 25-year, $400 billion strategic partnership deal with Iran, which could cloud India’s plans.

Trilateral agreement

- The railway project, which was being discussed between the Iranian Railways and the state-owned Indian Railways Construction Ltd (IRCON), was meant to be part of India’s commitment to the trilateral agreement between India, Iran and Afghanistan to build an alternate trade route to Afghanistan and Central Asia.
- In May 2016, during Prime Minister Narendra Modi’s visit to Tehran to sign the Chabahar agreement with Iranian President Rouhani and Afghanistan President Ghani, IRCON had signed an MoU with the Iranian Rail Ministry.
- The MoU was to construct the Chabahar-Zahedan railway as “part of transit and transportation corridor in trilateral agreement between India, Iran and Afghanistan”.
- IRCON had promised to provide all services, superstructure work and financing for the project (around $1.6 billion).
- However, despite several site visits by IRCON engineers, and preparations by Iranian railways, India never began the work, ostensibly due to worries that these could attract U.S. sanctions.
- The U.S. had provided a sanctions waiver for the Chabahar port and the
rail line to Zahedan, but it has been difficult to find equipment suppliers and partners due to worries they could be targeted by the U.S., said officials. India has already “zeroed out” its oil imports from Iran due to U.S. sanctions.

25-year Strategic Partnership

- Meanwhile, complicating matters further, Iran and China are close to finalising a 25-year Strategic Partnership which will include Chinese involvement in Chabahar’s duty free zone, an oil refinery nearby, and possibly a larger role in Chabahar port as well.
- According to leaked versions of the 18-page “Comprehensive Plan for Cooperation between Iran and China”, being finalised by officials in Tehran and Beijing, the cooperation will extend from investments in infrastructure, manufacturing and upgrading energy and transport facilities, to refurbishing ports, refineries and other installations, and will commit Iranian oil and gas supplies to China during that period.
- Iranian officials denied a report that also suggested Chabahar port, where India took, will be leased to China.
- However, Iran proposed a tie-up between the Chinese-run Pakistani port at Gwadar and Chabahar last year, and has offered interests to China in the Bandar-e-Jask port 350km away from Chabahar, as well as in the Chabahar duty free zone.
- Each of those possibilities should be watched closely by New Delhi, said former Ambassador to Iran, K.C. Singh. “[The Iran-China deal] impinges on India’s “strategic ties” with Iran and the use of Chabahar port. **Jask lies to west of Chabahar & right before Straits of Hormuz.** China would thus extends its control along the Pakistan-Iran coast,” he cautioned.
Iran drops India from Chabahar rail project, cites funding delay

- Four years after India and Iran signed an agreement to construct a rail line from Chabahar port to Zahedan, along the border with Afghanistan, the Iranian government has decided to proceed with the construction on its own, citing delays from the Indian side in funding and starting the project.
- Last week, Iranian Transport and Urban Development Minister Mohammad Eslami inaugurated the track-laying process for the 628 km Chabahar-Zahedan line, which will be extended to Zaranj across the border in Afghanistan.
- Iranian Railways will proceed without India’s assistance, using approximately $400 million from the Iranian National Development Fund.
- The development comes as China finalises a massive 25-year, $400 billion strategic partnership deal with Iran, which could cloud India’s plans.

Trilateral agreement

- The railway project, which was being discussed between the Iranian Railways and the state-owned Indian Railways Construction Ltd (IRCON), was meant to be part of India’s commitment to the trilateral agreement between India, Iran and Afghanistan to build an alternate trade route to Afghanistan and Central Asia.
- In May 2016, during Prime Minister Narendra Modi’s visit to Tehran to sign the Chabahar agreement with Iranian President Rouhani and Afghanistan President Ghani, IRCON had signed an MoU with the Iranian Rail Ministry.
- The MoU was to construct the Chabahar-Zahedan railway as “part of transit and transportation corridor in trilateral agreement between India, Iran and Afghanistan”.
- IRCON had promised to provide all services, superstructure work and financing for the project (around $1.6 billion).
- However, despite several site visits by IRCON engineers, and preparations by Iranian railways, India never began the work, ostensibly due to worries that these could attract U.S. sanctions.
- The U.S. had provided a sanctions waiver for the Chabahar port and the
rail line to Zahedan, but it has been difficult to find equipment suppliers and partners due to worries they could be targeted by the U.S., said officials. India has already “zeroed out” its oil imports from Iran due to U.S. sanctions.

25-year Strategic Partnership

- Meanwhile, complicating matters further, Iran and China are close to finalising a 25-year Strategic Partnership which will include Chinese involvement in Chabahar’s duty free zone, an oil refinery nearby, and possibly a larger role in Chabahar port as well.
- According to leaked versions of the 18-page “Comprehensive Plan for Cooperation between Iran and China”, being finalised by officials in Tehran and Beijing, the cooperation will extend from investments in infrastructure, manufacturing and upgrading energy and transport facilities, to refurbishing ports, refineries and other installations, and will commit Iranian oil and gas supplies to China during that period.
- Iranian officials denied a report that also suggested Chabahar port, where India took, will be leased to China.
- However, Iran proposed a tie-up between the Chinese-run Pakistani port at Gwadar and Chabahar last year, and has offered interests to China in the Bandar-e-Jask port 350km away from Chabahar, as well as in the Chabahar duty free zone.
- Each of those possibilities should be watched closely by New Delhi, said former Ambassador to Iran, K.C. Singh. “[The Iran-China deal] impinges on India’s “strategic ties” with Iran and the use of Chabahar port. Jask lies to west of Chabahar & right before Straits of Hormuz. China would thus extends its control along the Pakistan-Iran coast,” he cautioned.
‘Pragyata’ Guidelines

- Union HRD Minister Ramesh Pokhriyal ‘Nishank’ has released ‘Pragyata’ Guidelines for Online Education that can help balance screen time allowed for various classes of school students.
- The guidelines are important, especially during the current times of COVID-19 pandemic, when online education and digital classrooms have become a norm due to school closure and travel restrictions announced by the governments.

HRD Minister unveiled the Guidelines

- The Union HRD Minister Ramesh Pokhriyal formally unveiled the ‘Pragyata’ Guidelines on 14th July 2020.
- The guidelines focus on 8 key steps i.e. Plan, Review, Arrange, Guide, Yak(talk), Assign, Track, and Appreciate.

Screen time Caps Recommended for Students

- According to the ‘Pragyata’ Guidelines, HRD Ministry has recommended a cap on screen time allotted to the students of different classes as part of their online learning through digital classrooms.
- The guidelines recommend that for pre-primary school students, the screen time should be limited to 30 minutes per day.
- On similar lines, for students of 1st to 8th Class, two online sessions of up to 30-45 minutes each should be conducted, whereas for Classes 9th to 12th, four sessions of up to 30-45 minutes each have been recommended.

Source: TH
Union HRD Minister Ramesh Pokhriyal ‘Nishank’ has released ‘Pragyata’ Guidelines for Online Education that can help balance screen time allowed for various classes of school students. The guidelines are important, especially during the current times of COVID-19 pandemic, when online education and digital classrooms have become a norm due to school closure and travel restrictions announced by the governments.

The Union HRD Minister Ramesh Pokhriyal formally unveiled the ‘Pragyata’ Guidelines on 14th July 2020. The guidelines focus on 8 key steps i.e. Plan, Review, Arrange, Guide, Yak(talk), Assign, Track, and Appreciate.

According to the ‘Pragyata’ Guidelines, HRD Ministry has recommended a cap on screen time allotted to the students of different classes as part of their online learning through digital classrooms. The guidelines recommend that for pre-primary school students, the screen time should be limited to 30 minutes per day. On similar lines, for students of 1st to 8th Class, two online sessions of up to 30-45 minutes each should be conducted, whereas for Classes 9th to 12th, four sessions of up to 30-45 minutes each have been recommended.

Source: TH
Reservations for Divyangjan- Persons with Disability

GS-PAPER-1 Social issue (MAINS- IV)

The Supreme Court, in a significant decision, confirmed that persons with disabilities are also socially backward. The decision highlighted Divyangjan are entitled to the same benefits of relaxation as Scheduled Caste and Scheduled Tribe candidates in public employment and education.

SC upheld a 2012 judgment of the Delhi High Court in Anamol Bhandari vs. Delhi Technological University.

Constitutional provisions on reservations

- **Article 15 (4)** empowers the State to make special provision for the advancement of the SCs and the STs.
- E.g. providing fee concession in admission to any educational institution, building hostels for SCs/STs.
- **Article 15 (5)** empowers the State to reserve seats for SCs and the STs in admission to educational institutions including private educational institutions, whether aided or unaided by the State.
- However, it excludes minority educational institutions referred to in Article 30 (1).
- **Article 16 (4)** empowers the State to make provisions for the reservation of appointments or posts in favor of SCs/STs.
- **Article 46** - Empower the state to promote educational and economic interests of the weaker sections of the people, and, in particular SC & ST and shall protect them from social injustice and all forms of exploitation.

The Rights of Persons with Disabilities Act

A study conducted by the Disability Rights India Foundation (DRIF) on the implementation of the Rights of Persons with Disabilities (RPWD) Act, across 24 States, has revealed that more than half have not notified the State rules.

- Only ten states including Bihar, Chandigarh, Manipur, Meghalaya, Odisha,
Telangana, Tamil Nadu and West Bengal have notified the rules.

- Recently, **Rajasthan was recognised as the best State in implementation of Accessible India Campaign** on the occasion of **International Day of Persons with Disabilities (December 3rd)**.
  - This year's theme for International Day of Persons with Disabilities was **"Empowering persons with disabilities and ensuring inclusiveness and equality"**- declared by the United Nations (UN).
  - It focuses on the **2030 Agenda for Sustainable Development** and pledges to "leave no one behind". This year also marks the **70th anniversary of the Universal Declaration of Human Rights**.
- **Article 41 of the Directive Principles of State Policy (DPSP)** states that State shall make effective provision for securing right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, within the limits of its economic capacity and development.
- The subject of ‘relief of the disabled and unemployable’ is specified in **state list of the Seventh schedule of the constitution**.

### Accessible India Campaign (AIC)

- Accessible India Campaign (AIC) is the nationwide flagship campaign of the **Department of Empowerment of Persons with Disabilities (DEPwD)**, **Ministry of Social Justice and Empowerment**.
- The aim of the Campaign is to make a barrier free and conducive environment for Divyangjans all over the country.
- It was **launched on International Day of Persons with Disabilities on 3rd December, 2015**.

### Right of Persons with Disabilities Act 2016

- Disability has been defined based on an **evolving and dynamic concept**.
- The types of disabilities have been **increased from 7 to 21**. The act added mental illness, autism, spectrum disorder, cerebral palsy, muscular dystrophy, chronic neurological conditions, speech and language disability, thalassemia, hemophilia, sickle cell disease, multiple disabilities including deaf blindness, **acid attack victims** and Parkinson’s disease which were largely ignored in earlier act. In addition, the **Government has been authorized to notify** any other category of specified disability.
- It increases the quantum of reservation for people suffering from disabilities from **3% to 4% in government jobs** and from **3% to 5% in higher education institutes**.
- Every child with benchmark disability between the age group of **6 and 18**
years shall have the right to free education. Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education.

- Stress has been given to ensure accessibility in public buildings in a prescribed time frame along with Accessible India Campaign.
- The Chief Commissioner for Persons with Disabilities and the State Commissioners will act as regulatory bodies and Grievance Redressal agencies, monitoring implementation of the Act.
- A separate National and State Fund be created to provide financial support to the persons with disabilities.

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)

- The Convention was adopted by the General Assembly in December 2006 and it came into force on May 2008.
- The convention seeks to engage member countries in developing and carrying out policies, laws and administrative measures for securing the rights recognized in the Convention and abolish laws, regulations, customs and practices that constitute discrimination.
- It requires countries to identify and eliminate obstacles and barriers and ensure that persons with disabilities can access their environment, transportation, public facilities and services, and information and communications technologies.
- It asks member countries to recognize the right to an adequate standard of living and social protection which includes public housing, services and assistance for disability-related needs, as well as assistance with disability-related expenses in case of poverty.

Source: PIB

India â€“ Iran recent ties and China

GS-II | 18 July, 2020
Recently, the Ministry of External Affairs (MEA) has confirmed that India is no longer involved in the Farzad-B gas field project of Iran. Further, it said that India has not received any response from Iran since December 2019 on the future of the Chabahar-Zahedan railway project as well.

It cited policy changes by the Iranian government, Iran’s uncertain finances, and the USA sanctions situation as the reasons behind the decisions on Indian infrastructure projects in Iran.

Farzad-B Gas Field:

- It is located in Persian Gulf (Iran).
- The contract for exploration of the field was signed in 2002 by Indian consortium comprising ONGC Videsh, Indian Oil Corporation and Oil India.

**TIMELINE: CHABAHAR AND FARZAD-B**

*Dec 25, 2002:* A consortium of ONGC Videsh, IOC and Oil India signs contract for carrying out exploration at Farzad-B block

*Jan 25, 2003:* Former PM Atal Bihari Vajpayee and then Iran president Seyyed Mohammad Khatami sign a deal to develop Chabahar port complex and Chabahar-Fahranj-Bam railway link

*June, 2009:* Farzad-B contract expires

*May 6, 2015:* Union minister Nitin Gadkari signs an MoU with Iran

*May 22, 2016:* PM Narendra Modi visits Tehran; discusses Chabahar and Farzad with Iranian President Hassan Rouhani

*Dec 3, 2017:* Rouhani inaugurates first phase of port

*Jan 2018:* Iran and India sign pact worth $2 bn for cooperation in rail

*Feb 10, 2018:* Iran signs agreement to lease the operational control of Chabahar port

*Jul 2020:* Iran shows the door to India in both Chabahar and Farzad-B projects
The contract expired in 2009 after declaration of commerciality of the field, based on the gas discovery.
- It has **gas reserves of more than 19 trillion cubic feet**. ONGC has invested approximately **USD 100 million**.
- Since then, the consortium has been trying to secure the contract for development of the field.
- The major dispute between India and Iran was over setting up of two pipelines, and also over money to be quoted on the development plan.
- Around 75% of the deal was finalised by May 2018, when the **USA unilaterally withdrew from the nuclear deal** and announced sanctions on Iran.
- In **January 2020**, India was informed that in the immediate future, Iran would develop the field on its own and would like to **involve India appropriately at a later stage**.

Chabahar-Zahedan Railway Project:
UPSC "PT" DNA (Daily News Analysis)
In the ‘New Delhi Declaration’ signed in 2003, both countries had decided to jointly develop the Chabahar Port complex.

- The Port development was exempted from the sanctions. India’s main investment in the Chabahar Port where it has taken over operations of one terminal, had progressed well in the last few years, handling 82 ships with 12 lakh tonnes of bulk cargo in 8200 containers since December 2018.
- A contract to develop the 628-km railway line (Chabahar-Zahedan) along the Iran-Afghanistan border was signed in 2016.
- IRCON was appointed by the Government of India to assess the feasibility of the project. It was working with CDTIC, an Iranian company.
- It had completed the site inspection and review of the feasibility report. The Iranian side was to nominate an authorised entity to finalise outstanding technical and financial issues. India waited for the same.
- However, Iran started work on the railway project in July 2020. India is not part of this project as of now since there is lack of clarity on whether it will attract the USA sanctions. However, it has conveyed to Iran that it is open to joining the project later.

Concerns for India

- Iran’s growing proximity to China. Further, Iran seems to be sceptical of India’s diplomatic ties with the USA.
- **Farzad-B gas Field:** India needs gas and Iran remains one of the best options as geographically, Iran is closest to India of all the countries in the Persian gulf region. Further, it could have improved India-Iran ties as the crude oil import from Iran remains impacted due to the USA sanctions.
- **Chabahar** is not only a key to maritime relations between both the countries, but also provides an opportunity to India to reach Russia and Central Asia.

  **Further, it allows India to bypass Pakistan** which had blocked Indian aid to Afghanistan and all trade over land.

India needs to play a balancing act between the USA and Iran. Further, India needs to closely watch the space created by its exit. In a world where connectivity is seen as the new currency, India’s loss on account of these projects can become gain for some other country, especially China.

Source: IE
The recently discovered comet C/2020 F3 will make its closest approach to the Earth at a distance of 64 million miles or 103 million kilometres while crossing Earth’s outside orbit on 22nd July 2020.

It is also known as NEOWISE after the National Aeronautics and Space Administration (NASA) telescope that discovered it. On 3rd July, it was closest to the sun at 43 million km due to which its outer layer was released, creating an atmosphere (referred to as coma) of gas and dust from its icy surface. It will be visible through binoculars or a small telescope.

What is Coma?
On July 3, the comet was closest to the sun at 43 million km. On this day, the comet cruised inside Mercury’s orbit and, due to its proximity to the sun, its outer layer was released creating an atmosphere – referred to as coma – of gas and dust from its icy surface.

1. This atmosphere sometimes leads to formation of a bright tail of debris that can extend for thousands or millions of kilometres.

What Are The Differences Between An Asteroid, Comet, Meteoroid, Meteor and Meteorite?

- **Asteroid**: A relatively small, inactive, rocky body orbiting the Sun and is available between Mars and Jupiter.
- **Comet**: A relatively small, at times active, object whose ices can vaporize in sunlight forming an atmosphere (coma) of dust and gas and, sometimes, a tail of dust and/or gas.
- **Meteoroid**: A small particle from a comet or asteroid orbiting the Sun.
- **Meteor**: The light phenomena which results when a meteoroid enters the Earth’s atmosphere and vaporizes; a shooting star.
- **Meteorite**: A meteoroid that survives its passage through the Earth’s atmosphere and lands upon the Earth’s surface.

**NASA’s NEOWISE:**

Launched in December 2009 as the Wide-Field Infrared Survey Explorer, or WISE, the space telescope was originally designed to survey the sky in infrared, detecting asteroids, stars and some of the faintest galaxies in space.

It did so successfully until completing its primary mission in February 2011. In December 2013, it was re-purposed for the NEOWISE project as an instrument to study near-Earth objects, or NEOs, as well as more distant asteroids and comets.

**Significance of the Study**

- Astronomers believe that comets hold important clues about the formation of the solar system and it is possible that comets brought water and other organic compounds to Earth.
- NASA tracks all Near Earth Objects (NEOs) that includes comets and asteroids using telescopes placed all around the Earth, as part of its NEO
Observation Program.

**Objective of the Program:** To find, track and characterise NEOs that are 140 meters or larger in size since they can pose a risk to the Earth because of the devastation a potential impact can cause.

Source: TH
## UPSC "PT" DNA (Daily News Analysis)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>14&lt;sup&gt;th&lt;/sup&gt; FC 2015-20</th>
<th>15&lt;sup&gt;th&lt;/sup&gt; FC 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Distance</td>
<td>50.0</td>
<td>45.0</td>
</tr>
<tr>
<td>Population (1971)</td>
<td>17.5</td>
<td>-</td>
</tr>
<tr>
<td>Population (2011)</td>
<td>10.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Area</td>
<td>15.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Forest Cover</td>
<td>7.5</td>
<td>-</td>
</tr>
<tr>
<td>Forest and Ecology</td>
<td>-</td>
<td>10.0</td>
</tr>
<tr>
<td>Demographic Performance</td>
<td>-</td>
<td>12.5</td>
</tr>
<tr>
<td>Tax Effort</td>
<td>-</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Sources: Report for the year 2020-21, 15<sup>th</sup> Finance Commission; PRS.

- **Income distance:** Income distance is the distance of the state’s income from the state with the highest income. The income of a state has been computed as average per capita GSDP during the three-year period between 2015-16 and 2017-18. States with lower per capita income would be given a higher share to maintain equity among states.

- **Demographic performance:** The Terms of Reference (ToR) of the Commission required it to use the population data of 2011 while making recommendations. Accordingly, the Commission used only 2011 population data for its recommendations. The Demographic Performance criterion has been introduced to reward efforts made by states in controlling their population. It will be computed by using the reciprocal of the total fertility ratio of each state, scaled by 1971 population data. States with a lower fertility ratio will be scored higher on this criterion. The total fertility ratio in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates.

- **Forest and ecology:** This criterion has been arrived at by calculating the share of dense forest of each state in the aggregate dense forest of all the states.
**Tax effort:** This criterion has been used to reward states with higher tax collection efficiency. It has been computed as the ratio of the average per capita own tax revenue and the average per capita state GDP during the three-year period between 2014-15 and 2016-17.

**Grants-in-aid**

In 2020-21, the following grants will be provided to states: (i) revenue deficit grants, (ii) grants to local bodies, and (iii) disaster management grants. The Commission has also proposed a framework for sector-specific and performance-based grants. State-specific grants will be provided in the final report.

- **Revenue deficit grants:** In 2020-21, 14 states are estimated to have an aggregate revenue deficit of Rs 74,340 crore post-devolution. The Commission recommended revenue deficit grants for these states (see Table 4 in the annexure).
- **Special grants:** In case of three states, the sum of devolution and revenue deficit grants is estimated to decline in 2020-21 as compared to 2019-20. These states are Karnataka, Mizoram, and Telangana. The Commission has recommended special grants to these states aggregating to Rs 6,764 crore.
- **Sector-specific grants:** The Commission has recommended a grant of Rs 7,375 crore for nutrition in 2020-21. Sector-specific grants for the following sectors will be provided in the final report: (i) nutrition, (ii) health, (iii) pre-primary education, (iv) judiciary, (v) rural connectivity, (vi) railways, (vii) police training, and (viii) housing.
- **Performance-based grants:** Guidelines for performance-based grants include: (i) implementation of agricultural reforms, (ii) development of aspirational districts and blocks, (iii) power sector reforms, (iv) enhancing trade including exports, (v) incentives for education, and (vi) promotion of domestic and international tourism. The grant amount will be provided in the final report.
- **Grants to local bodies:** The total grants to local bodies for 2020-21 has been fixed at Rs 90,000 crore, of which Rs 60,750 crore is recommended for rural local bodies (67.5%) and Rs 29,250 crore for urban local bodies (32.5%). This allocation is 4.31% of the divisible pool. This is an increase over the grants for local bodies in 2019-20, which amounted to 3.54% of the divisible pool (Rs 87,352 crore). The grants will be divided between states based on population and area in the ratio 90:10. The grants will be made available to all three tiers of Panchayat- village, block, and district.
Disaster risk management: The Commission recommended setting up National and State Disaster Management Funds (NDMF and SDMF) for the promotion of local-level mitigation activities. The Commission has recommended retaining the existing cost-sharing patterns between the centre and states to fund the SDMF (new) and the SDRF (existing). The cost-sharing pattern between centre and states is (i) 75:25 for all states, and (ii) 90:10 for north-eastern and Himalayan states.

For 2020-21, State Disaster Risk Management Funds have been allocated Rs 28,983 crore, out of which the share of the union is Rs 22,184 crore. The National Disaster Risk Management Funds has been allocated Rs 12,390 crore.

Recommendations on fiscal roadmap

- **Fiscal deficit and debt levels:** The Commission noted that recommending a credible fiscal and debt trajectory roadmap remains problematic due to uncertainty around the economy. It recommended that both central and state governments should focus on debt consolidation and comply with the fiscal deficit and debt levels as per their respective Fiscal Responsibility and Budget Management (FRBM) Acts.

- **Off-budget borrowings:** The Commission observed that financing capital expenditure through off-budget borrowings detracts from compliance with the FRBM Act. It recommended that both the central and state governments should make full disclosure of extra-budgetary borrowings. The outstanding extra-budgetary liabilities should be clearly identified and eliminated in a time-bound manner.

- **Statutory framework for public financial management:** The Commission recommended forming an expert group to draft legislation to provide for a statutory framework for sound public financial management system. It observed that an overarching legal fiscal framework is required which will provide for budgeting, accounting, and audit standards to be followed at all levels of government.

- **Tax capacity:** In 2018-19, the tax revenue of state governments and central government together stood at around 17.5% of GDP. The Commission noted that tax revenue is far below the estimated tax capacity of the country. Further, India’s tax capacity has largely remained unchanged since the early 1990s. In contrast, tax revenue has been rising in other emerging markets. The Commission recommended: (i) broadening the tax base, (ii) streamlining
GST implementation: The Commission highlighted some challenges with the implementation of the Goods and Services Tax (GST). These include: (i) large shortfall in collections as compared to original forecast, (ii) high volatility in collections, (iii) accumulation of large integrated GST credit, (iv) glitches in invoice and img tax matching, and (v) delay in refunds. The Commission observed that the continuing dependence of states on compensation from the central government (21 states out of 29 states in 2018-19) for making up for the shortfall in revenue is a concern. It suggested that the structural implications of GST for low consumption states need to be considered.

Other recommendations

• Financing of security-related expenditure: The ToR of the Commission required it to examine whether a separate funding mechanism for defence and internal security should be set up and if so, how it can be operationalised. In this regard, the Commission intends to constitute an expert group comprising representatives of the Ministries of Defence, Home Affairs, and Finance. The Commission noted that the Ministry of Defence proposed following measures for this purpose: (i) setting up of a non-lapsable fund, (ii) levy of a cess, (iii) monetisation of surplus land and other assets, (iv) tax-free defence bonds, and (v) utilising proceeds of disinvestment of defence public sector undertakings. The expert group is expected to examine these proposals or alternative funding mechanisms.

Criticisms:

• The population parameter used by the Commission has been criticised by the governments of the southern states.
• The previous FC used both the 1971 and the 2011 populations to calculate the states' shares, giving greater weight to the 1971 population (17.5%) as compared to the 2011 population (10%).
• The use of 2011 population figures has resulted in states with larger populations like UP and Bihar getting larger shares, while smaller states with lower fertility rates have lost out.
• The combined population of the Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Jharkhand is 47.8 crore.
• This is over 39.48% of India’s total population, and is spread over 32.4% of the country’s area, as per the 2011 Census.
• On the other hand, the southern states of Tamil Nadu, Kerala, Karnataka and undivided Andhra Pradesh are home to only 20.75% of the population living in 19.34% of the area, with a 13.89% share of the taxes.
• This means that the terms decided by the Commission are loaded against the more progressive (and prosperous) southern states.

Source: PIB

Aid for Rural Local Bodies-Finance commission

Paper-2 Governance (Mains)

Finance Commission

It is a constitutional body, that determines the method and formula for distributing the tax proceeds between the Centre and states and among the states as per the constitutional arrangement and present requirements. Under Article 280 of the Constitution, the President of India is required to constitute a Finance Commission at an interval of five years or earlier.

The 1st FC was set up in 1951 and there have been fifteen so far. The 15th FC headed by N.K. Singh was constituted by the President of India on 27th November 2017, against the backdrop of the abolition of the Planning Commission and the introduction of the Goods and Services Tax (GST). In November 2019, the Union Cabinet approved the 15th FC to submit its first report for the first fiscal year 2020-21 and to extend its tenure to provide for the presentation of the final report covering Financial Years 2021-22 to 2025-26 by 30th October, 2020.

In News:
Recently, the Ministry of Finance has released a part of grants-in-aid of Rs.
15187.50 crore for around 2.63 lakh Rural Local Bodies (RLBs) of 28 States. This has been made on the recommendations of the Ministry of Panchayati Raj and the Department of Drinking Water and Sanitation, Ministry of Jal Shakti. This forms part of the Tied Grant as recommended by the 15th Finance Commission (FC) for the Financial Year (FY) 2020-2021.

Imp Points

- **Recommendation of 15th FC**: It recommended the grant in aid of Rs. 60,750 crore for (FY 2020-21) the RLBs which is the highest ever allocation made by the Finance Commission in any single year.

- **Allocation**: It will be allocated in two parts, namely Basic Grant and Tied Grant in 50:50% mode. Basic Grant: These grants are untied and can be used by RLBs for location-specific needs, except for salary or other establishment expenditure. Untied funds are utilised for the works of emergent nature which are normally not covered under the schemes decentralized at the district level.

Tied Grants: These are used for the basic services of:

- Sanitation and maintenance of Open-Defecation Free (ODF) status.
- Supply of drinking water, rain water harvesting and water recycling.
- The RLBs shall, as far as possible, earmark one half of these grants each to these two critical services.
- However, if any RLB has fully saturated the needs of one category it can utilize the funds for the other category.

**Distribution**: The State Governments will be distributing the grants to all the tiers of the Panchayati Raj -village, block and district including the traditional bodies of 5th and 6th Schedule areas based on the accepted recommendations of the latest State Finance Commission (SFC) and in conformity with the recommendations of the 15th FC.

**Assistance**: The Ministry of Panchayati Raj would support the states in
effective utilization of the grants by providing Web/IT enabled platforms for planning, monitoring, accounting / auditing of the works and funds flow at the level of each of the RLBs.

Significance:

- **Fighting Covid 19**: It would help RLBs in providing employment. E.g. migrant laborers who have returned to their native places owing to Covid-19 pandemic situation.
- **Delivery of Basic Services**: Availability of this fund will boost RLBs effectiveness in delivery of basic services to the rural citizens.
- **Rural Infrastructure**: It will augment the rural infrastructure in a constructive way e.g construction of roads, supply of water etc.

Source: PIB

Multidimensional Poverty Index

**GS-III | 18 July, 2020**

**Multidimensional Poverty Index**

**GS-PAPER-3 Poverty (PT-MAINS)**

The Multidimensional Poverty Index was launched by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative (OPHI) in 2010.

MPI is based on the idea that poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional. The index shows the proportion of poor people and the average number of deprivations each poor person experiences at the same time. MPI uses three dimensions and ten indicators which are:

- **Education**: Years of schooling and child enrollment (1/6 weightage
A person is **multidimensionally poor** if she/he is deprived in one third or more (means 33% or more) of the **weighted indicators** (out of the ten indicators). Those who are deprived in one half or more of the weighted indicators are considered living in **extreme multidimensional poverty**. MPI is significant as it recognizes poverty from different dimensions compared to the conventional methodology that measures poverty only from the income or monetary terms.

**In News:**

According to India’s **Voluntary National Review (VNR) of Sustainable Development Goals (SDG)** at least 271 million people were **lifted out of multidimensional poverty** between 2005-06 and 2016-17. The **VNR of SDGs** has been presented by the **Niti Ayog** at the High-Level Political Forum on Sustainable Development.

**Data:**

- The estimates presented were drawn from the 2019 **global Multidimensional Poverty Index (MPI)** released in July 2019.
- Over **640 million people** across India were in multidimensional poverty in 2005-2006.
- The number of people living under **poverty decreased to around 369.55 million** by 2016-2017.
- However, 27.9% of India’s population was still poor in 2016-17

**Poverty Reduction:** In rural areas poverty reduction has outpaced that in urban areas.

Source: TH
European Union (EU), is an international organization comprising 27 European countries and governing common economic, social, and security policies.

The EU was created by the Maastricht Treaty, which entered into force on November 1, 1993. The treaty was designed to enhance European political and economic integration by creating a single currency (the euro), a unified foreign and security policy, and common citizenship rights and by advancing cooperation in the areas of immigration, asylum, and judicial affairs.
In NEWS:

Recently, India and the European Union (EU) agreed to **renew** the **Agreement on Scientific Cooperation** for the **next five years (2020-2025)** during the virtual **15th India-EU Summit**.

**Renewal of Agreement on Scientific Cooperation:**

India and the EU have agreed to further collaborate in research and innovation.
based on the principles of mutual benefit and reciprocity, as established in the India-EU Agreement on Science and Technology (2001) which expired on 17th May 2020.

Both parties are also committed to launch the renewal procedure for the above agreement and acknowledge 20 years of cooperation on research and innovation.

Significance:

- It is expected to enhance research and innovation cooperation in different fields like Water, Energy, Healthcare, Agritech & Bioeconomy, Integrated Cyber-Physical Systems, Information and Communication Technologies, Nanotechnology, and clean technologies, etc.
- It will also strengthen the institutional linkages in research, exchange of researchers, students, startups and attract co-investment of resources for co-generation of knowledge.

India-EU Science and Technology Cooperation:

Science and Technology: India-EU Science & Technology Steering Committee meets annually to review scientific cooperation.

- The Ministry of Earth Sciences (MoES) and the European Commission (EC) have established a Co-Funding Mechanism (CFM) to support joint research projects selected under European Research & Innovation Framework Program ‘Horizon 2020’ related to climate change and polar research.
- Space Technology: Indian Space Research Organisation (ISRO) has had a long standing cooperation with the European Union, since the 1970s. ISRO and the European Space Agency are working towards enhancing cooperation in earth observation. It also involves the Copernicus programme signed in 2018.
- Copernicus is the European Union’s Earth observation programme.

India-EU Relations

Evolution of Diplomatic Relations:

- India being amongst the first countries to establish diplomatic relations with the European Economic Community in 1962.
The first India-EU Summit was held in Lisbon (Portugal) in 2000. Since then, fifteen annual bilateral Summits have been held between India and the EU. The relationship was upgraded to a ‘Strategic Partnership’ during the 5th India-EU Summit held at the Hague (Netherlands) in 2004.

The bilateral Strategic Partnership encompasses dialogue mechanisms covering a wide range of issues including trade, energy security, science & research, non-proliferation and disarmament, counter terrorism, cyber security, counter-piracy, migration and mobility, etc.

Trade and Investment:

- The **EU as a whole** was India’s largest trading partner while India was EU’s 9th largest trading partner in 2018.
- India is also the fourth largest service exporter to the EU and the sixth largest destination for service exports from the EU.
- EU is the largest source of Foreign Direct Investment (FDI) into India.
- Over the period April 2000 to June 2018, FDI equity flows from the EU countries into $ 90.7 billion, which is about 24% of the total FDI inflows to India.
- Among countries, **Singapore** is the largest source of FDI in India during 2019 with $ 14.67 billion investment followed by **Mauritius** ($ 8.24 billion).
- India and the EU are in the process of negotiating a bilateral **Broad-based Trade and Investment Agreement (BTIA)** since 2007.

Way Forward

India and the EU are ideal partners to make a difference in an international environment that is increasingly shaped by strategic rivalry between the USA and China.

They have a common interest in avoiding a bipolarised world and developing the rules-based international order. The effort has to be to make the India-EU partnership rise to its potential and provide a new model for international relations today.

Source: PIB
Reservations for Divyangjan- Persons with Disability

GS-PAPER-1 Social issue (MAINS- IV)

The Supreme Court, in a significant decision, confirmed that persons with disabilities are also socially backward. The decision highlighted Divyangjan are entitled to the same benefits of relaxation as Scheduled Caste and Scheduled Tribe candidates in public employment and education.

SC upheld a 2012 judgment of the Delhi High Court in Anamol Bhandari vs. Delhi Technological University.

Constitutional provisions on reservations

- **Article 15 (4)** empowers the State to make special provision for the advancement of the SCs and the STs.
- E.g. providing fee concession in admission to any educational institution, building hostels for SCs/STs.
- **Article 15 (5)** empowers the State to reserve seats for SCs and the STs in admission to educational institutions including private educational institutions, whether aided or unaided by the State.
- However, it excludes minority educational institutions referred to in Article 30 (1).
- **Article 16 (4)** empowers the State to make provisions for the reservation of appointments or posts in favor of SCs/STs.
- **Article 46** - Empower the state to promote educational and economic interests of the weaker sections of the people, and, in particular SC & ST and shall protect them from social injustice and all forms of exploitation.

The Rights of Persons with Disabilities Act

A study conducted by the Disability Rights India Foundation (DRIF) on the implementation of the Rights of Persons with Disabilities (RPWD) Act, across 24 States, has revealed that more than half have not notified the State rules.

- Only ten states including Bihar, Chandigarh, Manipur, Meghalaya, Odisha,
Telangana, Tamil Nadu and West Bengal have notified the rules.

- Recently, **Rajasthan was recognised as the best State in implementation of Accessible India Campaign** on the occasion of **International Day of Persons with Disabilities (December 3rd)**.
  - This year’s **theme** for International Day of Persons with Disabilities was- "Empowering persons with disabilities and ensuring inclusiveness and equality"- declared by the United Nations (UN).
  - It focuses on the **2030 Agenda for Sustainable Development and pledges to "leave no one behind"**. This year also marks the **70th anniversary of the Universal Declaration of Human Rights**.

- **Article 41 of the Directive Principles of State Policy (DPSP)** states that State shall make effective provision for securing right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, within the limits of its economic capacity and development.

- The subject of ‘relief of the disabled and unemployable’ is specified in **state list of the Seventh schedule of the constitution**.

**Accessible India Campaign (AIC)**

- Accessible India Campaign (AIC) is the nationwide flagship campaign of the **Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment**.

  - The aim of the Campaign is to make a barrier free and conducive environment for Divyangjans all over the country.

  - It was **launched on International Day of Persons with Disabilities on 3rd December, 2015**.

**Right of Persons with Disabilities Act 2016**

- Disability has been defined based on an **evolving and dynamic concept**.

- The types of disabilities have been **increased from 7 to 21**. The act added mental illness, autism, spectrum disorder, cerebral palsy, muscular dystrophy, chronic neurological conditions, speech and language disability, thalassemia, hemophilia, sickle cell disease, multiple disabilities including deaf blindness, **acid attack victims** and Parkinson’s disease which were largely ignored in earlier act. In addition, the **Government has been authorized to notify** any other category of specified disability.

- It increases the quantum of reservation for people suffering from disabilities from **3% to 4% in government jobs** and from **3% to 5% in higher education institutes**.

- Every child with benchmark disability between the age group of **6 and 18**
years shall have the right to free education. Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education.

- Stress has been given to ensure accessibility in public buildings in a prescribed time frame along with Accessible India Campaign.
- The Chief Commissioner for Persons with Disabilities and the State Commissioners will act as regulatory bodies and Grievance Redressal agencies, monitoring implementation of the Act.
- A separate National and State Fund be created to provide financial support to the persons with disabilities.

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)

- The Convention was adopted by the General Assembly in December 2006 and it came into force on in May 2008.
- The convention seeks to engage member countries in developing and carrying out policies, laws and administrative measures for securing the rights recognized in the Convention and abolish laws, regulations, customs and practices that constitute discrimination.
- It requires countries to identify and eliminate obstacles and barriers and ensure that persons with disabilities can access their environment, transportation, public facilities and services, and information and communications technologies.
- It asks member countries to recognize the right to an adequate standard of living and social protection which includes public housing, services and assistance for disability-related needs, as well as assistance with disability-related expenses in case of poverty.

Source: PIB

India â€“ Iran recent ties and China

GS-II | 18 July, 2020

India – Iran recent ties and China
Recently, the Ministry of External Affairs (MEA) has confirmed that India is no longer involved in the Farzad-B gas field project of Iran. Further, it said that India has not received any response from Iran since December 2019 on the future of the Chabahar-Zahedan railway project as well.

It cited policy changes by the Iranian government, Iran’s uncertain finances, and the USA sanctions situation as the reasons behind the decisions on Indian infrastructure projects in Iran.

**TIMELINE: CHABAHAR AND FARZAD-B**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 25, 2002</td>
<td>A consortium of ONGC Videsh, IOI and Oil India signs contract for carrying out exploration at Farzad-B block</td>
</tr>
<tr>
<td>Jan 25, 2003</td>
<td>Former PM Atal Bihari Vajpayee and then Iran president Seyyed Mohammad Khatami sign a deal to develop Chabahar port complex and Chabahar-Fahranj-Bam railway link</td>
</tr>
<tr>
<td>June, 2009</td>
<td>Farzad-B contract expires</td>
</tr>
<tr>
<td>May 6, 2015</td>
<td>Union minister Nitin Gadkari signs an MoU with Iran</td>
</tr>
<tr>
<td>May 22, 2016</td>
<td>PM Narendra Modi visits Tehran; discusses Chabahar and Farzad with Iranian President Hassan Rouhani</td>
</tr>
<tr>
<td>Dec 3, 2017</td>
<td>Rouhani inaugurates first phase of port</td>
</tr>
<tr>
<td>Jan 2018</td>
<td>Iran and India sign pact worth $2 bn for cooperation in rail</td>
</tr>
<tr>
<td>Feb 10, 2018</td>
<td>Iran signs agreement to lease the operational control of Chabahar port</td>
</tr>
<tr>
<td>Jul 2020</td>
<td>Iran shows the door to India in both Chabahar and Farzad-B projects</td>
</tr>
</tbody>
</table>

**Farzad-B Gas Field:**

- It is located in Persian Gulf (Iran).
- The contract for exploration of the field was signed in 2002 by Indian consortium comprising ONGC Videsh, Indian Oil Corporation and Oil India.
The contract expired in 2009 after declaration of commerciality of the field, based on the gas discovery.
- It has **gas reserves of more than 19 trillion cubic feet**. ONGC has invested approximately **USD 100 million**.
- Since then, the consortium has been trying to secure the contract for development of the field.
- The major dispute between India and Iran was over setting up of two pipelines, and also over money to be quoted on the development plan.
- Around 75% of the deal was finalised by May 2018, when the USA unilaterally withdrew from the nuclear deal and announced sanctions on Iran.
- In **January 2020**, India was informed that in the immediate future, Iran would develop the field on its own and would like to involve India appropriately at a later stage.

Chabahar-Zahedan Railway Project:
UPSC "PT" DNA (Daily News Analysis)
In the ‘New Delhi Declaration’ signed in 2003, both countries had decided to jointly develop the Chabahar Port complex.

- The Port development was exempted from the sanctions. India’s main investment in the Chabahar Port where it has taken over operations of one terminal, had progressed well in the last few years, handling 82 ships with 12 lakh tonnes of bulk cargo in 8200 containers since December 2018.
- A contract to develop the 628-km railway line (Chabahar-Zahedan) along the Iran-Afghanistan border was signed in 2016.
- IRCON was appointed by the Government of India to assess the feasibility of the project. It was working with CDTIC, an Iranian company.
- It had completed the site inspection and review of the feasibility report. The Iranian side was to nominate an authorised entity to finalise outstanding technical and financial issues. India waited for the same.
- However, Iran started work on the railway project in July 2020. India is not part of this project as of now since there is lack of clarity on whether it will attract the USA sanctions. However, it has conveyed to Iran that it is open to joining the project later.

Concerns for India

- Iran’s growing proximity to China. Further, Iran seems to be sceptical of India’s diplomatic ties with the USA.
- Farzad-B gas Field: India needs gas and Iran remains one of the best options as geographically, Iran is closest to India of all the countries in the Persian gulf region. Further, it could have improved India-Iran ties as the crude oil import from Iran remains impacted due to the USA sanctions.
- Chabahar is not only a key to maritime relations between both the countries, but also provides an opportunity to India to reach Russia and Central Asia.
  
  Further, it allows India to bypass Pakistan which had blocked Indian aid to Afghanistan and all trade over land.

India needs to play a balancing act between the USA and Iran. Further, India needs to closely watch the space created by its exit. In a world where connectivity is seen as the new currency, India’s loss on account of these projects can become gain for some other country, especially China.

Source: IE
The recently discovered comet C/2020 F3 will make its closest approach to the Earth at a distance of 64 million miles or 103 million kilometres while crossing Earth’s outside orbit on 22nd July 2020. It is also known as NEOWISE after the National Aeronautics and Space Administration (NASA) telescope that discovered it. On 3rd July, it was closest to the sun at 43 million km due to which its outer layer was released, creating an atmosphere (referred to as coma) of gas and dust from its icy surface. It will be visible through binoculars or a small telescope.

What is Coma?
On July 3, the comet was closest to the sun at 43 million km. On this day, the comet cruised inside Mercury’s orbit and, due to its proximity to the sun, its outer layer was released creating an atmosphere – referred to as coma – of gas and dust from its icy surface.

1. This atmosphere sometimes leads to formation of a bright tail of debris that can extend for thousands or millions of kilometres.

What Are The Differences Between An Asteroid, Comet, Meteoroid, Meteor and Meteorite?

- **Asteroid:** A relatively small, inactive, rocky body orbiting the Sun and is available between Mars and Jupiter.
- **Comet:** A relatively small, at times active, object whose ices can vaporize in sunlight forming an atmosphere (coma) of dust and gas and, sometimes, a tail of dust and/or gas.
- **Meteoroid:** A small particle from a comet or asteroid orbiting the Sun.
- **Meteor:** The light phenomena which results when a meteoroid enters the Earth’s atmosphere and vaporizes; a shooting star.
- **Meteorite:** A meteoroid that survives its passage through the Earth’s atmosphere and lands upon the Earth’s surface.

**NASA’s NEOWISE:**

Launched in December 2009 as the Wide-Field Infrared Survey Explorer, or WISE, the space telescope was originally designed to survey the sky in infrared, detecting asteroids, stars and some of the faintest galaxies in space.

It did so successfully until completing its primary mission in February 2011. In December 2013, it was re-purposed for the NEOWISE project as an instrument to study near-Earth objects, or NEOs, as well as more distant asteroids and comets.

**Significance of the Study**

- Astronomers believe that comets hold important clues about the formation of the solar system and it is possible that comets brought water and other organic compounds to Earth.
- NASA tracks all Near Earth Objects (NEOs) that includes comets and asteroids using telescopes placed all around the Earth, as part of its NEO
Observation Program.

**Objective of the Program:** To find, track and characterise NEOs that are 140 meters or larger in size since they can pose a risk to the Earth because of the devastation a potential impact can cause.

Source: TH

---

**15th Finance Commission**

**GS-II | 18 July, 2020**

**15th Finance Commission for FY 2020-21**

**Paper-2 Governance Finance commission (PT-MAINS-IV)**

The Finance Commission is a constitutional body formed by the President of India to give suggestions on centre-state financial relations. The 15th Finance Commission (Chair: Mr N. K. Singh) was required to submit two reports. The first report, consisting of recommendations for the financial year 2020-21, was tabled in Parliament on February 1, 2020. The final report with recommendations for the 2021-26 period will be submitted by October 30, 2020.

**Key recommendations in the first report (2020-21 period) include:**

- **Devolution of taxes to states:** The share of states in the centre’s taxes is recommended to be decreased from 42% during the 2015-20 period to 41% for 2020-21. The 1% decrease is to provide for the newly formed union territories of Jammu and Kashmir, and Ladakh from the resources of the central government. The individual shares of states from the divisible pool of central taxes is provided in Table 3 in the annexure.

**Criteria for devolution**

Table 1 below shows the criteria used by the Commission to determine each state’s share in central taxes, and the weight assigned to each criterion. We explain some of the indicators below.

**Table 1: Criteria for devolution (2020-21)**
Income distance: Income distance is the distance of the state’s income from the state with the highest income. The income of a state has been computed as average per capita GSDP during the three-year period between 2015-16 and 2017-18. States with lower per capita income would be given a higher share to maintain equity among states.

Demographic performance: The Terms of Reference (ToR) of the Commission required it to use the population data of 2011 while making recommendations. Accordingly, the Commission used only 2011 population data for its recommendations.

The Demographic Performance criterion has been introduced to reward efforts made by states in controlling their population. It will be computed by using the reciprocal of the total fertility ratio of each state, scaled by 1971 population data. States with a lower fertility ratio will be scored higher on this criterion. The total fertility ratio in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates.

Forest and ecology: This criterion has been arrived at by calculating the share of dense forest of each state in the aggregate dense forest of all the states.
**Tax effort:** This criterion has been used to reward states with higher tax collection efficiency. It has been computed as the ratio of the average per capita own tax revenue and the average per capita state GDP during the three-year period between 2014-15 and 2016-17.

**Grants-in-aid**

In 2020-21, the following grants will be provided to states: (i) revenue deficit grants, (ii) grants to local bodies, and (iii) disaster management grants. The Commission has also proposed a framework for sector-specific and performance-based grants. State-specific grants will be provided in the final report.

- **Revenue deficit grants:** In 2020-21, 14 states are estimated to have an aggregate revenue deficit of Rs 74,340 crore post-devolution. The Commission recommended revenue deficit grants for these states (see Table 4 in the annexure).
- **Special grants:** In case of three states, the sum of devolution and revenue deficit grants is estimated to decline in 2020-21 as compared to 2019-20. These states are Karnataka, Mizoram, and Telangana. The Commission has recommended special grants to these states aggregating to Rs 6,764 crore.
- **Sector-specific grants:** The Commission has recommended a grant of Rs 7,375 crore for nutrition in 2020-21. Sector-specific grants for the following sectors will be provided in the final report: (i) nutrition, (ii) health, (iii) pre-primary education, (iv) judiciary, (v) rural connectivity, (vi) railways, (vii) police training, and (viii) housing.
- **Performance-based grants:** Guidelines for performance-based grants include: (i) implementation of agricultural reforms, (ii) development of aspirational districts and blocks, (iii) power sector reforms, (iv) enhancing trade including exports, (v) incentives for education, and (vi) promotion of domestic and international tourism. The grant amount will be provided in the final report.
- **Grants to local bodies:** The total grants to local bodies for 2020-21 has been fixed at Rs 90,000 crore, of which Rs 60,750 crore is recommended for rural local bodies (67.5%) and Rs 29,250 crore for urban local bodies (32.5%). This allocation is 4.31% of the divisible pool. This is an increase over the grants for local bodies in 2019-20, which amounted to 3.54% of the divisible pool (Rs 87,352 crore). The grants will be divided between states based on population and area in the ratio 90:10. The grants will be made available to all three tiers of Panchayat- village, block, and district.
Disaster risk management: The Commission recommended setting up National and State Disaster Management Funds (NDMF and SDMF) for the promotion of local-level mitigation activities. The Commission has recommended retaining the existing cost-sharing patterns between the centre and states to fund the SDMF (new) and the SDRF (existing). The cost-sharing pattern between centre and states is (i) 75:25 for all states, and (ii) 90:10 for north-eastern and Himalayan states.

For 2020-21, State Disaster Risk Management Funds have been allocated Rs 28,983 crore, out of which the share of the union is Rs 22,184 crore. The National Disaster Risk Management Funds has been allocated Rs 12,390 crore.

Recommendations on fiscal roadmap

- **Fiscal deficit and debt levels:** The Commission noted that recommending a credible fiscal and debt trajectory roadmap remains problematic due to uncertainty around the economy. It recommended that both central and state governments should focus on debt consolidation and comply with the fiscal deficit and debt levels as per their respective Fiscal Responsibility and Budget Management (FRBM) Acts.

- **Off-budget borrowings:** The Commission observed that financing capital expenditure through off-budget borrowings detracts from compliance with the FRBM Act. It recommended that both the central and state governments should make full disclosure of extra-budgetary borrowings. The outstanding extra-budgetary liabilities should be clearly identified and eliminated in a time-bound manner.

- **Statutory framework for public financial management:** The Commission recommended forming an expert group to draft legislation to provide for a statutory framework for sound public financial management system. It observed that an overarching legal fiscal framework is required which will provide for budgeting, accounting, and audit standards to be followed at all levels of government.

- **Tax capacity:** In 2018-19, the tax revenue of state governments and central government together stood at around 17.5% of GDP. The Commission noted that tax revenue is far below the estimated tax capacity of the country. Further, India’s tax capacity has largely remained unchanged since the early 1990s. In contrast, tax revenue has been rising in other emerging markets. The Commission recommended: (i) broadening the tax base, (ii) streamlining
tax rates, (iii) and increasing capacity and expertise of tax administration in all tiers of the government.

- **GST implementation:** The Commission highlighted some challenges with the implementation of the Goods and Services Tax (GST). These include: (i) large shortfall in collections as compared to original forecast, (ii) high volatility in collections, (iii) accumulation of large integrated GST credit, (iv) glitches in invoice and img tax matching, and (v) delay in refunds. The Commission observed that the continuing dependence of states on compensation from the central government (21 states out of 29 states in 2018-19) for making up for the shortfall in revenue is a concern. It suggested that the structural implications of GST for low consumption states need to be considered.

**Other recommendations**

- **Financing of security-related expenditure:** The ToR of the Commission required it to examine whether a separate funding mechanism for defence and internal security should be set up and if so, how it can be operationalised. In this regard, the Commission intends to constitute an expert group comprising representatives of the Ministries of Defence, Home Affairs, and Finance. The Commission noted that the Ministry of Defence proposed following measures for this purpose: (i) setting up of a non-lapsable fund, (ii) levy of a cess, (iii) monetisation of surplus land and other assets, (iv) tax-free defence bonds, and (v) utilising proceeds of disinvestment of defence public sector undertakings. The expert group is expected to examine these proposals or alternative funding mechanisms.

**Criticisms:**

- The population parameter used by the Commission has been criticised by the governments of the southern states.
- The previous FC used both the 1971 and the 2011 populations to calculate the states' shares, giving greater weight to the 1971 population (17.5%) as compared to the 2011 population (10%).
- The use of 2011 population figures has resulted in states with larger populations like UP and Bihar getting larger shares, while smaller states with lower fertility rates have lost out.
- The combined population of the Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Jharkhand is 47.8 crore.
This is over 39.48% of India’s total population, and is spread over 32.4% of the country’s area, as per the 2011 Census.

On the other hand, the southern states of Tamil Nadu, Kerala, Karnataka and undivided Andhra Pradesh are home to only 20.75% of the population living in 19.34% of the area, with a 13.89% share of the taxes.

This means that the terms decided by the Commission are loaded against the more progressive (and prosperous) southern states.

Source: PIB

Aid for Rural Local Bodies-Finance commission

Paper-2 Governance (Mains)

Finance Commission

It is a constitutional body, that determines the method and formula for distributing the tax proceeds between the Centre and states and among the states as per the constitutional arrangement and present requirements. Under Article 280 of the Constitution, the President of India is required to constitute a Finance Commission at an interval of five years or earlier.

The 1st FC was set up in 1951 and there have been fifteen so far. The 15th FC headed by N.K. Singh was constituted by the President of India on 27th November 2017, against the backdrop of the abolition of the Planning Commission and the introduction of the Goods and Services Tax (GST). In November 2019, the Union Cabinet approved the 15th FC to submit its first report for the first fiscal year 2020-21 and to extend its tenure to provide for the presentation of the final report covering Financial Years 2021-22 to 2025-26 by 30th October, 2020.

In News:
Recently, the Ministry of Finance has released a part of grants-in-aid of Rs. 15187.50 crore for around 2.63 lakh Rural Local Bodies (RLBs) of 28 States. This has been made on the recommendations of the Ministry of Panchayati Raj and the Department of Drinking Water and Sanitation, Ministry of Jal Shakti.

This forms part of the Tied Grant as recommended by the 15th Finance Commission (FC) for the Financial Year (FY) 2020-2021.

Imp Points

- **Recommendation of 15th FC:** It recommended the grant in aid of Rs. 60,750 crore for (FY 2020-21) the RLBs which is the highest ever allocation made by the Finance Commission in any single year.

- **Allocation:** It will be allocated in two parts, namely Basic Grant and Tied Grant in 50:50% mode. Basic Grant: These grants are untied and can be used by RLBs for location-specific needs, except for salary or other establishment expenditure.

  - Untied funds are utilised for the works of emergent nature which are normally not covered under the schemes decentralized at the district level.

Tied Grants: These are used for the basic services of:

- Sanitation and maintenance of Open-Defecation Free (ODF) status.
- Supply of drinking water, rain water harvesting and water recycling.
- The RLBs shall, as far as possible, earmark one half of these grants each to these two critical services.
- However, if any RLB has fully saturated the needs of one category it can utilize the funds for the other category.

**Distribution:** The State Governments will be distributing the grants to all the tiers of of the Panchayati Raj -village, block and district including the traditional bodies of 5th and 6th Schedule areas based on the accepted recommendations of the latest State Finance Commission (SFC) and in conformity with the recommendations of the 15th FC.

**Assistance:** The Ministry of Panchayati Raj would support the states in
effective utilization of the grants by providing Web/IT enabled platforms for planning, monitoring, accounting / auditing of the works and funds flow at the level of each of the RLBs.

Significance:

- **Fighting Covid 19**: It would help RLBs in providing employment. E.g. migrant laborers who have returned to their native places owing to Covid-19 pandemic situation.
- **Delivery of Basic Services**: Availability of this fund will boost RLBs effectiveness in delivery of basic services to the rural citizens.
- **Rural Infrastructure**: It will augment the rural infrastructure in a constructive way e.g construction of roads, supply of water etc.

Source: PIB

---

**Multidimensional Poverty Index**

GS-III | 18 July, 2020

**Multidimensional Poverty Index**

**GS-PAPER-3 Poverty (PT-MAINS)**

The Multidimensional Poverty Index was launched by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative (OPHI) in 2010.

MPI is based on the idea that poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional. The index shows the proportion of poor people and the average number of deprivations each poor person experiences at the same time. MPI uses three dimensions and ten indicators which are:

- **Education**: Years of schooling and child enrollment (1/6 weightage
Health: Child mortality and nutrition (1/6 weightage each, total 2/6);
Standard of living: Electricity, flooring, drinking water, sanitation, cooking fuel and assets (1/18 weightage each, total 2/6)

A person is multidimensionally poor if she/he is deprived in one third or more (means 33% or more) of the weighted indicators (out of the ten indicators). Those who are deprived in one half or more of the weighted indicators are considered living in extreme multidimensional poverty. MPI is significant as it recognizes poverty from different dimensions compared to the conventional methodology that measures poverty only from the income or monetary terms.

In News:

According to India’s Voluntary National Review (VNR) of Sustainable Development Goals (SDG) at least 271 million people were lifted out of multidimensional poverty between 2005-06 and 2016-17. The VNR of SDGs has been presented by the Niti Ayog at the High-Level Political Forum on Sustainable Development.

Data:

- The estimates presented were drawn from the 2019 global Multidimensional Poverty Index (MPI) released in July 2019.
- Over 640 million people across India were in multidimensional poverty in 2005-2006.
- The number of people living under poverty decreased to around 369.55 million by 2016-2017.
- However, 27.9% of India’s population was still poor in 2016-17

Poverty Reduction: In rural areas poverty reduction has outpaced that in urban areas.

Source: TH
**European Union**

**European Union (EU),** is an international organization comprising **27 European countries** and governing common economic, social, and security policies.

The EU was created by the **Maastricht Treaty,** which entered into force on November 1, **1993.** The treaty was designed to enhance European political and economic integration by **creating a single currency (the euro),** a unified foreign and security policy, and common citizenship rights and by advancing cooperation in the areas of immigration, asylum, and judicial affairs.

**Scientific Cooperation between India and EU**

**Paper-2 I.O (PT-MAINS)**
In NEWS:

Recently, India and the European Union (EU) agreed to renew the Agreement on Scientific Cooperation for the next five years (2020-2025) during the virtual 15th India-EU Summit.

Renewal of Agreement on Scientific Cooperation:

India and the EU have agreed to further collaborate in research and innovation
based on the principles of mutual benefit and reciprocity, as established in the India-EU Agreement on Science and Technology (2001) which expired on 17th May 2020.

Both parties are also committed to launch the renewal procedure for the above agreement and acknowledge 20 years of cooperation on research and innovation.

Significance:

- It is expected to enhance research and innovation cooperation in different fields like Water, Energy, Healthcare, Agritech & Bioeconomy, Integrated Cyber-Physical Systems, Information and Communication Technologies, Nanotechnology, and clean technologies, etc.
- It will also strengthen the institutional linkages in research, exchange of researchers, students, startups and attract co-investment of resources for co-generation of knowledge.

India-EU Science and Technology Cooperation:

Science and Technology: India-EU Science & Technology Steering Committee meets annually to review scientific cooperation.

- The Ministry of Earth Sciences (MoES) and the European Commission (EC) have established a Co-Funding Mechanism (CFM) to support joint research projects selected under European Research & Innovation Framework Program ‘Horizon 2020’ related to climate change and polar research.
- Space Technology: Indian Space Research Organisation (ISRO) has had a long standing cooperation with the European Union, since the 1970s. ISRO and the European Space Agency are working towards enhancing cooperation in earth observation. It also involves the Copernicus programme signed in 2018.
- Copernicus is the European Union’s Earth observation programme.

India-EU Relations

Evolution of Diplomatic Relations:

- India being amongst the first countries to establish diplomatic relations with the European Economic Community in 1962.
The first India-EU Summit was held in Lisbon (Portugal) in 2000. Since then, fifteen annual bilateral Summits have been held between India and the EU.

The relationship was upgraded to a ‘Strategic Partnership’ during the 5th India-EU Summit held at the Hague (Netherlands) in 2004.

The bilateral Strategic Partnership encompasses dialogue mechanisms covering a wide range of issues including trade, energy security, science & research, non-proliferation and disarmament, counter terrorism, cyber security, counter-piracy, migration and mobility, etc.

Trade and Investment:

- The EU as a whole was India’s largest trading partner while India was EU’s 9th largest trading partner in 2018.
- India is also the fourth largest service exporter to the EU and the sixth largest destination for service exports from the EU.
- EU is the largest source of Foreign Direct Investment (FDI) into India.
- Over the period April 2000 to June 2018, FDI equity flows from the EU countries into $ 90.7 billion, which is about 24% of the total FDI inflows to India.
- Among countries, Singapore is the largest source of FDI in India during 2019 with $ 14.67 billion investment followed by Mauritius ($ 8.24 billion).
- India and the EU are in the process of negotiating a bilateral Broad-based Trade and Investment Agreement (BTIA) since 2007.

Way Forward

India and the EU are ideal partners to make a difference in an international environment that is increasingly shaped by strategic rivalry between the USA and China.

They have a common interest in avoiding a bipolarised world and developing the rules-based international order. The effort has to be to make the India-EU partnership rise to its potential and provide a new model for international relations today.

Source: PIB
Study finds evidence of vertical transmission of coronavirus across the placenta

Modes of COVID-19 transmission

- Transmission through **droplets and contact** with contaminated surfaces seem to be the major routes of novel coronavirus spread.
- The **World Health Organization recently** acknowledged that “**short-range aerosol transmission**” of the virus “cannot be ruled out” in specific **indoor locations** which are crowded, inadequately ventilated and where exposure to the infected person is over a prolonged period of time.
- Now, a study has found evidence that **confirms vertical transmission of SARS-CoV-2 virus** from the mother to the foetus.
- The route of infection is **through the womb (in utero)** well before the onset of labour and delivery of the baby.

Transplacental transmission (a probable route):

- These studies could not confirm the transmission route because samples of **placenta, amniotic fluid and blood** of the mother and the newborn were not collected and tested in every mother–infant pair.
- For instance, in a study published recently in the journal CMAJ (Canadian Medical Association Journal), only the placenta and **nasopharyngeal swab** samples of the mother were tested for the virus.
- Though nasopharyngeal swab samples of the newborn collected on the day of birth and on two other days, plasma and stool samples tested positive for the virus, the researchers did not collect and test the cord blood.
- Hence the researchers classified it a **“probable” case of congenital route of vertical transmission.**

Strong evidence

- In contrast, the results published recently in Nature Communications involving one mother–newborn pair provide strong evidence of **“confirmed” vertical transmission of the SARS-CoV-2 virus** through the “transplacental” route.

About transplacental transmission:
The virus first occurs in the mother’s blood and later causes placental infection and inflammation. The virus then gets into the blood of the neonate following placental infection. The neonate also showed clinical manifestation of COVID-19 in terms of neurological signs and symptoms. To check for vertical transmission, the researchers first collected clear amniotic fluid prior to rupture of membranes. The amniotic fluid tested positive for two genes of the virus. The baby was delivered through caesarean section to avoid infection during normal childbirth; caesarean delivery is routinely done in the case of HIV positive mothers to cut the risk of vertical transmission.

Source: TH

Moral Injury
GS-IV | 19 July, 2020

Moral injury

- Moral injury is the damage done to one’s conscience or moral compass when that person perpetrates, witnesses, or fails to prevent acts that transgress one’s own moral beliefs, values, or ethical codes of conduct.
- Within the context of military service, particularly regarding the experience of war, “moral injury” refers to the lasting emotional, psychological, social, behavioral, and spiritual impacts of actions that violate a service member’s core moral values and behavioral expectations of self or others.
- This type of psychological distress is occurring among the healthcare workers handling the COVID-19 cases.

Source: TH
Maternal Mortality Ratio

Paper-3 Health/Women (Mains-Optional)

Recently, the Office of the Registrar General’s Sample Registration System (SRS) has released a special bulletin on Maternal Mortality in India 2016-18. As per the World Health Organization, maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management.

Maternal Mortality Ratio of the Country:

- MMR has declined to 113 in 2016-18 from 122 in 2015-17 and 130 in 2014-2016.
- MMR is defined as the number of maternal deaths during a given time period per 1,00,000 live births during the same time period.
- The target of Sustainable Development Goals (SDGs) set by the United Nations aims at reducing the global maternal mortality ratio to less than 70 per 1,00,000 live births.

MMR of Various States:

- Assam (215), Uttar Pradesh (197), Madhya Pradesh (173), Rajasthan (164), Chhattisgarh (159), Odisha (150), Bihar (149), and Uttarakhand (99).
- The southern States registered a lower MMR — Karnataka (92), Andhra Pradesh (65), Tamil Nadu (60), Telangana (63) and Kerala (43).

Government Initiatives:

- Janani Suraksha Yojana under the National Health Mission to link cash assistance to institutional deliveries.
- The Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) provides a fixed day for assured, comprehensive and quality antenatal care free of cost to pregnant women on 9th of every month.
- Pradhan Mantri Matru Vandana Yojana and LaQshya Guidelines.

Way Forward

Maternal mortality in a region is a measure of reproductive health of women in
the area. The WHO has already appreciated India’s efforts in reducing the maternal mortality rate. India needs to give a special focus to states with higher maternal mortality ratio.

Source: PIB

NTPC and Renewable energy & NIIF

GS-paper-3 Energy security (PT-MAINS)

National Investment and Infrastructure Fund Limited

It is a collaborative investment platform for international and Indian investors, anchored by the Government of India. It was set up in December 2015 to catalyse funding into the country’s core sector.

It invests across asset classes such as infrastructure, private equity and other diversified sectors in India, with the objective to generate attractive risk-adjusted returns for its investors.

- It has a targeted corpus of Rs. 40,000 crore to be raised over the years. 49% of which will be funded by the government at any given point of time.
- Remaining 51% is to be raised from domestic and global investors, including international pension funds, sovereign wealth funds and multilateral/bilateral investors.
- It was registered with the Securities and Exchange Board of India (SEBI) as a Category II Alternate Investment Fund on 28th December 2015.
- NIIF manages over USD 4.3 billion of equity capital commitments across its three funds which are Master Fund, Fund of Funds and Strategic Opportunities Fund, each with its distinct investment strategy.

The NIIF Master Fund is the largest infrastructure fund in the country and invests in core infrastructure sectors such as transportation and energy.
A Governing Council chaired by the Finance Minister has been set up to act as an advisory council to the NIIF.

In News:

Recently, the National Thermal Power Corporation Limited (NTPC Ltd.) has entered into a Memorandum of Understanding (MoU) with the National Investment and Infrastructure Fund (NIIF), acting through the National Investment and Infrastructure Fund Limited (NIIFL). It will explore opportunities for investments in areas like renewable energy (RE), power distribution among other areas of mutual interest in India.

- NTPC Ltd. is a central Public Sector Undertaking (PSU) under the Ministry of Power.
- It is India's largest energy conglomerate with roots planted way back in 1975 to accelerate power development in India.
- Aim: To provide reliable power and related solutions in an economical, efficient and environment-friendly manner, driven by innovation and agility.
- It became a Maharatna company in May 2010.
- It is located in New Delhi.

Few Recent Initiatives:

- Creation of public charging infrastructure in various cities and battery charging and swapping stations for electric 3-wheelers have been commissioned.
- Providing electric buses to state/city transport undertakings. For example, e-bus solutions for Andaman and Nicobar Administration are under implementation.
- Launch of its new project involving hydrogen Fuel Cell Electric Vehicles (FCEV) to run in Delhi and Leh.

Please refer WWW.ASPIREIAS.COM search for HYDROGEN FUEL CELL

Source: PIB

Covid-19 Vaccine: ZyCoV-D
GS-III | 19 July, 2020
Covid-19 Vaccine: ZyCoV-D

GS-PAPER-3 S&T

Recently, India has started phase I/II clinical trials of Covid-19 vaccine - ZyCoV-D, designed and developed by Zydus (a pharmaceutical company) with support from the Department of Biotechnology (DBT).

The adaptive phase I/II clinical trials will assess the safety, tolerability and immunogenicity of the vaccine. The other indigenously developed vaccine - Covaxin - produced by Hyderabad based Bharat Biotech is also underway to start clinical trials.

Imp Points

- **Description:** ZyCoV-D, a plasmid DNA vaccine, comes under the Vaccine Discovery Programme supported by the Department of Biotechnology under the National Biopharma Mission.

**National Biopharma Mission**

- It is an industry-academia collaborative mission for accelerating biopharmaceutical development in the country.
- It was launched in 2017 at a total cost of Rs. 1500 crore and is 50% co-funded by World Bank loan.
- It is being implemented by the Biotechnology Industry Research Assistance Council (BIRAC).

(BIRAC is a Public Sector Enterprise, set up by the Department of Biotechnology (DBT), Ministry of Science & Technology)

- Under this Mission, the Government has launched Innovate in India (i3) programme to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the biopharma sector.
- **Objectives:** Development of vaccines, medical devices, diagnostics and biotherapeutics besides, strengthening the clinical trial capacity and building technology transfer capabilities in the country.

Plasmids are circular deoxyribonucleic acid (DNA) vectors that can be used as
vaccines to prevent various types of diseases.

- **Pre-Clinical Phase:** It was found to initiate a strong immune response in multiple animal species like mice, rats, guinea pigs and rabbits.
  - The antibodies produced by the vaccine were able to neutralize the wild type virus indicating the protective potential of the vaccine candidate.
  - No safety concerns were observed in repeat dose by both intramuscular (directly into muscles) and intradermal (superficial injection into skin) routes of administration.

- **DNA Vaccine Platform:** The development of ZyCov-D has established the DNA vaccine platform in the country which is simple to deploy, temperature stable, and consistently manufacturable—thus lowering costs and enhancing the effectiveness of a vaccine.

  It provides ease of manufacturing the vaccine with minimal biosafety requirements. It has shown much improved vaccine stability and lower cold chain requirements making it easy for transportation to remote regions of the country. Furthermore, the platform can be rapidly used to modify the vaccine in a couple of weeks in case the virus mutates.

Source: IE

---

**Delimitation: North-east Illegal**

**GS-II | 19 July, 2020**

**Delimitation: North-east Illegal**

**GS-PAPER-2 Governance – Elections**

**Delimitation**

Delimitation is the act of redrawing boundaries of Lok Sabha and Assembly constituencies to represent changes in population and is done on the basis of the preceding Census.

- **Need:**
To provide **equal representation to equal segments** of a population.

- **A fair division of geographical areas** so that one political party does not have an advantage over others in an election.
- To **follow the principle of “One Vote One Value”**.

### Delimitation Commission

**Establishment:** It was appointed by the President of India and works in collaboration with the Election Commission of India.

**Constitutional Basis:**

- **Article 82** provides the Parliament to enact a Delimitation Act after every Census.
  - The **Census Act of 1948** provides for the permanent scheme of conducting population Census. It is carried out in a ten years interval.
- **Article 170** provides division of State into territorial constituencies as per Delimitation Act after every Census.
  - Once the Act enacted by the Parliament is in force, the Union government sets up a Delimitation Commission.
- **Composition:** It is usually composed of the retired Supreme Court judge, Chief Election Commissioner and respective states’ Election Commissioners.

**Functions:** It determines the number and boundaries of constituencies to make the population of all constituencies nearly equal. It also identifies the seats reserved for Scheduled Castes and Scheduled Tribes, wherever their population is relatively large.

### In News:

Recently, a former legal advisor to the **Election Commission** (EC) has held that the Centre’s order for setting up a **Delimitation Commission** for Arunachal Pradesh, Manipur, Assam and Nagaland is “unconstitutional” and “illegal”. The government constituted a Delimitation Commission to redraw Lok Sabha and assembly constituencies of the **Union Territory Jammu and Kashmir** and the four northeastern states on 6th March 2020. It is headed by the former **Supreme Court** judge Ranjana Prakash Desai.

### ImpPoints
Background:

- Last delimitation exercise (2002-08) kept out Arunachal Pradesh, Assam, Manipur and Nagaland because the data used for it from 2001 Census was challenged for being defective.
- The tribal communities in the four states feared that the delimitation exercise would change the composition of seats reserved for them, hurting their electoral interests.
- The Delimitation Act of 2002 was amended on 14th January 2008, to empower the President to postpone the exercise in these states after violence erupted.
- Subsequently, Parliament decided that EC would carry out the delimitation exercise in the four states and introduced the Section 8A of the Representation of the People (RP) Act 1950 for this purpose.
- The decision of Parliament was based on earlier precedence of the EC being vested with the authority to redraw boundaries of constituencies including when Delhi was delimited into 70 seats in 1991-92 and Uttarakhand into 70 seats in 2000.

Issue: The Centre's order for setting up a Delimitation Commission is illegal because it violates the Representation of the People Act 1950.

Section 8A of the RP Act 1950, introduced by Parliament in 2008, states that delimitation in the four northeastern states would fall within the EC’s remit.

Hence, any delimitation exercise by the new Delimitation Commission would be declared void and result in wastage of huge public funds.

Source: IE
Recently, India and the USA have participated in a virtual ministerial meeting of the U.S.-India Strategic Energy Partnership (SEP) to review progress, highlight major accomplishments, and prioritize new areas for cooperation.

The SEP was established in April 2018 whose objective is to encourage meaningful engagements through robust government-to-government cooperation and industry engagement. The next Ministerial meeting will be held in 2021.

Description: The SEP organizes inter-agency engagement on both sides across four primary pillars of cooperation:

- Power and Energy Efficiency,
- Oil and Gas,
- Renewable Energy,
- Sustainable Growth.

The SEP also supports USA efforts under the AsiaEDGE initiative, which establishes India as a strong energy partner in the Indo-Pacific region.

Major Outcomes: Number of achievements and priorities for new work under the SEP were announced by both sides. These can be broadly segregated under the four primary pillars of cooperation, as given below:

1. Power and Energy Efficiency:

   - Modernizing the Power System: Both countries have been collaborating on the integration of new technologies into the smart grid; modernizing the power distribution sector i.e. rooftop solar, deployment of Smart Meters etc. The two countries are leading joint research and development (R&D) through Advance Clean Energy-Research (PACE-R) on smart grids and energy storage to increase resilience and reliability of the electric grid.
   - New areas of research on transformational power generation based on supercritical CO₂ (sCO₂) power cycles and advanced coal technologies for power generation including carbon capture, utilization, and storage (CCUS) were also initiated.

   **sCO₂ is a fluid state of carbon dioxide where it is held at or above its critical temperature and critical pressure.

   - Commitment to advance civil nuclear cooperation i.e. recent progress on
the Westinghouse (USAs Electric Company) nuclear reactor project at Kovvada, Andhra Pradesh were also discussed.

- It also promotes continued bilateral R&D engagement on advanced civil nuclear energy technologies through the U.S.-India Civil Nuclear Energy Working Group.

2. Oil and Gas: A Memorandum of Understanding (MoU) was signed to begin cooperation on Strategic Petroleum Reserves operation.

- The possibility of India storing oil in the U.S. Strategic Petroleum Reserve was also discussed.
- Both sides have noted the significant increase in the bilateral hydrocarbon trade through SEP touching 9.2 billion USD during 2019-20 and marking a 93% increase since 2017-18. Through the U.S.-India Natural Gas Task Force, it affirmed to promote greater hydrocarbon trade between the two countries.

3. Renewable Energy: The both sides launched a public-private Hydrogen Task Force to help scale up technologies to produce hydrogen from renewable energy and fossil fuel sources and to bring down the cost of deployment for enhanced energy security and resiliency.

- Efficient Buildings and Clean Technologies: A MoU was signed to collaborate on India’s first-ever Solar Decathlon in 2021, establishing a collegiate competition to prepare the next generation to design and build high efficiency buildings powered by renewables.
- In response to the Covid-19 pandemic, United States Agency for International Development (USAID) and Energy Efficiency Services Ltd (EESL), India has jointly initiated “Retrofit of Air Conditioning to Improve Air Quality for Safety and Efficiency” (RAISE) for healthy and energy efficient buildings.
- Launched collaboration between the USA Department of Energy (DOE) National labs and the Indian National Institutes under the Ministry of New & Renewable Energy as part of the South Asia Group for Energy (SAGE), supported by USAID, for joint research on development of advanced clean technologies.
- Information exchange on sustainable biofuel production (bioethanol and renewable diesel) and use for air and sea transport were also discussed.
- It will also explore cooperation on utilizing the economic value of converting bio-waste into biogas.
4. Sustainable Growth: The best practices are being adopted through methodologies in energy data management and capacity building in energy modeling.

- **USAID** and **NITI Aayog** jointly launched the **India Energy Modeling Forum** to build a network of modeling communities and its linkage with Government for analytical work and policy making exercise.
- **Empowering Women in the Energy Sector**: USAID launched the **South Asia Women in Energy (SAWIE) platform** focused on the power sector and both the countries have been working to incorporate **gender-focused activities** across the technical pillars.

Source: PIB

---

**UN ECOSOC**

**GS-PAPER-2 I.O (PT-MAINS)**

**Economic and Social Council**

- It is the principal body for **coordination, policy review, policy dialogue and recommendations on economic, social and environmental issues**, as well as **implementation of internationally agreed development goals**.
- It has **54 members**, elected by the General Assembly for **overlapping three-year terms**.
- It is the **UN's central platform for reflection, debate and innovative thinking on sustainable development**.
- Each year, **ECOSOC** structures its work around an annual theme of **global importance** to sustainable development. This **ensures focused attention**, among ECOSOC's array of partners and throughout the UN development system.
- It **coordinates the work** of the 14 UN specialized agencies, ten functional commissions and five regional commissions, receives reports from nine UN
funds and programmes and issues policy recommendations to the UN system and to member states.

- **Few important bodies under the purview of ECOSOC:**
  - International Labour Organization (ILO)
  - Food and Agriculture Organization (FAO)
  - United Nations Educational, Scientific and Cultural Organization (UNESCO)
  - World Health Organization (WHO)
  - Bretton Woods Twins (World Bank Group and International Monetary Fund)
  - United Nations Children’s Fund (UNICEF)
  - Apart from these there are various Functional and Regional Commissions, Standing Committees, Ad Hoc and Expert Bodies as well.

**In News**

Recently, the United Nations Economic and Social Council (ECOSOC) has held a high-level dialogue on the subject ‘Multilateralism after Covid-19: What kind of UN do we need at the 75th Anniversary?’

The Prime Minister of India gave a speech focusing on India’s battle against the Covid-19 pandemic and emphasised upon the need of multilateralism in achieving sustainable peace and prosperity. He also indicated India’s push for a permanent seat in the UN Security Council.

**The UN will celebrate its 75th anniversary on 24th October 2020.**

**Imp Points**

**Covid-19 and Current Indian Scenario:**

- India has **crossed the 1 million mark** for Covid-19 cases recently, making it the **third highest incidence** in the world.
- India also has the **third highest recoveries** at about 644,000, **after the USA and Brazil**.
- However, its **recovery rate is about 63%**, which ranks India at number **42** in the world.

**India’s Efforts Against Covid-19:**

- India has **extended assistance** to more than 150 countries. For example, assistance in materials and services to Afghanistan, Bangladesh, Bhutan, the Maldives (Operation Sanjeevani), Nepal and Sri Lanka.
India set up a South Asian Association for Regional Cooperation (SAARC) Covid-19 Emergency Fund in the South Asian neighbourhood.

- **PM Cares Fund** to deal with any kind of emergency or distress situation like posed by the current pandemic.
- **Atmanirbhar Bharat Abhiyan** with various economic stimulus packages worth Rs. 20 lakh crore aimed towards achieving the mission of self reliance.

**Multilateralism**

- It is the process of organizing relations between groups of three or more states.
- It generally comprises certain qualitative elements or principles that shape the character of the arrangement or institution. These principles are:
  - **Indivisibility of interests** among participants.
  - Commitment to diffuse reciprocity, i.e., not an equivalence of obligations or concessions in any one exchange but a balance in an ongoing, potentially indefinite, series of exchanges with a group of partners instead of expectations of direct obligations or concessions by a particular member.
  - System of dispute settlement intended to enforce a particular mode of behaviour.
- Multilateralism has a long history but it is principally associated with the era after World War II, during which there was a rapid growth of multilateral agreements. The organizations most strongly embodying the principle of multilateralism are to be found in trade like the World Trade Organization (WTO) and security like the North Atlantic Treaty Organization (NATO).
- Multilateral institutions have played a significant role in postwar global governance and are arguably more stable than other forms of organization because the principles underlying them appear to be more durable and more able to adapt to external changes.

**Conclusion**

India called on the UN members to pledge for reform within the world body and held that the multilateral system needs to be more representative. The United Nations was originally born from the furies of World War II and the current fury of the pandemic provides the context for its rebirth and reform.
At this pivotal moment, with Covid-19 still spreading, geopolitical tensions rising and the cry for racial justice, social justice and climate justice ever more urgent, the UN and world leaders have a responsibility to respond to the anxieties, fears and hopes of the people.

Source: TH
Study finds evidence of vertical transmission of coronavirus across the placenta

Modes of COVID-19 transmission

- Transmission through **droplets and contact** with contaminated surfaces seem to be the major routes of novel coronavirus spread.
- The **World Health Organization recently** acknowledged that "**short-range aerosol transmission**" of the virus "cannot be ruled out" in specific **indoor locations** which are crowded, inadequately ventilated and where exposure to the infected person is over a prolonged period of time.
- Now, a study has found evidence that **confirms vertical transmission of SARS-CoV-2 virus** from the **mother to the foetus**.
- The route of infection is **through the womb (in utero) well before the onset of labour and delivery of the baby**.

**Transplacental transmission (a probable route):**

- These studies could not confirm the transmission route because samples of **placenta, amniotic fluid and blood** of the mother and the newborn were not collected and tested in every mother–infant pair.
- For instance, in a study published recently in the journal CMAJ (Canadian Medical Association Journal), **only the placenta and nasopharyngeal swab samples** of the mother were tested for the virus.
- Though nasopharyngeal swab samples of the newborn collected on the day of birth and on two other days, plasma and stool samples tested positive for the virus, the researchers did not collect and test the cord blood.
- Hence the researchers classified it a **"probable" case of congenital route of vertical transmission**.

**Strong evidence**

- In contrast, the results published recently in Nature Communications involving one mother–newborn pair provide strong evidence of **“confirmed” vertical transmission of the SARS-CoV-2 virus through the “transplacental” route**.

**About transplacental transmission:**
The virus first occurs in the mother’s blood and later causes placental infection and inflammation. The virus then gets into the blood of the neonate following placental infection. The neonate also showed clinical manifestation of COVID-19 in terms of neurological signs and symptoms. To check for vertical transmission, the researchers first collected clear amniotic fluid prior to rupture of membranes. The amniotic fluid tested positive for two genes of the virus. The baby was delivered through caesarean section to avoid infection during normal childbirth; caesarean delivery is routinely done in the case of HIV positive mothers to cut the risk of vertical transmission.

Source: TH

Moral Injury

Moral Injury

Source: TH
Maternal Mortality Ratio

Paper-3 Health/Women (Mains-Optional)

Recently, the Office of the Registrar General’s Sample Registration System (SRS) has released a special bulletin on Maternal Mortality in India 2016-18. As per the World Health Organization, maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management.

Maternal Mortality Ratio of the Country:

- MMR has **declined to 113** in 2016-18 from 122 in 2015-17 and 130 in 2014-2016.
- MMR is defined as the number of maternal deaths during a given time period per 1,00,000 live births during the same time period.
- The target 3.1 of Sustainable Development Goals (SDGs) set by the United Nations aims at reducing the global maternal mortality ratio to less than 70 per 1,00,000 live births.

MMR of Various States:

- Assam (215), Uttar Pradesh (197), Madhya Pradesh (173), Rajasthan (164), Chhattisgarh (159), Odisha (150), Bihar (149), and Uttarakhand (99).
- The southern States registered a lower MMR — Karnataka (92), Andhra Pradesh (65), Tamil Nadu (60), Telangana (63) and Kerala (43).

Government Initiatives:

- **Janani Suraksha Yojana** under the National Health Mission to link cash assistance to institutional deliveries.
- The **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** provides a fixed day for assured, comprehensive and quality antenatal care free of cost to pregnant women on 9th of every month.
- **Pradhan Mantri Matru Vandana Yojana** and LaQshya Guidelines.

Way Forward

Maternal mortality in a region is a measure of reproductive health of women in
the area. The WHO has already appreciated India’s efforts in reducing the maternal mortality rate. India needs to give a special focus to states with higher maternal mortality ratio.

Source: PIB

NTPC and Renewable energy & NIIF

GS-paper-3 Energy security (PT-MAINS)

National Investment and Infrastructure Fund Limited

It is a collaborative investment platform for international and Indian investors, anchored by the Government of India. It was set up in December 2015 to catalyse funding into the country’s core sector.

It invests across asset classes such as infrastructure, private equity and other diversified sectors in India, with the objective to generate attractive risk-adjusted returns for its investors.

- It has a targeted corpus of Rs. 40,000 crore to be raised over the years. 49% of which will be funded by the government at any given point of time.
- Remaining 51% is to be raised from domestic and global investors, including international pension funds, sovereign wealth funds and multilateral/bilateral investors.
- It was registered with the Securities and Exchange Board of India (SEBI) as a Category II Alternate Investment Fund on 28th December 2015.
- NIIF manages over USD 4.3 billion of equity capital commitments across its three funds which are Master Fund, Fund of Funds and Strategic Opportunities Fund, each with its distinct investment strategy.

The NIIF Master Fund is the largest infrastructure fund in the country and invests in core infrastructure sectors such as transportation and energy.
A Governing Council chaired by the Finance Minister has been set up to act as an advisory council to the NIIF.

In News:

Recently, the National Thermal Power Corporation Limited (NTPC Ltd.) has entered into a Memorandum of Understanding (MoU) with the National Investment and Infrastructure Fund (NIIF), acting through the National Investment and Infrastructure Fund Limited (NIIFL). It will explore opportunities for investments in areas like renewable energy (RE), power distribution among other areas of mutual interest in India.

- NTPC Ltd. is a central Public Sector Undertaking (PSU) under the Ministry of Power.
- It is India’s largest energy conglomerate with roots planted way back in 1975 to accelerate power development in India.
- **Aim:** To provide reliable power and related solutions in an economical, efficient and environment-friendly manner, driven by innovation and agility.
- It became a *Maharatna company* in May 2010.
- It is located in New Delhi.

Few Recent Initiatives:

- **Creation of public charging infrastructure** in various cities and battery charging and swapping stations for electric 3-wheelers have been commissioned.
- **Providing electric buses to state/city transport undertakings.** For example, e-bus solutions for Andaman and Nicobar Administration are under implementation.
- Launch of its new project involving hydrogen Fuel Cell Electric Vehicles (FCEV) to run in Delhi and Leh.

Please refer [WWW.ASPIREIAS.COM](http://WWW.ASPIREIAS.COM) search for HYDROGEN FUEL CELL

Source: PIB

**Covid-19 Vaccine: ZyCoV-D**

GS-III | 19 July, 2020
Covid-19 Vaccine: ZyCoV-D

GS-PAPER-3 S&T

Recently, India has started phase I/II clinical trials of Covid-19 vaccine - ZyCoV-D, designed and developed by Zydus (a pharmaceutical company) with support from the Department of Biotechnology (DBT).

The adaptive phase I/II clinical trials will assess the safety, tolerability and immunogenicity of the vaccine. The other indigenously developed vaccine - Covaxin - produced by Hyderabad based Bharat Biotech is also underway to start clinical trials.

Imp Points

- **Description:** ZyCoV-D, a plasmid DNA vaccine, comes under the Vaccine Discovery Programme supported by the Department of Biotechnology under the National Biopharma Mission.

**National Biopharma Mission**

- It is an industry-academia collaborative mission for accelerating biopharmaceutical development in the country.
- It was launched in 2017 at a total cost of Rs. 1500 crore and is 50% co-funded by World Bank loan.
- It is being implemented by the Biotechnology Industry Research Assistance Council (BIRAC).

(BIRAC is a Public Sector Enterprise, set up by the Department of Biotechnology (DBT), Ministry of Science & Technology)

- Under this Mission, the Government has launched Innovate in India (i3) programme to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the biopharma sector.
- **Objectives:** Development of vaccines, medical devices, diagnostics and biotherapeutics besides, strengthening the clinical trial capacity and building technology transfer capabilities in the country.

Plasmids are circular deoxyribonucleic acid (DNA) vectors that can be used as
vaccines to prevent various types of diseases.

- **Pre-Clinical Phase:** It was found to initiate a **strong immune response** in multiple animal species like mice, rats, guinea pigs and rabbits.
  - The **antibodies** produced by the **vaccine** were able to **neutralize the wild type virus** indicating the protective potential of the vaccine candidate.
  - No safety concerns were observed in repeat dose by both **intramuscular** (directly into muscles) and **intradermal** (superficial injection into skin) routes of administration.

- **DNA Vaccine Platform:** The development of ZyCov-D has established the **DNA vaccine platform** in the country which is simple to deploy, temperature stable, and consistently manufacturable—thus lowering costs and enhancing the effectiveness of a vaccine.

  It provides ease of manufacturing the vaccine with **minimal biosafety requirements.** It has shown much improved **vaccine stability and lower cold chain requirements** making it easy for transportation to remote regions of the country. Furthermore, the platform can be **rapidly used to modify the vaccine** in a couple of weeks in case the virus mutates.

Source: IE

---

**Delimitation: North-east Illegal**

GS-II | 19 July, 2020

**Delimitation: North-east Illegal**

**GS-PAPER-2 Governance – Elections**

**Delimitation**

Delimitation is the **act of redrawing boundaries of Lok Sabha and Assembly constituencies to represent changes in population and is done on the basis of the preceding Census.**

- **Need:**
To provide equal representation to equal segments of a population.

- A fair division of geographical areas so that one political party does not have an advantage over others in an election.
- To follow the principle of “One Vote One Value”.

Delimitation Commission

Establishment: It was appointed by the President of India and works in collaboration with the Election Commission of India.

Constitutional Basis:

- **Article 82** provides the Parliament to enact a Delimitation Act after every Census.
  The **Census Act of 1948** provides for the permanent scheme of conducting population Census. It is carried out in a ten years interval.
- **Article 170** provides division of State into territorial constituencies as per Delimitation Act after every Census.
  Once the Act enacted by the Parliament is in force, the Union government sets up a Delimitation Commission.
  - **Composition**: It is usually composed of the retired Supreme Court judge, Chief Election Commissioner and respective states’ Election Commissioners.

Functions: It determines the number and boundaries of constituencies to make the population of all constituencies nearly equal. It also identifies the seats reserved for Scheduled Castes and Scheduled Tribes, wherever their population is relatively large.

In News:

Recently, a former legal advisor to the Election Commission (EC) has held that the Centre’s order for setting up a Delimitation Commission for Arunachal Pradesh, Manipur, Assam and Nagaland is “unconstitutional” and “illegal”. The government constituted a Delimitation Commission to redraw Lok Sabha and assembly constituencies of the Union Territory Jammu and Kashmir and the four northeastern states on 6th March 2020. It is headed by the former Supreme Court judge Ranjana Prakash Desai.

ImpPoints
Background:

- **Last delimitation exercise (2002-08) kept out** Arunachal Pradesh, Assam, Manipur and Nagaland because the **data used for it from 2001 Census was challenged for being defective.**
- The **tribal communities** in the four states feared that the delimitation exercise **would change the composition of seats reserved for them**, hurting their electoral interests.
- The **Delimitation Act of 2002** was amended on **14th January 2008**, to empower the President to **postpone the exercise in these states** after violence erupted.
- Subsequently, Parliament decided that EC would carry out the **delimitation exercise** in the four states and introduced the **Section 8A of the Representation of the People (RP) Act 1950** for this purpose.
- The decision of Parliament was based on **earlier precedence of the EC being vested with the authority to redraw boundaries of constituencies including when Delhi was delimited into 70 seats in 1991-92 and Uttarakhand into 70 seats in 2000.**

**Issue:** The Centre's order for setting up a Delimitation Commission is **illegal because it violates the Representation of the People Act 1950.**

**Section 8A of the RP Act 1950**, introduced by Parliament in 2008, states that delimitation in the four northeastern states would fall within the EC’s remit.

Hence, any delimitation exercise by the new Delimitation Commission would be **declared void and result in wastage of huge public funds.**

Source: IE
Recently, India and the USA have participated in a virtual ministerial meeting of the U.S.-India Strategic Energy Partnership (SEP) to review progress, highlight major accomplishments, and prioritize new areas for cooperation.

The SEP was established in April 2018 whose objective is to encourage meaningful engagements through robust government-to-government cooperation and industry engagement. The next Ministerial meeting will be held in 2021.

**Description:** The SEP organizes inter-agency engagement on both sides across four primary pillars of cooperation:

- Power and Energy Efficiency,
- Oil and Gas,
- Renewable Energy,
- Sustainable Growth.

The SEP also supports USA efforts under the AsiaEDGE initiative, which establishes India as a strong energy partner in the Indo-Pacific region.

**Major Outcomes:** Number of achievements and priorities for new work under the SEP were announced by both sides. These can be broadly segregated under the four primary pillars of cooperation, as given below:

1. **Power and Energy Efficiency:**

   - **Modernizing the Power System:** Both countries have been collaborating on the integration of new technologies into the smart grid; modernizing the power distribution sector i.e. rooftop solar, deployment of Smart Meters etc. The two countries are leading joint research and development (R&D) through Advance Clean Energy-Research (PACE-R) on smart grids and energy storage to increase resilience and reliability of the electric grid.
   - New areas of research on transformational power generation based on supercritical CO₂ (sCO₂) power cycles and advanced coal technologies for power generation including carbon capture, utilization, and storage (CCUS) were also initiated.

   **sCO₂** is a fluid state of carbon dioxide where it is held at or above its critical temperature and critical pressure.

   - Commitment to advance civil nuclear cooperation i.e. recent progress on
2. Oil and Gas: A Memorandum of Understanding (MoU) was signed to begin cooperation on Strategic Petroleum Reserves operation.

- The possibility of India storing oil in the U.S. Strategic Petroleum Reserve was also discussed.
- Both sides have noted the significant increase in the bilateral hydrocarbon trade through SEP touching 9.2 billion USD during 2019-20 and marking a 93% increase since 2017-18. Through the U.S.-India Natural Gas Task Force, it affirmed to promote greater hydrocarbon trade between the two countries.

3. Renewable Energy: The both sides launched a public-private Hydrogen Task Force to help scale up technologies to produce hydrogen from renewable energy and fossil fuel sources and to bring down the cost of deployment for enhanced energy security and resiliency.

- Efficient Buildings and Clean Technologies: A MoU was signed to collaborate on India’s first-ever Solar Decathlon in 2021, establishing a collegiate competition to prepare the next generation to design and build high efficiency buildings powered by renewables.
- In response to the Covid-19 pandemic, United States Agency for International Development (USAID) and Energy Efficiency Services Ltd (EESL), India has jointly initiated “Retrofit of Air Conditioning to Improve Air Quality for Safety and Efficiency” (RAISE) for healthy and energy efficient buildings.
- Launched collaboration between the USA Department of Energy (DOE) National labs and the Indian National Institutes under the Ministry of New & Renewable Energy as part of the South Asia Group for Energy (SAGE), supported by USAID, for joint research on development of advanced clean technologies.
- Information exchange on sustainable biofuel production (bioethanol and renewable diesel) and use for air and sea transport were also discussed.
- It will also explore cooperation on utilizing the economic value of converting bio-waste into biogas.
4. Sustainable Growth: The best practices are being adopted through methodologies in energy data management and capacity building in energy modeling.

- USAID and NITI Aayog jointly launched the India Energy Modeling Forum to build a network of modeling communities and its linkage with Government for analytical work and policy making exercise.
- Empowering Women in the Energy Sector: USAID launched the South Asia Women in Energy (SAWIE) platform focused on the power sector and both the countries have been working to incorporate gender-focused activities across the technical pillars.

Source: PIB
few important bodies under the purview of ECOSOC:
- International Labour Organization (ILO)
- Food and Agriculture Organization (FAO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)
- Bretton Woods Twins (World Bank Group and International Monetary Fund)
- United Nations Children’s Fund (UNICEF)

Apart from these there are various Functional and Regional Commissions, Standing Committees, Ad Hoc and Expert Bodies as well.

In News

Recently, the United Nations Economic and Social Council (ECOSOC) has held a high-level dialogue on the subject: ‘Multilateralism after Covid-19: What kind of UN do we need at the 75th Anniversary?’

The Prime Minister of India gave a speech focusing on India’s battle against the Covid-19 pandemic and emphasised upon the need of multilateralism in achieving sustainable peace and prosperity. He also indicated India’s push for a permanent seat in the UN Security Council.

**The UN will celebrate its 75th anniversary on 24th October 2020.**

Imp Points

Covid-19 and Current Indian Scenario:

- India has crossed the 1 million mark for Covid-19 cases recently, making it the third highest incidence in the world.
- India also has the third highest recoveries at about 644,000, after the USA and Brazil.
- However, its recovery rate is about 63%, which ranks India at number 42 in the world.

India’s Efforts Against Covid-19:

- India has extended assistance to more than 150 countries. For example, assistance in materials and services to Afghanistan, Bangladesh, Bhutan, the Maldives (Operation Sanjeevani), Nepal and Sri Lanka.
India set up a South Asian Association for Regional Cooperation (SAARC) Covid-19 Emergency Fund in the South Asian neighbourhood.

- PM Cares Fund to deal with any kind of emergency or distress situation like posed by the current pandemic.
- Atmanirbhar Bharat Abhiyan with various economic stimulus packages worth Rs. 20 lakh crore aimed towards achieving the mission of self reliance.

Multilateralism

- It is the process of organizing relations between groups of three or more states.
- It generally comprises certain qualitative elements or principles that shape the character of the arrangement or institution. These principles are:
  - Indivisibility of interests among participants.
  - Commitment to diffuse reciprocity, i.e. not an equivalence of obligations or concessions in any one exchange but a balance in an ongoing, potentially indefinite, series of exchanges with a group of partners instead of expectations of direct obligations or concessions by a particular member.
  - System of dispute settlement intended to enforce a particular mode of behaviour.
- Multilateralism has a long history but it is principally associated with the era after World War II, during which there was a rapid growth of multilateral agreements. The organizations most strongly embodying the principle of multilateralism are to be found in trade like the World Trade Organization (WTO) and security like the North Atlantic Treaty Organization (NATO).
- Multilateral institutions have played a significant role in postwar global governance and are arguably more stable than other forms of organization because the principles underlying them appear to be more durable and more able to adapt to external changes.

Conclusion

India called on the UN members to pledge for reform within the world body and held that the multilateral system needs to be more representative. The United Nations was originally born from the furies of World War II and the current fury of the pandemic provides the context for its rebirth and reform.
At this pivotal moment, with Covid-19 still spreading, geopolitical tensions rising and the cry for racial justice, social justice and climate justice ever more urgent, the UN and world leaders have a responsibility to respond to the anxieties, fears and hopes of the people.

Source: TH
Remission to Convicts by States

GS-paper-2 President and its power (PT-MAINS)

Recently, the Supreme Court of India referred to a seven-judge bench the issue whether states can grant benefit of remission to convicts under the Constitution by laying down a common policy.

- The legal issue has arisen before the Supreme Court (SC) while hearing the bail plea of a murder case convict Pyare Lal.
- The SC was told that Pyare Lal has been released from the jail after being granted the benefit of remission by the Haryana Governor under Article 161 of the Constitution, as per a 2019 policy of the state government.
- According to the policy, those entitled to get relief included:
  - Male convicts who have been sentenced for life in a murder case and are 75 years of age and completed eight years of sentence.
  - Female convicts who have been sentenced for life in a murder case and are 65 years of age and completed six years of sentence.
    - The policy also included that the conduct of such prisoners has to remain satisfactory during confinement and they must not have committed any major jail offence in the last two years.
    - Article 161 of the Constitution deals with the judicial power of the Governor to pardon a convict. Such power is also exercised by the President under Article 72 of the Constitution.
- The larger bench will also look into whether states can exercise such powers without placing "facts and materials" of each case before the Governor.
  - The SC noted that in the case of Pyare Lal, the Haryana government had placed no facts or material before the Governor and that the benefit was conferred by the Executive itself in terms of the Policy.
  - The Governor did not have the occasion to look into the issues such as severity of the crime or the manner in which the crime was committed or the impact of the crime on the Society.
- In the Maru Ram vs Union of India 1980 case, the SC had ruled that no separate order for each individual case would be necessary for granting
the benefit of remission but a general order must be clear enough to identify the group of cases.

- However, decisions of SC rendered since the Maru Ram case, shows that the relevant material (without any political vendetta or party favouritism) must be placed before the Governor in order to enable him to exercise the power under Article 161, failure on that count could result in quashing of the concerned orders of remission.
- The larger bench will also look into whether the exercise of granting remission by states can override the requirements under Section 433-A of the Code of Criminal Procedure (CrPC). Under Section 433-A of CrPC, a person, serving life term, cannot be granted remission benefit without serving 14 years in prison.

Pardoning Power of President and Governor

- Article 72 and Article 161 empowers the President and the Governors respectively, the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence.
- The pardoning power of the President extends to the:

Punishment or sentence for an offence against a Union Law,

Punishment or sentence is by a court-martial (military court), and

Punishment is a Death sentence.

The pardoning power of the Governor extends to the sentence of any person convicted of any offence against any State law. The Governor cannot pardon against the death sentence and sentence of a Court Martial. The scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161.

- The meaning of the terms:
  - **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
  - **Commutation:** It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
  - **Remission:** It implies reducing the period of the sentence without
changing its character. For example, a sentence of rigorous imprisonment for five years may be remitted to rigorous imprisonment for one year.

- **Respite**: It denotes *awarding a lesser sentence in place of one originally awarded due to some special fact*, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve**: It implies a *stay of the execution of a sentence (especially that of death) for a temporary period*. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Source: TH

---

**Anti Defection Law and Issues**

**GS-paper-2 Polity (PT-MAINS)**

Recently, the 19 rebel MLAs of Rajasthan’s ruling party (Congress) have filed a petition before the High Court *challenging the disqualification notices* issued to them by the Assembly Speaker under Anti Defection Law.

The disqualification notice was issued on MLAs’ absence from successive Congress Legislature Party (CLP) meetings and a “conspiracy to bring down the government”.

**Rebel MLAs Arguments:**

In their writ petition, *citing violation of their freedom of speech and expression* the legislators argued that they had neither given up their *membership of the House* nor did their failure to attend the two CLP meetings render them liable for disqualification on the ground of defection.

Therefore they challenged **Clause 2(1)(a) of the Tenth Schedule of the Constitution**, and the validity of the Rajasthan Assembly Members
Clause 2(1)(a) of the Tenth Schedule states that a member may be disqualified “if he has voluntarily given up his membership” of a political party.

They also contended that they could not be disqualified merely for disagreeing with the decisions and policies of some leaders outside the Assembly.

Supreme Court’s Ruling: The Supreme Court in the *Kihoto Hollohan versus Zachillu and Others*, 1992 has said that judicial review cannot be available at a stage prior to the making of a decision by the Speaker/Chairman. Nor would interference be permissible at an interlocutory stage of the proceedings. The only exception for any interlocutory interference (decree or judgment) being cases of interlocutory disqualifications or suspensions which may have grave, immediate and irreversible repercussions and consequences. Therefore, Constitutional courts cannot judicially review disqualification proceedings under the Tenth Schedule (anti-defection law) of the Constitution until the Speaker or Chairman makes a final decision on merits.

Reason for Limited Role of Courts: The Bench explained that the reason for limiting the role of courts in ongoing defection proceedings is that the office of the Speaker is held in the highest respect and esteem in parliamentary traditions.

Judicial Review: It had said that even the scope of judicial review against an order of a Speaker or Chairman in anti-defection proceedings would be confined to jurisdictional errors, that is infirmities based on violation of constitutional mandate, mala fide actions and non-compliance with rules of natural justice.

Disqualification under the Tenth Schedule

- The Anti-Defection Law was passed in 1985 through the 52nd amendment to the Constitution. It added the Tenth Schedule to the Indian Constitution. The main intent of the law was to combat “the evil of political defections”.
- According to it, a member of a House belonging to any political party becomes disqualified for being a member of the House, if: He voluntarily gives up his membership of such political party; or He votes or abstains
from voting in such House contrary to any direction issued by his political party without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.

Exceptions to the Disqualification on the Ground of Defection

- If a member **goes out of his party as a result of a merger of the party** with another party. A merger takes place when two-thirds of the members of the party have agreed to such a merger.
- If a member, **after being elected as the presiding officer of the House, voluntarily gives up the membership** of his party or rejoins it after he ceases to hold that office. This exemption has been provided in view of the dignity and impartiality of the office.

Powers of Speaker with regard to Anti-Defection Law

- Any question regarding **disqualification arising out of defection** is to be decided by the presiding officer of the House.

Source: TH

---

**Zonal Master Plan for the Bhagirathi Eco-Sensitive Zone**

**GS-Paper-3 Environment (PT-MAINS)**

Recently, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has approved the Zonal Master Plan for the Bhagirathi Eco-Sensitive Zone to pave the way for faster execution of Char Dham Road Project.

**Background:** In 2012, the MoEF&CC issued a gazette notification declaring the watershed area along the stretch of river Bhagirathi, covering 4,179.59 sq km from Gaumukh to Uttarkashi, an Eco-Sensitive Zone (ESZ). ESZs are the...
ecologically important areas designated to be protected from industrial pollution and unregulated development under the Environment Protection Act of 1986.

The 2012 notification was issued keeping in view the requirements of the local people without affecting their rights and privileges and also ensuring eco-friendly development for their livelihood security. It sought to protect the entire fragile Himalayan region by restricting hydropower projects of over 2 MW, riverbed mining and change of land use.

However, it was amended in 2018 following Uttarakhand government’s objection that the notification was ‘anti-development.’ The 2018 amendment approved land use change to meet the local needs including civic amenities and other infrastructure development in larger public interest and national security with the prior approval of State Government with due study of environmental impacts. It also allowed cutting of hills in eco-sensitive areas with proper study and construction on steep slopes in exceptional cases for the benefit of the community.

Zonal Master Plan (ZMP):

- The Bhagirathi Eco-Sensitive Zone notification mandates the State Government of Uttarakhand to prepare ZMP to be implemented under the supervision of the Monitoring Committee.
- The ZMP is based on watershed approach and includes governance in the area of forest and wildlife, watershed management, irrigation, energy, tourism, public health and sanitation, road infrastructure, etc.
- Watershed development approach is based on participatory planning following a bottom-up approach for developing a context appropriate plan for execution, strengthening of local level institution, conservation and appropriate management of watershed’s natural resources.
- Watershed is a geo-hydrological unit draining into a common point by a system of drains.
- The approval of ZMP is expected to give a boost to conservation and ecology of the area and also to undertake developmental activities as permitted under ZMP.

Char Dham Road Project:

The Char Dham project proposes to provide all-weather connectivity to Yamunotri, Gangotri, Badrinath and Kedarnath, and has 53 projects of 826...
km length, involving an investment of Rs. 12,000 crore. Bhagirathi is the source stream of Ganga. It emanates from Gangotri glacier at Gaumukh at an elevation of 3,892 m.

Concerns:

- In a report prepared after the Kedarnath disaster (2015), the Geological Survey of India stated that road construction in mountains reactivates landslides as it disturbs the ‘toe of the natural slope of the hill’.
- The Himalayas is the region where Indian tectonic plate goes under the Eurasian tectonic plate.
- Himalayas are in seismic zone V, thus a major earthquake can happen anytime.

Source: PIB

Legacy waste: Brahmapuram Dumping Site

GS-PAPER-3 Environment: Solid waste

Recently, the National Green Tribunal (NGT) has issued an order pertaining to the case of legacy waste (old municipal solid waste) piling up at the Kochi Corporation’s Brahmapuram dumpsite.

The NGT Judgement:

- The Chairman and Member Secretary of the Kerala State Pollution Control Board (KSPCB) will be held liable if they fail to initiate prosecution and recover compensation from those responsible for the unscientific handling of waste at Brahmapuram.
- The progress (remediation of waste) appears to be very slow and is disregardful of the statutory and constitutional obligation of providing a clean environment.
Further, the tribunal asked why there should be a bar on a single tender considering the critical situation.

The government decided to float fresh tenders as only one agency had met the minimum eligibility criteria when an e-tender for biomining of legacy waste at Brahmapuram was floated on 20th March, 2020.

The Bench suggested that other available options (besides biomining) be considered for compliance with Solid Waste Management Rules, 2016.

The tribunal expressed doubts on whether the leachate (dark liquid that gets generated within the solid waste) generated at the dumping yard could be treated in an ordinary septage treatment plant as it contained heavy metals.

Brahmapuram Dumpsite:

Only 1% of the recyclable plastic waste is recovered while the remaining 99% ends up as heaps in the dumping yard.

The leachate from the waste treatment plant at Brahmapuram is a major source of pollution of the river Kadambrayar.

Legacy waste was found to be a reason for the fire outbreaks. In 2020, the government took over the task of scientific management of legacy waste accumulated at Brahmapuram waste dumping yard from the Kochi corporation by invoking the provision under Section 24(e) of the Disaster Management Act, 2005.

Municipal Solid Waste Management

Municipal Solid Waste (MSW) Management is one of the most serious challenges to environment protection and although Solid Waste Management Rules have been framed in 2016, their implementation remains a problem.

The local authorities are responsible for the development of infrastructure for collection, storage, segregation, transportation, processing and disposal of MSW.

There are two major challenges of solid waste management:

Managing the continuous flow of solid waste on a daily basis.

Dealing with the legacy of neglect which has resulted in garbage heaps having built at dumpsites that were meant for waste processing and landfills.

In July 2019, the NGT directed that each local body would have to pay a compensation of Rs. 10 lakh per month (for population of above 10 lakh);
Rs. 5 lakh a month (for population between 5 lakh and 10 lakh), and Rs. 1 lakh per month for other local bodies for non-compliance with the Solid Waste Management Rules, 2016 from 1\textsuperscript{st} April, 2020 till compliance.

- This compensation is equally applicable to local bodies found erring on the issue of remediation of legacy waste (to be completed by 7\textsuperscript{th} April, 2021 statutorily).
- If local bodies are unable to bear financial burden, the liability will be of state governments to take remedial action against the erring bodies.
- An environment monitoring cell may be set up in the office of chief secretaries of all states/UTs for compliance.
- Remediation process is expected to be done as per the guidelines issued by the Central Pollution Control Board (CPCB).

Remediation of waste will help in unlocking the land occupied by waste sites which then can be used for setting up of biodiversity parks/buffer zones. Some parts can even be monetized. Further, protecting the environment is a constitutional mandate. Kochi needs to learn from success stories of urban local bodies like Thiruvananthapuram corporation, which is bigger in terms of population but is effectively managing waste with hundreds of Thumboormuzhy bins, material recovery centres and a mobile application.

Source: TH
One major feature of flood management in Assam is total dependence on embankments. Assam began constructing embankments in the 1960s and most of them have outlived their utility. Many of these started breaching or collapsing from the 1990s, more seriously from the 2000s. Massive deforestation in catchment areas of rivers or release of waters by dams upstream. Climate change is also a factor behind floods.

Destruction of forests and ecosystem.

Urbanisation.

Floods in Kaziranga’s Ecosystem:

- Experts believe that floods are necessary for Kaziranga by virtue of its riverine ecosystem. The system won’t survive without water.
- Kaziranga National Park and Tiger Reserve (KNPTR) is sandwiched between the Brahmaputra river and the Karbi Anglong Hills. The entire area is formed by alluvial deposits from the Brahmaputra and its tributaries.
- The regenerative nature of floods helps replenish Kaziranga’s water bodies and maintain its landscape, which is a mix of wetlands, grasslands and semi-evergreen deciduous forests.
- The floodwaters function as a breeding ground for fish, which are carried away by the receding waters into the Brahmaputra. i.e the Kaziranga’s floods replenishes the Brahmaputra’s stock of fish.
- The waters also help get rid of unwanted plants such as water hyacinth which collect in huge masses in the landscape.

Issues Involved:

Frequent Floods: Earlier, a big flood would come once in ten years, now they come every other year.

NH-37: When the flood water hits a certain level, the animal moves towards safer, higher ground in the Karbi Anglong hills. However, they have to cross NH-37 which cuts across the park, which leads to the killing of animals in road accidents. Animals are also killed by poachers who take advantage of their vulnerability.

Human-animal Conflict: Animals also move towards villages in floods, this leads to human-animal conflict.

Steps taken during Floods:

- The authorities keep a track of updates from the Central Water Commission,
and monitor water levels of the Brahmaputra tributaries upstream in Arunachal Pradesh.

- Camps are organised to create awareness against poaching and harming wild animals that are rendered vulnerable during the floods.
- When the floods hit, Section 144 of CrPC is imposed along NH-37, speed limits are enforced and fines levied. Barricades are also placed to help animals cross over to Karbi Anglong.

Conclusion

In the absence of long-term alternatives, the government has to invest in strong, durable embankments to ensure that the situation does not deteriorate every year. Kaziranga, with its rich grassland habitats, has a primary role to play in supporting the wildlife populations.

Emphasis needs to be put on securing animal corridors and ensuring a safe passage to the Karbi hills. Need for a landscape-scale conservation approach that recognises the value of the Karbi Anglong hills. The highlands of Karbi Anglong, where the animals take refuge, are the lifeline of the park during the floods.

Source: TH

Basmati and GI tag

GS-III | 20 July, 2020

Basmati and GI tag

GS-PAPER-3 IPR

India is the only producer of premium Basmati and it has been grown from time immemorial in the Indo-Gangetic Plains (IGP) area of India and 18 districts of Pakistan’s Punjab. It had been a tough battle for the country to protect Basmati name from the encroachment of various nations which all came out with their own versions of Basmati.

- APEDA got GI tag for the region located in IGP below the foothills of the
Himalayas, spread across seven states (Himachal Pradesh, Jammu and Kashmir, Punjab, Haryana, Uttarakhand, Western Uttar Pradesh (26 districts) and Delhi) in May 2010.

**Reasons Given:** The origin and reputation of Basmati rice as a ‘long-grain, aromatic rice’ from the IGP is found in tradition, folklore, scientific and culinary literature and political-historical records.

- Dehraduni Basmati, Amritsar Basmati and Tarawari Basmati are few varieties which have become famous over the period of hundreds of years.

**Claims and Efforts Made by Madhya Pradesh:**

- MP claims that its rice possesses the same characteristics and qualities as that of the rice grown in the IGP.
- It also claims that nearly 80,000 farmers of the state are growing Basmati in 13 districts and exporting worth Rs. 3,000 crore annually.
- MP appealed in Madras High Court where its plea was rejected in February 2020.
- In 2016, Intellectual Properties Appellate Board (IPBA) in Chennai had given the decision in favour of the APEDA.
- Despite these orders, MP has been repeatedly agitating and raising banter through political and bureaucratic channels.

**Basis of Rejection:**

- Under the World Trade Organisation Trade-Related Aspects of Intellectual Property Rights (WTO TRIPs) agreement, physical attributes are not enough for a product to earn a GI tag.
- As per the Goods (Registration and Protection) Act in 2003, ‘reputation’ to a geographical area is central to the recognition of a GI product and only seven states have that reputation.
- MP falls in the Madhya Bharat Pathar (plateau) and started cultivation of varieties of Basmati rice only around the middle of the first decade of this century.
- Even if the rice grown in MP has all the required characteristics it would not still entitle such rice to qualify as Basmati.

**Possible Effects of Inclusion of MP in GI list:**

- It will nullify APEDA’s efforts to secure and protect Indian Basmati since 1995 by taking up over 1,000 legal actions in nearly 50 countries.
- APEDA has spent around Rs. 250 crores in promoting Basmati rice, defending its GI status and shaping it into a global brand.
- If MP gets permission, Pakistan and China will grab the...
opportunity to start sowing Basmati. All those 50 and more nations who had been restricted from calling any of their aromatic rice with even ‘Basmati-like’ names will also start growing it and contend for its status.

- It will deprive over 20 lakh farmers of seven states from the economic premium of growing this unique product. Therefore, the commercial considerations cannot be sacrificed for expanding the area of GI.

Source: IE

Global Multidimensional Poverty Index 2020

GS-Paper-2 I.O UNDP (PT-MAINS)

Recently, Global Multidimensional Poverty Index 2020 was released by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative (OPHI). The data of the index is based on the study of poverty trends in 75 countries.

Global Scenario:

- 1.3 billion people are still living in multidimensional poverty. More than 80% are deprived in at least five of the ten indicators used to measure health, education and living standards in the global MPI.

Multidimensional Poverty Index

- The Multidimensional Poverty Index was launched by the UNDP and the OPHI in 2010.
- MPI is based on the idea that poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional.
- The index shows the proportion of poor people and the average
number of deprivations each poor person experiences at the same time.

- MPI uses three dimensions and ten indicators which are:
  - **Education**: Years of schooling and child enrollment (1/6 weightage each, total 2/6);
  - **Health**: Child mortality and nutrition (1/6 weightage each, total 2/6);
  - **Standard of living**: Electricity, flooring, drinking water, sanitation, cooking fuel and assets (1/18 weightage each, total 2/6)

- A person is **multidimensionally poor** if she/he is deprived in one third or more (means 33% or more) of the weighted indicators (out of the ten indicators). Those who are deprived in one half or more of the weighted indicators are considered living in **extreme multidimensional poverty**.

- MPI is significant as it recognizes poverty from different dimensions compared to the conventional methodology that measures poverty only from the income or monetary terms.

- The burden of multidimensional poverty disproportionately falls on children - half of multidimensionally poor people are children under age 18.
- 65 out of 75 countries studied significantly reduced their multidimensional poverty levels between 2000 and 2019.
- **About 84.3% of multidimensionally poor people live in Sub-Saharan Africa and South Asia.**
- 67% of multidimensionally poor people are in middle-income countries.

**Indian Scenario:**

- **India lifted as many as 270 million people out of multidimensional poverty between 2005-06 and 2015-16.**
- **Neighbourhood Scenario**: In China, 70 million people left multidimensional poverty between 2010 and 2014, while in Bangladesh, the numbers declined by 19 million between 2014 and 2019.
- **Impact of Covid-19**: Covid-19 is having a profound impact on the development landscape. The study finds that on average, poverty levels will be set back 3 to 10 years due to Covid-19.
- **Sustainable Development Goals**: The index emphasises on measuring and monitoring progress under the goals to reach ‘zero poverty by 2030-Goal 1 of the SDGs’.

The index with its information on both the level and composition of poverty – provides the data needed to pinpoint where and how poverty manifests itself. **Therefore, it will incite action in solidarity with the poor, so that nations like India can ‘build better’**. Reflecting progress before the coronavirus pandemic, it suggests that the progress is at risk and stake-holders need to look beyond
income to tackle poverty in all its forms. Hence, there is a need to take action to redress the rise of under-nutrition and children leaving school.

Source: TH

Earthquakes management

GS-Paper-1 Geography- Earthquake (PT)

According to a recently published study, researchers have developed a new way to improve the prediction of earthquakes.

Seismic Waves

Vibrations from an earthquake are categorised as P (primary) and S (secondary) waves. They travel through the Earth in different ways and at different speeds. They can be detected and analysed.

- **P-waves:***
  - These are the first waves detected by seismographs (instruments used to detect and record earthquakes).
  - These are longitudinal waves which means they vibrate along the same direction as they travel.
  - Other examples of longitudinal waves include sound waves and waves in a stretched spring.

- **S-waves:***
  - These waves arrive at the detector after primary waves.
  - These are transverse waves which means they vibrate at a right angle to the direction in which they travel.
  - Other examples of transverse waves include light waves and water waves.

Both types of seismic waves can be detected near the earthquake centre but only P-waves can be detected on the other side of the Earth. P-waves can travel through solids and liquids (since they are
longitudinal waves) whereas S-waves can only travel through solids (as they are transverse waves). This means the liquid part of the core blocks the passage of S-waves.

- The earthquake events are scaled either according to the magnitude or intensity of the shock.
  - The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the earthquake which is expressed in absolute numbers, 0-10.
  - The intensity scale or Mercalli scale takes into account the visible damage caused by the event. The range of intensity scale is from 1-12.

**Earthquakes:**

Earthquakes usually occur along faults (fractures between rocks which can range from a few millimetres to thousands of kilometres). When two blocks of earth slip past one another, seismic waves are generated in a short span of time and earthquakes occur. The waves travel to the surface causing destruction and are difficult to predict, making it challenging to save lives.

**Earlier Attempts**

Scientists have attempted to recreate the faults and their sliding in laboratories to try and understand the conditions in them during earthquakes.

However, the *actual conditions are so complex* that it is *difficult to recreate* them with full accuracy which makes the prediction of earthquakes difficult.

**New Method:**

- Researchers have now used a *different approach* for earthquake prediction by trying to predict the *frictional strength* of phyllosilicates.
- **Frictional Strength:** It is the force required to cause movement along a fault.
- **Phyllosilicates:** Minerals in the form of thin plates found along the weakest part of the faults where earthquakes occur.
- The researchers *analysed artificial fault zones on a microscopic scale to identify processes* that occurred during the experiment.
- A *set of equations were then formulated to predict how the frictional strength of phyllosilicate changes*, along with a change in conditions such as *humidity* or the *rate of fault movement*. 

This made it easier for modellers to simulate fault movement in natural conditions, including earthquakes. The new model predicts that movement along phyllosilicate-rich fault zones becomes more difficult as it becomes faster and this has been consistent with experiments. This behaviour of movement becoming more difficult prevents earthquakes and suggests minerals other than phyllosilicates play an important role in causing earthquakes. However, more work and research is needed to clearly explain it and to understand the relation between the force that holds a fault together and the force needed to move the fault.

Source: DTE

Anti-defection

GS-Paper-2 Governance (PT-MAINS)

The Tenth Schedule, technicalities and also the Anti Defection Law would be cited during the crisis. Ultimately the matter could also end up in the Supreme Court.

What is the anti-defection law?

The Tenth Schedule was inserted in the Constitution in 1985 by the 52nd Amendment Act.

- It lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature based on a petition by any other member of the House.
- The decision on question as to disqualification on ground of defection is referred to the Chairman or the Speaker of such House, and his decision is final.
Disqualification:

If a member of a house belonging to a political party:

- Voluntarily gives up the membership of his political party, or
- Votes, or does not vote in the legislature, contrary to the directions of his political party. However, if the member has taken prior permission, or is condoned by the party within 15 days from such voting or abstention, the member shall not be disqualified.
- If an independent candidate joins a political party after the election.
- If a nominated member joins a party six months after he becomes a member of the legislature.

Exceptions under the law:

Legislators may change their party without the risk of disqualification in certain circumstances.

- The law allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger.
- In such a scenario, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.

Decision of the Presiding Officer is subject to judicial review:

The law initially stated that the decision of the Presiding Officer is not subject to judicial review. This condition was struck down by the Supreme Court in 1992, thereby allowing appeals against the Presiding Officer’s decision in the High Court and Supreme Court. However, it held that there may not be any judicial intervention until the Presiding Officer gives his order.

Advantages of anti-defection law:

- Provides stability to the government by preventing shifts of party allegiance.
- Ensures that candidates remain loyal to the party as well the citizens voting for him.
- Promotes party discipline.
- Facilitates merger of political parties without attracting the provisions of Anti-defection.
- Expected to reduce corruption at the political level.
- Provides for punitive measures against a member who defects from one
party to another.

Various Recommendations to overcome the challenges posed by the law:

1. **Dinesh Goswami Committee on electoral reforms:** Disqualification should be limited to following cases:

   A member voluntarily gives up the membership of his political party

   A member abstains from voting, or votes contrary to the party whip in a motion of vote of confidence or motion of no-confidence. Political parties could issue whips only when the government was in danger.

2. **Law Commission (170th Report)**

   Provisions which exempt splits and mergers from disqualification to be deleted.

   Pre-poll electoral fronts should be treated as political parties under anti-defection

   Political parties should limit issuance of whips to instances only when the government is in danger.

3. **Election Commission:**

   Decisions under the Tenth Schedule should be made by the President/ Governor on the binding advice of the Election Commission.

Source: TH

**Dr. Anil Kakodkar Committee**

**High Level Safety Review Committee (Railways)**

- The Ministry of Railways had appointed a High Level Safety Review Committee under the chairmanship of **Dr. Anil Kakodkar** to review the safety of the Indian Railways and recommend improvements.
- The Committee recently presented its report. The Committee recommends a total financial investment of Rs 1,00,000 crore over a five year period.
If the Committee's recommendations are accepted, the total financial implication over the five year period is likely to be Rs 1,00,000 crore.

**Recommendations of the Committee are listed below:**

1. In the present situation, the three vital functions (rule making, operations and the regulation) are all vested in the Railway Board. There is need for an independent mechanism for safety regulation. The Committee recommends the creation of a statutory Railway Safety Authority with enough powers to have a safety oversight on the operational mode of Railways.

2. The Research Design and Standards Organization (RDSO), the apex technical wing of the Railways, is highly constrained. This has hampered the ability of the system to internalize emerging technologies. The Committee recommends restructuring of RDSO for greater empowerment. It also recommends that a Railway Research and Development Council (RRDC) be set up directly under the government.

3. The Committee recommends the adoption of an Advanced Signalling System (akin to the European Train Control System) for the entire trunk route length of 19,000 km within 5 years. This is estimated to cost Rs 20,000 crore.

4. All Level Crossings (both manned and unmanned) should be eliminated over five years. An estimated expenditure of Rs 50,000 crore will be required for achieving this target. The Committee is of the belief that this amount will be recovered within 7-8 years through savings in maintenance costs and improved train operations.

5. The Committee also recommends a switch over from the ICF design coaches to the much safer LHB design coaches. This is likely to cost Rs 10,000 crore over the next five years.

6. Other Committee recommendations on the maintenance of safety related infrastructure are estimated to cost about Rs 20,000 crore.

Source: WEB
Remission to Convicts by States

GS-paper-2 President and its power (PT-MAINS)

Recently, the Supreme Court of India referred to a seven-judge bench the issue whether states can grant benefit of remission to convicts under the Constitution by laying down a common policy.

- The legal issue has arisen before the Supreme Court (SC) while hearing the bail plea of a murder case convict Pyare Lal.
- The SC was told that Pyare Lal has been released from the jail after being granted the benefit of remission by the Haryana Governor under Article 161 of the Constitution, as per a 2019 policy of the state government.
- According to the policy, those entitled to get relief included:
  - Male convicts who have been sentenced for life in a murder case and are 75 years of age and completed eight years of sentence.
  - Female convicts who have been sentenced for life in a murder case and are 65 years of age and completed six years of sentence.
  - The policy also included that the conduct of such prisoners has to remain satisfactory during confinement and they must not have committed any major jail offence in the last two years.
  - Article 161 of the Constitution deals with the judicial power of the Governor to pardon a convict. Such power is also exercised by the President under Article 72 of the Constitution.
- The larger bench will also look into whether states can exercise such powers without placing "facts and materials" of each case before the Governor.
  - The SC noted that in the case of Pyare Lal, the Haryana government had placed no facts or material before the Governor and that the benefit was conferred by the Executive itself in terms of the Policy.
  - The Governor did not have the occasion to look into the issues such as severity of the crime or the manner in which the crime was committed or the impact of the crime on the Society.
- In the Maru Ram vs Union of India 1980 case, the SC had ruled that no separate order for each individual case would be necessary for granting
the benefit of remission but a general order must be clear enough to identify the group of cases.

- However, decisions of SC rendered since the *Maru Ram case*, shows that the relevant material (without any political vendetta or party favouritism) must be placed before the Governor in order to enable him to exercise the power under Article 161, failure on that count could result in quashing of the concerned orders of remission.
- The larger bench will also look into whether the exercise of granting remission by states can override the requirements under Section 433-A of the Code of Criminal Procedure (CrPC). Under Section 433-A of CrPC, a person, serving life term, cannot be granted remission benefit without serving 14 years in prison.

**Pardoning Power of President and Governor**

- **Article 72 and Article 161** empowers the President and the Governors respectively, the power to *grant pardons, reprieves, respites or remissions* of punishment or to *suspend, remit or commute* the sentence of any person convicted of any offence.
- The *pardoning power of the President* extends to the:
  - Punishment or sentence for an offence against a Union Law,
  - Punishment or sentence is by a court-martial (military court), and
  - Punishment is a Death sentence.

The *pardoning power of the Governor* extends to the sentence of any person convicted of any offence against any State law. The Governor cannot *pardon against the death sentence and sentence of a Court Martial*. The scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161.

- The meaning of the terms:
  - **Pardon**: It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
  - **Commutation**: It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
  - **Remission**: It implies reducing the period of the sentence without
changing its character. For example, a sentence of rigorous imprisonment for five years may be remitted to rigorous imprisonment for one year.

- **Respite:** It denotes *awarding a lesser sentence in place of one originally awarded due to some special fact,* such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a *stay of the execution of a sentence (especially that of death) for a temporary period.* Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Source: TH

---

**Anti Defection Law and Issues**

GS-paper-2 Polity (PT-MAINS)

Recently, the 19 rebel MLAs of Rajasthan’s ruling party (Congress) have filed a petition before the High Court challenging the disqualification notices issued to them by the Assembly Speaker under Anti Defection Law.

The disqualification notice was issued on MLAs’ absence from successive Congress Legislature Party (CLP) meetings and a “conspiracy to bring down the government”.

**Rebel MLAs Arguments:**

In their writ petition, citing violation of their freedom of speech and expression the legislators argued that they had neither given up their membership of the House nor did their failure to attend the two CLP meetings render them liable for disqualification on the ground of defection.

Therefore they challenged Clause 2(1)(a) of the Tenth Schedule of the Constitution, and the validity of the Rajasthan Assembly Members
Clause 2(1)(a) of the Tenth Schedule states that a member may be disqualified “if he has voluntarily given up his membership” of a political party.

They also contended that they could not be disqualified merely for disagreeing with the decisions and policies of some leaders outside the Assembly.

Supreme Court’s Ruling: The Supreme Court in the Kihoto Hollohan versus Zachillu and Others, 1992 has said that judicial review cannot be available at a stage prior to the making of a decision by the Speaker/Chairman. Nor would interference be permissible at an interlocutory stage of the proceedings. The only exception for any interlocutory interference (decree or judgment) being cases of interlocutory disqualifications or suspensions which may have grave, immediate and irreversible repercussions and consequences. Therefore, Constitutional courts cannot judicially review disqualification proceedings under the Tenth Schedule (anti-defection law) of the Constitution until the Speaker or Chairman makes a final decision on merits.

Reason for Limited Role of Courts: The Bench explained that the reason for limiting the role of courts in ongoing defection proceedings is that the office of the Speaker is held in the highest respect and esteem in parliamentary traditions.

Judicial Review: It had said that even the scope of judicial review against an order of a Speaker or Chairman in anti-defection proceedings would be confined to jurisdictional errors, that is infirmities based on violation of constitutional mandate, mala fide actions and non-compliance with rules of natural justice.

Disqualification under the Tenth Schedule

- The Anti-Defection Law was passed in 1985 through the 52nd amendment to the Constitution. It added the Tenth Schedule to the Indian Constitution. The main intent of the law was to combat “the evil of political defections”.
- According to it, a member of a House belonging to any political party becomes disqualified for being a member of the House, if: He voluntarily gives up his membership of such political party; or He votes or abstains
from voting in such House contrary to any direction issued by his political party without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.

Exceptions to the Disqualification on the Ground of Defection

- If a member goes out of his party as a result of a merger of the party with another party. A merger takes place when two-thirds of the members of the party have agreed to such a merger.
- If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it after he ceases to hold that office. This exemption has been provided in view of the dignity and impartiality of the office.

Powers of Speaker with regard to Anti-Defection Law

- Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.

Source: TH

Zonal Master Plan for the Bhagirathi Eco-Sensitive Zone

Zonal Master Plan for the Bhagirathi Eco-Sensitive Zone

GS-Paper-3 Environment (PT-MAINS)

Recently, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has approved the Zonal Master Plan for the Bhagirathi Eco-Sensitive Zone to pave the way for faster execution of Char Dham Road Project.

Background: In 2012, the MoEF&CC issued a gazette notification declaring the watershed area along the stretch of river Bhagirathi, covering 4,179.59 sq km from Gaumukh to Uttarkashi, an Eco-Sensitive Zone (ESZ). ESZs are the
ecologically important areas designated to be protected from industrial pollution and unregulated development under the Environment Protection Act of 1986.

The 2012 notification was issued keeping in view the requirements of the local people without affecting their rights and privileges and also ensuring eco-friendly development for their livelihood security. It sought to protect the entire fragile Himalayan region by restricting hydropower projects of over 2 MW, riverbed mining and change of land use.

However, it was amended in 2018 following Uttarakhand government’s objection that the notification was ‘anti-development.’ The 2018 amendment approved land use change to meet the local needs including civic amenities and other infrastructure development in larger public interest and national security with the prior approval of State Government with due study of environmental impacts. It also allowed cutting of hills in eco-sensitive areas with proper study and construction on steep slopes in exceptional cases for the benefit of the community.

Zonal Master Plan (ZMP):

- The Bhagirathi Eco-Sensitive Zone notification mandates the State Government of Uttarakhand to prepare ZMP to be implemented under the supervision of the Monitoring Committee.
- The ZMP is based on watershed approach and includes governance in the area of forest and wildlife, watershed management, irrigation, energy, tourism, public health and sanitation, road infrastructure, etc.
- Watershed development approach is based on participatory planning following a bottom-up approach for developing a context appropriate plan for execution, strengthening of local level institution, conservation and appropriate management of watershed’s natural resources.
- Watershed is a geo-hydrological unit draining into a common point by a system of drains.
- The approval of ZMP is expected to give a boost to conservation and ecology of the area and also to undertake developmental activities as permitted under ZMP.

Char Dham Road Project:

The Char Dham project proposes to provide all-weather connectivity to Yamunotri, Gangotri, Badrinath and Kedarnath, and has 53 projects of 826
km length, involving an investment of Rs. 12,000 crore. Bhagirathi is the source stream of Ganga. It emanates from Gangotri glacier at Gaumukh at an elevation of 3,892 m.

Concerns:

- In a report prepared after the Kedarnath disaster (2015), the Geological Survey of India stated that road construction in mountains reactivates landslides as it disturbs the ‘toe of the natural slope of the hill’.
- The Himalayas is the region where Indian tectonic plate goes under the Eurasian tectonic plate.
- Himalayas are in seismic zone V, thus a major earthquake can happen anytime.

Source: PIB

Legacy waste: Brahmapuram Dumping Site

GS-PAPER-3 Environment: Solid waste

Recently, the National Green Tribunal (NGT) has issued an order pertaining to the case of legacy waste (old municipal solid waste) piling up at the Kochi Corporation’s Brahmapuram dumpsite.

The NGT Judgement:

- The Chairman and Member Secretary of the Kerala State Pollution Control Board (KSPCB) will be held liable if they fail to initiate prosecution and recover compensation from those responsible for the unscientific handling of waste at Brahmapuram.
- The progress (remediation of waste) appears to be very slow and is disregardful of the statutory and constitutional obligation of providing a clean environment.
Further, the tribunal asked why there should be a bar on a single tender considering the critical situation. The government decided to float fresh tenders as only one agency had met the minimum eligibility criteria when an e-tender for biomining of legacy waste at Brahmapuram was floated on 20th March, 2020. The Bench suggested that other available options (besides biomining) be considered for compliance with Solid Waste Management Rules, 2016. The tribunal expressed doubts on whether the leachate (dark liquid that gets generated within the solid waste) generated at the dumping yard could be treated in an ordinary septage treatment plant as it contained heavy metals.

Brahmapuram Dumpsite:

- Only 1% of the recyclable plastic waste is recovered while the remaining 99% ends up as heaps in the dumping yard. 
- The leachate from the waste treatment plant at Brahmapuram is a major source of pollution of the river Kadambrayar. 
- Legacy waste was found to be a reason for the fire outbreaks. In 2020, the government took over the task of scientific management of legacy waste accumulated at Brahmapuram waste dumping yard from the Kochi corporation by invoking the provision under Section 24(e) of the Disaster Management Act, 2005.

Municipal Solid Waste Management

- Municipal Solid Waste (MSW) Management is one of the most serious challenges to environment protection and although Solid Waste Management Rules have been framed in 2016, their implementation remains a problem. 
- The local authorities are responsible for the development of infrastructure for collection, storage, segregation, transportation, processing and disposal of MSW. 
- There are two major challenges of solid waste management: Managin the continuous flow of solid waste on a daily basis. 

Dealing with the legacy of neglect which has resulted in garbage heaps having built at dumpsites that were meant for waste processing and landfills.

- In July 2019, the NGT directed that each local body would have to pay a compensation of Rs. 10 lakh per month (for population of above 10 lakh);
Rs. 5 lakh a month (for population between 5 lakh and 10 lakh), and Rs. 1 lakh per month for other local bodies for non-compliance with the Solid Waste Management Rules, 2016 from 1st April, 2020 till compliance.

- This compensation is equally applicable to local bodies found erring on the issue of remediation of legacy waste (to be completed by 7th April, 2021 statutorily).
- If local bodies are unable to bear financial burden, the liability will be of state governments to take remedial action against the erring bodies.
- An environment monitoring cell may be set up in the office of chief secretaries of all states/UTs for compliance.
- Remediation process is expected to be done as per the guidelines issued by the Central Pollution Control Board (CPCB).

Remediation of waste will help in unlocking the land occupied by waste sites which then can be used for setting up of biodiversity parks/buffer zones. Some parts can even be monetized. Further, protecting the environment is a constitutional mandate. Kochi needs to learn from success stories of urban local bodies like Thiruvananthapuram corporation, which is bigger in terms of population but is effectively managing waste with hundreds of Thumboormuzhy bins, material recovery centres and a mobile application.

Source: TH

Assam’s Flood and Management

GS-PAPER -1 Geography – Flood Management

The recent flood in Assam has led to heavy casualties, displacement of peoples and animals and destruction of property and environment. It has also led to inundation of 80% of the area of Kaziranga National Park.

Reason behind Floods:

- Ill-maintained or poorly constructed river embankments are the main
reason behind the flooding. One major feature of flood management in Assam is total dependence on embankments.

- Assam began constructing embankments in the 1960s and most of them have outlived their utility. Many of these started breaching or collapsing from the 1990s, more seriously from the 2000s. Massive deforestation in catchment areas of rivers or release of waters by dams upstream.
- Climate change is also a factor behind floods.
- Destruction of forests and ecosystem.
- Urbanisation.

Floods in Kaziranga’s Ecosystem:

- Experts believe that floods are necessary for Kaziranga by virtue of its riverine ecosystem. The system won’t survive without water.
- Kaziranga National Park and Tiger Reserve (KNPTR) is sandwiched between the Brahmaputra river and the Karbi Anglong Hills. The entire area is formed by alluvial deposits from the Brahmaputra and its tributaries.
- The regenerative nature of floods helps replenish Kaziranga’s water bodies and maintain its landscape, which is a mix of wetlands, grasslands and semi-evergreen deciduous forests.
- The floodwaters function as a breeding ground for fish, which are carried away by the receding waters into the Brahmaputra. i.e the Kaziranga’s floods replenishes the Brahmaputra’s stock of fish.
- The waters also help get rid of unwanted plants such as water hyacinth which collect in huge masses in the landscape.

Issues Involved:

Frequent Floods: Earlier, a big flood would come once in ten years, now they come every other year.

NH-37: When the flood water hits a certain level, the animal moves towards safer, higher ground in the Karbi Anglong hills. However, they have to cross NH-37 which cuts across the park, which leads to the killing of animals in road accidents. Animals are also killed by poachers who take advantage of their vulnerability.

Human-animal Conflict: Animals also move towards villages in floods, this leads to human-animal conflict.

Steps taken during Floods:

- The authorities keep a track of updates from the Central Water Commission,
and monitor water levels of the Brahmaputra tributaries upstream in Arunachal Pradesh.

- Camps are organised to create awareness against poaching and harming wild animals that are rendered vulnerable during the floods.”
- When the floods hit, Section 144 of CrPC is imposed along NH-37, speed limits are enforced and fines levied. Barricades are also placed to help animals cross over to Karbi Anglong.

Conclusion

In the absence of long-term alternatives, the government has to invest in strong, durable embankments to ensure that the situation does not deteriorate every year. Kaziranga, with its rich grassland habitats, has a primary role to play in supporting the wildlife populations.

Emphasis needs to be put on securing animal corridors and ensuring a safe passage to the Karbi hills. Need for a landscape-scale conservation approach that recognises the value of the Karbi Anglong hills. The highlands of Karbi Anglong, where the animals take refuge, are the lifeline of the park during the floods.

Source: TH

Basmati and GI tag

GS-III | 20 July, 2020

Basmati and GI tag

GS-PAPER-3 IPR

India is the only producer of premium Basmati and it has been grown from time immemorial in the Indo-Gangetic Plains (IGP) area of India and 18 districts of Pakistan’s Punjab. It had been a tough battle for the country to protect Basmati name from the encroachment of various nations which all came out with their own versions of Basmati.

- APEDA got GI tag for the region located in IGP below the foothills of the
Himalayas, spread across seven states (Himachal Pradesh, Jammu and Kashmir, Punjab, Haryana, Uttarakhand, Western Uttar Pradesh (26 districts) and Delhi) in May 2010.

**Reasons Given:** The origin and reputation of Basmati rice as a ‘long-grain, aromatic rice’ from the IGP is found in tradition, folklore, scientific and culinary literature and political-historical records.

- Dehraduni Basmati, Amritsar Basmati and Tarawari Basmati are few varieties which have become famous over the period of hundreds of years.

**Claims and Efforts Made by Madhya Pradesh:**

- MP claims that its rice possesses the same characteristics and qualities as that of the rice grown in the IGP.
- It also claims that nearly 80,000 farmers of the state are growing Basmati in 13 districts and exporting worth Rs. 3,000 crore annually.
- MP appealed in Madras High Court where its plea was rejected in February 2020.
- In 2016, Intellectual Properties Appellate Board (IPBA) in Chennai had given the decision in favour of the APEDA.
- Despite these orders, MP has been repeatedly agitating and raising banter through political and bureaucratic channels.

**Basis of Rejection:**

- Under the World Trade Organisation Trade-Related Aspects of Intellectual Property Rights (WTO TRIPs) agreement, physical attributes are not enough for a product to earn a GI tag.
- As per the Goods (Registration and Protection) Act in 2003, ‘reputation’ to a geographical area is central to the recognition of a GI product and only seven states have that reputation.
- MP falls in the Madhya Bharat Pathar (plateau) and started cultivation of varieties of Basmati rice only around the middle of the first decade of this century.
- Even if the rice grown in MP has all the required characteristics it would not still entitle such rice to qualify as Basmati.

**Possible Effects of Inclusion of MP in GI list:**

- It will nullify APEDA’s efforts to secure and protect Indian Basmati since 1995 by taking up over 1,000 legal actions in nearly 50 countries.
- APEDA has spent around Rs. 250 crores in promoting Basmati rice, defending its GI status and shaping it into a global brand.
- If MP gets permission, Pakistan and China will grab the
opportunity to start sowing Basmati. All those 50 and more nations who had been restricted from calling any of their aromatic rice with even ‘Basmati-like’ names will also start growing it and contend for its status.
- It will deprive over 20 lakh farmers of seven states from the economic premium of growing this unique product. Therefore, the commercial considerations cannot be sacrificed for expanding the area of GI.

Source: IE

Global Multidimensional Poverty Index 2020
GS-II | 20 July, 2020

Global Multidimensional Poverty Index 2020
GS-Paper-2 I.O UNDP (PT-MAINS)

Recently, Global Multidimensional Poverty Index 2020 was released by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative (OPHI). The data of the index is based on the study of poverty trends in 75 countries.

Global Scenario:

- **1.3 billion people are still living in multidimensional poverty.** More than 80% are deprived in at least five of the ten indicators used to measure health, education and living standards in the global MPI.

Multidimensional Poverty Index

- The Multidimensional Poverty Index was launched by the UNDP and the OPHI in 2010.
- MPI is based on the idea that poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional.
- The index shows the proportion of poor people and the average
MPI uses three dimensions and ten indicators which are:

- **Education**: Years of schooling and child enrollment (1/6 weightage each, total 2/6);
- **Health**: Child mortality and nutrition (1/6 weightage each, total 2/6);
- **Standard of living**: Electricity, flooring, drinking water, sanitation, cooking fuel and assets (1/18 weightage each, total 2/6)

A person is **multidimensionally poor** if she/he is deprived in one third or more (means 33% or more) of the weighted indicators (out of the ten indicators). Those who are deprived in one half or more of the weighted indicators are considered living in **extreme multidimensional poverty**.

MPI is significant as it recognizes poverty from different dimensions compared to the conventional methodology that measures poverty only from the income or monetary terms.

- The burden of multidimensional poverty disproportionately falls on children - half of multidimensionally poor people are children under age 18.
- 65 out of 75 countries studied significantly reduced their multidimensional poverty levels between 2000 and 2019.
- **About 84.3% of multidimensionally poor people live in Sub-Saharan Africa and South Asia.**
- 67% of multidimensionally poor people are in middle-income countries.

**Indian Scenario:**

- **India lifted as many as 270 million people out of multidimensional poverty between 2005-06 and 2015-16.**
- **Neighbourhood Scenario:** In China, 70 million people left multidimensional poverty between 2010 and 2014, while in Bangladesh, the numbers declined by 19 million between 2014 and 2019.
- **Impact of Covid-19:** Covid-19 is having a profound impact on the development landscape. The study finds that on average, poverty levels will be set back 3 to 10 years due to Covid-19.
- **Sustainable Development Goals:** The index emphasises on measuring and monitoring progress under the goals to reach ‘zero poverty by 2030-Goal 1 of the SDGs’.

The index with its information on both the level and composition of poverty – provides the data needed to pinpoint where and how poverty manifests itself. Therefore, it will incite action in solidarity with the poor, so that nations like India can ‘build better’. Reflecting progress before the coronavirus pandemic, it suggests that the progress is at risk and stake-holders need to look beyond...
income to tackle poverty in all its forms. Hence, there is a need to take action to redress the rise of under-nutrition and children leaving school.

Source: TH

Earthquakes management

According to a recently published study, researchers have developed a new way to improve the prediction of earthquakes.

Seismic Waves

Vibrations from an earthquake are categorised as P (primary) and S (secondary) waves. They travel through the Earth in different ways and at different speeds. They can be detected and analysed.

- **P-waves:**
  - These are the first waves detected by seismographs (instruments used to detect and record earthquakes).
  - These are longitudinal waves which means they vibrate along the same direction as they travel.
  - Other examples of longitudinal waves include sound waves and waves in a stretched spring.

- **S-waves:**
  - These waves arrive at the detector after primary waves.
  - These are transverse waves which means they vibrate at a right angle to the direction in which they travel.
  - Other examples of transverse waves include light waves and water waves.

Both types of seismic waves can be detected near the earthquake centre but only P-waves can be detected on the other side of the Earth. P-waves can travel through solids and liquids (since they are...
longitudinal waves) whereas S-waves can only travel through solids (as they are transverse waves). This means the liquid part of the core blocks the passage of S-waves.

- The earthquake events are scaled either according to the magnitude or intensity of the shock.
  - The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the earthquake which is expressed in absolute numbers, 0-10.
  - The intensity scale or Mercalli scale takes into account the visible damage caused by the event. The range of intensity scale is from 1-12.

### Earthquakes:

Earthquakes usually occur along faults (fractures between rocks which can range from a few millimetres to thousands of kilometres). When two blocks of earth slip past one another, seismic waves are generated in a short span of time and earthquakes occur. The waves travel to the surface causing destruction and are difficult to predict, making it challenging to save lives.

### Earlier Attempts

Scientists have attempted to recreate the faults and their sliding in laboratories to try and understand the conditions in them during earthquakes.

However, the actual conditions are so complex that it is difficult to recreate them with full accuracy which makes the prediction of earthquakes difficult.

### New Method:

- Researchers have now used a different approach for earthquake prediction by trying to predict the frictional strength of phyllosilicates.
- **Frictional Strength**: It is the force required to cause movement along a fault.
- **Phyllosilicates**: Minerals in the form of thin plates found along the weakest part of the faults where earthquakes occur.
- The researchers analysed artificial fault zones on a microscopic scale to identify processes that occurred during the experiment.
- A set of equations were then formulated to predict how the frictional strength of phyllosilicate changes, along with a change in conditions such as humidity or the rate of fault movement.
This made it easier for modellers to simulate fault movement in natural conditions, including earthquakes. The new model predicts that movement along phyllosilicate-rich fault zones becomes more difficult as it becomes faster and this has been consistent with experiments. This behaviour of movement becoming more difficult prevents earthquakes and suggests minerals other than phyllosilicates play an important role in causing earthquakes. However, more work and research is needed to clearly explain it and to understand the relation between the force that holds a fault together and the force needed to move the fault.

Source: DTE

Anti-defection

GS-Paper-2 Governance (PT-MAINS)

The Tenth Schedule, technicalities and also the Anti Defection Law would be cited during the crisis. Ultimately the matter could also end up in the Supreme Court.

What is the anti-defection law?

The Tenth Schedule was inserted in the Constitution in 1985 by the 52nd Amendment Act.

- It lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature based on a petition by any other member of the House.
- The decision on question as to disqualification on ground of defection is referred to the Chairman or the Speaker of such House, and his decision is final.
The law applies to both Parliament and state assemblies.

Disqualification:

If a member of a house belonging to a political party:

- Voluntarily gives up the membership of his political party, or
- Votes, or does not vote in the legislature, contrary to the directions of his political party. However, if the member has taken prior permission, or is condoned by the party within 15 days from such voting or abstention, the member shall not be disqualified.
- If an independent candidate joins a political party after the election.
- If a nominated member joins a party six months after he becomes a member of the legislature.

Exceptions under the law:

Legislators may change their party without the risk of disqualification in certain circumstances.

- The law allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger.
- In such a scenario, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.

Decision of the Presiding Officer is subject to judicial review:

The law initially stated that the decision of the Presiding Officer is not subject to judicial review. This condition was struck down by the Supreme Court in 1992, thereby allowing appeals against the Presiding Officer’s decision in the High Court and Supreme Court. However, it held that there may not be any judicial intervention until the Presiding Officer gives his order.

Advantages of anti-defection law:

- Provides stability to the government by preventing shifts of party allegiance.
- Ensures that candidates remain loyal to the party as well the citizens voting for him.
- Promotes party discipline.
- Facilitates merger of political parties without attracting the provisions of Anti-defection.
- Expected to reduce corruption at the political level.
- Provides for punitive measures against a member who defects from one
Various Recommendations to overcome the challenges posed by the law:

1. **Dinesh Goswami Committee on electoral reforms**: Disqualification should be limited to following cases:
   
   A member voluntarily gives up the membership of his political party
   
   A member abstains from voting, or votes contrary to the party whip in a motion of vote of confidence or motion of no-confidence. Political parties could issue whips only when the government was in danger.

2. **Law Commission (170th Report)**

   Provisions which exempt splits and mergers from disqualification to be deleted.
   
   Pre-poll electoral fronts should be treated as political parties under anti-defection
   
   Political parties should limit issuance of whips to instances only when the government is in danger.

3. **Election Commission**:

   Decisions under the Tenth Schedule should be made by the President/ Governor on the binding advice of the Election Commission.

Source: TH

---

**Dr. Anil Kakodkar Committee**

**GS-III | 20 July, 2020**

**High Level Safety Review Committee (Railways)**

- The Ministry of Railways had appointed a High Level Safety Review Committee under the chairmanship of **Dr. Anil Kakodkar** to review the safety of the Indian Railways and recommend improvements.
- The Committee recently presented its report. The Committee recommends a total financial investment of Rs 1,00,000 crore over a five year period.
If the Committee's recommendations are accepted, the total financial implication over the five year period is likely to be Rs 1,00,000 crore.

**Recommendations of the Committee are listed below:**

1. In the present situation, the three vital functions (rule making, operations and the regulation) are all vested in the Railway Board. There is need for an independent mechanism for safety regulation. The Committee recommends the creation of a statutory Railway Safety Authority with enough powers to have a safety oversight on the operational mode of Railways.

2. The Research Design and Standards Organization (RDSO), the apex technical wing of the Railways, is highly constrained. This has hampered the ability of the system to internalize emerging technologies. The Committee recommends restructuring of RDSO for greater empowerment. It also recommends that a Railway Research and Development Council (RRDC) be set up directly under the government.

3. The Committee recommends the adoption of an Advanced Signalling System (akin to the European Train Control System) for the entire trunk route length of 19,000 km within 5 years. This is estimated to cost Rs 20,000 crore.

4. All Level Crossings (both manned and unmanned) should be eliminated over five years. An estimated expenditure of Rs 50,000 crore will be required for achieving this target. The Committee is of the belief that this amount will be recovered within 7-8 years through savings in maintenance costs and improved train operations.

5. The Committee also recommends a switch over from the ICF design coaches to the much safer LHB design coaches. This is likely to cost Rs 10,000 crore over the next five years.

6. Other Committee recommendations on the maintenance of safety related infrastructure are estimated to cost about Rs 20,000 crore.

Source: WEB
National Financial Reporting Authority (NFRA)

- The National Financial Reporting Authority (NFRA) was constituted on 01st October, 2018 by the Government of India under Sub Section (1) of section 132 of the Companies Act, 2013.

Functions and Duties

- Recommend accounting and auditing policies and standards to be adopted by companies for approval by the Central Government;
- Monitor and enforce compliance with accounting standards and auditing standards;
- Oversee the quality of service of the professions associated with ensuring compliance with such standards and suggest measures for improvement in the quality of service;
- Perform such other functions and duties as may be necessary or incidental to the aforesaid functions and duties.
- Authority shall protect the public interest and the interests of investors, creditors and others associated with the companies or bodies.

Companies and Bodies Corporate Governed by the Authority

a. Companies whose securities are listed on any stock exchange in India or outside India;
b. Unlisted public companies having paid-up capital of not less than rupees five hundred crores or having annual turnover of not less than rupees one thousand crores or having, in aggregate, outstanding loans, debentures and deposits of not less than rupees five hundred crores as on the 31st March of immediately preceding financial year;
c. Insurance companies, banking companies, companies engaged in the generation or supply of electricity, companies governed by any special Act for the time being in force or bodies corporate incorporated by an Act in accordance with clauses (b), (c), (d), (e) and (f) of sub-section (4) of section 1 of the Act;
d. Any body corporate or company or person, or any class of bodies corporate or companies or persons, on a reference made to the Authority by the Central Government in public interest; and
e. A body corporate incorporated or registered outside India, which is a...
subsidiary or associate company of any company or body corporate incorporated or registered in India as referred to in clauses (a) to (d), if the income or networth of such subsidiary or associate company exceeds twenty per cent. of the consolidated income or consolidated networth of such company or the body corporate, as the case may be, referred to in clauses (a) to (d).

Source: TH
Consumer Protection Act, 2019

Context:

Details:
- The new Act empowers buyers to ask for replacements, refunds or damages from brands, e-tailers and service providers.
- Aggrieved customers in India will now be able to seek effective legal remedy, on the lines of class action suits seen in many countries.

Salient features of the Act:

Central Consumer Protection Authority (CCPA):
- The law proposes a Central Consumer Protection Authority (CCPA) to regulate matters of consumer rights, trade practices and advertisements prejudicial to the interests of the public, and to promote, protect and enforce the rights of the consumers as a class.
- The proposed CCPA will be able to file suo motu cases on behalf of a class of customers, thereby initiating class action suits that would hold brands and e-tailers accountable.

Simplified Dispute Resolution Process:
- Consumer Commissions are empowered to enforce their orders.
- State Commissions & District Commissions can now review their own orders.
- Ease of approaching Consumer Commissions through E-filing and video conferencing for hearing.

Mediation:
- Mediation is prescribed as an Alternate Dispute Resolution (ADR) mechanism.
- Reference to mediation by Consumer Commissions wherever scope for early settlement exists and parties agree for it.
- No appeal against settlement through mediation.

Product Liability:
A manufacturer or product service provider or product seller to be responsible to compensate for injury or damage caused by defective product or deficiency in services.

This provision would deter manufacturers and service providers from delivering defective products or deficient services.

Source: TH/WEB
Consumer Protection Act, 2019

Context:


Details:

- The new Act empowers buyers to ask for replacements, refunds or damages from brands, e-tailers and service providers.
- Aggrieved customers in India will now be able to seek effective legal remedy, on the lines of class action suits seen in many countries.

Salient features of the Act:

Central Consumer Protection Authority (CCPA):

- The law proposes a Central Consumer Protection Authority (CCPA) to regulate matters of consumer rights, trade practices and advertisements prejudicial to the interests of the public, and to promote, protect and enforce the rights of the consumers as a class.
- The proposed CCPA will be able to file suo motu cases on behalf of a class of customers, thereby initiating class action suits that would hold brands and e-tailers accountable.

Simplified Dispute Resolution Process:

- Consumer Commissions are empowered to enforce their orders.
- State Commissions & District Commissions can now review their own orders.
- Ease of approaching Consumer Commissions through E-filing and video conferencing for hearing.

Mediation:

- Mediation is prescribed as an Alternate Dispute Resolution (ADR) mechanism.
- Reference to mediation by Consumer Commissions wherever scope for early settlement exists and parties agree for it.
- No appeal against settlement through mediation.

Product Liability:
A manufacturer or product service provider or product seller to be responsible to compensate for injury or damage caused by defective product or deficiency in services.

This provision would deter manufacturers and service providers from delivering defective products or deficient services.

Source: TH/WEB
The Muslim Women (Protection of Rights on Marriage) Bill, 2019 became the first legislation to be tabled in Parliament by the Narendra Modi dispensation in its second term, with Law Minister Ravi Shankar Prasad asserting the legislation was a must for gender equality and justice. The bill was introduced following a division of votes, with 186 members supporting and 74 opposing it. The bill was introduced in the lower house to replace an Ordinance issued in February by the previous BJP-led NDA government. The Bill was earlier introduced in December 2017 but owing to dissolution of the 16th Lok Sabha last month, the previous bill had lapsed as it was pending in the Rajya Sabha. The government had promulgated the Ordinance on triple talaq twice — in September 2018 and in January 2019 — as the contentious bill remained pending in the Rajya Sabha, though it was passed by the Lok Sabha. The Bill proposes to make the practice of instant triple talaq a penal offence.

What’s the issue all about- A brief history:

The case dates back to 2016 when the Supreme Court had sought assistance from the then Attorney General Mukul Rohatgi on pleas challenging the constitutional validity of “triple talaq”, “nikah halala” and “polygamy”, to assess whether Muslim women face gender discrimination in cases of divorce.

Opposing the practice of triple talaq, the Centre told the top court that there is a need to re-look at these practices on grounds of gender equality and secularism.

The Supreme Court later announced the setting up of a five-judge constitutional bench to hear and deliberate on the challenges against the practice of ‘triple talaq, nikah halala’ and polygamy.

The issue gained political momentum on March 2017 when the All India Muslim Personal Law Board (AIMPLB) told the Supreme Court that the issue of triple
talaq falls outside the judiciary’s realm and that these issues should not be touched by the court.

However, on August 22, the Supreme Court set aside the decade-old practice of instant triple talaq saying it was violative of Article 14 and 21 of the Indian Constitution.

A bill in this regard:

In September, the government had proposed the Muslim Women (Protection of Rights on Marriage) Bill in the Parliament and sought to make triple talaq a punishable offence under the law.

At first, the Bill was passed in the Lok Sabha but it failed to secure a majority in the Rajya Sabha. The Bill was postponed till the winter session of Parliament. Following this, an ordinance was issued by the government after the bill failed to get cleared in Rajya Sabha amid protests by the Opposition.

Key provisions:

The Bill makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable in law) and illegal.

Definition: It defines talaq as talaq-e-biddat or any other similar form of talaq pronounced by a Muslim man resulting in instant and irrevocable divorce. Talaq-e-biddat refers to the practice under Muslim personal laws where pronunciation of the word ‘talaq’ thrice in one sitting by a Muslim man to his wife results in an instant and irrevocable divorce.

Offence and penalty: The Bill makes declaration of talaq a cognizable offence, attracting up to three years’ imprisonment with a fine. (A cognizable offence is one for which a police officer may arrest an accused person without warrant.) The offence will be cognizable only if information relating to the offence is given by: (i) the married woman (against whom talaq has been declared), or (ii) any person related to her by blood or marriage.

The Bill provides that the Magistrate may grant bail to the accused: The bail may be granted only after hearing the woman (against whom talaq has been
pronounced), and if the Magistrate is satisfied that there are reasonable grounds for granting bail.

The offence may be compounded by the Magistrate upon the request of the woman (against whom talaq has been declared). Compounding refers to the procedure where the two sides agree to stop legal proceedings, and settle the dispute. The terms and conditions of the compounding of the offence will be determined by the Magistrate.

**Allowance:** A Muslim woman against whom talaq has been declared, is entitled to seek subsistence allowance from her husband for herself and for her dependent children. The amount of the allowance will be determined by the Magistrate.

**Custody:** A Muslim woman against whom such talaq has been declared, is entitled to seek custody of her minor children. The manner of custody will be determined by the Magistrate.

**Arguments favouring the bill:**

- Bill is needed so that even Muslim women also get *equality on par* with other Muslim men.
- Triple talaq adversely impact rights of women to a life of dignity and is against constitutional principles such as gender equality, secularism, international laws etc.
- The penal measure acts as a “necessary deterrent”
- It significantly empowers Muslim women.
- The practice of triple talaq has continued despite the Supreme Court order terming it void.
- The practice is arbitrary and, therefore, unconstitutional
- The law is about justice and respect for women and is not about any religion or community
- It protects the rights of Muslim women against arbitrary divorce
- Instant triple talaq is viewed as sinful and improper by a large section of the community itself.
- The fine amount could be awarded as maintenance or subsistence.

**Arguments opposing the bill:**

- It is well established that criminalising something does not have any deterrent
Since marriage is a civil contract, the procedures to be followed on its breakdown should also be of civil nature only.

Civil redress mechanisms must ensure that Muslim women are able to negotiate for their rights both within and outside of the marriage.

The harsh punishment defies the doctrine of proportionality.

Three years in prison of the convicted husband will end up penalising the already aggrieved wife and children too.

The punishment will aggravate the insecurity and alienation of the Indian Muslim community.

In the recent Supreme Court judgement, it never said that triple talaq is to be criminally punished.

Invoke a secular law that already exists: Protection of Women from Domestic Violence Act (PWDVA), 2005.

Parliament should have passed a law stating that the utterance of the words “talaq, talaq, talaq” would amount to “domestic violence” as defined in the PWDVA.

The PWDVA was conceived as a law that ensures speedy relief — ideally within three months — to an aggrieved woman.

While PWDVA is civil in nature, it has a reasonably stringent penal provision built into it.

Concerns:

- It could be just a piece of legislation rather than a kind than a kind of relief to the women.
- Some representatives have given it a political and religious color.
- Some Muslim women’s groups raised concerns about “maintenance” if the husband is sent to jail.
- The mutual divorce provision is missing in the proposed law and needs to be debated.

Time has come to put an end to the suffering of Muslim women who have been at the receiving end of instant talaq for several years. More than 20 Islamic countries have already banned the practice.

Source: PIB
Uniform Civil Code

A Uniform Civil Code means that all sections of the society irrespective of their religion shall be treated equally according to a national civil code, which shall be applicable to all uniformly.

They cover areas like Marriage, divorce, maintenance, inheritance, adoption and succession of the property. It is based on the premise that there is no connection between religion and law in modern civilization.

Background

Historical perspective – The debate for a uniform civil code dates back to the colonial period in India.

- **Pre-Independence (colonial era)**
  - The Lex Loci Report of October 1840- It stressed the importance and necessity of uniformity in the codification of Indian law, relating to crimes, evidence and contract. But, it also recommended that personal laws of Hindus and Muslims should be kept outside such codification.
  - The Queen’s 1859 Proclamation- It promised absolute non-interference in religious matters.

So while criminal laws were codified and became common for the whole country, personal laws continue to be governed by separate codes for different communities.

- **Post-Colonial era (1947-1985)**
  - During the drafting of the constitution, prominent leaders like Jawaharlal Nehru and Dr B.R Ambedkar pushed for a uniform civil code. However, they included the UCC in the Directive Principles of State Policy (DPSP, Article 44) mainly due to opposition from religious fundamentalists and a lack of awareness among the masses during the time.

Some of the reforms of this period were:-

**The Hindu code bill** -The bill was drafted by Dr.B R Ambedkar to reform Hindu
laws, which legalized divorce, opposed polygamy, gave rights of inheritance to
daughters. Amidst intense opposition of the code, a diluted version was passed
via four different laws.

Succession Act- The Hindu Succession Act, 1956, originally did not give
daughters inheritance rights in ancestral property. They could only ask for a right
to sustenance from a joint Hindu family. But this disparity was removed by an
amendment to the Act on September 9, 2005

The Hindu Marriage Act

Minority and Guardianship Act

Adoptions and Maintenance Act

Special Marriage Act:

- It was enacted in 1954 which provided for civil marriages outside of any
  religious personal law.
- Judicial interventions:

Shah Bano case (1985):

A 73-year-old woman called Shah Bano was divorced by her husband using triple
talaq (saying “I divorce thee” three times) and was denied maintenance. She
approached the courts and the District Court and the High Court ruled in her
favour. This led to her husband appealing to the Supreme Court saying that he
had fulfilled all his obligations under Islamic law.

The Supreme Court ruled in her favour in 1985 under the “maintenance of
wives, children and parents” provision (Section 125) of the All India Criminal
Code, which applied to all citizens irrespective of religion. Further, It
recommended that a uniform civil code be set up.

Facts about the case:

- Under Muslim personal law, maintenance was to be paid only till the period of
  iddat. (three lunar months-roughly 90 days).
- Section 125 of CrPC (criminal procedure code) that applied to all citizens,
  provided for maintenance of the wife.

Impact – After this historic decision, nationwide discussions, meetings and
agitations were held. The then government under pressure passed The Muslim Women's (Right to protection on divorce) Act (MWA) in 1986, which made Section 125 of the Criminal Procedure Code inapplicable to Muslim women.

**The Constitution of India on the Uniform Civil Code**

Part IV, Article 44 of the Constitution states that “The State shall endeavour to secure the citizen a Uniform Civil Code throughout the territory of India”.

However, Article 37 of the Constitution itself makes it clear the DPSP “shall not be enforceable by any court”. Nevertheless, they are “fundamental in the governance of the country”. This indicates that although our constitution itself believes that a Uniform Civil Code should be implemented in some manner, it does not make this implementation mandatory.

**In NEWS**

Last week, while hearing a matter relating to properties of a Goan, the Supreme Court described Goa as a “shining example” with a Uniform Civil Code, observed that the founders of the Constitution had “hoped and expected” a Uniform Civil Code for India but there has been no attempt at framing one.

**Goa Civil Code**

Goa is the only Indian state to have a UCC in the form of common family law. The Portuguese Civil Code that remains in force even today was introduced in the 19th century in Goa and wasn’t replaced after its liberation.

**Features**-

- The Uniform Civil Code in Goa is a progressive law that allows equal division of income and property between husband and wife and also between children (regardless of gender).
- Every birth, marriage and death have to be compulsorily registered. For divorce, there are several provisions.
- Muslims who have their marriages registered in Goa cannot practice polygamy or divorce through triple talaq.
- During the course of a marriage, all the property and wealth owned or
acquired by each spouse is commonly held by the couple.

- Each spouse in case of divorce is entitled to half of the property and in case of death, the ownership of the property is halved for the surviving member.
- The parents cannot disinherit their children entirely. At least half of their property has to be passed on to the children. This inherited property must be shared equally among the children.

However, the code has certain drawbacks and is not strictly a uniform code. For example, Hindu men have the right to bigamy under specific circumstances mentioned in Codes of Usages and Customs of Gentile Hindus of Goa (if the wife fails to deliver a child by the age of 25, or if she fails to deliver a male child by the age of 30). For other communities, the law prohibits polygamy.

Uniform Civil Code and Arguments For & Against

Arguments in favour of the Uniform Civil Code:

- It Will Integrate India- India is a country with many religions, customs and practices. A uniform civil code will help in integrating India more than it has ever been since independence. It will help in bringing every Indian, despite his caste, religion or tribe, under one national civil code of conduct.
- Will Help in Reducing Vote Bank Politics- A UCC will also help in reducing vote bank politics that most political parties indulge in during every election.
- Personal Laws Are a Loophole- By allowing personal laws we have constituted an alternate judicial system that still operates on thousands of years old values. A uniform civil code would change that.
- Sign of a modern progressive nation- It is a sign that the nation has moved away from caste and religious politics. While our economic growth has been significant, our social growth has lagged behind. A UCC will help society move forward and take India towards its goal of becoming a truly developed nation.
- It will Give More Rights to Women- Religious personal laws are misogynistic in nature and by allowing old religious rules to continue to govern the family life we are condemning all Indian women to subjugation and mistreatment. A uniform civil code will also help in improving the condition of women in India.
- All Indians Should be Treated the Same- All the laws related to marriage, inheritance, family, land etc. should be equal for all Indians. UCC is the only way to ensure that all Indians are treated the same.
- It Promotes Real Secularism- A uniform civil code doesn’t mean that it will
limit the freedom of people to follow their religion, it just means that every person will be treated the same and all citizens of India have to follow the same laws regardless of any religion.

- Change has been the law of nature-A minority of people should not be allowed to pick and choose the laws they want to be administered under. These personal laws were formulated in a specific spatiotemporal context and should not stand still in a changed time and context.
- Many provisions of specific personal laws are in violation of human rights.
- Article 25 and Article 26 guarantee the freedom of religion and UCC is not opposed to secularism.
- The codification and unification of the variegated personal laws will produce a more coherent legal system. This will reduce the existing confusion and enable easier and more efficient administration of laws by the judiciary.
Does India not already have a uniform code in civil matters?

Indian laws do follow a uniform code in most civil matters — Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act etc. States, however, have made hundreds of amendments and therefore in certain matters, there is diversity even under these secular civil laws. Recently, several states refused to be governed by the uniform Motor Vehicles Act, 2019.

If the framers of the Constitution had intended to have a Uniform Civil Code, they would have given exclusive jurisdiction to Parliament in respect of personal laws, by including this subject in the Union List. But “personal laws” are mentioned in the Concurrent List.

Last year, the Law Commission concluded that a Uniform Civil Code is neither feasible nor desirable.
**Why is UCC may not desirable at this point?**

**Secularism cannot contradict the plurality prevalent in the country.** Besides, cultural diversity cannot be compromised to the extent that our urge for uniformity itself becomes a reason for threat to the territorial integrity of the nation.
The term ‘secularism’ has meaning only if it assures the expression of any form of difference. This diversity, both religious and regional, should not get subsumed under the louder voice of the majority. At the same time, discriminatory practices within a religion should not hide behind the cloak of that faith to gain legitimacy.

How does the idea of a Uniform Civil Code relate to the fundamental right to religion?

Article 25 lays down an individual’s fundamental right to religion; Article 26(b) upholds the right of each religious denomination or any section thereof to “manage its own affairs in matters of religion”; Article 29 defines the right to conserve distinctive culture.

An individual’s freedom of religion under Article 25 is subject to “public order, health, morality” and other provisions relating to fundamental rights, but a group’s freedom under Article 26 has not been subjected to other fundamental rights.

In the Constituent Assembly, there was division on the issue of putting Uniform Civil Code in the fundamental rights chapter. The matter was settled by a vote. By a 5:4 majority, the fundamental rights sub-committee headed by Sardar Vallabhbhai Patel held that the provision was outside the scope of fundamental rights and therefore the Uniform Civil Code was made less important than freedom of religion.

What is needed now?

Need of the hour is the codification of all personal laws so that prejudices and stereotypes in every one of them would come to light and can be tested on the anvil of fundamental rights of the Constitution. By codification of different personal laws, one can arrive at certain universal principles that prioritise equity rather than imposition of a Uniform Code, which would discourage many from using the law altogether, given that matters of marriage and divorce can also be settled extra-judicially.

Suggestions for Implementing a Uniform Civil Code:

To realize the goals of the DPSP and to maintain the uniformity of laws, the
following suggestions need immediate consideration:

- A progressive and broadminded outlook should be encouraged among the people to understand the spirit of the UCC. For this, education, awareness and sensitisation programmes must be taken up.
- The Uniform Civil Code should be drafted keeping in mind the best interest of all the religions.
- A committee of eminent jurists should be constituted to maintain uniformity and care must be taken not to hurt the sentiments of any particular community.
- The matter being sensitive in nature, it is always better if the initiative comes from the religious groups concerned.

**The Way Forward for UCC: Gradual Change**

India has a unique blend of codified personal laws of Hindus, Muslims, Christians, Parsis. There exists no uniform family-related law in a single statute book for all Indians which is acceptable to all religious communities who co-exist in India. However, a majority of them believe that UCC is definitely desirable and would go a long way in strengthening and consolidating the Indian nationhood. The differences of opinion are on its timing and the manner in which it should be realized.

Instead of using it as an emotive issue to gain political advantage, political and intellectual leaders should try to evolve a consensus. The question is not of minority protection, or even of national unity, it is simply one of treating each human person with dignity, something which personal laws have so far failed to do.

Source: PIB
According to a study titled *State of Food Security and Nutrition in the World*, hunger and malnutrition is increasing around the world. In this scenario, achieving the Sustainable Development Goal (2) of ‘Zero Hunger’ by 2030 will be very difficult.

The *State of Food Security and Nutrition in the World* is the most authoritative global study tracking progress towards ending hunger and malnutrition.

**It is produced jointly by the Food and Agriculture Organization (FAO) of the United Nations, the International Fund for Agriculture (IFAD), the United Nations Children’s Fund (UNICEF), the UN World Food Programme (WFP) and the World Health Organization (WHO).**

### Imp Points

#### Increasing Hunger:

**Steep Rise:** The study estimates that almost 690 million people went hungry in 2019 – up by 10 million from 2018, and by nearly 60 million in five years (2014-2019).

Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. For decades, FAO has used the prevalence of undernourishment indicator to estimate the extent of hunger in the world, thus “hunger” may also be referred to as undernourishment.

**Chronic Hunger:** There has been no change in the hunger trend since 2000, After steadily diminishing for decades, chronic hunger slowly began to rise in 2014 and continues to do so.

**Regional Hotspots:** Asia remains home to the greatest number of hunger (381 million). Africa is second (250 million), followed by Latin America and the Caribbean (combined 48 million).

**Rate of Hunger:** The rate of undernourishment (hunger) in Africa is double compared to Asia and it is expected that by 2030, Africa will be home to more than half of the world’s chronically hungry.

**Impact of Covid-19:** The Covid-19 pandemic could also push over 130 million more people into chronic hunger by the end of 2020.
Reasons: High costs and low affordability was the main reason behind the hunger.

Increasing Malnutrition:

Affordability: The study estimates that 3 billion people or more cannot afford a healthy diet.

In sub-Saharan Africa and southern Asia, this is the case for 57% of the population.

The key reason behind malnutrition is the high cost of nutritious foods and the low affordability of healthy diets for vast numbers of families.

According to the study, a healthy diet costs far more than USD 1.90/day, which is the international poverty threshold.

It puts the price of even the least expensive healthy diet at five times the price of filling stomachs with starch only.

Impact on Children: According to the study, in 2019, nearly a third of children under five (191 million) were stunted (too short) or wasted (too thin). Another 38 million under-fives were overweight.

Suggestions

Shifting of Diet: A global switch to healthy diets would help check the backslide into hunger while delivering enormous savings. Shift to a healthy diet will reduce the health costs associated with unhealthy diets. The diet related social cost of greenhouse gas emissions, estimated at USD 1.7 trillion, could also be cut by up to three-quarters by 2030.

Transform Food Systems: The transformation of food systems will not only reduce the cost of nutritious foods but also increase the affordability of healthy diets.

The study calls on governments:

- To mainstream nutrition in their approaches to agriculture.
- Work to cut cost-escalating factors in the production, storage, transport.
distribution and marketing of food – including by reducing inefficiencies and food loss and waste.
- Support local small-scale producers to grow and sell more nutritious foods and secure their access to markets.
- Prioritize children’s nutrition as the category in greatest need.
- Foster behaviour change through education and communication;
- Embed nutrition in national social protection systems and investment strategies.

Way Forward

This study is the reminder that such a huge percentage of humanity is still going hungry and should be a wake up call for the government in particular and society in general. Innovative strategies such as shifting towards **Smart Food** is the need of the hour, which is highly nutritious and will certainly help to reduce hunger.

Source: WHO

---

**Territory Swap with Bhutan: CHINA**

GS-II | 23 July, 2020

**Territory Swap with Bhutan: CHINA**

GS-PAPER-2 China domination (Mains exclusive)

Recently, China has offered Bhutan a **package solution**” to its boundary dispute. Although the package solution is not specified, it may be seen as a **revival of the 1996 proposal by China for a territory swap**.
ImpPoints

Territory Swap: In 1996, China wanted to exchange the valleys to the north of Bhutan (an area of 495 square kilometres), with the pasture land to the west (including Doklam), totalling 269 square kilometres. The deal would have benefited Bhutan by giving it the larger chunk of land, and resolving its tensions with China.

However it was a big worry for India, as the Doklam swap would have given China access to the strategically sensitive “chicken neck” of the Siliguri corridor.

Repeated Claim Over Sakteng: China also repeated its claim on Bhutan’s eastern boundary at Sakteng. Earlier, China has made the claim over Sakteng at an online meeting of the 58th Global Environment Facility (GEF) Council, while
unsuccessfully objecting to the funding request to develop the Sakteng Wildlife Sanctuary project in eastern Bhutan.

China claims that the boundary between China and Bhutan has never been delimited. It has had disputes over the eastern, central and western sectors of Bhutan. However, Bhutan outrightly rejected the claim made by China by saying that Sakteng is an integral and sovereign territory of Bhutan.

According to Bhutan, China and Bhutan have a dispute in only two sectors of
the border, one in the north (central) – Pasamlung and Jakarlung, and second in the west – Doklam.

There has been no mention of eastern Bhutan, where Sakteng is based, in 24 previous rounds of boundary negotiations held between the two countries between 1984 and 2016.

Reason Behind the New Offer: The aim may be to pressure Bhutan into concluding a deal quickly on terms on offer, otherwise the claims may keep increasing. The similar offer was made to India on Arunachal Pradesh, which subsequently expanded to include a Chinese claim on Tawang in 1985.

Concerns for India

In 2017 China had intruded into Doklam plateau, which is claimed by Bhutan, leading to a standoff between Indian and Chinese Armies. Even after the India-Bhutan Friendship Treaty of 2007, Indian military is virtually responsible for protecting Bhutan from the kind of external threat that the Chinese military poses.

According to the India-Bhutan Friendship Treaty of 1949, Bhutan allowed India to "guide" its foreign policy and defence affairs. However, the 1949 treaty was amended in 2007 to respect the sensitivities of Bhutan regarding its sovereignty. Under the India-Bhutan Friendship Treaty of 2007, the two sides have agreed to cooperate closely with each other on issues relating to their national interests. Neither Government shall allow the use of its territory for activities harmful to the national security and interest of the other. China has said that a third party should not point fingers in the China-Bhutan border issue, which is an apparent reference to India.

Way Forward

Bhutan has protested against Chinese territorial claims in eastern Bhutan and said that it will also contest in future if China refers to the territory as disputed. Safety of Border from China is a concern for both India and Bhutan. Therefore, both sides need to work together on this issue.

Source: TH
Study: Punjab’s law plays ‘minimal role’ in spiking Delhi’s pollution

Context:

- A study argues that Delhi’s meteorology and the quantity of chaff burnt play a greater role in worsening air quality than the time chosen by farmers in Punjab to start crop burning.
- Crop burning is a traditional practice in Punjab and Haryana of razing fields off rice chaff to prepare it for winter sowing.
- It begins around October and peaks in November, coinciding with the withdrawal of southwest monsoon.

Reasons:

- Subsidies and assured procurement of rice have led to a rise in the rice acreage in these States.
- Coupled with increased farm mechanization, large quantities of rice stubble have increased over the years.
- However, it has been pointed out that a change in Punjab’s water policy in 2009 that mandated farmers to delay sowing to late June (to discourage groundwater extraction), led to sowing being delayed by an average of 10 days compared to 2002-2008.
- This, consequently, delayed harvesting and rice chaff burning.
- As a result, the pollutants and the particulate matter from chaff, along with other sources of pollution in Delhi, which stuck in the lower atmosphere of the Indo-Gangetic plain, exacerbated winter pollution.
- The study states that the role of legislation appears to be minimal, and indeed can sometimes decrease as well as increase air quality problems depending on the meteorological conditions of the time.

Conclusion:

- According to the study, ultimately, the halting of crop residue burning would
greatly aid the newly established National Clean Air Programme [NCAP], which aims to reduce emissions from various sectors including agricultural residue burning.

- The NCAP proposes to reduce pollution by 20-30% in annual PM concentration by 2024.

Source: TH
TRIPLE TALAQ Analysis

GS-Paper-2 Governance Women and law

The Muslim Women (Protection of Rights on Marriage) Bill, 2019 became the first legislation to be tabled in Parliament by the Narendra Modi dispensation in its second term, with Law Minister Ravi Shankar Prasad asserting the legislation was a must for gender equality and justice. The bill was introduced following a division of votes, with 186 members supporting and 74 opposing it. The bill was introduced in the lower house to replace an Ordinance issued in February by the previous BJP-led NDA government. The Bill was earlier introduced in December 2017 but owing to dissolution of the 16th Lok Sabha last month, the previous bill had lapsed as it was pending in the Rajya Sabha. The government had promulgated the Ordinance on triple talaq twice — in September 2018 and in January 2019 — as the contentious bill remained pending in the Rajya Sabha, though it was passed by the Lok Sabha. The Bill proposes to make the practice of instant triple talaq a penal offence.

What’s the issue all about- A brief history:

The case dates back to 2016 when the Supreme Court had sought assistance from the then Attorney General Mukul Rohatgi on pleas challenging the constitutional validity of “triple talaq”, “nikah halala” and “polygamy”, to assess whether Muslim women face gender discrimination in cases of divorce.

Opposing the practice of triple talaq, the Centre told the top court that there is a need to re-look at these practices on grounds of gender equality and secularism.

The Supreme Court later announced the setting up of a five-judge constitutional bench to hear and deliberate on the challenges against the practice of ‘triple talaq, nikah halala’ and polygamy.

The issue gained political momentum on March 2017 when the All India Muslim Personal Law Board (AIMPLB) told the Supreme Court that the issue of triple
talaq falls outside the judiciary’s realm and that these issues should not be touched by the court.

However, on August 22, the Supreme Court set aside the decade-old practice of instant triple talaq saying it was violative of Article 14 and 21 of the Indian Constitution.

**A bill in this regard:**

In September, the government had proposed the Muslim Women (Protection of Rights on Marriage) Bill in the Parliament and sought to make triple talaq a punishable offence under the law.

At first, the Bill was passed in the Lok Sabha but it failed to secure a majority in the Rajya Sabha. The Bill was postponed till the winter session of Parliament. Following this, an ordinance was issued by the government after the bill failed to get cleared in Rajya Sabha amid protests by the Opposition.

**Key provisions:**

The Bill makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable in law) and illegal.

**Definition:** It defines talaq as talaq-e-biddat or any other similar form of talaq pronounced by a Muslim man resulting in instant and irrevocable divorce. Talaq-e-biddat refers to the practice under Muslim personal laws where pronouncement of the word ‘talaq’ thrice in one sitting by a Muslim man to his wife results in an instant and irrevocable divorce.

**Offence and penalty:** The Bill makes declaration of talaq a cognizable offence, attracting up to three years’ imprisonment with a fine. (A cognizable offence is one for which a police officer may arrest an accused person without warrant.) The offence will be cognizable only if information relating to the offence is given by: (i) the married woman (against whom talaq has been declared), or (ii) any person related to her by blood or marriage.

The Bill provides that the Magistrate may grant bail to the accused: The bail may be granted only after hearing the woman (against whom talaq has been
pronounced), and if the Magistrate is satisfied that there are reasonable grounds for granting bail.

The offence may be compounded by the Magistrate upon the request of the woman (against whom talaq has been declared). Compounding refers to the procedure where the two sides agree to stop legal proceedings, and settle the dispute. The terms and conditions of the compounding of the offence will be determined by the Magistrate.

Allowance: A Muslim woman against whom talaq has been declared, is entitled to seek subsistence allowance from her husband for herself and for her dependent children. The amount of the allowance will be determined by the Magistrate.

Custody: A Muslim woman against whom such talaq has been declared, is entitled to seek custody of her minor children. The manner of custody will be determined by the Magistrate.

Arguments favouring the bill:

- Bill is needed so that even Muslim women also get equality on par with other Muslim men.
- Triple talaq adversely impact rights of women to a life of dignity and is against constitutional principles such as gender equality, secularism, international laws etc.
- The penal measure acts as a “necessary deterrent”
- It significantly empowers Muslim women.
- The practice of triple talaq has continued despite the Supreme Court order terming it void.
- The practice is arbitrary and, therefore, unconstitutional
- The law is about justice and respect for women and is not about any religion or community
- It protects the rights of Muslim women against arbitrary divorce
- Instant triple talaq is viewed as sinful and improper by a large section of the community itself.
- The fine amount could be awarded as maintenance or subsistence.

Arguments opposing the bill:

- It is well established that criminalising something does not have any deterrent
Effect on its practice.
- Since marriage is a civil contract, the procedures to be followed on its breakdown should also be of civil nature only.
- Civil redress mechanisms must ensure that Muslim women are able to negotiate for their rights both within and outside of the marriage.
- The harsh punishment defies the doctrine of proportionality.
- Three years in prison of the convicted husband will end up penalising the already aggrieved wife and children too.
- The punishment will aggravate the insecurity and alienation of the Indian Muslim community.
- In the recent Supreme Court judgement, it never said that triple talaq is to be criminally punished.
- Invoke a secular law that already exists: Protection of Women from Domestic Violence Act (PWDVA), 2005.
- Parliament should have passed a law stating that the utterance of the words “talaq, talaq, talaq” would amount to “domestic violence” as defined in the PWDVA.
- The PWDVA was conceived as a law that ensures speedy relief — ideally within three months — to an aggrieved woman.
- While PWDVA is civil in nature, it has a reasonably stringent penal provision built into it.

Concerns:
- It could be just a piece of legislation rather than a kind than a kind of relief to the women.
- Some representatives have given it a political and religious color.
- Some Muslim women’s groups raised concerns about “maintenance” if the husband is sent to jail.
- The mutual divorce provision is missing in the proposed law and needs to be debated.

Time has come to put an end to the suffering of Muslim women who have been at the receiving end of instant talaq for several years. More than 20 Islamic countries have already banned the practice.

Source: PIB
Uniform Civil Code

A Uniform Civil Code means that all sections of the society irrespective of their religion shall be treated equally according to a national civil code, which shall be applicable to all uniformly.

They cover areas like Marriage, divorce, maintenance, inheritance, adoption and succession of the property. It is based on the premise that there is no connection between religion and law in modern civilization.

Background

Historical perspective – The debate for a uniform civil code dates back to the colonial period in India.

- **Pre-Independence (colonial era)**
  - The Lex Loci Report of October 1840- It stressed the importance and necessity of uniformity in the codification of Indian law, relating to crimes, evidence and contract. But, it also recommended that personal laws of Hindus and Muslims should be kept outside such codification.
  - The Queen’s 1859 Proclamation- It promised absolute non-interference in religious matters.

So while criminal laws were codified and became common for the whole country, personal laws continue to be governed by separate codes for different communities.

- **Post-Colonial era (1947-1985)**
  - During the drafting of the constitution, prominent leaders like Jawaharlal Nehru and Dr B.R Ambedkar pushed for a uniform civil code. However, they included the UCC in the Directive Principles of State Policy (DPSP, Article 44) mainly due to opposition from religious fundamentalists and a lack of awareness among the masses during the time.

Some of the reforms of this period were:-

The Hindu code bill -The bill was drafted by Dr.B R Ambedkar to reform Hindu
laws, which legalized divorce, opposed polygamy, gave rights of inheritance to daughters. Amidst intense opposition of the code, a diluted version was passed via four different laws.

**Succession Act**-The Hindu Succession Act, 1956, originally did not give daughters inheritance rights in ancestral property. They could only ask for a right to sustenance from a joint Hindu family. But this disparity was removed by an amendment to the Act on September 9, 2005

**The Hindu Marriage Act**

**Minority and Guardianship Act**

**Adoptions and Maintenance Act**

**Special Marriage Act:**

- It was enacted in 1954 which provided for civil marriages outside of any religious personal law.
- Judicial interventions:

**Shah Bano case (1985):**

A 73-year-old woman called Shah Bano was divorced by her husband using triple talaq (saying “I divorce thee” three times) and was denied maintenance. She approached the courts and the District Court and the High Court ruled in her favour. This led to her husband appealing to the Supreme Court saying that he had fulfilled all his obligations under Islamic law.

The Supreme Court ruled in her favour in 1985 under the “maintenance of wives, children and parents” provision (Section 125) of the All India Criminal Code, which applied to all citizens irrespective of religion. Further, It recommended that a uniform civil code be set up.

**Facts about the case:**

- Under Muslim personal law, maintenance was to be paid only till the period of iddat. (three lunar months-roughly 90 days).
- Section 125 of CrPC (criminal procedure code) that applied to all citizens, provided for maintenance of the wife.

**Impact –** After this historic decision, nationwide discussions, meetings and
agitations were held. The then government under pressure passed The Muslim Women’s (Right to protection on divorce) Act (MWA) in 1986, which made Section 125 of the Criminal Procedure Code inapplicable to Muslim women.

The Constitution of India on the Uniform Civil Code

Part IV, Article 44 of the Constitution states that “The State shall endeavour to secure the citizen a Uniform Civil Code throughout the territory of India”.

However, Article 37 of the Constitution itself makes it clear the DPSP “shall not be enforceable by any court”. Nevertheless, they are “fundamental in the governance of the country”. This indicates that although our constitution itself believes that a Uniform Civil Code should be implemented in some manner, it does not make this implementation mandatory.

In NEWS

Last week, while hearing a matter relating to properties of a Goan, the Supreme Court described Goa as a “shining example” with a Uniform Civil Code, observed that the founders of the Constitution had “hoped and expected” a Uniform Civil Code for India but there has been no attempt at framing one.

Goa Civil Code

Goa is the only Indian state to have a UCC in the form of common family law. The Portuguese Civil Code that remains in force even today was introduced in the 19th century in Goa and wasn’t replaced after its liberation.

Features-

- The Uniform Civil Code in Goa is a progressive law that allows equal division of income and property between husband and wife and also between children (regardless of gender).
- Every birth, marriage and death have to be compulsorily registered. For divorce, there are several provisions.
- Muslims who have their marriages registered in Goa cannot practice polygamy or divorce through triple talaq.
- During the course of a marriage, all the property and wealth owned or
acquired by each spouse is commonly held by the couple.
• Each spouse in case of divorce is entitled to half of the property and in case of death, the ownership of the property is halved for the surviving member.
• The parents cannot disinherit their children entirely. At least half of their property has to be passed on to the children. This inherited property must be shared equally among the children.

However, the code has certain drawbacks and is not strictly a uniform code. For example, Hindu men have the right to bigamy under specific circumstances mentioned in Codes of Usages and Customs of Gentile Hindus of Goa (if the wife fails to deliver a child by the age of 25, or if she fails to deliver a male child by the age of 30). For other communities, the law prohibits polygamy.

Uniform Civil Code and Arguments For & Against

Arguments in favour of the Uniform Civil Code:

• It Will Integrate India- India is a country with many religions, customs and practices. A uniform civil code will help in integrating India more than it has ever been since independence. It will help in bringing every Indian, despite his caste, religion or tribe, under one national civil code of conduct.
• Will Help in Reducing Vote Bank Politics- A UCC will also help in reducing vote bank politics that most political parties indulge in during every election.
• Personal Laws Are a Loophole- By allowing personal laws we have constituted an alternate judicial system that still operates on thousands of years old values. A uniform civil code would change that.
• Sign of a modern progressive nation- It is a sign that the nation has moved away from caste and religious politics. While our economic growth has been significant, our social growth has lagged behind. A UCC will help society move forward and take India towards its goal of becoming a truly developed nation.
• It will Give More Rights to Women- Religious personal laws are misogynistic in nature and by allowing old religious rules to continue to govern the family life we are condemning all Indian women to subjugation and mistreatment. A uniform civil code will also help in improving the condition of women in India.
• All Indians Should be Treated the Same- All the laws related to marriage, inheritance, family, land etc. should be equal for all Indians. UCC is the only way to ensure that all Indians are treated the same.
• It Promotes Real Secularism- A uniform civil code doesn’t mean that it will
limit the freedom of people to follow their religion, it just means that every person will be treated the same and all citizens of India have to follow the same laws regardless of any religion.

- Change has been the law of nature-A minority of people should not be allowed to pick and choose the laws they want to be administered under. These personal laws were formulated in a specific spatiotemporal context and should not stand still in a changed time and context.
- Many provisions of specific personal laws are in violation of human rights.
- Article 25 and Article 26 guarantee the freedom of religion and UCC is not opposed to secularism.
- The codification and unification of the variegated personal laws will produce a more coherent legal system. This will reduce the existing confusion and enable easier and more efficient administration of laws by the judiciary.
Indian laws do follow a uniform code in most civil matters – Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act etc. States, however, have made hundreds of amendments and therefore in certain matters, there is diversity even under these secular civil laws. Recently, several states refused to be governed by the uniform Motor Vehicles Act, 2019.

If the framers of the Constitution had intended to have a Uniform Civil Code, they would have given exclusive jurisdiction to Parliament in respect of personal laws, by including this subject in the Union List. But “personal laws” are mentioned in the Concurrent List.

Last year, the Law Commission concluded that a Uniform Civil Code is neither feasible nor desirable.
Why is UCC may not desirable at this point?

Secularism cannot contradict the plurality prevalent in the country. Besides, cultural diversity cannot be compromised to the extent that our urge for uniformity itself becomes a reason for threat to the territorial integrity of the nation.
The term ‘secularism’ has meaning only if it assures the expression of any form of difference. This diversity, both religious and regional, should not get subsumed under the louder voice of the majority. At the same time, discriminatory practices within a religion should not hide behind the cloak of that faith to gain legitimacy.

How does the idea of a Uniform Civil Code relate to the fundamental right to religion?

Article 25 lays down an individual’s fundamental right to religion; Article 26(b) upholds the right of each religious denomination or any section thereof to “manage its own affairs in matters of religion”; Article 29 defines the right to conserve distinctive culture.

An individual’s freedom of religion under Article 25 is subject to “public order, health, morality” and other provisions relating to fundamental rights, but a group’s freedom under Article 26 has not been subjected to other fundamental rights.

In the Constituent Assembly, there was division on the issue of putting Uniform Civil Code in the fundamental rights chapter. The matter was settled by a vote. By a 5:4 majority, the fundamental rights sub-committee headed by Sardar Vallabhbhai Patel held that the provision was outside the scope of fundamental rights and therefore the Uniform Civil Code was made less important than freedom of religion.

What is needed now?

Need of the hour is the codification of all personal laws so that prejudices and stereotypes in every one of them would come to light and can be tested on the anvil of fundamental rights of the Constitution. By codification of different personal laws, one can arrive at certain universal principles that prioritise equity rather than imposition of a Uniform Code, which would discourage many from using the law altogether, given that matters of marriage and divorce can also be settled extrajudicially.

Suggestions for Implementing a Uniform Civil Code:

To realize the goals of the DPSP and to maintain the uniformity of laws, the
following suggestions need immediate consideration:

- A progressive and broadminded outlook should be encouraged among the people to understand the spirit of the UCC. For this, education, awareness and sensitisation programmes must be taken up.
- The Uniform Civil Code should be drafted keeping in mind the best interest of all the religions.
- A committee of eminent jurists should be constituted to maintain uniformity and care must be taken not to hurt the sentiments of any particular community.
- The matter being sensitive in nature, it is always better if the initiative comes from the religious groups concerned.

The Way Forward for UCC: Gradual Change

India has a unique blend of codified personal laws of Hindus, Muslims, Christians, Parsis. There exists no uniform family-related law in a single statute book for all Indians which is acceptable to all religious communities who co-exist in India. However, a majority of them believe that UCC is definitely desirable and would go a long way in strengthening and consolidating the Indian nationhood. The differences of opinion are on its timing and the manner in which it should be realized.

Instead of using it as an emotive issue to gain political advantage, political and intellectual leaders should try to evolve a consensus. The question is not of minority protection, or even of national unity, it is simply one of treating each human person with dignity, something which personal laws have so far failed to do.

Source: PIB

Zero Hunger by 2030: UN Report

GS-Paper-3 Economic development (PT-MIANS)
According to a study titled *State of Food Security and Nutrition in the World*, hunger and malnutrition is increasing around the world. In this scenario, achieving the Sustainable Development Goal (2) of ‘Zero Hunger’ by 2030 will be very difficult.

The *State of Food Security and Nutrition in the World* is the most authoritative global study tracking progress towards ending hunger and malnutrition.

**It is produced jointly by the Food and Agriculture Organization (FAO) of the United Nations, the International Fund for Agriculture (IFAD), the United Nations Children’s Fund (UNICEF), the UN World Food Programme (WFP) and the World Health Organization (WHO).**

**Imp Points**

**Increasing Hunger:**

**Steep Rise:** The study estimates that almost 690 million people went hungry in 2019 – up by 10 million from 2018, and by nearly 60 million in five years (2014-2019).

Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. For decades, FAO has used the prevalence of undernourishment indicator to estimate the extent of hunger in the world, thus “hunger” may also be referred to as undernourishment.

**Chronic Hunger:** There has been no change in the hunger trend since 2000, After steadily diminishing for decades, chronic hunger slowly began to rise in 2014 and continues to do so.

**Regional Hotspots:** Asia remains home to the greatest number of hunger (381 million). Africa is second (250 million), followed by Latin America and the Caribbean (combined 48 million).

**Rate of Hunger:** The rate of undernourishment (hunger) in Africa is double compared to Asia and it is expected that by 2030, Africa will be home to more than half of the world’s chronically hungry.

**Impact of Covid-19:** The Covid-19 pandemic could also push over 130 million more people into chronic hunger by the end of 2020.
Reasons: High costs and low affordability was the main reason behind the hunger.

Increasing Malnutrition:

Affordability: The study estimates that 3 billion people or more cannot afford a healthy diet.

In sub-Saharan Africa and southern Asia, this is the case for 57% of the population.

The key reason behind malnutrition is the high cost of nutritious foods and the low affordability of healthy diets for vast numbers of families.

According to the study, a healthy diet costs far more than USD 1.90/day, which is the international poverty threshold.

It puts the price of even the least expensive healthy diet at five times the price of filling stomachs with starch only.

Impact on Children: According to the study, in 2019, nearly a third of children under five (191 million) were stunted (too short) or wasted (too thin). Another 38 million under-fives were overweight.

Suggestions

Shifting of Diet: A global switch to healthy diets would help check the backslide into hunger while delivering enormous savings. Shift to a healthy diet will reduce the health costs associated with unhealthy diets. The diet related social cost of greenhouse gas emissions, estimated at USD 1.7 trillion, could also be cut by up to three-quarters by 2030.

Transform Food Systems: The transformation of food systems will not only reduce the cost of nutritious foods but also increase the affordability of healthy diets.

The study calls on governments:

- To mainstream nutrition in their approaches to agriculture.
- Work to cut cost-escalating factors in the production, storage, transport.
distribution and marketing of food – including by reducing inefficiencies and food loss and waste.
- Support local small-scale producers to grow and sell more nutritious foods and secure their access to markets.
- Prioritize children’s nutrition as the category in greatest need.
- Foster behaviour change through education and communication;
- Embed nutrition in national social protection systems and investment strategies.

Way Forward

This study is the reminder that such a huge percentage of humanity is still going hungry and should be a wake up call for the government in particular and society in general. Innovative strategies such as shifting towards **Smart Food** is the need of the hour, which is highly nutritious and will certainly help to reduce hunger.

Source: WHO

---

**Territory Swap with Bhutan: CHINA**

**GS-II | 23 July, 2020**

Recent Chinese offer to Bhutan a “**package solution**” to its boundary dispute. Although the package solution is not specified, it may be seen as a **revival of the 1996 proposal by China for a territory swap**.
ImpPoints

**Territory Swap:** In 1996, China wanted to exchange the valleys to the north of Bhutan (an area of 495 square kilometres), with the pasture land to the west (including Doklam), totalling 269 square kilometres. The deal would have benefited Bhutan by giving it the larger chunk of land, and resolving its tensions with China.

However it was a big worry for India, as the Doklam swap would have given China access to the strategically sensitive “chicken neck” of the Siliguri corridor.

**Repeated Claim Over Sakteng:** China also repeated its claim on Bhutan’s eastern boundary at Sakteng. Earlier, China has made the claim over Sakteng at an online meeting of the 58th Global Environment Facility (GEF) Council, while
unsuccessfully objecting to the funding request to develop the Sakteng Wildlife Sanctuary project in eastern Bhutan.

China claims that the boundary between China and Bhutan has never been delimited. It has had disputes over the eastern, central and western sectors of Bhutan. However, Bhutan outrightly rejected the claim made by China by saying that Sakteng is an integral and sovereign territory of Bhutan.

According to Bhutan, China and Bhutan have a **dispute in only two sectors** of
the border, one in the north (central) – Pasamlung and Jakarlung, and second in the west – Doklam.

There has been no mention of eastern Bhutan, where Sakteng is based, in 24 previous rounds of boundary negotiations held between the two countries between 1984 and 2016.

**Reason Behind the New Offer:** The aim may be to pressure Bhutan into concluding a deal quickly on terms on offer, otherwise the claims may keep increasing. The similar offer was made to India on Arunachal Pradesh, which subsequently expanded to include a Chinese claim on Tawang in 1985.

**Concerns for India**

In 2017 China had intruded into Doklam plateau, which is claimed by Bhutan, leading to a standoff between Indian and Chinese Armies. Even after the India-Bhutan Friendship Treaty of 2007, Indian military is virtually responsible for protecting Bhutan from the kind of external threat that the Chinese military poses.

According to the India-Bhutan Friendship Treaty of 1949, Bhutan allowed India to "guide" its foreign policy and defence affairs. However, the 1949 treaty was amended in 2007 to respect the sensitivities of Bhutan regarding its sovereignty. Under the India-Bhutan Friendship Treaty of 2007, the two sides have agreed to cooperate closely with each other on issues relating to their national interests. Neither Government shall allow the use of its territory for activities harmful to the national security and interest of the other. China has said that a third party should not point fingers in the China-Bhutan border issue, which is an apparent reference to India.

**Way Forward**

Bhutan has protested against Chinese territorial claims in eastern Bhutan and said that it will also contest in future if China refers to the territory as disputed. Safety of Border from China is a concern for both India and Bhutan. Therefore, both sides need to work together on this issue.

Source: TH
Study: Punjab’s law plays ‘minimal role’ in spiking Delhi’s pollution

Context:

- A study argues that Delhi’s meteorology and the quantity of chaff burnt play a greater role in worsening air quality than the time chosen by farmers in Punjab to start crop burning.
- Crop burning is a traditional practice in Punjab and Haryana of razing fields off rice chaff to prepare it for winter sowing.
- It begins around October and peaks in November, coinciding with the withdrawal of southwest monsoon.

Reasons:

- Subsidies and assured procurement of rice have led to a rise in the rice acreage in these States.
- Coupled with increased farm mechanization, large quantities of rice stubble have increased over the years.
- However, it has been pointed out that a change in Punjab’s water policy in 2009 that mandated farmers to delay sowing to late June (to discourage groundwater extraction), led to sowing being delayed by an average of 10 days compared to 2002-2008.
- This, consequently, delayed harvesting and rice chaff burning.
- As a result, the pollutants and the particulate matter from chaff, along with other sources of pollution in Delhi, which stuck in the lower atmosphere of the Indo-Gangetic plain, exacerbated winter pollution.
- The study states that the role of legislation appears to be minimal, and indeed can sometimes decrease as well as increase air quality problems depending on the meteorological conditions of the time.

Conclusion:

- According to the study, ultimately, the halting of crop residue burning would
greatly aid the newly established National Clean Air Programme [NCAP], which aims to reduce emissions from various sectors including agricultural residue burning.

- The NCAP proposes to reduce pollution by 20-30% in annual PM concentration by 2024.

Source: TH
Locals mark 6 places for settling Bru refugees

**Context:**

- Six places have been proposed by the non-Brus of Tripura for settling the displaced Brus from Mizoram.
- Limits have also been placed for the number of families to be accommodated in two subdivisions that have borne the brunt of the 23-year-old refugee crisis.
- There are 7 relief camps among which the Bru families are distributed in these two subdivisions.

**Concerns:**

- Non-Bru groups have been maintaining that the Brus were difficult to coexist with.
- The onus was put on the state government by the Bru leaders, to honour a quadripartite agreement in January 2020 for resettling more than 6,500 families in suitable areas.
- The areas proposed by the Joint Movement Committee (comprising Bengali, Mizo and other indigenous communities of the subdivisions of North Tripura district) and those sought by the Bru organisations do not match.

Source: TH

Post-Brexit deal

**Post-Brexit deal**

- Britain and the European Union wound up their latest round of post-Brexit trade negotiations.
- Both the sides ruled out a quick deal but voiced hope for agreement in the coming months.
The UK formally left the EU on 31 January 2020 and immediately entered into an 11-month transition period.

- During this period, the **UK will continue to follow all of the EU's rules** and its trading relationship will remain the same.
- However, it is **no longer part of the EU’s political institutions** – so there are no longer any British Member of the European Parliament (MEPs) in the European Parliament.
- The transition gives both sides some time to decide the terms of the future UK-EU relationship.
- The **UK will leave the single market and customs union** at the end of the transition.
- **A free trade agreement will allow UK goods to move around the EU** without extra charges and keep other barriers (like checks) to a minimum.
- If an agreement cannot be reached by 31 December, then tariffs (taxes) and full border checks will be applied to UK goods travelling to the EU.
- A deal has to be reached and be **ratified by all 27 EU member states and the UK Parliament**.
- Failure to do so would see ties reduced to minimum standards set by the World Trade Organization, leading to high tariffs and serious disruptions to business.

Source: TH
Locals mark 6 places for settling Bru refugees

Context:

- Six places have been proposed by the non-Brus of Tripura for settling the displaced Brus from Mizoram.
- Limits have also been placed for the number of families to be accommodated in two subdivisions that have borne the brunt of the 23-year-old refugee crisis.
- There are 7 relief camps among which the Bru families are distributed in these two subdivisions.

Concerns:

- Non-Bru groups have been maintaining that the Brus were difficult to coexist with.
- The onus was put on the state government by the Bru leaders, to honour a quadripartite agreement in January 2020 for resettling more than 6,500 families in suitable areas.
- The areas proposed by the Joint Movement Committee (comprising Bengali, Mizo and other indigenous communities of the subdivisions of North Tripura district) and those sought by the Bru organisations do not match.

Source: TH

Post-Brexit deal

- Britain and the European Union wound up their latest round of post-Brexit trade negotiations.
- Both the sides ruled out a quick deal but voiced hope for agreement in the coming months.
The UK formally left the EU on 31 January 2020 and immediately entered into an **11-month transition period**.

- During this period, the **UK will continue to follow all of the EU’s rules** and its trading relationship will remain the same.
- However, it is **no longer part of the EU’s political institutions** – so there are no longer any British Member of the European Parliament (MEPs) in the European Parliament.
- The transition gives both sides some time to decide the terms of the future UK-EU relationship.
- The **UK will leave the single market and customs union** at the end of the transition.
- A **free trade agreement** will allow UK goods to move around the EU without extra charges and keep other barriers (like checks) to a minimum.
- If an agreement cannot be reached by 31 December, then tariffs (taxes) and full border checks will be applied to UK goods travelling to the EU.
- A deal has to be reached and be **ratified by all 27 EU member states and the UK Parliament**.
- Failure to do so would see ties reduced to minimum standards set by the World Trade Organization, leading to high tariffs and serious disruptions to business.

Source: TH
Australia rejects China’s sea claims

Context:

- Australia’s formal declaration to the UN on the South China Sea dispute.
- In a formal declaration to the UN, Australia has rejected China’s territorial and maritime claims in the South China Sea. Australia has held that there is no legal basis for China’s historic claims in the South China Sea.

Australia- U.S. compact:

- Australia’s declaration to the UN comes after the U.S. Secretary of State declared China’s pursuit of territory and resources in the South China Sea as illegal, backing the claims of Southeast Asian countries against China’s claims.
- Through this move, Australia seems to be aligning itself more closely with the U.S. in the escalating tensions between China and the U.S.
- U.S. relations with China have markedly deteriorated in recent months, especially over trade disputes, the COVID-19 pandemic and China’s crackdown on dissent in Hong Kong.
- The latest escalation comes ahead of annual talks between Australia and the U.S.

Source: TH

Cabinet decision binding on Governor

Context:

- Political turmoil in the state of Rajasthan.
- There has been a deadlock between Rajasthan Governor and Rajasthan
Chief Minister over the summoning of an Assembly session for a floor test.
- While the Chief Minister has been demanding the summoning of an Assembly session at the earliest, the Governor has not been receptive of the demand.

Details:
- The article discusses a key Supreme Court judgment which could act as a guiding light during the current deadlock.

Nabam Rebia vs. Deputy Speaker, 2016:
- In the Nabam Rebia versus Deputy Speaker case of 2016, a Constitution Bench of the Supreme Court had held that a Governor is bound to convene a meeting of the Assembly for a floor test on the recommendation of the Cabinet.
- It held that the Governor cannot employ his/her discretion in this matter and should strictly abide by the aid and advice of the Cabinet.

Important observations made in the judgment:
- The judgment was based on the constitutional provision which states that the Governor can summon, prorogue and dissolve (U/A. 174) the House only on the aid and advice of the Council of Ministers with the Chief Minister as the head.
- Article 163 of the Indian constitution notes that there shall be a council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions.

Limited discretionary power for the governor:
- The Supreme Court has noted that despite the provision for some degree of discretion for the governor provided for under Article 163 (2) of the Indian Constitution, it does not mean a general discretionary power to act against or without the advice of his Council of Ministers.
- This judgment limits the Governor’s discretionary power to specific areas.
- It noted that the Governor’s discretionary powers are limited to specified areas like giving assent or withholding/referring a Bill to the President or appointment of a Chief Minister or dismissal of a government which has lost confidence but refuses to quit, etc.
- The judgment further held that even in areas where there is scope for
discretion for the governor, the action should not be arbitrary or fanciful and must be dictated by reason, actuated by good faith and tempered by caution.

Responsible form of government:

- India has a parliamentary democracy with a responsible form of government. In such a form of government, the Governor functions only as a Constitutional or formal head of the State and his/her powers cannot be enlarged at the cost of the Council of Ministers, who are the real executive.

Constituent assembly discussions:

- The judgment noted the fact that even the Constituent Assembly was wary of extending the Governor’s discretion.
- Though the draft Constitution had vested the Governor with the discretion to summon and dissolve, it was later omitted by the framers of the Constitution.

Source: TH
Australia rejects China’s sea claims

Context:

- Australia’s formal declaration to the UN on the South China Sea dispute.
- In a formal declaration to the UN, Australia has rejected China’s territorial and maritime claims in the South China Sea. Australia has held that there is no legal basis for China’s historic claims in the South China Sea.

Australia- U.S. compact:

- Australia’s declaration to the UN comes after the U.S. Secretary of State declared China’s pursuit of territory and resources in the South China Sea as illegal, backing the claims of Southeast Asian countries against China’s claims.
- Through this move, Australia seems to be aligning itself more closely with the U.S. in the escalating tensions between China and the U.S.
- U.S. relations with China have markedly deteriorated in recent months, especially over trade disputes, the COVID-19 pandemic and China’s crackdown on dissent in Hong Kong.
- The latest escalation comes ahead of annual talks between Australia and the U.S.

Source: TH

Cabinet decision binding on Governor

Context:

- Political turmoil in the state of Rajasthan.
- There has been a deadlock between Rajasthan Governor and Rajasthan
Chief Minister over the summoning of an Assembly session for a floor test.
- While the Chief Minister has been demanding the summoning of an Assembly session at the earliest, the Governor has not been receptive of the demand.

Details:
- The article discusses a key Supreme Court judgment which could act as a guiding light during the current deadlock.

Nabam Rebia vs. Deputy Speaker, 2016:
- In the Nabam Rebia versus Deputy Speaker case of 2016, a Constitution Bench of the Supreme Court had held that a Governor is bound to convene a meeting of the Assembly for a floor test on the recommendation of the Cabinet.
- It held that the Governor cannot employ his/her discretion in this matter and should strictly abide by the aid and advice of the Cabinet.

Important observations made in the judgment:
- The judgment was based on the constitutional provision which states that the Governor can summon, prorogue and dissolve (U/A. 174) the House only on the aid and advice of the Council of Ministers with the Chief Minister as the head.
- Article 163 of the Indian constitution notes that there shall be a council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions.

Limited discretionary power for the governor:
- The Supreme Court has noted that despite the provision for some degree of discretion for the governor provided for under Article 163 (2) of the Indian Constitution, it does not mean a general discretionary power to act against or without the advice of his Council of Ministers.
- This judgment limits the Governor’s discretionary power to specific areas.
- It noted that the Governor’s discretionary powers are limited to specified areas like giving assent or withholding/referring a Bill to the President or appointment of a Chief Minister or dismissal of a government which has lost confidence but refuses to quit, etc.
- The judgment further held that even in areas where there is scope for
discretion for the governor, the action should not be arbitrary or fanciful and must be dictated by reason, actuated by good faith and tempered by caution.

**Responsible form of government:**

- India has a parliamentary democracy with a responsible form of government. In such a form of government, the **Governor functions only as a Constitutional or formal head of the State** and his/her powers cannot be enlarged at the cost of the Council of Ministers, who are the real executive.

**Constituent assembly discussions:**

- The judgment noted the fact that even the Constituent Assembly was wary of extending the Governor’s discretion.
- Though the draft Constitution had vested the Governor with the discretion to summon and dissolve, it was later omitted by the framers of the Constitution.

Source: TH
New FDI rules, 2020

- The Government of India has made its approval for Foreign Direct Investment (FDI) by neighbouring countries mandatory.
- This revised FDI policy aims to curb opportunistic takeovers/acquisitions of Indian companies due to the current Covid-19 pandemic.

Important points:

- FDI is allowed under two modes - either through the automatic route, for which companies don't need government approval, or through the government route, for which companies need a go-ahead from the centre.

New FDI policy:

- An entity of a country, which shares a land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route.
- A transfer of ownership in an FDI deal that benefits any country that shares a border with India will also need government approval.
- India shares land borders with Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar.
- Investors from countries not covered by the new policy only have to inform the RBI after a transaction rather than asking for prior permission from the relevant government department.

Impacts:

- The earlier FDI policy was limited to allowing only Bangladesh and Pakistan via the government route in all sectors. The revised rule has now brought companies from China under the government route filter.
- China’s footprint in the Indian business space has been expanding rapidly, especially since 2014.

Chinese investment in India:

- The net Chinese investment in India, which was $1.6 billion in 2014, shot up five-folds to at least $8 billion (Rs 60,800 crore) in the next three years — with a noticeable shift from state-driven to market-driven investment from the
Chinese private sector.
- **Official figures underestimate the amount of investment:** They neither account for all Chinese companies’ acquisitions of stakes in the technology sector nor investments from China routed through third-party countries, such as Singapore.
- For instance, a $504-million investment from the Singapore arm of the mobile firm Xiaomi would not figure in official statistics because of how investments are measured.
- It has been seen that the Chinese firms have escaped the kind of scrutiny in India that their investments have attracted in the West despite several high-profile investments and acquisitions.
- Another concern is that there is no clear separation between the Chinese state and private business. They work closely in pursuing many goals.

**Foreign Direct Investment definition:**

- FDI is an investment from a party in one country into a business or corporation in another country with the intention of establishing a lasting interest.
- Lasting interest differentiates FDI from foreign portfolio investments, where investors passively hold securities from a foreign country.
- Foreign direct investment can be made by expanding one’s business into a foreign country or by becoming the owner of a company in another country.

Source: TH

---

### Cold War between U.S.A and China

#### GS-II | 27 July, 2020

**Cold War between U.S.A and China**

**GS-Paper-2 US-CHINA (Mains)**

Recently, the U.S.A blocked China's access to chip making tools and designated Chinese telecom giants Huawei, ZTE as national security threats. However, with the 5G rollout approaching, the move will impact several countries including India. Recently, the United Kingdom also reversed its earlier
U.S.A-China Tech Relation: China has traditionally resisted against American big-data companies such as Facebook and Google to operate within its jurisdiction. However, both the Countries still have significant dealings on the technology side.

Last year, Apple recorded USD 100 million of daily sales in China, while Huawei Technologies reported record revenues primarily from its exposure in western markets, including the U.S.A.

The latest steps by U.S.A against Huawei mark the first real prohibitory action by a western government in the nearly two decades. This has been done on the ground that China’s equipment is designed to aid snooping. There have been apprehensions that American telecoms players are too much dependent on subsidised Chinese technology.

Impact of Ban on Chip Making Tools: Huawei could face shortages in its supply of specialist chips for which it relies on the U.S.A. Technological cold war could extend beyond the U.S.A and China, and compel other countries, including India, to effectively choose between one of the camps. Some of the countries perceive the same threat as that of the U.S.A, and others are wary of trade sanctions by the U.S.A.

This could have a bearing on the growing competition to dominate next-generation technologies such as 5G networks and artificial intelligence. Impact the plans of most countries preparing to transition to a 5G regime, including India.

India’s Position

In 2009, the Department of Telecommunications (DoT) had advised Indian mobile companies to suspend deals with Chinese equipment makers after fears that Chinese equipment were being used for hacking and spying.

However, India did not took strong actions on any of DoT’s recommendations. Indeed, much of India’s telecom growth story has been supported by Chinese companies in both hardware and software.

The approach changed after the standoff in Ladakh, wherein India has asked state-owned telecom service providers to exclude Chinese companies from the
India also justified the ban on 59 mobile apps with Chinese links on grounds of a threat to national security.

This was part of the wider decision to signal curbs on Chinese investments and tech companies in the country.

The border clashes and the U.S.A action could now force India into the anti-China camp.

**Conclusion**

With the Chinese being increasingly blocked by governments in 5G networks, other global players could be at a competitive advantage. The other leaders in the telecoms network equipment market are the European players such as Ericsson and Nokia, and South Korea’s Samsung.

India’s Reliance Jio has also designed and developed a complete 5G solution from scratch. This could also have a bearing on the global 5G rollout, especially in the countries outside of North America and Europe.

Source: TH

---

**Military Equipments and why RUSSIA??**

**GS-II | 27 July, 2020**

**Military Equipments and why RUSSIA??**

Russia’s Military Equipment:

- The Navy’s only active aircraft carrier INS Vikramaditya and it’s only nuclear attack submarine in service, Chakra II, are from Russia.
- So are the Army’s T-90 and T-72 main battle tanks and IAF’s Su30 MKI fighter.
- The country’s only nuclear-capable supersonic cruise missile, BrahMos, is produced by a joint venture with Russia.
As India has been spreading its supplier base with Israel, USA and France, Russia still remains a major supplier. This is indicated by following latest developments:

India has approved proposals to acquire 21 Mig29 and 12 Su30 MKI fighter aircraft from Russia for 2.4 billion USD.

India and Russia had agreed to a joint programme to develop a variant of Fifth Generation Fighter Aircraft Programme (FGFA) in 2007.

As India has not committed to the Fifth Generation Fighter Aircraft Programme (FGFA) programme with Russia. It is negotiating on the price of AK103 rifles for Make in India.

USA’s Military Equipment

- Apache and Chinook helicopters,
- M777 howitzer guns for the Army,
- Boeing C-17 and C-130J for IAF and P8I submarine hunter aircraft for Navy.

Reasons

There are many reasons for India's dependency on Russia for the supply of military equipments:

- **Legacy Issue:** India and Russia have a longstanding defence relationship and there is familiarity with each other's processes and systems.
- **Specialised Equipment:** The kind of specialised equipment that Russia provides to India makes a difference from other countries, e.g. the S-400 Air Defence Missile Systems, nuclear submarines and aircraft carrier.
- **Combat Capability:** Each of the systems supplied by Russia has its advantages and uses as they have been used effectively to develop maximum combat capability especially when focusing on India’s higher-end strike platforms.

Significance:

**Border Clash with China:** Notwithstanding India’s growing mutual convergence with the USA against China following the recent tensions on the Ladakh border, its armed forces remain heavily dependent on equipment, weapons and military platforms of Russian origin which form the bulk of its inventory.

**USA’s CAATSA:** Recently, the USA has asked all its allies and partners, including India, to stop transactions with Russia. The USA can risk triggering sanctions under the Countering America’s Adversaries Through Sanctions Act.
DDT to South Africa
GS-II | 27 July, 2020

DDT to South Africa

GS-Paper-2 I.R India and Africa (PT-MAINS)

Recently, HIL (India) Limited has supplied 20.60 Metric tonne of Dichlorodiphenyltrichloroethane (DDT), a fertilizer to South Africa for their malaria control program. The Company is further in the process of supplying DDT to Zimbabwe and Zambia in the current Financial Year 2020-21.

HIL (India) Limited

It is a PSU under the Ministry of Chemicals and Fertilizers. It was incorporated in 1954 to manufacture and supply DDT to the Ministry of Health and Family Welfare for malaria control programmes. It is the sole manufacturer of DDT globally.

DDT:

It is a colorless, tasteless, and almost odorless crystalline chemical compound. It was first synthesized in 1874 by the Austrian chemist Othmar Zeidler. Its insecticidal action was discovered by the Swiss chemist Paul Hermann Muller in 1939.

He was awarded the Nobel Prize in Physiology or Medicine in 1948 "for his discovery of the high efficiency of DDT as a contact poison against several arthropods. Arthropods are invertebrate species which include insects (Mosquitos), arachnids (Spiders), and crustaceans (Crabs) etc. Originally developed as an insecticide, it became infamous for its environmental impacts.
A worldwide ban on agricultural use was formalized under the **Stockholm Convention on Persistent Organic Pollutants**. However, its limited use in disease vector control continues, because of its effectiveness in reducing malarial infections.

The **World Health Organisation** (WHO) recommends DDT as one of the efficient **Indoor Residual Spraying (IRS)** chemicals to curb mosquito menace and it is widely used by Southern African countries like South Africa, Zimbabwe, Zambia, Namibia, Mozambique and India. IRS is a **core vector control intervention** that involves the application of a residual insecticide to internal walls and ceilings of housing structures where malaria vectors may come into contact with the insecticide.

**Supply to South Africa:** South Africa will be utilising DDT in three provinces bordering Mozambique. The region is highly affected with Malaria and it has reported maximum morbidity and mortality.

**Supply to Other Countries:** HIL (India) Limited has recently exported **Malathion Technical 95%** to Iran under Government-to-Government initiative for the **Locust Control Programme** and also exported **Agrochemical-fungicide** to Latin American region.

**Malaria**

Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female Anopheles mosquitoes, called "**malaria vectors"**.

**Impact:** Malaria continues to be one of the major public health problems globally. In 2018, an estimated **228 million cases** of malaria occurred worldwide.

Most of the cases and deaths (93%) were reported from **African Region**. In the South East Asia Region, **India accounts** for the majority of cases and death.

According to **World Malaria Report 2019**, India reported 2.6 million fewer cases in 2018 **compared to 2017**. Thus the overall incidence of malaria in the country has reduced.

However, 7 states (**Uttar Pradesh, Jharkhand, Chhattisgarh, West Bengal, Gujarat, Odisha and Madhya Pradesh**) account for about 90% of the burden of
malaria cases in India.

Source: PIB

Social Security Number for Migrants
GS-I | 27 July, 2020

Social Security Number for Migrants

GS-Paper-3 Economic development (Mains)

The Parliamentary Standing Committee on Labour has recommended that the government introduce a social security number for migrant workers, especially those working in the unorganised sectors which are beyond the purview of the labour laws.

Background: The Ministry of Labour and Employment was unable to give any concrete figures on the number of migrant workers. However, the officials quoted data from the Railway Ministry. About 1.08 crore migrant workers had travelled on Special Shramik express trains initiated by the government to ferry migrant workers.

It was pointed out that students and family members of the workers too used these trains and thus this figure doesn’t accurately record the number of migrant workers.

Social Security Number: Instead of making Aadhar the basis for providing government benefits to migrants, they should be given a social security number which is a more effective way of covering them for insurance, health and other welfare programmes.

A social security number is essential to avert situations like the one during the extended lockdown when several lakh workers had to walk back to their homes as they were shut out of employment overnight. The number will not only help in mapping the number of migrant workers but also their migration patterns.
Suggestions:

Both the **State of origin** and **State where the worker has migrated** to should have a record. The migrant workers may or may not have access to the Internet, therefore the smallest arm of administration — the **gram sabhas** — should be roped in. The same work can be done by municipality workers in the urban areas.

Concerns

It flagged issues related to the social security fund stated under the **Social Security Code Bill 2019**. There are no specific details in the legislation as to who will contribute to the fund and how it will be utilised.

It also discussed changes in labour laws by some states in the wake of pandemic and impact on workers.

Most of the beneficiaries under the **PM Garib Kalyan Yojana** were **local workers** and not migrants.

**Social Security Code Bill, 2019**

- The central government has been working to **concise 44 central labour** laws into four broad codes on wages, industrial relations, social security and **occupational health & safety**.
- The Social Security Code Bill **seeks to amend and consolidate nine laws** related to social security, including the Employees’ Provident Fund Act, 1952, the Maternity Benefit Act, 1961, and the Unorganised Workers’ Social Security Act, 2008. Social security refers to measures to ensure access to health care and provision of income security to workers.
- It proposes setting up a **social security fund**. This fund will provide welfare benefits such as pension, medical cover, and death and disablement benefits to all workers, **including gig workers**. ***Gig workers refer to workers outside of the traditional employer-employee relationship (e.g., freelancers).***
- The Code provides for the **establishment of several bodies** to administer the social security schemes notified by the government.
- It provides that every woman shall be entitled to, and her employer shall be liable for, the payment of **maternity benefit** at the rate of the average daily wage for the period of her actual absence, i.e. the period immediately preceding the day of her delivery, and any period immediately following that day.
The Code specifies penalties for various offences, such as falsification of reports, punishable with imprisonment of up to six months.

Source: PIB

Kakrapar Atomic Power Plant-NUCLEAR ENERGY

GS-Paper-3 Nuclear energy (S&T) (PT-MAINS)

Kakrapar Atomic Power Plant is the country’s first 700 MWe (megawatt electric) unit, located in Gujarat. It is the biggest indigenously developed variant of the Pressurized Heavy Water Reactor (PHWR). The operationalization of India’s first 700MWe reactor marks a significant scale-up in technology. It has recently achieved its criticality, which is a landmark event in India’s domestic civilian nuclear programme.

It is significant in terms of optimization of its PHWR design. It addresses the issue of excess thermal margins and an improvement in the economies of scale, without significant changes to the design of the 540 MWe reactor.

'Thermal margin' refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature. The 700MWe capacity would constitute the biggest component of the expansion plan of India to ramp up its existing nuclear power capacity of 6,780 MWe to 22,480 MWe by 2031.

Criticality means: The normal operating condition of a reactor, in which nuclear fuel sustains a fission chain reaction. A reactor achieves criticality when each fission event releases a sufficient number of neutrons to sustain an ongoing series of reactions.

What is Nuclear Energy?
Nuclear Energy is the energy in the nucleus or core of an atom. Tiny units that make up all matter in the universe are called atoms.

How is Nuclear Energy produced?

Nuclear energy is released by splitting the atom, using the process called Nuclear fission.

How is electricity produced using Nuclear Energy?

A nuclear reactor is a power plant that can control nuclear fission to produce electricity. In the nuclear reactor, uranium is used as fuel. Atoms of uranium are split, which creates fission products which cause other uranium atoms to split, thus creating a chain reaction. The energy from this chain reaction is released in the form of heat. This heat is used to warm the nuclear reactor's cooling agent, which results in the formation of steam. This steam turns the turbines, which drive the engines or generators to produce electricity.

Where was the first nuclear reactor located, that produced electricity?

Argonne National Laboratory was the first nuclear reactor to produce electricity located in Idaho, USA. It was in the year 1951.

Where was the first nuclear power plant designed to provide electricity to a community?

It was set up in Obninsk, Russia in 1954.

What are the advantages of electricity produced using Nuclear Energy?

- It is a source of clean energy.
- It helps in the development of a country's economy without adversely contributing to climate change.
- It does not emit any greenhouse gases.
- It can be built in urban or rural areas.
- Nuclear Energy – Electricity production across the Globe
- Approximately 10% of the world’s electricity is produced using nuclear energy.
- Worldwide, nuclear power plants are operational in around 30 countries.
- In France, approximately 75% of the electricity is produced by Nuclear energy.
- A total of around 450 nuclear reactors are operating worldwide for generating
Uses

- Provides electricity to a nation without polluting its environment unlike electricity produced from thermal sources like coal.
- Source of huge employment for a nation.
- It helps in boosting the economy of a nation and helps in achieving Sustainable Development Goals.
- Nuclear power is used for space explorations.
- Used for providing potable water through desalination
- Used in cancer treatment
- Used for sterilizing medical equipment.
- A country’s security needs are addressed by using nuclear-powered submarines and nuclear powered submarines.
- Nuclear radiation is used in the treatment of food by killing bacteria, insects and parasites that cause illness.
- Nuclear energy could play a major role in transportation by acting as a substitute for fossil fuels.

Nuclear Energy Facts – India

- Till 2009, India was excluded from global nuclear trade as it was non-signatory of the Nuclear Non-proliferation treaty due to its nuclear weapons program. This was a hindrance in the development of India’s Civil Nuclear energy program.
- Approximately 2.5% of India’s energy requirements are met through nuclear energy.

Locations of Nuclear Power Plants – Planned in India

- Gorakhpur
- Chutka – Madhya Pradesh
- Mahi Banswara – Rajasthan

Locations of Nuclear Power Plants – Proposed

- Haripur – West Bengal
- Rajouli, Nawada – Bihar
- Bhimpur – Madhya Pradesh
- Jaitapur (Ratnagiri District) – Maharashtra
- Kovvada (Srikakulam District) – Andhra Pradesh
- Nizampatnam (Guntur District) – Andhra Pradesh
- Pulivendula (Kadapa District) – Andhra Pradesh
- Chhaya – Mithi (Bhavnagar District) – Gujarat
Locations of Uranium Resources

- Tummalapalle (Kadapa District) – Andhra Pradesh
- Nalgonda District – Telangana
- East Singhbhum District – Jharkhand
- West Khasi Hills District – Meghalaya
- Udaipur District – Rajasthan
- Yadgir District – Karnataka
- Rajnandgaon (District) – Chhattisgarh
- Sonbhadra District – Uttar Pradesh
- Rudraprayag District – Uttarakhand
- Una District – Himachal Pradesh
- Gondia District – Maharashtra

The Indian nuclear programme was conceived based on, unique sequential three-stages and associated technologies essentially to aim at optimum utilization of the indigenous nuclear resource profile of modest Uranium and abundant Thorium resources. This sequential three-stage program is based on a closed fuel cycle, where the spent fuel of one stage is reprocessed to produce fuel for the next stage.

The commercial nuclear power program of the first stage (comprising of PHWRs and imported LWRs) is being implemented by Nuclear Power Corporation of India Limited (NPCIL), and the second stage (comprising of Fast Breeder Reactors) by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI), both companies owned fully by the union government in accordance with the provisions of the act.

**STAGE 1: Pressurized Heavy Water Reactor using**
- Natural UO2 as fuel matrix.
- Heavy water as moderator and coolant.

**STAGE 2: Fast Breeder Reactor**
- India’s second stage of nuclear power generation envisages the use of Pu-239 obtained from the first stage reactor operation, as the fuel core in fast breeder reactors (FBR).

**STAGE 3: Breeder Reactor**

The third phase of India’s Nuclear Power Generation programme is, breeder...
reactors using U-233 fuel. India's vast thorium deposits permit design and operation of U-233 fuelled breeder reactors.

Research Reactors:

- **DHRUVA Reactor** at BARC was designed, constructed and commissioned by Indian Engineers and scientists. Natural U is the fuel used and heavy water as moderator and coolant, Dhruva enabled India to attain self-sufficiency in the production of radioisotopes.

- **Kamini, a 30 kWt reactor** at the Indira Gandhi Centre for Atomic Research at Kalpakkam, achieved criticality in October 1996 for providing neutron radiography facilities and is a small but significant step towards utilization of our vast thorium reserves. It is the only operating reactor in the world using U-233 fuel.

Institutions involved in Nuclear energy Development

India's Atomic Energy Commission (AEC) was established in August 1948 within the Department of Scientific Research, which was set up in June 1948. The Department of Atomic Energy (DAE) came into existence in August 1954 through a Presidential Order. Thereafter, a Government Resolution in 1958 transferred the DAE within the AEC. The Secretary to the Government of India in the DAE is the ex-officio Chairman of the AEC. The other Members of the AEC are appointed on the recommendation of the Chairman of the AEC.

DAE's own Research & Development wings include:

1) **Bhabha Atomic Research Centre (BARC), Trombay**: A series of 'research' reactors and critical facilities was built here. Reprocessing of used fuel was first undertaken at Trombay in 1964. BARC is also responsible for the transition to thorium-based systems. BARC is responsible for India's uranium enrichment projects, the pilot Rare Materials Plant (RMP) at Ratnahalli near Mysore.

2) **Indira Gandhi Centre for Atomic Research (IGCAR)**: IGCAR at Kalpakkam was set up in 1971. Two civil research reactors here are preparing for stage two of the thorium cycle. BHAVINI is located here and draws upon the centre's expertise and that of NPCIL in establishing the fast reactor program, including the Fast Reactor Fuel Cycle Facility.
3) **The Raja Ramanna Centre for Advanced Technology (RRCAT):** Multi-purpose research reactor (MPRR) for radioisotope production, testing nuclear fuel and reactor materials, and basic research.

4) **Atomic Minerals Directorate:** The DAE's Atomic Minerals Directorate for Exploration and Research (AMD) is focused on mineral exploration for uranium and thorium. It was set up in 1949, and is based in Hyderabad, with over 2700 staff.

5) **Variable Energy Cyclotron Centre:** Variable Energy Cyclotron Centre is a premier R & D unit of the Department of Atomic Energy. This Centre is dedicated to carry out frontier research and development in the fields of Accelerator Science & Technology, Nuclear Science (Theoretical and Experimental), Material Science, Computer Science & Technology and in other relevant areas.

6) **Global Centre for Nuclear Energy Partnership:** It will be the DAE's sixth R & D facility. It is being built near Bahadurgarh in Haryana state and designed to strengthen India's collaboration internationally. It will house five schools to conduct research into advanced nuclear energy systems, nuclear security, radiological safety, as well as applications for radioisotopes and radiation technologies. Russia is to help set up four of the GCNEP schools.

Besides carrying out research at its own research centres, the DAE provides full support to seven aided institutions

1) **Tata Institute of Fundamental Research (TIFR):** The Tata Institute of Fundamental Research is a National Centre of the Government of India, under the umbrella of the Department of Atomic Energy, as well as a deemed University awarding degrees for master's and doctoral programs. TIFR, carry out basic research in physics, chemistry, biology, mathematics, computer science and science education. Main campus is located in Mumbai, but additional campuses are in Pune, Bangalore and Hyderabad.

2) **Tata Memorial Centre:** The Tata Memorial Centre commissioned state of the art new operation theatres. For delivering hi-tech patient care, sophisticated facilities such as stereotactic radiosurgery and stereotactic and intensity modulated radiotherapy, were added.

3) **Saha Institute of Nuclear Physics:** The Saha Institute of Nuclear Physics
is an institution of basic research and training in physical and biophysical sciences located in Bidhannagar, Kolkata, India. The institute is named after the famous Indian physicist Meghnad Saha.

4) **Institute of Physics:** Institute of Physics, Bhubaneswar is an autonomous research institution of the (DAE), Government of India.

5) **Institute for Plasma Research:** Research and development in fusion technology continued at the Institute for Plasma Research.

6) **Harish Chandra Research Institute:** The Harish-Chandra Research Institute is an institution dedicated to research in Mathematics and Theoretical Physics, located in Allahabad, Uttar Pradesh in India.

7) **Institute of Mathematical Sciences:** The Institute of Mathematical Sciences (IMSc), founded in 1962 and based in the verdant surroundings of the CIT campus in Chennai, is a national institution which promotes fundamental research in frontier disciplines of the mathematical and physical sciences.

**AERB:** The AERB reviews the safety and security of the country's Operating Nuclear Power Plants, Nuclear Power Projects, Fuel Cycle Facilities, and Other Nuclear/Radiation Facilities and Radiation Facilities. The regulatory authority of AERB is derived from the rules and notifications promulgated under the Atomic Energy Act, 1962 and the Environmental (Protection) Act, 1986. The headquarters is in Mumbai. The mission of the Board is to ensure that the use of Ionising Radiation and Nuclear Power in India does not cause undue risk to health and the Environment. Currently, the Board consists of a full-time Chairman, an ex officio Member, three part-time Members and a Secretary.

**NPCIL:** Nuclear Power Corporation of India Limited (NPCIL) is a Public Sector Enterprise under the administrative control of the Department of Atomic Energy (DAE), Government of India. The Nuclear Power Corporation of India Ltd (NPCIL) is responsible for design, construction, commissioning and operation of thermal nuclear power plants.

NPCIL is presently (June-2016) operating 21 nuclear power reactors with an installed capacity of 5780 MW. The reactor fleet comprises two Boiling Water Reactors (BWRs) and 18 Pressurised Heavy Water Reactors (PHWRs) including one 100 MW PHWR at Rajasthan which is owned by DAE, Government of India.
The AERB is a regulatory body, which derives administrative and financial support from the Department of Atomic Energy. It reports to the secretary, DAE.

The DAE is also involved in the promotion of nuclear energy, and is also responsible for the functioning of the Nuclear Power Corporation of India Limited, which operates most nuclear power plants in the country.

The DAE is thus responsible both for nuclear safety (through the AERB), as well as the operation of nuclear power plants (through NPCIL). This could be seen as a conflict of interest.

Source: PIB
New FDI rules, 2020

- The Government of India has made its approval for Foreign Direct Investment (FDI) by neighbouring countries mandatory.
- This revised FDI policy aims to curb opportunistic takeovers/acquisitions of Indian companies due to the current Covid-19 pandemic.

Important points:

- FDI is allowed under two modes - either through the automatic route, for which companies don't need government approval, or through the government route, for which companies need a go-ahead from the centre.

New FDI policy:

- An entity of a country, which shares a land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route.
- A transfer of ownership in an FDI deal that benefits any country that shares a border with India will also need government approval.
- India shares land borders with Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar.
- Investors from countries not covered by the new policy only have to inform the RBI after a transaction rather than asking for prior permission from the relevant government department.

Impacts:

- The earlier FDI policy was limited to allowing only Bangladesh and Pakistan via the government route in all sectors. The revised rule has now brought companies from China under the government route filter.
- China’s footprint in the Indian business space has been expanding rapidly, especially since 2014.

Chinese investment in India:

- The net Chinese investment in India, which was $1.6 billion in 2014, shot up five-folds to at least $8 billion (Rs 60,800 crore) in the next three years — with a noticeable shift from state-driven to market-driven investment from the
Chinese private sector.

- **Official figures underestimate the amount of investment**: They neither account for all Chinese companies’ acquisitions of stakes in the technology sector nor investments from China routed through third-party countries, such as Singapore.
- For instance, a $504-million investment from the Singapore arm of the mobile firm Xiaomi would not figure in official statistics because of how investments are measured.
- It has been seen that the Chinese firms have escaped the kind of scrutiny in India that their investments have attracted in the West despite several high-profile investments and acquisitions.
- Another concern is that there is no clear separation between the Chinese state and private business. They work closely in pursuing many goals.

**Foreign Direct Investment definition:**

- FDI is an investment from a party in one country into a business or corporation in another country with the intention of establishing a lasting interest.
- Lasting interest differentiates FDI from foreign portfolio investments, where investors passively hold securities from a foreign country.
- Foreign direct investment can be made by expanding one’s business into a foreign country or by becoming the owner of a company in another country.

Source: TH

---

**Cold War between U.S.A and China**

GS-Paper-2 US-CHINA (Mains)

Recently, the **U.S.A blocked China's access to chip making tools and designated Chinese telecom giants Huawei, ZTE as national security threats**. However, with the **5G rollout** approaching, the move will impact several countries including India. Recently, the United Kingdom also reversed its earlier
decision and blocked Huawei from its 5G network rollout.

**U.S.A-China Tech Relation:** China has traditionally resisted against American big-data companies such as Facebook and Google to operate within its jurisdiction. However, both the Countries still have significant dealings on the technology side.

Last year, Apple recorded USD 100 million of daily sales in China, while Huawei Technologies reported record revenues primarily from its exposure in western markets, including the U.S.A.

The latest steps by U.S.A against Huawei mark the first real prohibitory action by a western government in the nearly two decades. This has been done on the ground that China’s equipment is designed to aid snooping. There have been apprehensions that American telecoms players are too much dependent on subsidised Chinese technology.

**Impact of Ban on Chip Making Tools:** Huawei could face shortages in its supply of specialist chips for which it relies on the U.S.A. Technological cold war could extend beyond the U.S.A and China, and compel other countries, including India, to effectively choose between one of the camps. Some of the countries perceive the same threat as that of the U.S.A, and others are wary of trade sanctions by the U.S.A.

This could have a bearing on the growing competition to dominate next-generation technologies such as 5G networks and artificial intelligence. Impact the plans of most countries preparing to transition to a 5G regime, including India.

**India’s Position**

In 2009, the Department of Telecommunications (DoT) had advised Indian mobile companies to suspend deals with Chinese equipment makers after fears that Chinese equipment were being used for hacking and spying.

However, India did not took strong actions on any of DoT’s recommendations. Indeed, much of India’s telecom growth story has been supported by Chinese companies in both hardware and software.

The approach changed after the standoff in Ladakh, wherein India has asked state-owned telecom service providers to exclude Chinese companies from the
India also justified the **ban on 59 mobile apps** with Chinese links on grounds of a threat to national security.

This was part of the **wider decision to signal curbs on Chinese investments** and tech companies in the country.

The border clashes and the U.S.A action could now force India into the anti-China camp.

**Conclusion**

With the **Chinese being increasingly blocked by governments in 5G networks**, other global players could be at a competitive advantage. The other leaders in the telecoms network equipment market are the European players such as Ericsson and Nokia, and South Korea’s Samsung.

**India’s Reliance Jio has also designed and developed a complete 5G solution from scratch.** This could also have a bearing on the global 5G rollout, especially in the countries outside of North America and Europe.

Source: TH
As India has been spreading its supplier base with Israel, USA and France, Russia still remains a major supplier. This is indicated by following latest developments:

- India has approved proposals to acquire 21 Mig29 and 12 Su30 MKI fighter aircraft from Russia for 2.4 billion USD.
- India and Russia had agreed to a joint programme to develop a variant of Fifth Generation Fighter Aircraft Programme (FGFA) in 2007.
- As India has not committed to the Fifth Generation Fighter Aircraft Programme (FGFA) programme with Russia. It is negotiating on the price of AK103 rifles for Make in India.

USA’s Military Equipment

- Apache and Chinook helicopters,
- M777 howitzer guns for the Army.
- Boeing C-17 and C-130J for IAF and P8I submarine hunter aircraft for Navy.

Reasons

There are many reasons for India's dependency on Russia for the supply of military equipments:

- **Legacy Issue:** India and Russia have a longstanding defence relationship and there is familiarity with each other's processes and systems.
- **Specialised Equipment:** The kind of specialised equipment that Russia provides to India makes a difference from other countries, e.g. the S-400 Air Defence Missile Systems, nuclear submarines and aircraft carrier.
- **Combat Capability:** Each of the systems supplied by Russia has its advantages and uses as they have been used effectively to develop maximum combat capability especially when focusing on India’s higher-end strike platforms.

Significance:
**Border Clash with China:** Notwithstanding India’s growing mutual convergence with the USA against China following the recent tensions on the Ladakh border, its armed forces remain heavily dependent on equipment, weapons and military platforms of Russian origin which form the bulk of its inventory.

**USA’s CAATSA:** Recently, the USA has asked all its allies and partners, including India, to stop transactions with Russia. The USA can risk triggering sanctions under the Countering America’s Adversaries Through Sanctions Act.
DDT to South Africa

Recently, HIL (India) Limited has supplied 20.60 Metric tonne of Dichlorodiphenyltrichloroethane (DDT), a fertilizer to South Africa for their malaria control program. The Company is further in the process of supplying DDT to Zimbabwe and Zambia in the current Financial Year 2020-21.

**HIL (India) Limited**

It is a PSU under the Ministry of Chemicals and Fertilizers. It was incorporated in 1954 to manufacture and supply DDT to the Ministry of Health and Family Welfare for malaria control programmes. It is the sole manufacturer of DDT globally.

**DDT:**

It is a colorless, tasteless, and almost odorless crystalline chemical compound. It was first synthesized in 1874 by the Austrian chemist Othmar Zeidler. Its insecticidal action was discovered by the Swiss chemist Paul Hermann Muller in 1939.

He was awarded the Nobel Prize in Physiology or Medicine in 1948 "for his discovery of the high efficiency of DDT as a contact poison against several arthropods.

Arthropods are invertebrate species which include insects (Mosquitos), arachnids (Spiders), and crustaceans (Crabs) etc. Originally developed as an insecticide, it became infamous for its environmental impacts.
A worldwide ban on agricultural use was formalized under the Stockholm Convention on Persistent Organic Pollutants. However, its limited use in disease vector control continues, because of its effectiveness in reducing malarial infections.

The World Health Organisation (WHO) recommends DDT as one of the efficient Indoor Residual Spraying (IRS) chemicals to curb mosquito menace and it is widely used by Southern African countries like South Africa, Zimbabwe, Zambia, Namibia, Mozambique and India. IRS is a core vector control intervention that involves the application of a residual insecticide to internal walls and ceilings of housing structures where malaria vectors may come into contact with the insecticide.

Supply to South Africa: South Africa will be utilising DDT in three provinces bordering Mozambique. The region is highly affected with Malaria and it has reported maximum morbidity and mortality.

Supply to Other Countries: HIL (India) Limited has recently exported Malathion Technical 95% to Iran under Government-to-Government initiative for the Locust Control Programme and also exported Agrochemical-fungicide to Latin American region.

Malaria

Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female Anopheles mosquitoes, called "malaria vectors".

Impact: Malaria continues to be one of the major public health problems globally. In 2018, an estimated 228 million cases of malaria occurred worldwide.

Most of the cases and deaths (93%) were reported from African Region. In the South East Asia Region, India accounts for the majority of cases and death.

According to World Malaria Report 2019, India reported 2.6 million fewer cases in 2018 compared to 2017. Thus the overall incidence of malaria in the country has reduced.

However, 7 states (Uttar Pradesh, Jharkhand, Chhattisgarh, West Bengal, Gujarat, Odisha and Madhya Pradesh) account for about 90% of the burden of
malaria cases in India.

Source: PIB

Social Security Number for Migrants
GS-I | 27 July, 2020

Social Security Number for Migrants
GS-Paper-3 Economic development (Mains)

The Parliamentary Standing Committee on Labour has recommended that the government introduce a social security number for migrant workers, especially those working in the unorganised sectors which are beyond the purview of the labour laws.

Background: The Ministry of Labour and Employment was unable to give any concrete figures on the number of migrant workers. However, the officials quoted data from the Railway Ministry. About 1.08 crore migrant workers had travelled on Special Shramik express trains initiated by the government to ferry migrant workers.

It was pointed out that students and family members of the workers too used these trains and thus this figure doesn’t accurately record the number of migrant workers.

Social Security Number: Instead of making Aadhar the basis for providing government benefits to migrants, they should be given a social security number which is a more effective way of covering them for insurance, health and other welfare programmes.

A social security number is essential to avert situations like the one during the extended lockdown when several lakh workers had to walk back to their homes as they were shut out of employment overnight. The number will not only help in mapping the number of migrant workers but also their migration patterns.
Suggestions:

Both the **State of origin** and **State where the worker has migrated** to should have a record. The migrant workers may or may not have access to the Internet, therefore the smallest arm of administration — the **gram sabhas** — should be roped in. The same work can be done by municipality workers in the urban areas.

Concerns

It flagged issues related to the social security fund stated under the **Social Security Code Bill 2019**. There are no specific details in the legislation as to who will contribute to the fund and how it will be utilised.

It also discussed **changes in labour laws by some states** in the wake of pandemic and impact on workers.

Most of the beneficiaries under the **PM Garib Kalyan Yojana** were **local workers** and not **migrants**.

Social Security Code Bill, 2019

- The central government has been working to **concise 44 central labour** laws into four broad codes on **wages**, industrial relations, social security and **occupational health & safety**.
- The Social Security Code Bill seeks to amend and consolidate **nine laws** related to social security, including the Employees’ Provident Fund Act, 1952, the Maternity Benefit Act, 1961, and the Unorganised Workers’ Social Security Act, 2008. Social security refers to measures to ensure access to **health care and provision of income security to workers**.
- It proposes setting up a **social security fund**. This fund will provide welfare benefits such as pension, medical cover, and death and disablement benefits to all workers, including **gig workers**. ***Gig workers refer to workers outside of the traditional employer-employee relationship (e.g., freelancers).***
- The Code provides for the **establishment of several bodies** to administer the social security schemes notified by the government.
- It provides that every woman shall be entitled to, and her employer shall be liable for, the payment of **maternity benefit** at the rate of the average daily wage for the period of her actual absence, i.e. the period immediately preceding the day of her delivery, and any period immediately following that day.
The Code specifies penalties for various offences, such as falsification of reports, punishable with imprisonment of up to six months.

Source: PIB

Kakrapar Atomic Power Plant-NUCLEAR ENERGY

Kakrapar Atomic Power Plant is the country’s first 700 MWe (megawatt electric) unit, located in Gujarat. It is the biggest indigenously developed variant of the Pressurized Heavy Water Reactor (PHWR). The operationalization of India’s first 700MWe reactor marks a significant scale-up in technology. It has recently achieved its criticality, which is a landmark event in India’s domestic civilian nuclear programme.

It is significant in terms of optimization of its PHWR design. It addresses the issue of excess thermal margins and an improvement in the economies of scale, without significant changes to the design of the 540 MWe reactor.

'Thermal margin' refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature. The 700MWe capacity would constitute the biggest component of the expansion plan of India to ramp up its existing nuclear power capacity of 6,780 MWe to 22,480 MWe by 2031.

Criticality means: The normal operating condition of a reactor, in which nuclear fuel sustains a fission chain reaction. A reactor achieves criticality when each fission event releases a sufficient number of neutrons to sustain an ongoing series of reactions.

What is Nuclear Energy?
Nuclear Energy is the energy in the nucleus or core of an atom. Tiny units that make up all matter in the universe are called atoms.

How is Nuclear Energy produced?

Nuclear energy is released by splitting the atom, using the process called Nuclear fission.

How is electricity produced using Nuclear Energy?

A nuclear reactor is a power plant that can control nuclear fission to produce electricity. In the nuclear reactor, uranium is used as fuel. Atoms of uranium are split, which creates fission products which cause other uranium atoms to split, thus creating a chain reaction. The energy from this chain reaction is released in the form of heat. This heat is used to warm the nuclear reactors cooling agent, which results in the formation of steam. This steam turns the turbines, which drive the engines or generators to produce electricity.

Where was the first nuclear reactor located, that produced electricity?

Argonne National Laboratory was the first nuclear reactor to produce electricity was located in Idaho, USA. It was in the year 1951.

Where was the first nuclear power plant designed to provide electricity to a community?

It was set up in Obninsk, Russia in 1954.

What are the advantages of electricity produced using Nuclear Energy?

- It is a source of clean energy.
- It helps in the development of a country’s economy without adversely contributing to climate change.
- It does not emit any greenhouse gases.
- It can be built in urban or rural areas.
- Nuclear Energy – Electricity production across the Globe
- Approximately 10% of the world’s electricity is produced using nuclear energy.
- Worldwide, nuclear power plants are operational in around 30 countries.
- In France, approximately 75% of the electricity is produced by Nuclear energy.
- A total of around 450 nuclear reactors are operating worldwide for generating
electricity.

Uses

- Provides electricity to a nation without polluting its environment unlike electricity produced from thermal sources like coal.
- Source of huge employment for a nation.
- It helps in boosting the economy of a nation and helps in achieving Sustainable Development Goals.
- Nuclear power is used for space explorations.
- Used for providing potable water through desalination
- Used in cancer treatment
- Used for sterilizing medical equipment.
- A country’s security needs are addressed by using nuclear-powered submarines and nuclear powered
- Nuclear radiation is used in the treatment of food by killing bacteria, insects and parasites that cause illness.
- Nuclear energy could play a major role in transportation by acting as a substitute for fossil fuels.

Nuclear Energy Facts – India

- Till 2009, India was excluded from global nuclear trade as it was non-signatory of the Nuclear Non-proliferation treaty due to its nuclear weapons program. This was a hindrance in the development of India’s Civil Nuclear energy program.
- Approximately 2.5% of India’s energy requirements are met through nuclear energy.

Locations of Nuclear Power Plants – Planned in India

- Gorakhpur
- Chutka – Madhya Pradesh
- Mahi Banswara – Rajasthan

Locations of Nuclear Power Plants – Proposed

- Haripur – West Bengal
- Rajouri, Nawada – Bihar
- Bhimpur – Madhya Pradesh
- Jaitapur (Ratnagiri District) – Maharashtra
- Kovvada (Srikakulam District) – Andhra Pradesh
- Nizampatnam (Guntur District) – Andhra Pradesh
- Pulivendula (Kadapa District) – Andhra Pradesh
- Chhaya – Mithi (Bhavnagar District) – Gujarat
Locations of Uranium Resources

- Tummalapalle (Kadapa District) – Andhra Pradesh
- Nalgonda District – Telangana
- East Singhbhum District – Jharkhand
- West Khasi Hills District – Meghalaya
- Udaipur District – Rajasthan
- Yadgir District – Karnataka
- Rajnandgaon (District) – Chhattisgarh
- Sonbhadra District – Uttar Pradesh
- Rudraprayag District – Uttarakhand
- Una District – Himachal Pradesh
- Gondia District – Maharashtra

The Indian nuclear programme was conceived based on unique sequential three-stages and associated technologies essentially to aim at optimum utilization of the indigenous nuclear resource profile of modest Uranium and abundant Thorium resources. This sequential three-stage program is based on a closed fuel cycle, where the spent fuel of one stage is reprocessed to produce fuel for the next stage.

The commercial nuclear power program of the first stage (comprising of PHWRs and imported LWRs) is being implemented by Nuclear Power Corporation of India Limited (NPCIL), and the second stage (comprising of Fast Breeder Reactors) by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI), both companies owned fully by the union government in accordance with the provisions of the act.

**STAGE 1: Pressurized Heavy Water Reactor using**
- Natural UO₂ as fuel matrix.
- Heavy water as moderator and coolant.

**STAGE 2: Fast Breeder Reactor**
- India’s second stage of nuclear power generation envisages the use of Pu-239 obtained from the first stage reactor operation, as the fuel core in fast breeder reactors (FBR).

**STAGE 3: Breeder Reactor**

The third phase of India’s Nuclear Power Generation programme is, breeder
reactors using U-233 fuel. India’s vast thorium deposits permit design and operation of U-233 fuelled breeder reactors.

Research Reactors:

- **DHRUVA Reactor** at BARC was designed, constructed and commissioned by Indian Engineers and scientists. Natural U is the fuel used and heavy water as moderator and coolant, Dhruva enabled India to attain self sufficiency in the production of radioisotopes.

- **Kamini, a 30 kWt reactor** at the Indira Gandhi Centre for Atomic Research at Kalpakkam, achieved criticality in October 1996 for providing neutron radiography facilities and is a small but significant step towards utilization of our vast thorium reserves. It is the only operating reactor in the world using U-233 fuel.

Institutions involved in Nuclear energy Development

India’s Atomic Energy Commission (AEC) was established in August 1948 within the Department of Scientific Research, which was set up in June 1948. The Department of Atomic Energy (DAE) came into existence in August 1954 through a Presidential Order. Thereafter, a Government Resolution in 1958 transferred the DAE within the AEC. The Secretary to the Government of India in the DAE is the ex-officio Chairman of the AEC. The other Members of the AEC are appointed on the recommendation of the Chairman of the AEC.

DAE’s own Research & Development wings include:

1) **Bhabha Atomic Research Centre (BARC), Trombay:** A series of 'research' reactors and critical facilities was built here. Reprocessing of used fuel was first undertaken at Trombay in 1964. BARC is also responsible for the transition to thorium-based systems. BARC is responsible for India’s uranium enrichment projects, the pilot Rare Materials Plant (RMP) at Ratnahalli near Mysore.

2) **Indira Gandhi Centre for Atomic Research (IGCAR):** IGCAR at Kalpakkam was set up in 1971. Two civil research reactors here are preparing for stage two of the thorium cycle. BHAVINI is located here and draws upon the centre's expertise and that of NPCIL in establishing the fast reactor program, including the Fast Reactor Fuel Cycle Facility.
3) The Raja Ramanna Centre for Advanced Technology (RRCAT): Multi-purpose research reactor (MPRR) for radioisotope production, testing nuclear fuel and reactor materials, and basic research.

4) Atomic Minerals Directorate: The DAE's Atomic Minerals Directorate for Exploration and Research (AMD) is focused on mineral exploration for uranium and thorium. It was set up in 1949, and is based in Hyderabad, with over 2700 staff.

5) Variable Energy Cyclotron Centre: Variable Energy Cyclotron Centre is a premier R & D unit of the Department of Atomic Energy. This Centre is dedicated to carry out frontier research and development in the fields of Accelerator Science & Technology, Nuclear Science (Theoretical and Experimental), Material Science, Computer Science & Technology and in other relevant areas.

6) Global Centre for Nuclear Energy Partnership: It will be the DAE’s sixth R & D facility. It is being built near Bahadurgarh in Haryana state and designed to strengthen India’s collaboration internationally. It will house five schools to conduct research into advanced nuclear energy systems, nuclear security, radiological safety, as well as applications for radioisotopes and radiation technologies. Russia is to help set up four of the GCNEP schools.

Besides carrying out research at its own research centres, the DAE provides full support to seven aided institutions

1) Tata Institute of Fundamental Research (TIFR): The Tata Institute of Fundamental Research is a National Centre of the Government of India, under the umbrella of the Department of Atomic Energy, as well as a deemed University awarding degrees for master's and doctoral programs. TIFR, carry out basic research in physics, chemistry, biology, mathematics, computer science and science education. Main campus is located in Mumbai, but additional campuses are in Pune, Bangalore and Hyderabad.

2) Tata Memorial Centre: The Tata Memorial Centre commissioned state of the art new operation theatres. For delivering hi-tech patient care, sophisticated facilities such as stereotactic radiosurgery and stereotactic and intensity modulated radiotherapy, were added.

3) Saha Institute of Nuclear Physics: The Saha Institute of Nuclear Physics
is an institution of basic research and training in physical and biophysical sciences located in Bidhannagar, Kolkata, India. The institute is named after the famous Indian physicist Meghnad Saha.

4) **Institute of Physics:** Institute of Physics, Bhubaneswar is an autonomous research institution of the (DAE), Government of India.

5) **Institute for Plasma Research:** Research and development in fusion technology continued at the Institute for Plasma Research.

6) **Harish Chandra Research Institute:** The Harish-Chandra Research Institute is an institution dedicated to research in Mathematics and Theoretical Physics, located in Allahabad, Uttar Pradesh in India.

7) **Institute of Mathematical Sciences:** The Institute of Mathematical Sciences (IMSc), founded in 1962 and based in the verdant surroundings of the CIT campus in Chennai, is a national institution which promotes fundamental research in frontier disciplines of the mathematical and physical sciences.

**AERB:** The AERB reviews the safety and security of the country's Operating Nuclear Power Plants, Nuclear Power Projects, Fuel Cycle Facilities, and Other Nuclear/Radiation Facilities and Radiation Facilities. The regulatory authority of AERB is derived from the rules and notifications promulgated under the Atomic Energy Act, 1962 and the Environmental (Protection) Act, 1986. The headquarters is in Mumbai. The mission of the Board is to ensure that the use of Ionising Radiation and Nuclear Power in India does not cause undue risk to health and the Environment. Currently, the Board consists of a full-time Chairman, an ex officio Member, three part-time Members and a Secretary.

**NPCIL:** Nuclear Power Corporation of India Limited (NPCIL) is a Public Sector Enterprise under the administrative control of the Department of Atomic Energy (DAE), Government of India. The Nuclear Power Corporation of India Ltd (NPCIL) is responsible for design, construction, commissioning and operation of thermal nuclear power plants.

NPCIL is presently (June-2016) operating 21 nuclear power reactors with an installed capacity of 5780 MW. The reactor fleet comprises two Boiling Water Reactors (BWRs) and 18 Pressurised Heavy Water Reactors (PHWRs) including one 100 MW PHWR at Rajasthan which is owned by DAE, Government of India.
The AERB is a regulatory body, which derives administrative and financial support from the Department of Atomic Energy. It reports to the secretary, DAE.

The DAE is also involved in the promotion of nuclear energy, and is also responsible for the functioning of the Nuclear Power Corporation of India Limited, which operates most nuclear power plants in the country.

The DAE is thus responsible both for nuclear safety (through the AERB), as well as the operation of nuclear power plants (through NPCIL). This could be seen as a conflict of interest.

Source: PIB
The draft notification is issued under the powers vested in the central government under the Environment (Protection) Act, 1986 to take all such measures for “protecting and improving the quality of the environment. According to the government, the new notification is being brought in order to make the process more transparent and expedient by the implementation of an online system, further delegation, rationalisation and standardisation of the process. However, the environmentalist said that the draft will further dilute the EIA process.

Case related to EIA:

- In the Samarth Trust Case, the Delhi high court had considered EIAs- a part of participatory justice in which the voice is given to the voiceless and it is like a Jan Sunwai, where the community is the jury.

Issues pertaining to draft EIA Notification 2020

1. Post-Facto Approval

- The new draft allows for post-facto approval for projects. It means that the clearances for projects can be awarded even if they have started construction or have been running phase without securing environmental clearances.
- This also means that any environmental damage caused by the project is likely to be waived off as the violations get legitimised.
- As the only remedy would be to impose a fine or punishment; but that would not reverse the detrimental consequences on the environment.
- Post facto approval is the derogation of the fundamental principles of environmental jurisprudence and violation of the “precautionary principle,” which is a principle of environmental sustainability.
- In 2017, post-facto clearance given to projects in Tamil Nadu was struck down by the Madras high court.

2. Public Consultation Process

- The draft notification provides for a reduction of the time period from 30 days to 20 days for the public to submit their responses during a public
hearing for any application seeking environmental clearance.

- The danger is that if adequate time is not given for the preparation of views, comments and suggestions to those who would be affected by the project, then such public hearings would not be meaningful.
- Unless a public hearing is meaningful, the whole EIA process would lack transparency and credibility.
- Further, the reduction of time would particularly pose a problem in those areas where information is not easily accessible or areas in which people are not that well aware of the process itself.

3. Compliance Report Issue

- The 2006 notification required that the project proponent submit a report every six months, showing that they are carrying out their activities as per the terms on which permission has been given.
- However, the new draft requires the promoter to submit a report only once every year.
- During this period, certain irreversible environmental, social or health consequences of the project could go unnoticed because of the extended reporting time.
- For example, if a mining project is being carried out at someplace which can be potentially hazardous to the nearby population and can contaminate the air, and water nearby, a half-yearly compliance report would better help in addressing these concerns.

4. Bypassing EIA Process

- Through the draft notification, the central government gets the power to categorise projects as “strategic.”
- Once a project is considered as strategic, the draft notification states that no information related to such projects shall be placed in the public domain.
- Violations can only be reported suo motu by the project proponent, or by a government authority, appraisal committee, or regulatory authority. This is against the principles of natural justice.
- Further, the draft notification states that the new construction projects up to 1,50,000 square metres (instead of the existing 20,000 square metres) do not need “detailed scrutiny” by the Expert Committee, nor do they need EIA studies and public consultation.

Way Forward
The ministry, instead of reducing the time for public consultation, should focus on ensuring access to information as well as awareness about the public hearing and its impact upon the whole EIA process.

In order to improve ease of doing business, the government should bring down the average delay of 238 days in granting environmental clearance, that emanates from bureaucratic delays and complex laws.

Grow now, sustain later should not be the policy, as the notion is dangerously tilted against the concept of sustainable development.

With the EIA, we also need Social impact assessment to achieve sustainable development in true sense.

Source: TH/WEB
Draft Environmental Impact Assessment, 2020

- The draft notification is issued under the powers vested in the central government under the Environment (Protection) Act, 1986 to take all such measures for protecting and improving the quality of the environment.
- According to the government, the new notification is being brought in order to make the process more transparent and expedient by the implementation of an online system, further delegation, rationalisation and standardisation of the process. However, the environmentalist said that the draft will further dilute the EIA process.

Case related to EIA:

- In the Samarth Trust Case, the Delhi high court had considered EIAs-a part of participatory justice in which the voice is given to the voiceless and it is like a Jan Sunwai, where the community is the jury.

Issues pertaining to draft EIA Notification 2020

1. Post-Facto Approval

   - The new draft allows for post-facto approval for projects. It means that the clearances for projects can be awarded even if they have started construction or have been running phase without securing environmental clearances.
   - This also means that any environmental damage caused by the project is likely to be waived off as the violations get legitimised.
   - As the only remedy would be to impose a fine or punishment; but that would not reverse the detrimental consequences on the environment.
   - Post facto approval is the derogation of the fundamental principles of environmental jurisprudence and violation of the “precautionary principle,” which is a principle of environmental sustainability.
   - In 2017, post-facto clearance given to projects in Tamil Nadu was struck down by the Madras high court.

2. Public Consultation Process

   - The draft notification provides for a reduction of the time period from 30 days to 20 days for the public to submit their responses during a public
The hearing for any application seeking environmental clearance.
• The danger is that if adequate time is not given for the preparation of views, comments and suggestions to those who would be affected by the project, then such public hearings would not be meaningful.
• Unless a public hearing is meaningful, the whole EIA process would lack transparency and credibility.
• Further, the reduction of time would particularly pose a problem in those areas where information is not easily accessible or areas in which people are not that well aware of the process itself.

3. Compliance Report Issue
• The 2006 notification required that the project proponent submit a report every six months, showing that they are carrying out their activities as per the terms on which permission has been given.
• However, the new draft requires the promoter to submit a report only once every year.
• During this period, certain irreversible environmental, social or health consequences of the project could go unnoticed because of the extended reporting time.
• For example, if a mining project is being carried out at someplace which can be potentially hazardous to the nearby population and can contaminate the air, and water nearby, a half-yearly compliance report would better help in addressing these concerns.

4. Bypassing EIA Process
• Through the draft notification, the central government gets the power to categorise projects as “strategic.”
• Once a project is considered as strategic, the draft notification states that no information related to such projects shall be placed in the public domain.
• Violations can only be reported suo motu by the project proponent, or by a government authority, appraisal committee, or regulatory authority. This is against the principles of natural justice.
• Further, the draft notification states that the new construction projects up to 1,50,000 square metres (instead of the existing 20,000 square metres) do not need “detailed scrutiny” by the Expert Committee, nor do they need EIA studies and public consultation.

Way Forward
The ministry, instead of reducing the time for public consultation, should focus on ensuring access to information as well as awareness about the public hearing and its impact upon the whole EIA process.

In order to improve ease of doing business, the government should bring down the average delay of 238 days in granting environmental clearance, that emanates from bureaucratic delays and complex laws.

Grow now, sustain later should not be the policy, as the notion is dangerously tilted against the concept of sustainable development.

With the EIA, we also need Social impact assessment to achieve sustainable development in true sense.

Source: TH/WEB
RIC meeting is important as Russia, India and China are countries that carry important voices in international politics and have the potential to significantly influence world events.

About RIC trilateral summit

- RIC committed itself to multilateralism and the principles of Charter of the United Nations.
- Countries called for the comprehensive reform of the UN, including its Security Council, with a view to making it more representative, effective and efficient, and to increase the representation of the developing countries so that it can adequately respond to global challenges.
- During the summit, RIC acknowledged the importance of BRICS, and the Shanghai Cooperation Organization as important, effective mechanisms for promoting multilateralism.
- RIC reiterated the importance of various regional fora and organizations such as the East Asia Summit (EAS), ASEAN Regional Forum (ARF), ASEAN Defence Ministers Meeting Plus (ADMM-Plus), Asia-Europe Meeting (ASEM), the Conference on Interaction and Confidence Building Measures in Asia (CICA) and the Asia Cooperation Dialogue (ACD).
- RIC strongly condemned terrorism in all its forms and manifestations. It called for early adoption of the Comprehensive Convention on International Terrorism (CCIT). It also called for the implementation of the relevant UN Security Council (UNSC) resolutions against terrorism.
- RIC also stressed that those committing, orchestrating, inciting or supporting terrorist acts must be held accountable and brought to justice.
- RIC also called for the adoption of the convention against drug trafficking, peaceful uses of outer space, prohibition of biological, chemical weapons.
- RIC called for peace in Afghanistan through an Afghan-led, Afghan-owned peace and reconciliation process, welcomed the significant and positive changes in Korean Peninsula, supported Iran-Nuclear Deal, supported the two-state solution to achieve settlement of the Palestinian issue.
UPSC "PT" DNA (Daily News Analysis)

Source: TH
RIC

- RIC meeting is important as Russia, India and China are countries that carry important voices in international politics and have the potential to significantly influence world events.

About RIC trilateral summit

- RIC committed itself to multilateralism and the principles of Charter of the United Nations.
- Countries called for the comprehensive reform of the UN, including its Security Council, with a view to making it more representative, effective and efficient, and to increase the representation of the developing countries so that it can adequately respond to global challenges.
- During the summit, RIC acknowledged the importance of BRICS, and the Shanghai Cooperation Organization as important, effective mechanisms for promoting multilateralism.
- RIC reiterated the importance of various regional fora and organizations such as the East Asia Summit (EAS), ASEAN Regional Forum (ARF), ASEAN Defence Ministers Meeting Plus (ADMM-Plus), Asia-Europe Meeting (ASEM), the Conference on Interaction and Confidence Building Measures in Asia (CICA) and the Asia Cooperation Dialogue (ACD).
- RIC strongly condemned terrorism in all its forms and manifestations. It called for early adoption of the Comprehensive Convention on International Terrorism (CCIT). It also called for the implementation of the relevant UN Security Council (UNSC) resolutions against terrorism.
- RIC also stressed that those committing, orchestrating, inciting or supporting terrorist acts must be held accountable and brought to justice.
- RIC also called for the adoption of the convention against drug trafficking, peaceful uses of outer space, prohibition of biological, chemical weapons.
- RIC called for peace in Afghanistan through an Afghan-led, Afghan-owned peace and reconciliation process, welcomed the significant and positive changes in Korean Peninsula, supported Iran-Nuclear Deal, supported the two-state solution to achieve settlement of the Palestinian issue.
Environmental Impact Assessment and EIA Draft analysis

Gs-Paper-3 EIA Environment (PT-MAINS)

Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.

UNEP defines Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.

Environment Impact Assessment in India is statutorily backed by the Environment Protection Act, 1986 which contains various provisions on EIA methodology and process.

History of EIA in India

- The Indian experience with Environmental Impact Assessment began over 20 years back. It started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle.
- Till 1994, environmental clearance from the Central Government was an administrative decision and lacked legislative support.
- On 27 January 1994, the then Union Ministry of Environment and Forests, under the Environmental (Protection) Act 1986, promulgated an EIA notification making Environmental Clearance (EC) mandatory for expansion or modernisation of any activity or for setting up new projects listed in Schedule 1 of the notification.
- The Ministry of Environment, Forests and Climate Change (MoEFCC) notified new EIA legislation in September 2006. The notification makes it mandatory for various projects such as mining, thermal power plants, river valley, infrastructure (road, highway, ports, harbours and airports) and
industries including very small electroplating or foundry units to get environment clearance. However, unlike the EIA Notification of 1994, the new legislation has put the onus of clearing projects on the state government depending on the size/capacity of the project.

The EIA Process

EIA involves the steps mentioned below. However, the EIA process is cyclical with interaction between the various steps.

- **Screening**: The project plan is screened for scale of investment, location and type of development and if the project needs statutory clearance.
- **Scoping**: The project’s potential impacts, zone of impacts, mitigation possibilities and need for monitoring.
- **Collection of baseline data**: Baseline data is the environmental status of study area.
- **Impact prediction**: Positive and negative, reversible and irreversable and temporary and permanent impacts need to be predicted which presupposes a good understanding of the project by the assessment agency.
- **Mitigation measures and EIA report**: The EIA report should include the actions and steps for preventing, minimizing or by passing the impacts or else the level of compensation for probable environmental damage or loss.
- **Public hearing**: On completion of the EIA report, public and environmental groups living close to project site may be informed and consulted.
- **Decision making**: Impact Assessment Authority along with the experts consult the project-in-charge along with consultant to take the final decision, keeping in mind EIA and EMP (Environment Management Plan).
- **Monitoring and implementation of environmental management plan**: The various phases of implementation of the project are monitored.
- **Assessment of Alternatives, Delineation of Mitigation Measures and Environmental Impact Assessment Report**: For every project, possible alternatives should be identified, and environmental attributes compared. Alternatives should cover both project location and process technologies. Once alternatives have been reviewed, a mitigation plan should be drawn up for the selected option and is supplemented with an Environment Management Plan (EMP) to guide the proponent towards environmental improvements.
- **Risk assessment**: Inventory analysis and hazard probability and index also form part of EIA procedures.

**** In the **Samarth Trust Case, the Delhi high court** had considered EIAs- a
part of participatory justice in which the voice is given to the voiceless and it is like a Jan Sunwai, where the community is the jury.

Salient Features of 2006 Amendments to EIA Notification

- Environment Impact Assessment Notification of 2006 has decentralized the environmental clearance projects by categorizing the developmental projects in two categories, i.e., **Category A (national level appraisal)** and **Category B (state level appraisal)**.
  - Category A projects are appraised at national level by Impact Assessment Agency (IAA) and the Expert Appraisal Committee (EAC) and Category B projects are appraised at state level.
  - State Level Environment Impact Assessment Authority (SEIAA) and State Level Expert Appraisal Committee (SEAC) are constituted to provide clearance to Category B process.

- **After 2006 Amendment the EIA cycle comprises of four stages:**
  - Screening
  - Scoping
  - Public hearing
  - Appraisal

- **Category A projects** require mandatory environmental clearance and thus they do not undergo the screening process.
- **Category B projects** undergoes screening process and they are classified into two types.
  - **Category B1 projects (Mandatory requires EIA).**
  - **Category B2 projects (Do not require EIA).**

- Thus, Category A projects and Category B, projects undergo the complete EIA process whereas Category B2 projects are excluded from complete EIA process.

Importance of EIA

- EIA links environment with development for environmentally safe and sustainable development.
- EIA provides a cost effective method to eliminate or minimize the adverse impact of developmental projects.
- EIA enables the decision makers to analyse the effect of developmental activities on the environment well before the developmental project is implemented.
- EIA encourages the adaptation of mitigation strategies in the developmental plan.
- EIA makes sure that the developmental plan is environmentally sound and
Shortcomings of EIA Process

- **Applicability:** There are several projects with significant environmental impacts that are exempted from the notification either because they are not listed in schedule I, or their investments are less than what is provided for in the notification.

- **Composition of expert committees and standards:** It has been found that the team formed for conducting EIA studies is lacking the expertise in various fields such as environmentalists, wildlife experts, Anthropologists and Social Scientists.

- **Public hearing:**
  - Public comments are not considered at an early stage, which often leads to conflict at a later stage of project clearance.
  - A number of projects with significant environmental and social impacts have been excluded from the mandatory public hearing process.
  - The data collectors do not pay respect to the indigenous knowledge of local people.

- **Quality of EIA:** One of the biggest concerns with the environmental clearance process is related to the quality of EIA report that are being carried out.

- **Lack of Credibility:** There are so many cases of fraudulent EIA studies where erroneous data has been used, same facts used for two totally different places etc.

- Often, and more so for strategic industries such as nuclear energy projects, the EMPs are kept confidential for political and administrative reasons.
  - Details regarding the effectiveness and implementation of mitigation measures are often not provided.
  - Emergency preparedness plans are not discussed in sufficient details and the information not disseminated to the communities.
In News:

Recently, the Ministry of Environment, Forest and Climate Change (MoEFCC) has proposed a draft Environmental Impact Assessment (EIA) notification 2020, that seeks to replace the current notification which goes back to 2006.

EIA is an important process for evaluating the likely environmental impact of a proposed project. It is a process whereby people’s views are taken into consideration for granting final approval to any developmental project or activity. It is basically, a decision-making tool to decide whether the project should be approved or not.

The draft notification is issued under the powers vested in the central government under the Environment (Protection) Act, 1986 to take all such measures for “protecting and improving the quality of the environment.

According to the government, the new notification is being brought in order to make the process more transparent and expedient by the implementation of an online system, further delegation, rationalisation and standardisation of the
process. However, the environmentalist said that the draft will further dilute the EIA process.

Issues pertaining to draft EIA Notification 2020

Post-Facto Approval

- The new draft allows for post-facto approval for projects. It means that the clearances for projects can be awarded even if they have started construction or have been running phase without securing environmental clearances.
- This also means that any environmental damage caused by the project is likely to be waived off as the violations get legitimised. As the only remedy would be to impose a fine or punishment; but that would not reverse the detrimental consequences on the environment.
- Post facto approval is the derogation of the fundamental principles of environmental jurisprudence and violation of the “precautionary principle,” which is a principle of environmental sustainability.
- In 2017, post-facto clearance given to projects in Tamil Nadu was struck down by the Madras high court.

Public Consultation Process

- The draft notification provides for a reduction of the time period from 30 days to 20 days for the public to submit their responses during a public hearing for any application seeking environmental clearance.
- The danger is that if adequate time is not given for the preparation of views, comments and suggestions to those who would be affected by the project, then such public hearings would not be meaningful.
- Unless a public hearing is meaningful, the whole EIA process would lack transparency and credibility.
- Further, the reduction of time would particularly pose a problem in those areas where information is not easily accessible or areas in which people are not that well aware of the process itself.

Compliance Report Issue

- The 2006 notification required that the project proponent submit a report every six months, showing that they are carrying out their activities as per the terms on which permission has been given.
- However, the new draft requires the promoter to submit a report only once every year.
- During this period, certain irreversible environmental, social or health
consequences of the project could go unnoticed because of the extended reporting time.

- For example, if a mining project is being carried out at someplace which can be potentially hazardous to the nearby population and can contaminate the air, and water nearby, a half-yearly compliance report would better help in addressing these concerns.

**Bypassing EIA Process**

- Through the draft notification, the central government gets the power to categorise projects as “strategic.”
- Once a project is considered as strategic, the draft notification states that no information related to such projects shall be placed in the public domain.
- Violations can only be reported suo motu by the project proponent, or by a government authority, appraisal committee, or regulatory authority. This is against the principles of natural justice.
- Further, the draft notification states that the new construction projects up to 1,50,000 square metres (instead of the existing 20,000 square metres) do not need “detailed scrutiny” by the Expert Committee, nor do they need EIA studies and public consultation.

**Way Forward**

On a positive note, the 2020 draft notification has a clause dedicated to definitions to several terms related to EIA. It may be beneficial in the sense that it consolidates the EIA rules and has the potential of alleviating some ambiguity in the present law.

However, it needs to address the above issues. In this context:

- The ministry, instead of reducing the time for public consultation, should focus on ensuring access to information as well as awareness about the public hearing and its impact upon the whole EIA process.
- In order to improve ease of doing business, the government should bring down the average delay of 238 days in granting environmental clearance, that emanates from bureaucratic delays and complex laws.
- Grow now, sustain later should not be the policy, as the notion is dangerously tilted against the concept of sustainable development.

Source: TH
In June 2017 a ‘Committee for the Draft National Education Policy’ was constituted under the Chairmanship of eminent scientist Padma Vibhushan, Dr. K. Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon’ble Human Resource Development Minister on 31st May, 2019.

Summary

- New Policy aims for Universalization of Education from pre-school to secondary level with 100% GER in school education by 2030.
- NEP 2020 will bring 2 crore out of school children back into the main stream.
- New 5+3+3+4 school curriculum with 12 years of schooling and 3 years of Anganwadi/Pre-schooling.
- Emphasis on Foundational Literacy and Numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools; Vocational Education to start from Class 6 with Internships.
- Teaching up to at least Grade 5 to be in mother tongue/ regional language.
- Assessment reforms with 360 degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes.
- GER in higher education to be raised to 50% by 2035; 3.5 crore seats to be added in higher education.
- Higher Education curriculum to have Flexibility of Subjects.
- Multiple Entry/Exit to be allowed with appropriate certification.
- Academic Bank of Credits to be established to facilitate Transfer of Credits.
- National Research Foundation to be established to foster a strong research culture.
- Light but Tight Regulation of Higher Education, single regulator with four separate verticals for different functions.
- Affiliation System to be phased out in 15 years with graded autonomy to colleges.
- NEP 2020 advocates increased use of technology with equity; National Educational Technology Forum to be created.
• NEP 2020 emphasizes setting up of Gender Inclusion Fund, Special Education Zones for disadvantaged regions and groups
• New Policy promotes Multilingualism in both schools and HEs; National Institute for Pali, Persian and Prakrit, Indian Institute of Translation and Interpretation to be set up

The Union Cabinet chaired by the Prime Minister approved the National Education Policy 2020 today, making way for large scale, transformational reforms in both school and higher education sectors. This is the first education policy of the 21st century and replaces the thirty-four year old National Policy on Education (NPE), 1986. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, this policy is aligned to the 2030 Agenda for Sustainable Development and aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary, suited to 21st century needs and aimed at bringing out the unique capabilities of each student.

Important Highlights

School Education

Ensuring Universal Access at all levels of school education

NEP 2020 emphasizes on ensuring universal access to school education at all levels- pre school to secondary. Infrastructure support, innovative education centres to bring back dropouts into the mainstream, tracking of students and their learning levels, facilitating multiple pathways to learning involving both formal and non-formal education modes, association of counselors or well-trained social workers with schools, open learning for classes 3, 5 and 8 through NIOS and State Open Schools, secondary education programs equivalent to Grades 10 and 12, vocational courses, adult literacy and life-enrichment programs are some of the proposed ways for achieving this. About 2 crore out of school children will be brought back into mainstream under NEP 2020.
Early Childhood Care & Education with new Curricular and Pedagogical Structure

With emphasis on Early Childhood Care and Education, the 10+2 structure of school curricula is to be replaced by a 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively. This will bring the hitherto uncovered age group of 3-6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child. The new system will have 12 years of schooling with three years of Anganwadi/ pre schooling.

NCERT will develop a National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE) for children up to the age of 8. ECCE will be delivered through a significantly expanded and strengthened system of institutions including Anganwadis and pre-schools that will have teachers and Anganwadi workers trained in the ECCE pedagogy and curriculum. The planning and implementation of ECCE will be carried out jointly by the Ministries of HRD, Women and Child Development (WCD), Health and Family Welfare (HFW), and Tribal Affairs.

Attaining Foundational Literacy and Numeracy

Recognizing Foundational Literacy and Numeracy as an urgent and necessary prerequisite to learning, NEP 2020 calls for setting up of a National Mission on Foundational Literacy and Numeracy by MHRD. States will prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools for all learners by grade 3 by 2025. A National Book Promotion Policy is to be formulated.

Reforms in school curricula and pedagogy

The school curricula and pedagogy will aim for holistic development of learners by equipping them with the key 21st century skills, reduction in curricular content to enhance essential learning and critical thinking and greater focus on experiential learning. Students will have increased flexibility and choice of subjects. There will be no rigid separations between arts and sciences, between
curricular and extra-curricular activities, between vocational and academic streams.

Vocational education will start in schools from the 6th grade, and will include internships.

A new and comprehensive National Curricular Framework for School Education, NCFSE 2020-21, will be developed by the NCERT.

Multilingualism and the power of language

The policy has emphasized mother tongue/local language/regional language as the medium of instruction at least till Grade 5, but preferably till Grade 8 and beyond. Sanskrit to be offered at all levels of school and higher education as an option for students, including in the three-language formula. Other classical languages and literatures of India also to be available as options. No language will be imposed on any student. Students to participate in a fun project/activity on ‘The Languages of India’, sometime in Grades 6-8, such as, under the ‘Ek Bharat Shrestha Bharat’ initiative. Several foreign languages will also be offered at the secondary level. Indian Sign Language (ISL) will be standardized across the country, and National and State curriculum materials developed, for use by students with hearing impairment.

Assessment Reforms

NEP 2020 envisages a shift from summative assessment to regular and formative assessment, which is more competency-based, promotes learning and development, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. All students will take school examinations in Grades 3, 5, and 8 which will be conducted by the appropriate authority. Board exams for Grades 10 and 12 will be continued, but redesigned with holistic development as the aim. A new National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body.

Equitable and Inclusive Education
NEP 2020 aims to ensure that no child loses any opportunity to learn and excel because of the circumstances of birth or background. Special emphasis will be given on Socially and Economically Disadvantaged Groups (SEDGs) which include gender, socio-cultural, and geographical identities and disabilities. This includes setting up of **Gender Inclusion Fund** and also **Special Education Zones** for disadvantaged regions and groups. Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education, with support of educators with cross disability training, resource centres, accommodations, assistive devices, appropriate technology-based tools and other support mechanisms tailored to suit their needs. Every state/district will be encouraged to establish “Bal Bhavans” as a special daytime boarding school, to participate in art-related, career-related, and play-related activities. Free school infrastructure can be used as **Samajik Chetna Kendras**

Robust Teacher Recruitment and Career Path

Teachers will be recruited through robust, transparent processes. Promotions will be merit-based, with a mechanism for multi-source periodic performance appraisals and available progression paths to become educational administrators or teacher educators. A common **National Professional Standards for Teachers (NPST)** will be developed by the National Council for Teacher Education by 2022, in consultation with NCERT, SCERTs, teachers and expert organizations from across levels and regions.

School Governance

Schools can be organized into complexes or clusters which will be the basic unit of governance and ensure availability of all resources including infrastructure, academic libraries and a strong professional teacher community.

Standard-setting and Accreditation for School Education

NEP 2020 envisages clear, separate systems for policy making, regulation, operations and academic matters. States/UTs will set up independent **State School Standards Authority (SSSA)**. Transparent public self-disclosure of all
the basic regulatory information, as laid down by the SSSA, will be used extensively for public oversight and accountability. The SCERT will develop a School Quality Assessment and Accreditation Framework (SQAAF) through consultations with all stakeholders.

**Higher Education**

**Increase GER to 50 % by 2035**

NEP 2020 aims to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035. 3.5 Crore new seats will be added to Higher education institutions.

**Holistic Multidisciplinary Education**

The policy envisages broad based, multi-disciplinary, holistic Under Graduate education with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entry and exit points with appropriate certification. UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period. For example, Certificate after 1 year, Advanced Diploma after 2 years, Bachelor’s Degree after 3 years and Bachelor’s with Research after 4 years.

An Academic Bank of Credit is to be established for digitally storing academic credits earned from different HEIs so that these can be transferred and counted towards final degree earned.

Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.

The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
Regulation

Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body for the entire higher education, excluding medical and legal education. HECI to have four independent verticals - National Higher Education Regulatory Council (NHERC) for regulation, General Education Council (GEC) for standard setting, Higher Education Grants Council (HEGC) for funding, and National Accreditation Council (NAC) for accreditation. HECI will function through faceless intervention through technology, & will have powers to penalise HEIs not conforming to norms and standards. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.

Rationalised Institutional Architecture

Higher education institutions will be transformed into large, well resourced, vibrant multidisciplinary institutions providing high quality teaching, research, and community engagement. The definition of university will allow a spectrum of institutions that range from Research-intensive Universities to Teaching-intensive Universities and Autonomous degree-granting Colleges.

Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges. Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.

Motivated, Energized, and Capable Faculty

NEP makes recommendations for motivating, energizing, and building capacity of faculty through clearly defined, independent, transparent recruitment, freedom to design curricula/pedagogy, incentivising excellence, movement into institutional leadership. Faculty not delivering on basic norms will be held accountable.

Teacher Education

A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with...
NCERT. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree. Stringent action will be taken against substandard stand-alone Teacher Education Institutions (TEIs).

**Mentoring Mission**

A National Mission for Mentoring will be established, with a large pool of outstanding senior/retired faculty – including those with the ability to teach in Indian languages – who would be willing to provide short and long-term mentoring/professional support to university/college teachers.

**Financial support for students**

Efforts will be made to incentivize the merit of students belonging to SC, ST, OBC, and other SEDGs. The National Scholarship Portal will be expanded to support, foster, and track the progress of students receiving scholarships. Private HEIs will be encouraged to offer larger numbers of free ships and scholarships to their students.

**Open and Distance Learning**

This will be expanded to play a significant role in increasing GER. Measures such as online courses and digital repositories, funding for research, improved student services, credit-based recognition of MOOCs, etc., will be taken to ensure it is at par with the highest quality in-class programmes.

**Online Education and Digital Education:**

A comprehensive set of recommendations for promoting online education consequent to the recent rise in epidemics and pandemics in order to ensure preparedness with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible, has been covered. A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created in the MHRD to
look after the e-education needs of both school and higher education.

Technology in education

An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration. Appropriate integration of technology into all levels of education will be done to improve classroom processes, support teacher professional development, enhance educational access for disadvantaged groups and streamline educational planning, administration and management.

Promotion of Indian languages

To ensure the preservation, growth, and vibrancy of all Indian languages, NEP recommends setting an Indian Institute of Translation and Interpretation (IITI), National Institute (or Institutes) for Pali, Persian and Prakrit, strengthening of Sanskrit and all language departments in HEIs, and use mother tongue/local language as a medium of instruction in more HEI programmes.

Internationalization of education will be facilitated through both institutional collaborations, and student and faculty mobility and allowing entry of top world ranked Universities to open campuses in our country.

Professional Education

All professional education will be an integral part of the higher education system. Stand-alone technical universities, health science universities, legal and agricultural universities etc will aim to become multi-disciplinary institutions.

Adult Education

Policy aims to achieve 100% youth and adult literacy.
Financing Education

The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Unprecedented Consultations

NEP 2020 has been formulated after an unprecedented process of consultation that involved nearly over 2 lakh suggestions from 2.5 lakhs Gram Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. The MHRD initiated an unprecedented collaborative, inclusive, and highly participatory consultation process from January 2015. In May 2016, ‘Committee for Evolution of the New Education Policy’ under the Chairmanship of Late Shri T.S.R. Subramanian, Former Cabinet Secretary, submitted its report. Based on this, the Ministry prepared ‘Some Inputs for the Draft National Education Policy, 2016’. In June 2017 a ‘Committee for the Draft National Education Policy’ was constituted under the Chairmanship of eminent scientist Padma Vibhushan, Dr. K. Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon’ble Human Resource Development Minister on 31st May, 2019. The Draft National Education Policy 2019 was uploaded on MHRD’s website and at ‘MyGov Innovate’ portal eliciting views/suggestions/comments of stakeholders, including public.

Source: PIB

ITER: World's largest nuclear FUSION project begins assembly

GS-III | 30 July,2020

ITER: World's largest nuclear FUSION project begins assembly

GS-PAPER-3 S&T Nuclear energy (PT-MAINS)

In NEWS
The world's biggest nuclear fusion project has entered its five-year assembly phase. After this is finished, the facility will be able to start generating the super-hot "plasma" required for fusion power. The £18.2bn (€20bn; $23.5bn) facility has been under construction in Saint-Paul-lez-Durance, southern France.

Advocates say fusion could be a source of clean, unlimited power that would help tackle the climate crisis.

**ITER is a collaboration between China, the European Union, India, Japan, South Korea, Russia and the US. All members share in the cost of construction.**

“Current nuclear energy relies on fission, where a heavy chemical element is split to produce lighter ones. Nuclear fusion, on the other hand, works by combining two light elements to make a heavier one. This releases vast amounts of energy with very little radioactivity.”

**Iter will confine hot plasma within a structure called a tokamak** in order to control fusion reactions.

The project will aim to help demonstrate whether fusion can be commercially viable. France's President Emmanuel Macron said the effort would unite countries around a common good.

**ITER Timeline**

2005: Decision to site the project in France

2006: Signature of the ITER Agreement

2007: Formal creation of the ITER Organization

2007-2009: Land clearing and levelling

2010-2014: Ground support structure and seismic foundations for the Tokamak

2012: Nuclear licensing milestone: ITER becomes a Basic Nuclear Installation under French law

2014-2021: Construction of the Tokamak Building (access for assembly activities in 2019)

2010-2021: Construction of the ITER plant and auxiliary buildings for First Plasma

2008-2021: Manufacturing of principal First Plasma components
### WHAT WILL ITER DO?

The amount of **fusion energy a tokamak is capable of producing** is a direct result of the number of fusion reactions taking place in its core. Scientists know that the larger the vessel, the larger the volume of the plasma... and therefore the greater the potential for fusion energy. With ten times the plasma volume of the largest machine operating today, the **ITER Tokamak will be a unique experimental tool**, capable of longer plasmas and better confinement. The machine has been designed specifically to:

1) **Produce 500 MW of fusion power** The world record for fusion power is held by the European tokamak JET. In 1997, JET produced 16 MW of fusion power from a total img heating power of 24 MW (Q=0.67). ITER is designed to produce a ten-fold return on energy (Q=10), or **500 MW** of fusion power from 50 MW of img heating power. ITER will not capture the energy it produces as electricity, but—as first of all fusion experiments in history to produce net energy gain—it will prepare the way for the machine that can.

2) **Demonstrate the integrated operation of technologies for a fusion power plant** ITER will bridge the gap between today's smaller-scale experimental fusion devices and the demonstration fusion power plants of the future. Scientists will be
able to study plasmas under conditions similar to those expected in a future power plant and test technologies such as heating, control, diagnostics, cryogenics and remote maintenance.

3) Achieve a deuterium-tritium plasma in which the reaction is sustained through internal heating Fusion research today is at the threshold of exploring a "burning plasma"—one in which the heat from the fusion reaction is confined within the plasma efficiently enough for the reaction to be sustained for a long duration. Scientists are confident that the plasmas in ITER will not only produce much more fusion energy, but will remain stable for longer periods of time.

4) Test tritium breeding One of the missions for the later stages of ITER operation is to demonstrate the feasibility of producing tritium within the vacuum vessel. The world supply of tritium (used with deuterium to fuel the fusion reaction) is not sufficient to cover the needs of future power plants. ITER will provide a unique opportunity to test mockup in-vessel tritium breeding blankets in a real fusion environment.

5) Demonstrate the safety characteristics of a fusion device ITER achieved an important landmark in fusion history when, in 2012, the ITER Organization was licensed as a nuclear operator in France based on the rigorous and impartial examination of its safety files. One of the primary goals of ITER operation is to demonstrate the control of the plasma and the fusion reactions with negligible consequences to the environment.

WHAT IS FUSION?

Fusion is the energy source of the Sun and stars. In the tremendous heat and gravity at the core of these stellar bodies, hydrogen nuclei collide, fuse into heavier helium atoms and release tremendous amounts of energy in the process. Twentieth-century fusion science identified the most efficient fusion reaction in the laboratory setting to be the reaction between two hydrogen isotopes, deuterium (D) and tritium (T). The DT fusion reaction produces the highest energy gain at the "lowest" temperatures.

Three conditions must be fulfilled to achieve fusion in a laboratory:

- very high temperature (on the order of 150,000,000° Celsius);
sufficient plasma particle density (to increase the likelihood that collisions do occur); and
sufficient confinement time (to hold the plasma, which has a propensity to expand, within a defined volume).

At extreme temperatures, electrons are separated from nuclei and a gas becomes a plasma—often referred to as the fourth state of matter. Fusion plasmas provide the environment in which light elements can fuse and yield energy. In a tokamak device, powerful magnetic fields are used to confine and control the plasma.

For further READING: https://www.iter.org/proj/inafewlines

Source: ITER web

Rafale fighter jet deal analysis
GS-III | 30 July, 2020

Rafale fighter jet deal analysis
GS-Paper-3 Internal security (PT-MAINS)

- December 30, 2002: Defence Procurement Procedures (DPP) adopted to streamline procurement.
- January 30, 2012: Dassault Aviation’s Rafale aircraft comes up with the lowest bid.
- March 13, 2014: Work Share agreement signed between Hindustan Aeronautics Limited (HAL) and Dassault Aviation under which they were responsible for 70 per cent and 30 percent of the work, respectively, for 108 aircraft.
- January 26, 2016: India and France sign MoU for 36 Rafale aircraft.
- November 18, 2016: Government states in Parliament that the cost of each
Rafale aircraft to be approximately Rs 670 crore and that all aircraft will be delivered by April 2022.

- December 31, 2016: Dassault Aviation’s Annual Report reveals the actual price paid for the 36 aircrafts at about Rs 60,000 crore, more than double the government’s stated price in Parliament.
- March 13, 2018: Public Interest Litigation (PIL) in SC seeks independent probe into Centre’s decision to procure 36 Rafale fighter jets and disclosure of the cost.
- September 5, 2018: SC agrees to hear PIL seeking stay on Rafale fighter jet deal.
- October 10, 2018: SC asks Centre to provide details of the decision making process in the Rafale fighter jet deal in a sealed cover.
- November 12, 2018: Centre places price details of 36 Rafale fighter jets in a sealed cover before SC. It also gives details of steps that led to finalisation of the Rafale deal.
- November 14, 2018: SC reserves order on pleas seeking court-monitored probe in Rafale deal.
- December 14, 2018: SC says there was no occasion to doubt the decision-making process in the procurement of 36 Rafale fighter jets and dismissed the petitions seeking an investigation into alleged irregularities in the Rs 58,000 crore deal.
- February 26, 2019: SC decides to hear pleas seeking review of Rafale verdict in open court.
- March 6, 2019: Documents related to Rafale deal stolen from Defence Ministry, Centre tells SC.
- March 8, 2019: Attorney General clarifies that Rafale documents not stolen, petitioners used photocopies.
- April 10, 2019: SC allows use of leaked documents, dismisses Centre’s objections claiming privilege.
- May 4, 2019: Centre filed reply in SC related to the review petition filed against the SC order of 14 December and submitted all the pricing details related to the Rafale deal to CAG.
- May 10, 2019: SC reserved its verdict on review petitions.

Competitors of Rafale:

- Military had to replace hundreds of obsolete IAF MiG-21, MiG-23 and MiG-27 fighters that had been steadily retired from service by the
indigenous Tejas fighter. But as the fighter’s development got delayed, the then government in 2007, ordered a global tender for 126 medium multi-role combat aircraft, of which 108 would be built in India by public sector firm Hindustan Aeronautics Limited (HAL).

Over the next four years, the IAF flight-tested six fighters:

- Boeing’s F/A-18 Super Hornet,
- Lockheed Martin’s F-16IN Super Viper,
- Saab’s Gripen C/D,
- Russian MiG-35,
- Eurofighter’s Typhoon,
- Rafale.

In 2011, the Typhoon and the Rafale were found to have met the Indian Air Force (IAF’s) performance requirements. In January 2012, Dassault’s bid was declared lower than Eurofighter’ and the Rafale became India’s combat aircraft of choice.

Importance of the deal:

- Defence Minister Rajnath Singh, recently received the first of the 36 Rafale fighter jets (as part of the Rs 59,000 crore deal signed in 2016) at Dassault Aviation’s facility in Merignac.
- Four of the total 36 aircrafts will be flying over the Indian skies by May 2020.
- All 36 jets are expected to arrive in India by September 2022.
- Apart from Dassault, French companies Thales and Saffron are also involved in the Rafale’s production through offset contract.
- The Rafale is a twin-jet fighter aircraft able to operate from both an aircraft carrier and a shore base.
- The fighter jet is armed with potent meteor and scalp missiles.
- The meteor is a beyond visual range air-to-air missile and scalp is a long-range cruise missile that can be launched from the aircraft for deep strikes to hit fixed and stationary targets.
- The first batch of Rafale will be stationed in Ambala, while the second batch will be stationed at Hasimara in West Bengal to combat the Chinese threat.
- The induction of Rafale aircraft in the IAF will increase it’s combat capability.
- Rafale will make India one of the four countries, besides France, Egypt
and Qatar, to possess the next-gen fighter jet.

- Rafale will **enhance the air strike capabilities** of the IAF and will be used as a **deterrent** against any country.

**Specifications of Rafale:**

- Rafale can attain a **maximum speed of Mach 1.8/750 kt (2,222.6 km per hour)** and can **climb up to 50,000 ft**.
- Though Rafale can fly up to a range of 3,700 km, it can be **refuelled mid-air**.
- The 15.27 metre long aircraft has **wing length of 10.8 metres each**.
- While Sukhoi 30 MKI can carry ammunition up to 8,000 kg, Rafale can **easily carry bombs up to 9,500 kg**.
- Rafale can carry out all combat aviation missions, including **air defence**, **close air support**, **in-depth strikes**, **reconnaissance**, **anti-ship strikes** and **nuclear deterrence**.
- Its ‘**delta wings**’ are extremely stable and have **supersonic speed**.
- Rafale’s **cannon can release over 2,500 rounds in one minute**.
- The aircraft’s advanced engine is capable of allowing the **throttle to shift from combat to idle power in less than three seconds**.
- It can **jam enemy radars, detect targets anywhere including sea, ground and air**.
- Other superior capabilities include close air support, dynamic targeting, air-to-ground precision strike, anti-ship attack capability and buddy-buddy refuelling.
- The advanced Rafale aircraft **can carry a nuclear weapon, and deploy long range air-to-air missiles, laser-guided bombs** with different warheads and non-guided classic bombs.

Source: TH

---

**Global Tiger Day**

**GS-III | 30 July, 2020**

**Global Tiger Day**

**GS-PAPER-3 Environment – Animals (PT)**

The Ministry of Environment, Forest and Climate Change has released a
The report compares information obtained from the earlier three tiger surveys (2006, 2010, and 2014) with data obtained from the 2018-19 survey to estimate tiger population trends at country level.

**St. Petersburg declaration:** With 2,967 tigers, India, four years in advance, has achieved the target set in the 2010 St Petersburg Declaration of doubling tiger population by 2022. India had around 1,400 tigers in 2006.

The Heads of the Governments of Tiger Range countries at St. Petersburg, Russia, had resolved to double tiger numbers across their global range by 2022 by signing the St. Petersburg declaration on tiger conservation. During the same meeting it was also decided to celebrate 29th July as Global Tiger Day across the world, which is since being celebrated to spread and generate awareness on tiger conservation.

**There are currently 13 tiger range countries** - India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.

**National Scenario:**
- The national tiger status assessment of 2018-19 estimated the overall tiger population in India at 2,967 - 33% increase from 2014 (2,226).
- The 2018 census (once in every four years) has set a Guinness record for being the largest camera-trap wildlife survey.
- Tigers were observed to be increasing at a rate of 6% per annum in India from 2006 to 2018.
- The largest contiguous tiger population in the world of about 724 tigers was found in the Western Ghats (Nagarhole-Bandipur-Wayanad-Mudumalai- Sathyamangalam- Biligiri Ranganathaswamy Temple block).

**Regional Scenario:**
- **Madhya Pradesh** has the highest number of tigers at 526, closely followed...
The Northeast has suffered losses in population. Further, the tiger status in Chhattisgarh, Jharkhand and Odisha has steadily declined, which is a matter of concern.

Out of 50 tiger reserves in the country, three reserves - Mizoram’s Dampa reserve, Bengal’s Buxa reserve and Jharkhand’s Palamau reserve - have no tigers left.

Corbett Tiger Reserve (Uttrakhand) had the largest population of tigers at about 231 in 2018.

India’s Project Tiger was launched in 1973 with 9 tiger reserves.

Concerns:
Most of the populations remain confined to small Protected Areas, some of which have habitat corridors that permit tiger movement between them. However, most of the corridor habitats in India are degrading due to unsustainable human use and developmental projects. Some reserves nearing full capacity is another issue.

Solutions:
In areas where tigers have not been recorded or the population has declined, restoration needs to be proceeded by improving protection, augmentation of prey, and reintroduction of tigers from an appropriate source. Some reserves like Similipal (Odisha), Pakke (Arunachal Pradesh) are below their potential and require resources and targeted management.

Government’s Response:
Tigers and other wildlife are a kind of soft power that India has to show on the international front.

Despite several constraints such as less land mass, India has 8% of biodiversity because of its culture of saving and preserving nature, trees and its wildlife.

India has 70% of the world’s tiger population. It is tirelessly working with all 13 tiger range countries towards nurturing the tiger.

The Government is working on a programme to provide water and fodder to animals at the forest itself to deal with the challenge of human-animal conflict that is causing the death of animals. For this, Lidar-based survey technology will be used for the first time. Lidar is a method of measuring distance by illuminating the
target with laser light and measuring the reflection with a sensor.

### List of Tiger Reserves in India

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>State</th>
<th>Name of Tiger Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>Nagarjunsagar Srisailam</td>
</tr>
<tr>
<td>2</td>
<td>Arunachal Pradesh</td>
<td>Namdapha National Park</td>
</tr>
<tr>
<td>3</td>
<td>Arunachal Pradesh</td>
<td>Kamlang Tiger Reserve</td>
</tr>
<tr>
<td>4</td>
<td>Arunachal Pradesh</td>
<td>Pakke Tiger Reserve</td>
</tr>
<tr>
<td>5</td>
<td>Assam</td>
<td>Manas Tiger Reserve</td>
</tr>
<tr>
<td>6</td>
<td>Assam</td>
<td>Nameri National Park</td>
</tr>
<tr>
<td>7</td>
<td>Assam</td>
<td>Orang Tiger Reserve</td>
</tr>
<tr>
<td>8</td>
<td>Assam</td>
<td>Kaziranga National Park</td>
</tr>
<tr>
<td>9</td>
<td>Bihar</td>
<td>Valmiki National Park</td>
</tr>
<tr>
<td>10</td>
<td>Chhattisgarh</td>
<td>Udanti-Sitanadi Wildlife Sanctuary</td>
</tr>
<tr>
<td>11</td>
<td>Chhattisgarh</td>
<td>Achanakmar Wildlife Sanctuary</td>
</tr>
<tr>
<td>12</td>
<td>Chhattisgarh</td>
<td>Indravati Tiger Reserve</td>
</tr>
<tr>
<td>13</td>
<td>Jharkhand</td>
<td>Palamau Tiger Reserve</td>
</tr>
<tr>
<td>14</td>
<td>Karnataka</td>
<td>Bandipur Tiger Reserve</td>
</tr>
<tr>
<td>15</td>
<td>Karnataka</td>
<td>Bhadra Wildlife Sanctuary</td>
</tr>
<tr>
<td>16</td>
<td>Karnataka</td>
<td>Dandeli-Anshi Tiger Reserve</td>
</tr>
<tr>
<td>17</td>
<td>Karnataka</td>
<td>Nagarhole National Park</td>
</tr>
<tr>
<td>18</td>
<td>Karnataka</td>
<td>Biligiri Ranganatha Temple Tiger reserve</td>
</tr>
<tr>
<td>19</td>
<td>Kerala</td>
<td>Periyar Tiger reserve</td>
</tr>
<tr>
<td>20</td>
<td>Kerala</td>
<td>Parambikulam Tiger reserve</td>
</tr>
<tr>
<td>21</td>
<td>Madhya Pradesh</td>
<td>Kanha Tiger reserve</td>
</tr>
<tr>
<td>22</td>
<td>Madhya Pradesh</td>
<td>Pench Tiger reserve</td>
</tr>
<tr>
<td>23</td>
<td>Madhya Pradesh</td>
<td>Bandhavgarh Tiger reserve</td>
</tr>
<tr>
<td>24</td>
<td>Madhya Pradesh</td>
<td>Panna Tiger reserve</td>
</tr>
<tr>
<td>25</td>
<td>Madhya Pradesh</td>
<td>Satpura Tiger reserve</td>
</tr>
<tr>
<td>26</td>
<td>Madhya Pradesh</td>
<td>Sanjay-Dubri Tiger reserve</td>
</tr>
<tr>
<td>27</td>
<td>Maharashtra</td>
<td>Melghat Tiger reserve</td>
</tr>
<tr>
<td>No.</td>
<td>State</td>
<td>Tiger Reserve</td>
</tr>
<tr>
<td>-----</td>
<td>---------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>28</td>
<td>Maharashtra</td>
<td>Tadoba-Andhari Tiger Reserve</td>
</tr>
<tr>
<td>29</td>
<td>Maharashtra</td>
<td>Pench Tiger Reserve</td>
</tr>
<tr>
<td>30</td>
<td>Maharashtra</td>
<td>Sahyadri Tiger Reserve</td>
</tr>
<tr>
<td>31</td>
<td>Maharashtra</td>
<td>Nagzira Tiger Reserve</td>
</tr>
<tr>
<td>32</td>
<td>Maharashtra</td>
<td>Bor Tiger Reserve</td>
</tr>
<tr>
<td>33</td>
<td>Mizoram</td>
<td>Dampa Tiger Reserve</td>
</tr>
<tr>
<td>34</td>
<td>Odisha</td>
<td>Similipal Tiger Reserve</td>
</tr>
<tr>
<td>35</td>
<td>Odisha</td>
<td>Satkosia Tiger Reserve</td>
</tr>
<tr>
<td>36</td>
<td>Rajasthan</td>
<td>Ranthambore Tiger Reserve</td>
</tr>
<tr>
<td>37</td>
<td>Rajasthan</td>
<td>Sariska Tiger Reserve</td>
</tr>
<tr>
<td>38</td>
<td>Rajasthan</td>
<td>Mukundra Hills Tiger Reserve</td>
</tr>
<tr>
<td>39</td>
<td>Tamil Nadu</td>
<td>Kalakad-Mundanthurai Tiger Reserve</td>
</tr>
<tr>
<td>40</td>
<td>Tamil Nadu</td>
<td>Anamalai Tiger Reserve (Indira Gandhi Wildlife Sanctuary and National Park)</td>
</tr>
<tr>
<td>41</td>
<td>Tamil Nadu</td>
<td>Mudumalai Tiger Reserve</td>
</tr>
<tr>
<td>42</td>
<td>Tamil Nadu</td>
<td>Sathyamangalam Tiger Reserve</td>
</tr>
<tr>
<td>43</td>
<td>Telangana</td>
<td>Kawal Tiger Reserve</td>
</tr>
<tr>
<td>44</td>
<td>Telangana</td>
<td>Amrabad Tiger Reserve</td>
</tr>
<tr>
<td>45</td>
<td>Uttar Pradesh</td>
<td>Dudhwa Tiger Reserve</td>
</tr>
<tr>
<td>46</td>
<td>Uttar Pradesh</td>
<td>Pilibhit Tiger Reserve</td>
</tr>
<tr>
<td>47</td>
<td>Uttar Pradesh</td>
<td>Amangarh Tiger Reserve (buffer zone of Corbett Tiger Reserve)</td>
</tr>
<tr>
<td>48</td>
<td>Uttarakhand</td>
<td>Jim Corbett National Park</td>
</tr>
<tr>
<td>49</td>
<td>Uttarakhand</td>
<td>Rajaji Tiger Reserve</td>
</tr>
<tr>
<td>50</td>
<td>West Bengal</td>
<td>Sunderban National Park</td>
</tr>
<tr>
<td>51</td>
<td>West Bengal</td>
<td>Buxa Tiger Reserve</td>
</tr>
</tbody>
</table>

Source: TH
In 2018, India commemorated 20 years since it conducted its five nuclear tests, known as Operation Shakti–98, and 10 year since **India – U.S Civil Nuclear Agreement** in 2008, also called as **123 Agreement**. India on November 5, 2018, declared that its nuclear triad, stated in its nuclear doctrine, is operational after indigenous ballistic missile nuclear submarine INS Arihant achieved a milestone by conducting its first deterrence patrol.

**Nuclear power in India delivers a total capacity of 6.7 GWe (Giga Watt Electricity), contributing about 2% of the country’s electricity supply.** India has ambitious plans to increase nuclear power generation capacity to **275 GWe by 2052**. At the start of 2018, six reactors were under construction in India, with a combined capacity of 4.4 GWe.
India has a largely indigenous nuclear power programme which is controlled by Nuclear Power Corporation of India Ltd. (NPCIL), a state-owned corporation founded in 1987. Because India is outside the Nuclear Non-Proliferation
Treaty due to its weapons programme, it was, for 34 years, largely excluded from trade in nuclear plant and materials, which hampered its development of civil nuclear energy until 2009.

Due to earlier trade bans and lack of indigenous uranium, India has uniquely been developing a nuclear fuel cycle to exploit its reserves of thorium.

**India’s Nuclear Energy Program**

- India has consciously proceeded to explore the possibility of tapping nuclear energy for the purpose of power generation. In this direction **three-stage nuclear power programme** was formulated by Homi Bhabha in the 1950s.
- **Atomic Energy Act, 1962** was framed and implemented with the set objectives of using two naturally occurring elements Uranium and Thorium having good potential to be utilized as nuclear fuel in Indian Nuclear Power Reactors.
- The estimated natural deposits of Uranium are about 70,000 tonnes and Thorium are about 3,60,000 tonnes in the country.

**Three Stage programme**

- **Stage one – Pressurised Heavy Water Reactor** uses
  - Natural UO2 as fuel matrix,
  - Heavy water as moderator and coolant.
- In the reactor, the first two plants were of boiling water reactors based on imported technology. Subsequent plants are of PHWR type through indigenous R&D efforts. India achieved complete self-reliance in this technology and this stage of the programme is in the industrial domain.
- The future plan includes the setting up of **VVER type** i.e. **Russian version of the Pressurized Water Reactor (PWR)** is under progress to augment power generation.
- **MOX fuel (Mixed oxide)** is developed and introduced at Tarapur to conserve fuel and to develop new fuel technology.
- **Second stage** of nuclear power generation envisages the use of Pu-239 obtained from the first stage reactor operation, as the fuel core in fast breeder reactors (FBR).
- **Third phase** of India’s Nuclear Power Generation programme is, **breeder reactors** using U-233 fuel.
- India’s vast thorium deposits permit design and operation of **U-233 fuelled breeder reactors**.
### Power Plants

#### In Operation
- Rawatbhata (Rajasthan)
- Tarapur (Maharashtra)
- Kudankulam (Tamil Nadu)
- Kakrapar (Gujarat)
- Kalpakkam (Tamil Nadu)
- Narora (Uttar Pradesh)
- Kaiga (Karnataka)

#### Under Construction
- Kakrapar 3&4 (Gujarat)
- Rawatbhata (Rajasthan)
- Kudankulam 3&4 (Tamil Nadu)
- Kalpakkam PFBR (Tamil Nadu)
- Jaitapur (Maharashtra)
- Kovvada (Andhra Pradesh)
- Mithi Virdi (Gujarat)
- Haripur (West Bengal)
- Gorakhpur (Haryana)
- Bhimpur (Madhya Pradesh)
- Mahi Banswara (Rajasthan)
- Kaiga (Karnataka)
- Chutka (Madhya Pradesh)
- Tarapur (Maharashtra)
Challenges

- Genuine problems of Nuclear technology includes safety and waste
management. Incidents like Chernobyl, Three Mile Island, Fukushima are serious case of concern.

- Complete phase out of nuclear power generation for the fear of nuclear accident would be a wrong move. If nuclear energy is generated adhering to the highest standards of safety, there is less possibility of catastrophic accidents.
- Land acquisition and selection of location for Nuclear Power Plant (NPP) is also major problem in the country. NPP’s like kudankulam in Tamil Nadu and Kovvada in Andhra Pradesh have met with several delays due to the land acquisition related challenges.
- As India is not a signatory of NPT and NSG, nuclear supply is severely contained by sanctioned against India. This situation has changed after 2009 waiver and bilateral civil nuclear energy agreements with many countries.
- Reprocessing and enrichment capacity also required boost in India. For this India needs advanced technology to fully utilise the spent fuel and for enhancing its enrichment capacity.
- On the front of Infrastructure and Manpower needs, India has worked very hard for development of Industrial infrastructure to manufacture equipment and skill development. Many Universities and institutes provide engineering manpower for NPP.

Suggestions

To ensure the safety and security of using nuclear power there is need to:

- ensure maintenance of the skills base
- maintain continued effective safety regulation
- foster progress on facilities for waste disposal and management must be given serious consideration.
- maintain and reinforce international non-proliferation arrangements.

Nuclear Tests and Nuclear Doctrine

- In 2003, India has adopted its Nuclear Doctrine of 'No First Use' i.e. India will use nuclear weapons only in retaliation against a nuclear attack on its Territory.
- In addition with this in 1965, India with NAM countries proposed five points to prevent the proliferation of nuclear weapons to UN Disarmament commission. These are:
  - Not to transfer Nuclear technology to others
  - No use of nuclear weapons against non nuclear countries
  - UN security cover to non nuclear States
In May 1974, India has conducted its first nuclear test in Pokharan with the codename of "Smiling Buddha".
 Between 11 and 13 May, 1998, five nuclear tests were conducted as a part of the series of Pokhran-II. These tests were collectively called Operation Shakti–98.
 According to a 2018 report by the Stockholm International Peace Research Institute (SIPRI), Pakistan has 140-150 nuclear warheads compared to India’s 130-140 warheads.
 Pakistan has not stated a “no first use” policy and there is little known about its nuclear doctrine.

India’s Stand on different Nuclear Treaties

- **Limited Ban Treaty**: US, UK and USSR in 1963, signed this treaty. It allows nuclear tests only underground thus, prohibits the nuclear experiments on ground, underwater and in outer space. India has also ratified the treaty.
- **Treaty on Outer Space**: Signed in 1967, it prohibits countries to test nuclear weapons in orbit or on celestial bodies like moon.
- **Nuclear Non-Proliferation Treaty (NPT)**: Signed in 1968, the treaty entered into force in 1970, now has 190 member states. It requires countries to give up any present or future plans to build nuclear weapons in return for access to peaceful uses of nuclear energy.

- Three main objectives of the treaty are non-proliferation, disarmament, and the right to peacefully use nuclear technology.
- **India is one of the only five countries that either did not sign the NPT or signed but withdrew, thus becoming part of a list that includes Pakistan, Israel, North Korea, and South Sudan.**

**Why India didn’t sign the NPT?**

- The quest for freedom of action in an uncertain regional strategic environment and an asymmetric international system dominated by superpowers and China drove India to not sign the NPT and hedge, and to conduct the 1974 test.
- India perceives its nuclear weapons and missile programs as crucial components of its strategic doctrine.
- India rejects the Treaty on the grounds that it perpetuates—at least in the short-term—an unjust distinction between the five states that are permitted by...
the treaty to possess nuclear weapons, while requiring all other state parties
to the treaty to remain non-nuclear weapon states.
- One major point raised by India is that the five authorized nuclear weapons
  states still have stockpiles of warheads and have shown reluctance to
disarmament which also angered some non-nuclear-weapon NPT states.
- For eliminating the last nuclear weapons, the nuclear weapons state requires
  confidence that the other countries would not acquire nuclear weapons.
- Moreover, India’s pledge of not to use nuclear weapons unless first attacked
  by an adversary and a self-imposed moratorium on nuclear test since 1998,
established its credibility as a peaceful nuclear power even without joining the
treaty.
- Perceived security threats from Pakistan and Pakistan’s ally China and
demonstration of a nuclear weapons capability guaranteed New Delhi’s
ability to effectively hedge in an asymmetric international system, and a
regional strategic environment where New Delhi felt largely cornered.
- Maintaining a degree of political autonomy has driven independent India’s
foreign policy choices. Major decisions that New Delhi took in the nuclear
realm are representative of that. The grand bargain of NPT was certainly
going to restrict India’s policy options.
- Domestic political imperatives also dictated the timing and the rhetoric about
the nuclear power.

**Comprehensive Test Ban Treaty (CTBT)** intends to ban all nuclear
explosions - everywhere, by everyone. It opened for signature on 24
September 1996 and since then 182 countries have signed the Treaty, most
recently Ghana has ratified the treaty on 14 June 2011.
- The Treaty will enter into force after all 44 States listed in Annex 2 to the
Treaty will ratify it. These States had nuclear facilities at the time the Treaty
was negotiated and adopted.
- As of August 2011, 35 of these States have ratified the Treaty. Nine States
still need to do so: China, the Democratic People’s Republic of Korea, Egypt,
India, Indonesia, Iran, Israel, Pakistan and the United States. India, North
Korea and Pakistan have not yet signed the Treaty.

**Reasons behind India’s rejection to CTBT**

- India has always stood by its demand for a nuclear weapons-free world but
  various procedural, political, and security concerns have stopped India to join
  the treaty.
- India’s relationship with the CTBT has undergone distinct changes. In 1954,
  Indian Prime Minister Jawaharlal Nehru championed the cause of a nuclear
test ban by calling for a "standstill" agreement. In 1993, India was among those that co-sponsored the call for a test ban treaty. However, in 1996, India’s reservations about the Treaty blocked its adoption by the Conference on Disarmament.

- India, after negotiation was ready to sign the treaty provided United States should presents a schedule for eliminating its nuclear stockpile, a condition the United States rejected.
- India believed that the universal and complete nuclear disarmament should be the end goal not a mean.
- India considered, Article XIV, the entry-into-force (EIF) clause of the treaty as a violation of its right to voluntarily withhold participation in an international treaty.
- The treaty initially made ratification by states, that were to be a part of the CTBT’s International Monitoring System (IMS), mandatory for the treaty’s EIF. Because of this, India withdrew its participation from the IMS.
- The treaty didn’t talk about the disarmament of the stocks by nuclear weapon states.
- Further, the treaty is vague on the ban of laboratory testing of nuclear weapons. It means sophisticated technology of developed countries permit them for laboratory testing and ban on field test only affect the developing countries nuclear programme.
- India’s scientific community believes that accepting the CTBT would hinder India’s strategic nuclear program development and the option to test must be kept open.
- On the security front, India thought that it faced uncertain dangers from Pakistan, and China, which had conducted nuclear tests even while the CTBT was being negotiated.

- **Fissile Material Cut-off Treaty (FMCT)** is a proposed international agreement that would prohibit the production of two main components of nuclear weapons: highly-enriched Uranium and Plutonium.
- An FMCT would provide new restrictions for the five recognized nuclear weapon states (NWS—United States, Russia, United Kingdom, France, and China), and for the four nations that are not NPT members (Israel, India, Pakistan, and North Korea).
- **Missile Technology Control Regime (MTCR)** is not a treaty and does not impose any legally binding obligations on Partners (members). Rather, it is an informal political understanding among states that seek to limit the proliferation of missiles and missile technology.
- The regime was formed in 1987 by the G-7 industrialized countries (Canada,
France, Germany, Italy, Japan, the UK, and the United States). There are currently 35 countries that are members (Partners) of the MTCR. India has become the 35th full member MTCR in July 2016.
- MTCR membership enables India to buy high-end missile technology, strengthen its export control regime and it supports India’s bid to become the member of Nuclear Supplier Group (NSG).

**India and Nuclear Suppliers Group (NSG)**

- The NSG was created in response to India’s first nuclear test ‘Smiling Buddha’ (Pokharan-I) in 1974. The NSG first met in November 1975 in London, thus popularly referred to as the "London Club".
- It’s a group of nuclear supplier countries that seek to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports.
- NSG consists of 48 members, include the five nuclear weapon states US, UK, France, China, and Russia. It is not a formal organization, and its guidelines are not binding.
- A non-NPT state cannot become a member of NSG which keeps India out of the group.
- India was left outside the international nuclear order, which forced India to develop its own resources for each stage of the nuclear fuel cycle and power generation, including next generation reactors such as fast breeder reactors and thorium breeder reactors.
- More recently in January 2019, China has again reiterated its previous stand that India’s accession to the Non-Proliferation Treaty (NPT) is prerequisite for its membership to the NSG or else there should be a common guidelines for the membership of the non-NPT states.
- Rejecting India’s claims for NSG membership, China cited the reasons that there should be no double standards in enforcing the NPT and the international community should stick to multilateralism and promote the three pillars namely non-proliferation, disarmament and peaceful uses of nuclear energy.
- Except China, all P5 members have endorsed India’s membership of NSG based on India’s non-proliferation record.
- Pakistan has also applied for the NSG membership while being also a non-signatory to the NPT. But it has a dubious record and its credibility is very much doubtful as a peaceful nuclear state.
- Membership of the NSG will provide India, greater certainty and a legal foundation for India's nuclear regime and thus greater confidence for those
countries investing billions of dollars to set up ambitious nuclear power projects in India.

- Though India is not a member of NPT and NSG, its track-record in observing the provisions of either body, is impeccable. NSG was able to grant a waiver to India in 2008 on the basis of its past performance, now it should have no objection to admitting the country as a member.

- **Australia Group** admitted India as the 43rd member on 19 January 2018. It’s an informal group that keeps a control over exports of substances used in making of chemical weapons.
- The group membership will help India to raise its stature in the field of non-proliferation, and help in acquiring the critical technologies. It will also strengthen India’s bid to gain NSG membership.
- **Wassenaar Agreement**, established in 1996, is a group of countries which subscribe to arms export controls. It seeks to bring about security and stability, by fostering transparent practices in the process of sale and transfer of arms and materials and technologies that can be used to make nuclear weapons.
- It is a grouping of 42 countries, of which India is the latest entrant on December 8, 2017. With the exception of China, all the other permanent members of the U.N. Security Council are signatories of this arrangement.
- After joining the group India will be able easily access dual use technologies and materials and military equipment that are proscribed for non-participating members. In addition India will also be able to sell its nuclear reactors and other materials and equipment indigenously produced without attracting adverse reactions.

**Way Forward**

- In his presidential address at the first International Conference on the Peaceful Uses of Atomic Energy in Geneva in August 1955, Homi J Bhabha, traced the growth of the civilization, correlating it with increase in energy consumption and the development of new energy sources.
- He emphasized that the acquisition by man of the knowledge of how to release and use atomic energy must be recognized as the third epoch of human history.
- To maintain pace of development, it is important to build a constant and reliable supply chain of nuclear materials.
- The fundamentals underlying the possibility of breakthrough growth in India’s
civil nuclear programme are strong: political will, bilateral agreements with most supplier countries, an NSG waiver for nuclear trade, domestic human resources and capability developed in the last 30 years of nuclear power operations.

- While the political will and commitment to nuclear power remains strong, the government in recent months tried hard to secure membership in the NSG, an effort that was ultimately unsuccessful.
- It is crucial to remember that India does not need NSG membership to import nuclear technology that was already cleared through the exemption given in 2008.

Source: Web
Environmental Impact Assessment and EIA Draft analysis

Gs-Paper-3 EIA Environment (PT-MAINS)

Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.

UNEP defines Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.

Environment Impact Assessment in India is statutorily backed by the Environment Protection Act, 1986 which contains various provisions on EIA methodology and process.

History of EIA in India

- The Indian experience with Environmental Impact Assessment began over 20 years back. It started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle.
- Till 1994, environmental clearance from the Central Government was an administrative decision and lacked legislative support.
- On 27 January 1994, the then Union Ministry of Environment and Forests, under the Environmental (Protection) Act 1986, promulgated an EIA notification making Environmental Clearance (EC) mandatory for expansion or modernisation of any activity or for setting up new projects listed in Schedule 1 of the notification.
- The Ministry of Environment, Forests and Climate Change (MoEFCC) notified new EIA legislation in September 2006. The notification makes it mandatory for various projects such as mining, thermal power plants, river valley, infrastructure (road, highway, ports, harbours and airports) and...
industries including very small electroplating or foundry units to get environment clearance. However, unlike the EIA Notification of 1994, the new legislation has put the onus of clearing projects on the state government depending on the size/capacity of the project.

The EIA Process

EIA involves the steps mentioned below. However, the EIA process is cyclical with interaction between the various steps.

- **Screening**: The project plan is screened for scale of investment, location and type of development and if the project needs statutory clearance.
- **Scoping**: The project’s potential impacts, zone of impacts, mitigation possibilities and need for monitoring.
- **Collection of baseline data**: Baseline data is the environmental status of study area.
- **Impact prediction**: Positive and negative, reversible and irreversible and temporary and permanent impacts need to be predicted which presupposes a good understanding of the project by the assessment agency.
- **Mitigation measures and EIA report**: The EIA report should include the actions and steps for preventing, minimizing or by passing the impacts or else the level of compensation for probable environmental damage or loss.
- **Public hearing**: On completion of the EIA report, public and environmental groups living close to project site may be informed and consulted.
- **Decision making**: Impact Assessment Authority along with the experts consult the project-in-charge along with consultant to take the final decision, keeping in mind EIA and EMP (Environment Management Plan).
- **Monitoring and implementation of environmental management plan**: The various phases of implementation of the project are monitored.
- **Assessment of Alternatives, Delineation of Mitigation Measures and Environmental Impact Assessment Report**: For every project, possible alternatives should be identified, and environmental attributes compared. Alternatives should cover both project location and process technologies. Once alternatives have been reviewed, a mitigation plan should be drawn up for the selected option and is supplemented with an Environmental Management Plan (EMP) to guide the proponent towards environmental improvements.
- **Risk assessment**: Inventory analysis and hazard probability and index also form part of EIA procedures.

**** In the Samarth Trust Case, the Delhi high court had considered EIAs- a
part of participatory justice in which the voice is given to the voiceless and it is like a Jan Sunwai, where the community is the jury.

**Salient Features of 2006 Amendments to EIA Notification**

- Environment Impact Assessment Notification of 2006 has decentralized the environmental clearance projects by categorizing the developmental projects in two categories, i.e., **Category A (national level appraisal)** and **Category B (state level appraisal)**.
  - Category A projects are appraised at national level by Impact Assessment Agency (IAA) and the Expert Appraisal Committee (EAC) and Category B projects are appraised at state level.
  - State Level Environment Impact Assessment Authority (SEIAA) and State Level Expert Appraisal Committee (SEAC) are constituted to provide clearance to Category B process.

- **After 2006 Amendment the EIA cycle comprises of four stages:**
  - Screening
  - Scoping
  - Public hearing
  - Appraisal

- **Category A projects** require mandatory environmental clearance and thus they do not undergo the screening process.

- **Category B projects** undergoes screening process and they are classified into two types.
  - Category B1 projects (Mandatorily requires EIA).
  - Category B2 projects (Do not require EIA).

- Thus, Category A projects and Category B, projects undergo the complete EIA process whereas Category B2 projects are excluded from complete EIA process.

**Importance of EIA**

- EIA links environment with development for environmentally safe and sustainable development.
- EIA provides a cost effective method to eliminate or minimize the adverse impact of developmental projects.
- EIA enables the decision makers to analyse the effect of developmental activities on the environment well before the developmental project is implemented.
- EIA encourages the adaptation of mitigation strategies in the developmental plan.
- EIA makes sure that the developmental plan is environmentally sound and
within the limits of the capacity of assimilation and regeneration of the ecosystem.

Shortcomings of EIA Process

- **Applicability:** There are several projects with significant environmental impacts that are exempted from the notification either because they are not listed in schedule I, or their investments are less than what is provided for in the notification.

- **Composition of expert committees and standards:** It has been found that the team formed for conducting EIA studies is lacking the expertise in various fields such as environmentalists, wildlife experts, Anthropologists and Social Scientists.

- **Public hearing:**
  - Public comments are not considered at an early stage, which often leads to conflict at a later stage of project clearance.
  - A number of projects with significant environmental and social impacts have been excluded from the mandatory public hearing process.
  - The data collectors do not pay respect to the indigenous knowledge of local people.

- **Quality of EIA:** One of the biggest concerns with the environmental clearance process is related to the quality of EIA report that are being carried out.

- **Lack of Credibility:** There are so many cases of fraudulent EIA studies where erroneous data has been used, same facts used for two totally different places etc.

- Often, and more so for strategic industries such as nuclear energy projects, the EMPs are kept confidential for political and administrative reasons.
  - Details regarding the effectiveness and implementation of mitigation measures are often not provided.
  - Emergency preparedness plans are not discussed in sufficient details and the information not disseminated to the communities.
In News:

Recently, the Ministry of Environment, Forest and Climate Change (MoEFCC) has proposed a draft Environmental Impact Assessment (EIA) notification 2020, that seeks to replace the current notification which goes back to 2006.

EIA is an important process for evaluating the likely environmental impact of a proposed project. It is a process whereby people’s views are taken into consideration for granting final approval to any developmental project or activity. It is basically, a decision-making tool to decide whether the project should be approved or not.

The draft notification is issued under the powers vested in the central government under the Environment (Protection) Act, 1986 to take all such measures for “protecting and improving the quality of the environment.

According to the government, the new notification is being brought in order to make the process more transparent and expedient by the implementation of an online system, further delegation, rationalisation and standardisation of the
process. However, the environmentalist said that the draft will further dilute the EIA process.

Issues pertaining to draft EIA Notification 2020

Post-Facto Approval

- The new draft allows for post-facto approval for projects. It means that the clearances for projects can be awarded even if they have started construction or have been running phase without securing environmental clearances.
- This also means that any environmental damage caused by the project is likely to be waived off as the violations get legitimised. As the only remedy would be to impose a fine or punishment; but that would not reverse the detrimental consequences on the environment.
- Post facto approval is the derogation of the fundamental principles of environmental jurisprudence and violation of the “precautionary principle,” which is a principle of environmental sustainability.
- In 2017, post-facto clearance given to projects in Tamil Nadu was struck down by the Madras high court.

Public Consultation Process

- The draft notification provides for a reduction of the time period from 30 days to 20 days for the public to submit their responses during a public hearing for any application seeking environmental clearance.
- The danger is that if adequate time is not given for the preparation of views, comments and suggestions to those who would be affected by the project, then such public hearings would not be meaningful.
- Unless a public hearing is meaningful, the whole EIA process would lack transparency and credibility.
- Further, the reduction of time would particularly pose a problem in those areas where information is not easily accessible or areas in which people are not that well aware of the process itself.

Compliance Report Issue

- The 2006 notification required that the project proponent submit a report every six months, showing that they are carrying out their activities as per the terms on which permission has been given.
- However, the new draft requires the promoter to submit a report only once every year.
- During this period, certain irreversible environmental, social or health
consequences of the project could go unnoticed because of the extended reporting time.

- For example, if a mining project is being carried out at someplace which can be potentially hazardous to the nearby population and can contaminate the air, and water nearby, a half-yearly compliance report would better help in addressing these concerns.

### Bypassing EIA Process

- Through the draft notification, the central government gets the power to categorise projects as “strategic.”
- Once a project is considered as strategic, the draft notification states that no information related to such projects shall be placed in the public domain.
- Violations can only be reported suo motu by the project proponent, or by a government authority, appraisal committee, or regulatory authority. This is against the principles of natural justice.
- Further, the draft notification states that the new construction projects up to 1,50,000 square metres (instead of the existing 20,000 square metres) do not need “detailed scrutiny” by the Expert Committee, nor do they need EIA studies and public consultation.

### Way Forward

On a positive note, the 2020 draft notification has a clause dedicated to definitions to several terms related to EIA. It may be beneficial in the sense that it consolidates the EIA rules and has the potential of alleviating some ambiguity in the present law.

However, it needs to address the above issues. In this context:

- The ministry, instead of reducing the time for public consultation, should focus on ensuring access to information as well as awareness about the public hearing and its impact upon the whole EIA process.
- In order to improve ease of doing business, the government should bring down the average delay of 238 days in granting environmental clearance, that emanates from bureaucratic delays and complex laws.
- Grow now, sustain later should not be the policy, as the notion is dangerously tilted against the concept of sustainable development.

Source: TH
Cabinet Approves National Education Policy 2020

GS-PAPER-2 Education policy (PT-MAINS)

“In June 2017 a ‘Committee for the Draft National Education Policy’ was constituted under the Chairmanship of eminent scientist Padma Vibhushan, Dr. K. Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon’ble Human Resource Development Minister on 31st May, 2019”

Summary

- New Policy aims for **Universalization of Education from pre-school to secondary level with 100 % GER in school education by 2030**
- NEP 2020 will bring 2 crore out of school children back into the mainstream
- New **5+3+3+4 school curriculum** with 12 years of schooling and 3 years of Anganwadi/ Pre-schooling
- Emphasis on Foundational Literacy and Numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools; Vocational Education to start from Class 6 with Internships
- **Teaching upto at least Grade 5 to be in mother tongue/ regional language**
- Assessment reforms with **360 degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes**
- **GER in higher education** to be raised to **50 % by 2035**; 3.5 crore seats to be added in higher education
- Higher Education curriculum to have Flexibility of Subjects
- **Multiple Entry / Exit to be allowed with appropriate certification**
- Academic Bank of Credits to be established to facilitate Transfer of Credits
- **National Research Foundation** to be established to foster a strong research culture
- Light but Tight Regulation of Higher Education, single regulator with four separate verticals for different functions
- **Affiliation System to be phased out in 15 years with graded autonomy to colleges**
- NEP 2020 advocates increased use of technology with equity; National Educational Technology Forum to be created
The Union Cabinet chaired by the Prime Minister approved the National Education Policy 2020 today, making way for large scale, transformational reforms in both school and higher education sectors. This is the first education policy of the 21st century and replaces the thirty-four year old National Policy on Education (NPE), 1986. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, this policy is aligned to the 2030 Agenda for Sustainable Development and aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary, suited to 21st century needs and aimed at bringing out the unique capabilities of each student.

Important Highlights

**School Education**

Ensuring Universal Access at all levels of school education

NEP 2020 emphasizes on ensuring universal access to school education at all levels- pre school to secondary. Infrastructure support, innovative education centres to bring back dropouts into the mainstream, tracking of students and their learning levels, facilitating multiple pathways to learning involving both formal and non-formal education modes, association of counselors or well-trained social workers with schools, open learning for classes 3, 5 and 8 through NIOS and State Open Schools, secondary education programs equivalent to Grades 10 and 12, vocational courses, adult literacy and life-enrichment programs are some of the proposed ways for achieving this. About 2 crore out of school children will be brought back into main stream under NEP 2020.
Early Childhood Care & Education with new Curricular and Pedagogical Structure

With emphasis on Early Childhood Care and Education, the 10+2 structure of school curricula is to be replaced by a 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively. This will bring the hitherto uncovered age group of 3-6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child. The new system will have 12 years of schooling with three years of Anganwadi/ pre schooling.

NCERT will develop a National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE) for children up to the age of 8. ECCE will be delivered through a significantly expanded and strengthened system of institutions including Anganwadis and pre-schools that will have teachers and Anganwadi workers trained in the ECCE pedagogy and curriculum. The planning and implementation of ECCE will be carried out jointly by the Ministries of HRD, Women and Child Development (WCD), Health and Family Welfare (HFW), and Tribal Affairs.

Attaining Foundational Literacy and Numeracy

Recognizing Foundational Literacy and Numeracy as an urgent and necessary prerequisite to learning, NEP 2020 calls for setting up of a National Mission on Foundational Literacy and Numeracy by MHRD. States will prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools for all learners by grade 3 by 2025. A National Book Promotion Policy is to be formulated.

Reforms in school curricula and pedagogy

The school curricula and pedagogy will aim for holistic development of learners by equipping them with the key 21st century skills, reduction in curricular content to enhance essential learning and critical thinking and greater focus on experiential learning. Students will have increased flexibility and choice of subjects. There will be no rigid separations between arts and sciences, between
curricular and extra-curricular activities, between vocational and academic streams.

Vocational education will start in schools from the 6th grade, and will include internships.

A new and comprehensive National Curricular Framework for School Education, NCFSE 2020-21, will be developed by the NCERT.

Multilingualism and the power of language

The policy has emphasized mother tongue/local language/regional language as the medium of instruction at least till Grade 5, but preferably till Grade 8 and beyond. Sanskrit to be offered at all levels of school and higher education as an option for students, including in the three-language formula. Other classical languages and literatures of India also to be available as options. No language will be imposed on any student. Students to participate in a fun project/activity on ‘The Languages of India’, sometime in Grades 6-8, such as, under the ‘Ek Bharat Shrestha Bharat’ initiative. Several foreign languages will also be offered at the secondary level. Indian Sign Language (ISL) will be standardized across the country, and National and State curriculum materials developed, for use by students with hearing impairment.

Assessment Reforms

NEP 2020 envisages a shift from summative assessment to regular and formative assessment, which is more competency-based, promotes learning and development, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. All students will take school examinations in Grades 3, 5, and 8 which will be conducted by the appropriate authority. Board exams for Grades 10 and 12 will be continued, but redesigned with holistic development as the aim. A new National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body.

Equitable and Inclusive Education
NEP 2020 aims to ensure that no child loses any opportunity to learn and excel because of the circumstances of birth or background. Special emphasis will be given on Socially and Economically Disadvantaged Groups (SEDGs) which include gender, socio-cultural, and geographical identities and disabilities. This includes setting up of **Gender Inclusion Fund** and also **Special Education Zones** for disadvantaged regions and groups. Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education, with support of educators with cross disability training, resource centres, accommodations, assistive devices, appropriate technology-based tools and other support mechanisms tailored to suit their needs. Every state/district will be encouraged to establish “**Bal Bhavans**” as a special daytime boarding school, to participate in art-related, career-related, and play-related activities. Free school infrastructure can be used as **Samajik Chetna Kendras**.

**Robust Teacher Recruitment and Career Path**

Teachers will be recruited through robust, transparent processes. Promotions will be merit-based, with a mechanism for multi-source periodic performance appraisals and available progression paths to become educational administrators or teacher educators. A common **National Professional Standards for Teachers (NPST)** will be developed by the National Council for Teacher Education by 2022, in consultation with NCERT, SCERTs, teachers and expert organizations from across levels and regions.

**School Governance**

Schools can be organized into complexes or clusters which will be the basic unit of governance and ensure availability of all resources including infrastructure, academic libraries and a strong professional teacher community.

**Standard-setting and Accreditation for School Education**

NEP 2020 envisages clear, separate systems for policy making, regulation, operations and academic matters. States/UTs will set up independent **State School Standards Authority (SSSA)**. Transparent public self-disclosure of all
the basic regulatory information, as laid down by the SSSA, will be used extensively for public oversight and accountability. The SCERT will develop a School Quality Assessment and Accreditation Framework (SQAAF) through consultations with all stakeholders.

Higher Education

Increase GER to 50 % by 2035

NEP 2020 aims to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035. 3.5 Crore new seats will be added to Higher education institutions.

Holistic Multidisciplinary Education

The policy envisages broad based, multi-disciplinary, holistic Under Graduate education with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entry and exit points with appropriate certification. UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period. For example, Certificate after 1 year, Advanced Diploma after 2 years, Bachelor’s Degree after 3 years and Bachelor’s with Research after 4 years.

An Academic Bank of Credit is to be established for digitally storing academic credits earned from different HEIs so that these can be transferred and counted towards final degree earned.

Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.

The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
Regulation

Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body for entire higher education, excluding medical and legal education. HECI to have four independent verticals - National Higher Education Regulatory Council (NHERC) for regulation, General Education Council (GEC) for standard setting, Higher Education Grants Council (HEGC) for funding, and National Accreditation Council (NAC) for accreditation. HECI will function through faceless intervention through technology, & will have powers to penalise HEIs not conforming to norms and standards. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.

Rationalised Institutional Architecture

Higher education institutions will be transformed into large, well resourced, vibrant multidisciplinary institutions providing high quality teaching, research, and community engagement. The definition of university will allow a spectrum of institutions that range from Research-intensive Universities to Teaching-intensive Universities and Autonomous degree-granting Colleges.

Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges. Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.

Motivated, Energized, and Capable Faculty

NEP makes recommendations for motivating, energizing, and building capacity of faculty thorough clearly defined, independent, transparent recruitment, freedom to design curricula/pedagogy, incentivising excellence, movement into institutional leadership. Faculty not delivering on basic norms will be held accountable

Teacher Education

A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with
NCERT. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree. Stringent action will be taken against substandard stand-alone Teacher Education Institutions (TEIs).

Mentoring Mission

A National Mission for Mentoring will be established, with a large pool of outstanding senior/retired faculty — including those with the ability to teach in Indian languages — who would be willing to provide short and long-term mentoring/professional support to university/college teachers.

Financial support for students

Efforts will be made to incentivize the merit of students belonging to SC, ST, OBC, and other SEDGs. The National Scholarship Portal will be expanded to support, foster, and track the progress of students receiving scholarships. Private HEIs will be encouraged to offer larger numbers of free ships and scholarships to their students.

Open and Distance Learning

This will be expanded to play a significant role in increasing GER. Measures such as online courses and digital repositories, funding for research, improved student services, credit-based recognition of MOOCs, etc., will be taken to ensure it is at par with the highest quality in-class programmes.

Online Education and Digital Education:

A comprehensive set of recommendations for promoting online education consequent to the recent rise in epidemics and pandemics in order to ensure preparedness with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible, has been covered. A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created in the MHRD to
look after the e-education needs of both school and higher education.

Technology in education

An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration. Appropriate integration of technology into all levels of education will be done to improve classroom processes, support teacher professional development, enhance educational access for disadvantaged groups and streamline educational planning, administration and management.

Promotion of Indian languages

To ensure the preservation, growth, and vibrancy of all Indian languages, NEP recommends setting an Indian Institute of Translation and Interpretation (IITI), National Institute (or Institutes) for Pali, Persian and Prakrit, strengthening of Sanskrit and all language departments in HEIs, and use mother tongue/local language as a medium of instruction in more HEI programmes.

Internationalization of education will be facilitated through both institutional collaborations, and student and faculty mobility and allowing entry of top world ranked Universities to open campuses in our country.

Professional Education

All professional education will be an integral part of the higher education system. Stand-alone technical universities, health science universities, legal and agricultural universities etc will aim to become multi-disciplinary institutions.

Adult Education

Policy aims to achieve 100% youth and adult literacy.
Financing Education

The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Unprecedented Consultations

NEP 2020 has been formulated after an unprecedented process of consultation that involved nearly over 2 lakh suggestions from 2.5 lakhs Gram Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. The MHRD initiated an unprecedented collaborative, inclusive, and highly participatory consultation process from January 2015. In May 2016, ‘Committee for Evolution of the New Education Policy’ under the Chairmanship of Late Shri T.S.R. Subramanian, Former Cabinet Secretary, submitted its report. Based on this, the Ministry prepared ‘Some Inputs for the Draft National Education Policy, 2016’. In June 2017 a ‘Committee for the Draft National Education Policy’ was constituted under the Chairmanship of eminent scientist Padma Vibhushan, Dr. K. Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon’ble Human Resource Development Minister on 31st May, 2019. The Draft National Education Policy 2019 was uploaded on MHRD’s website and at ‘MyGov Innovate’ portal eliciting views/suggestions/comments of stakeholders, including public.

Source: PIB

ITER: World's largest nuclear FUSION project begins assembly

GS-III | 30 July,2020

ITER: World's largest nuclear FUSION project begins assembly

GS-PAPER-3 S&T Nuclear energy (PT-MAINS)

In NEWS
The world's biggest nuclear fusion project has entered its five-year assembly phase. After this is finished, the facility will be able to start generating the super-hot "plasma" required for fusion power. The £18.2bn (€20bn; $23.5bn) facility has been under construction in Saint-Paul-lez-Durance, southern France.

Advocates say fusion could be a source of clean, unlimited power that would help tackle the climate crisis.

ITER is a collaboration between China, the European Union, India, Japan, South Korea, Russia and the US. All members share in the cost of construction.

"Current nuclear energy relies on fission, where a heavy chemical element is split to produce lighter ones. Nuclear fusion, on the other hand, works by combining two light elements to make a heavier one. This releases vast amounts of energy with very little radioactivity".

ITER will confine hot plasma within a structure called a tokamak in order to control fusion reactions.

The project will aim to help demonstrate whether fusion can be commercially viable. France's President Emmanuel Macron said the effort would unite countries around a common good.

ITER Timeline

2005: Decision to site the project in France
2006: Signature of the ITER Agreement
2007: Formal creation of the ITER Organization
2007-2009: Land clearing and levelling
2010-2014: Ground support structure and seismic foundations for the Tokamak
2012: Nuclear licensing milestone: ITER becomes a Basic Nuclear Installation under French law
2014-2021: Construction of the Tokamak Building (access for assembly activities in 2019)
2010-2021: Construction of the ITER plant and auxiliary buildings for First Plasma
2008-2021: Manufacturing of principal First Plasma components
2015-2023: Largest components are transported along the ITER Itinerary

2020-2025: Main assembly phase I

2022: Torus completion

2024: Cryostat closure

2024-2025: Integrated commissioning phase (commissioning by system starts several years earlier)

Dec 2025 First Plasma

2025-2035: Progressive ramp-up of the machine

2035: Deuterium-Tritium Operation begins

WHAT WILL ITER DO?

The amount of fusion energy a tokamak is capable of producing is a direct result of the number of fusion reactions taking place in its core. Scientists know that the larger the vessel, the larger the volume of the plasma ... and therefore the greater the potential for fusion energy. With ten times the plasma volume of the largest machine operating today, the ITER Tokamak will be a unique experimental tool, capable of longer plasmas and better confinement. The machine has been designed specifically to:

1) Produce 500 MW of fusion power The world record for fusion power is held by the European tokamak JET. In 1997, JET produced 16 MW of fusion power from a total img heating power of 24 MW (Q=0.67). ITER is designed to produce a ten-fold return on energy (Q=10), or 500 MW of fusion power from 50 MW of img heating power. ITER will not capture the energy it produces as electricity, but—as first of all fusion experiments in history to produce net energy gain—it will prepare the way for the machine that can.

2) Demonstrate the integrated operation of technologies for a fusion power plant ITER will bridge the gap between today's smaller-scale experimental fusion devices and the demonstration fusion power plants of the future. Scientists will be
able to study plasmas under conditions similar to those expected in a future power plant and test technologies such as heating, control, diagnostics, cryogenics and remote maintenance.

3) Achieve a deuterium-tritium plasma in which the reaction is sustained through internal heating Fusion research today is at the threshold of exploring a "burning plasma"—one in which the heat from the fusion reaction is confined within the plasma efficiently enough for the reaction to be sustained for a long duration. Scientists are confident that the plasmas in ITER will not only produce much more fusion energy, but will remain stable for longer periods of time.

4) Test tritium breeding One of the missions for the later stages of ITER operation is to demonstrate the feasibility of producing tritium within the vacuum vessel. The world supply of tritium (used with deuterium to fuel the fusion reaction) is not sufficient to cover the needs of future power plants. ITER will provide a unique opportunity to test mockup in-vessel tritium breeding blankets in a real fusion environment.

5) Demonstrate the safety characteristics of a fusion device ITER achieved an important landmark in fusion history when, in 2012, the ITER Organization was licensed as a nuclear operator in France based on the rigorous and impartial examination of its safety files. One of the primary goals of ITER operation is to demonstrate the control of the plasma and the fusion reactions with negligible consequences to the environment.

WHAT IS FUSION?

Fusion is the energy source of the Sun and stars. In the tremendous heat and gravity at the core of these stellar bodies, hydrogen nuclei collide, fuse into heavier helium atoms and release tremendous amounts of energy in the process. Twentieth-century fusion science identified the most efficient fusion reaction in the laboratory setting to be the reaction between two hydrogen isotopes, deuterium (D) and tritium (T). The DT fusion reaction produces the highest energy gain at the "lowest" temperatures.

Three conditions must be fulfilled to achieve fusion in a laboratory:

- very high temperature (on the order of 150,000,000° Celsius);
sufficient plasma particle density (to increase the likelihood that collisions do occur); and
sufficient confinement time (to hold the plasma, which has a propensity to expand, within a defined volume).

At extreme temperatures, electrons are separated from nuclei and a gas becomes a plasma—often referred to as the fourth state of matter. Fusion plasmas provide the environment in which light elements can fuse and yield energy. In a tokamak device, powerful magnetic fields are used to confine and control the plasma.

For further READING: https://www.iter.org/proj/inafewlines

Source: ITER web

Rafale fighter jet deal analysis
GS-III | 30 July, 2020

Rafale fighter jet deal analysis

GS-Paper-3 Internal security (PT-MAINS)

- December 30, 2002: Defence Procurement Procedures (DPP) adopted to streamline procurement.
- January 30, 2012: Dassault Aviation’s Rafale aircraft comes up with the lowest bid.
- March 13, 2014: Work Share agreement signed between Hindustan Aeronautics Limited (HAL) and Dassault Aviation under which they were responsible for 70 per cent and 30 percent of the work, respectively, for 108 aircraft.
- January 26, 2016: India and France sign MoU for 36 Rafale aircraft.
- November 18, 2016: Government states in Parliament that the cost of each
Rafale aircraft to be approximately Rs 670 crore and that all aircraft will be delivered by April 2022.

- December 31, 2016: Dassault Aviation’s Annual Report reveals the actual price paid for the 36 aircrafts at about Rs 60,000 crore, more than double the government’s stated price in Parliament.
- March 13, 2018: Public Interest Litigation (PIL) in SC seeks independent probe into Centre’s decision to procure 36 Rafale fighter jets and disclosure of the cost.
- September 5, 2018: SC agrees to hear PIL seeking stay on Rafale fighter jet deal.
- October 10, 2018: SC asks Centre to provide details of the decision making process in the Rafale fighter jet deal in a sealed cover.
- November 12, 2018: Centre places price details of 36 Rafale fighter jets in a sealed cover before SC. It also gives details of steps that led to finalisation of the Rafale deal.
- November 14, 2018: SC reserves order on pleas seeking court-monitored probe in Rafale deal.
- December 14, 2018: SC says there was no occasion to doubt the decision-making process in the procurement of 36 Rafale fighter jets and dismissed the petitions seeking an investigation into alleged irregularities in the Rs 58,000 crore deal.
- February 26, 2019: SC decides to hear pleas seeking review of Rafale verdict in open court.
- March 6, 2019: Documents related to Rafale deal stolen from Defence Ministry, Centre tells SC.
- March 8, 2019: Attorney General clarifies that Rafale documents not stolen, petitioners used photocopies.
- April 10, 2019: SC allows use of leaked documents, dismisses Centre’s objections claiming privilege.
- May 4, 2019: Centre filed reply in SC related to the review petition filed against the SC order of 14 December and submitted all the pricing details related to the Rafale deal to CAG.
- May 10, 2019: SC reserved its verdict on review petitions.

Competitors of Rafale:

- Military had to replace hundreds of obsolete IAF MiG-21, MiG-23 and MiG-27 fighters that had been steadily retired from service by the
indigenous Tejas fighter.

- But as the fighter’s development got delayed, the then government in 2007, ordered a global tender for 126 medium multi-role combat aircraft, of which 108 would be built in India by public sector firm Hindustan Aeronautics Limited (HAL).

Over the next four years, the IAF flight-tested six fighters:

- Boeing’s F/A-18 Super Hornet,
- Lockheed Martin’s F-16IN Super Viper,
- Saab’s Gripen C/D,
- Russian MiG-35,
- Eurofighter’s Typhoon,
- Rafale.

In 2011, the Typhoon and the Rafale were found to have met the Indian Air Force (IAF’s) performance requirements. In January 2012, Dassault’s bid was declared lower than Eurofighter’ and the Rafale became India’s combat aircraft of choice.

Importance of the deal:

- Defence Minister Rajnath Singh, recently received the first of the 36 Rafale fighter jets (as part of the Rs 59,000 crore deal signed in 2016) at Dassault Aviation’s facility in Merignac.
- Four of the total 36 aircrafts will be flying over the Indian skies by May 2020.
- All 36 jets are expected to arrive in India by September 2022.
- Apart from Dassault, French companies Thales and Saffron are also involved in the Rafale’s production through offset contract.
- The Rafale is a twin-jet fighter aircraft able to operate from both an aircraft carrier and a shore base.
- The fighter jet is armed with potent meteor and scalp missiles.
- The meteor is a beyond visual range air-to-air missile and scalp is a long-range cruise missile that can be launched from the aircraft for deep strikes to hit fixed and stationary targets.
- The first batch of Rafale will be stationed in Ambala, while the second batch will be stationed at Hasimara in West Bengal to combat the Chinese threat.
- The induction of Rafale aircraft in the IAF will increase it’s combat capability.
- Rafale will make India one of the four countries, besides France, Egypt
and Qatar, to possess the next-gen fighter jet.

- Rafale will enhance the air strike capabilities of the IAF and will be used as a deterrent against any country.

**Specifications of Rafale:**

- Rafale can attain a **maximum speed of Mach 1.8/750 kt (2,222.6 km per hour)** and can **climb up to 50,000 ft.**
- Though Rafale can fly up to a range of 3,700 km, it can be **refuelled mid-air.**
- The 15.27 metre long aircraft has **wing length of 10.8 metres each.**
- While Sukhoi 30 MKI can carry ammunition up to 8,000 kg, Rafale can **easily carry bombs up to 9,500 kg.**
- Rafale can carry out all combat aviation missions, including air defence, close air support, in-depth strikes, reconnaissance, anti-ship strikes and nuclear deterrence.
- Its ‘delta wings’ are extremely stable and have **supersonic speed.**
- Rafale’s cannon can release over **2,500 rounds in one minute.**
- The aircraft’s advanced engine is capable of allowing the **throttle to shift from combat to idle power in less than three seconds.**
- It can **jam enemy radars, detect targets anywhere including sea, ground and air.**
- Other superior capabilities include close air support, dynamic targeting, air-to-ground precision strike, anti-ship attack capability and buddy-buddy refuelling.
- The advanced Rafale aircraft can carry a nuclear weapon, and deploy long range air-to-air missiles, laser-guided bombs with different warheads and non-guided classic bombs.

Source: TH

---

**Global Tiger Day**

**GS-III | 30 July, 2020**

**Global Tiger Day**

**GS-PAPER-3 Environment – Animals (PT)**

The Ministry of Environment, Forest and Climate Change has released a
The report compares information obtained from the earlier three tiger surveys (2006, 2010, and 2014) with data obtained from the 2018-19 survey to estimate tiger population trends at country level.

**St. Petersburg declaration:** With 2,967 tigers, India, four years in advance, has achieved the target set in the 2010 St Petersburg Declaration of doubling tiger population by 2022. India had around 1,400 tigers in 2006.

The Heads of the Governments of Tiger Range countries at St. Petersburg, Russia, had resolved to double tiger numbers across their global range by 2022 by signing the St. Petersburg declaration on tiger conservation. During the same meeting it was also decided to celebrate 29th July as Global Tiger Day across the world, which is since being celebrated to spread and generate awareness on tiger conservation.

**There are currently 13 tiger range countries** - India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.

**National Scenario:**

- The national tiger status assessment of 2018-19 estimated the overall tiger population in India at 2,967 - 33% increase from 2014 (2,226).
- The 2018 census (once in every four years) has set a Guinness record for being the largest camera-trap wildlife survey.
- Tigers were observed to be increasing at a rate of 6% per annum in India from 2006 to 2018.
- The largest contiguous tiger population in the world of about 724 tigers was found in the Western Ghats (Nagarhole-Bandipur-Wayanad-Mudumalai- Sathyamangalam- Biligiri Ranganathaswamy Temple block).

**Regional Scenario:**

- Madhya Pradesh has the highest number of tigers at 526, closely followed...
The Northeast has suffered losses in population. Further, the tiger status in Chhattisgarh, Jharkhand and Odisha has steadily declined, which is a matter of concern.

Out of 50 tiger reserves in the country, three reserves - Mizoram’s Dampa reserve, Bengal’s Buxa reserve and Jharkhand’s Palamau reserve - have no tigers left.

Corbett Tiger Reserve (Uttarakhand) had the largest population of tigers at about 231 in 2018.

India’s Project Tiger was launched in 1973 with 9 tiger reserves.

Concerns:
Most of the populations remain confined to small Protected Areas, some of which have habitat corridors that permit tiger movement between them. However, most of the corridor habitats in India are degrading due to unsustainable human use and developmental projects. Some reserves nearing full capacity is another issue.

Solutions:
In areas where tigers have not been recorded or the population has declined, restoration needs to be proceeded by improving protection, augmentation of prey, and reintroduction of tigers from an appropriate source. Some reserves like Similipal (Odisha), Pakke (Arunachal Pradesh) are below their potential and require resources and targeted management.

Government’s Response:
Tigers and other wildlife are a kind of soft power that India has to show on the international front.

Despite several constraints such as less land mass, India has 8% of biodiversity because of its culture of saving and preserving nature, trees and its wildlife.

India has 70% of the world’s tiger population. It is tirelessly working with all 13 tiger range countries towards nurturing the tiger.

The Government is working on a programme to provide water and fodder to animals at the forest itself to deal with the challenge of human-animal conflict that is causing the death of animals. For this, Lidar-based survey technology will be used for the first time. Lidar is a method of measuring distance by illuminating the
target with laser light and measuring the reflection with a sensor.

### List of Tiger Reserves in India

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>State</th>
<th>Name of Tiger Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>Nagarjunsagar Srisailam</td>
</tr>
<tr>
<td>2</td>
<td>Arunachal Pradesh</td>
<td>Namdapha National Park</td>
</tr>
<tr>
<td>3</td>
<td>Arunachal Pradesh</td>
<td>Kamlang Tiger Reserve</td>
</tr>
<tr>
<td>4</td>
<td>Arunachal Pradesh</td>
<td>Pakke Tiger Reserve</td>
</tr>
<tr>
<td>5</td>
<td>Assam</td>
<td>Manas Tiger Reserve</td>
</tr>
<tr>
<td>6</td>
<td>Assam</td>
<td>Nameri National Park</td>
</tr>
<tr>
<td>7</td>
<td>Assam</td>
<td>Orang Tiger Reserve</td>
</tr>
<tr>
<td>8</td>
<td>Assam</td>
<td>Kaziranga National Park</td>
</tr>
<tr>
<td>9</td>
<td>Bihar</td>
<td>Valmiki National Park</td>
</tr>
<tr>
<td>10</td>
<td>Chhattisgarh</td>
<td>Udanti-Sitanadi Wildlife Sanctuary</td>
</tr>
<tr>
<td>11</td>
<td>Chhattisgarh</td>
<td>Achanakmar Wildlife Sanctuary</td>
</tr>
<tr>
<td>12</td>
<td>Chhattisgarh</td>
<td>Indravati Tiger Reserve</td>
</tr>
<tr>
<td>13</td>
<td>Jharkhand</td>
<td>Palamau Tiger Reserve</td>
</tr>
<tr>
<td>14</td>
<td>Karnataka</td>
<td>Bandipur Tiger Reserve</td>
</tr>
<tr>
<td>15</td>
<td>Karnataka</td>
<td>Bhadra Wildlife Sanctuary</td>
</tr>
<tr>
<td>16</td>
<td>Karnataka</td>
<td>Dandeli-Anshi Tiger Reserve</td>
</tr>
<tr>
<td>17</td>
<td>Karnataka</td>
<td>Nagarhole National Park</td>
</tr>
<tr>
<td>18</td>
<td>Karnataka</td>
<td>Biligiri Ranganatha Temple Tiger reserve</td>
</tr>
<tr>
<td>19</td>
<td>Kerala</td>
<td>Periyar Tiger reserve</td>
</tr>
<tr>
<td>20</td>
<td>Kerala</td>
<td>Parambikulam Tiger reserve</td>
</tr>
<tr>
<td>21</td>
<td>Madhya Pradesh</td>
<td>Kanha Tiger reserve</td>
</tr>
<tr>
<td>22</td>
<td>Madhya Pradesh</td>
<td>Pench Tiger reserve</td>
</tr>
<tr>
<td>23</td>
<td>Madhya Pradesh</td>
<td>Bandhavgarh Tiger reserve</td>
</tr>
<tr>
<td>24</td>
<td>Madhya Pradesh</td>
<td>Panna Tiger reserve</td>
</tr>
<tr>
<td>25</td>
<td>Madhya Pradesh</td>
<td>Satpura Tiger reserve</td>
</tr>
<tr>
<td>26</td>
<td>Madhya Pradesh</td>
<td>Sanjay-Dubri Tiger reserve</td>
</tr>
<tr>
<td>27</td>
<td>Maharashtra</td>
<td>Melghat Tiger reserve</td>
</tr>
<tr>
<td>No.</td>
<td>State</td>
<td>Tiger Reserve</td>
</tr>
<tr>
<td>-----</td>
<td>---------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>28</td>
<td>Maharashtra</td>
<td>Tadoba-Andhari Tiger Reserve</td>
</tr>
<tr>
<td>29</td>
<td>Maharashtra</td>
<td>Pench Tiger Reserve</td>
</tr>
<tr>
<td>30</td>
<td>Maharashtra</td>
<td>Sahyadri Tiger Reserve</td>
</tr>
<tr>
<td>31</td>
<td>Maharashtra</td>
<td>Nagzira Tiger Reserve</td>
</tr>
<tr>
<td>32</td>
<td>Maharashtra</td>
<td>Bor Tiger Reserve</td>
</tr>
<tr>
<td>33</td>
<td>Mizoram</td>
<td>Dampa Tiger Reserve</td>
</tr>
<tr>
<td>34</td>
<td>Odisha</td>
<td>Similipal Tiger Reserve</td>
</tr>
<tr>
<td>35</td>
<td>Odisha</td>
<td>Satkosia Tiger Reserve</td>
</tr>
<tr>
<td>36</td>
<td>Rajasthan</td>
<td>Ranthambore Tiger Reserve</td>
</tr>
<tr>
<td>37</td>
<td>Rajasthan</td>
<td>Sariska Tiger Reserve</td>
</tr>
<tr>
<td>38</td>
<td>Rajasthan</td>
<td>Mukundra Hills Tiger Reserve</td>
</tr>
<tr>
<td>39</td>
<td>Tamil Nadu</td>
<td>Kalakad-Mundanthurai Tiger Reserve</td>
</tr>
<tr>
<td>40</td>
<td>Tamil Nadu</td>
<td>Anamalai Tiger Reserve (Indira Gandhi Wildlife Sanctuary and National Park)</td>
</tr>
<tr>
<td>41</td>
<td>Tamil Nadu</td>
<td>Mudumalai Tiger Reserve</td>
</tr>
<tr>
<td>42</td>
<td>Tamil Nadu</td>
<td>Sathyamangalam Tiger Reserve</td>
</tr>
<tr>
<td>43</td>
<td>Telangana</td>
<td>Kawal Tiger Reserve</td>
</tr>
<tr>
<td>44</td>
<td>Telangana</td>
<td>Amrabad Tiger Reserve</td>
</tr>
<tr>
<td>45</td>
<td>Uttar Pradesh</td>
<td>Dudhwa Tiger Reserve</td>
</tr>
<tr>
<td>46</td>
<td>Uttar Pradesh</td>
<td>Pilibhit Tiger Reserve</td>
</tr>
<tr>
<td>47</td>
<td>Uttar Pradesh</td>
<td>Amangarh Tiger Reserve (buffer zone of Corbett Tiger Reserve)</td>
</tr>
<tr>
<td>48</td>
<td>Uttarakhand</td>
<td>Jim Corbett National Park</td>
</tr>
<tr>
<td>49</td>
<td>Uttarakhand</td>
<td>Rajaji Tiger Reserve</td>
</tr>
<tr>
<td>50</td>
<td>West Bengal</td>
<td>Sunderban National Park</td>
</tr>
<tr>
<td>51</td>
<td>West Bengal</td>
<td>Buxa Tiger Reserve</td>
</tr>
</tbody>
</table>

Source: TH
In 2018, India commemorated 20 years since it conducted its five nuclear tests, known as Operation Shakti–98, and 10 year since India – U.S Civil Nuclear Agreement in 2008, also called as 123 Agreement. India on November 5, 2018, declared that its nuclear triad, stated in its nuclear doctrine, is operational after indigenous ballistic missile nuclear submarine INS Arihant achieved a milestone by conducting its first deterrence patrol.

Nuclear power in India delivers a total capacity of 6.7 GWe (Giga Watt Electricity), contributing about 2% of the country’s electricity supply. India has ambitious plans to increase nuclear power generation capacity to 275 GWe by 2052. At the start of 2018, six reactors were under construction in India, with a combined capacity of 4.4 GWe.
India has a largely indigenous nuclear power programme which is controlled by Nuclear Power Corporation of India Ltd. (NPCIL), a state-owned corporation founded in 1987. Because India is outside the Nuclear Non-Proliferation
Treaty due to its weapons programme, it was, for 34 years, largely excluded from trade in nuclear plant and materials, which hampered its development of civil nuclear energy until 2009.

Due to earlier trade bans and lack of indigenous uranium, India has uniquely been developing a nuclear fuel cycle to exploit its reserves of thorium.

India’s Nuclear Energy Program

- India has consciously proceeded to explore the possibility of tapping nuclear energy for the purpose of power generation. In this direction three-stage nuclear power programme was formulated by Homi Bhabha in the 1950s.
- Atomic Energy Act, 1962 was framed and implemented with the set objectives of using two naturally occurring elements Uranium and Thorium having good potential to be utilized as nuclear fuel in Indian Nuclear Power Reactors.
- The estimated natural deposits of Uranium are about 70,000 tonnes and Thorium are about 3, 60,000 tonnes in the country.

Three Stage programme

- **Stage one – Pressurised Heavy Water Reactor** uses
  - Natural UO2 as fuel matrix,
  - Heavy water as moderator and coolant.
- In the reactor, the first two plants were of boiling water reactors based on imported technology. Subsequent plants are of PHWR type through indigenous R&D efforts. India achieved complete self-reliance in this technology and this stage of the programme is in the industrial domain.
- The future plan includes the setting up of **VVER type** i.e. Russian version of the Pressurized Water Reactor (PWR) is under progress to augment power generation.
- **MOX fuel (Mixed oxide)** is developed and introduced at Tarapur to conserve fuel and to develop new fuel technology.
- **Second stage** of nuclear power generation envisages the use of Pu-239 obtained from the first stage reactor operation, as the fuel core in fast breeder reactors (FBR).
- **Third phase** of India’s Nuclear Power Generation programme is, breeder reactors using U-233 fuel.
- India’s vast thorium deposits permit design and operation of U-233 fuelled breeder reactors.
# UPSC "PT" DNA (Daily News Analysis)

## Power Plants

<table>
<thead>
<tr>
<th>In Operation</th>
<th>Under Construction</th>
<th>Power Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rawatbhata (Rajasthan)</td>
<td></td>
<td>Jaitapur (Maharashtra)</td>
</tr>
<tr>
<td>Tarapur (Maharashtra)</td>
<td>Kakrapar 3&amp;4 (Gujarat)</td>
<td>Kovvada (Andhra Pradesh)</td>
</tr>
<tr>
<td>Kudankulam (Tamil Nadu)</td>
<td>Rawatbhata (Rajasthan)</td>
<td>Mithi Virdi (Gujarat)</td>
</tr>
<tr>
<td>Kakrapar (Gujarat)</td>
<td>Kudankulam 3&amp;4 (Tamil Nadu)</td>
<td>Haripur (West Bengal)</td>
</tr>
<tr>
<td>Kalpakkam (Tamil Nadu)</td>
<td>Kalpakkam PFBR (Tamil Nadu)</td>
<td>Gorakhpur (Haryana)</td>
</tr>
<tr>
<td>Narora (Uttar Pradesh)</td>
<td></td>
<td>Bhimpur (Madhya Pradesh)</td>
</tr>
<tr>
<td>Kaiga (Karnataka)</td>
<td></td>
<td>Mahi Banswara (Rajasthan)</td>
</tr>
</tbody>
</table>

| | | |
| | | Kaiga (Karnataka) |
| | | Chutka (Madhya Pradesh) |
| | | Tarapur (Maharashtra) |
Challenges

- Genuine problems of Nuclear technology includes safety and waste
management. Incidents like Chernobyl, Three Mile Island, Fukushima are serious case of concern.

- Complete phase out of nuclear power generation for the fear of nuclear accident would be a wrong move. If nuclear energy is generated adhering to the highest standards of safety, there is less possibility of catastrophic accidents.
- Land acquisition and selection of location for Nuclear Power Plant (NPP) is also major problem in the country. NPP’s like kudankulam in Tamil Nadu and Kovvada in Andhra Pradesh have met with several delays due to the land acquisition related challenges.
- As India is not a signatory of NPT and NSG, nuclear supply is severely contained by sanctioned against India. This situation has changed after 2009 waiver and bilateral civil nuclear energy agreements with many countries.
- Reprocessing and enrichment capacity also required boost in India. For this India needs advanced technology to fully utilise the spent fuel and for enhancing its enrichment capacity.
- On the front of Infrastructure and Manpower needs, India has worked very hard for development of Industrial infrastructure to manufacture equipment and skill development. Many Universities and institutes provide engineering manpower for NPP.

Suggestions

To ensure the safety and security of using nuclear power there is need to:

- ensure maintenance of the skills base
- maintain continued effective safety regulation
- foster progress on facilities for waste disposal and management must be given serious consideration.
- maintain and reinforce international non-proliferation arrangements.

Nuclear Tests and Nuclear Doctrine

- In 2003, India has adopted its Nuclear Doctrine of 'No First Use' i.e. India will use nuclear weapons only in retaliation against a nuclear attack on its Territory.
- In addition with this in 1965, India with NAM countries proposed five points to prevent the proliferation of nuclear weapons to UN Disarmament commission. These are:
  - Not to transfer Nuclear technology to others
  - No use of nuclear weapons against non nuclear countries
  - UN security cover to non nuclear States
Nuclear disarmament
Ban on the nuclear test

- In May 1974, India has conducted its first nuclear test in Pokharan with the codename of "Smiling Buddha".
- Between 11 and 13 May, 1998, five nuclear tests were conducted as a part of the series of Pokhran-II. These tests were collectively called Operation Shakti–98.
- According to a 2018 report by the Stockholm International Peace Research Institute (SIPRI), Pakistan has 140-150 nuclear warheads compared to India’s 130-140 warheads.
- Pakistan has not stated a “no first use” policy and there is little known about its nuclear doctrine.

India’s Stand on different Nuclear Treaties

- **Limited Ban Treaty**: US, UK and USSR in 1963, signed this treaty. It allows nuclear tests only underground thus, prohibits the nuclear experiments on ground, underwater and in outer space. India has also ratified the treaty.
- **Treaty on Outer Space**: Signed in 1967, it prohibits countries to test nuclear weapons in orbit or on celestial bodies like moon.
- **Nuclear Non-Proliferation Treaty (NPT)**: Signed in 1968, the treaty entered into force in 1970, now has 190 member states. It requires countries to give up any present or future plans to build nuclear weapons in return for access to peaceful uses of nuclear energy.
  - Three main objectives of the treaty are non-proliferation, disarmament, and the right to peacefully use nuclear technology.
  - **India is one of the only five countries that either did not sign the NPT or signed but withdrew, thus becoming part of a list that includes Pakistan, Israel, North Korea, and South Sudan.**

Why India didn’t sign the NPT?

- The quest for freedom of action in an uncertain regional strategic environment and an asymmetric international system dominated by superpowers and China drove India to not sign the NPT and hedge, and to conduct the 1974 test.
- India perceives its nuclear weapons and missile programs as crucial components of its strategic doctrine.
- India rejects the Treaty on the grounds that it perpetuates—at least in the short-term—an unjust distinction between the five states that are permitted by
the treaty to possess nuclear weapons, while requiring all other state parties to the treaty to remain non-nuclear weapon states.

- One major point raised by India is that the five authorized nuclear weapons states still have stockpiles of warheads and have shown reluctance to disarmament which also angered some non-nuclear-weapon NPT states.
- For eliminating the last nuclear weapons, the nuclear weapons state requires confidence that the other countries would not acquire nuclear weapons.
- Moreover, India’s pledge of not to use nuclear weapons unless first attacked by an adversary and a self-imposed moratorium on nuclear test since 1998, established its credibility as a peaceful nuclear power even without joining the treaty.
- Perceived security threats from Pakistan and Pakistan’s ally China and demonstration of a nuclear weapons capability guaranteed New Delhi’s ability to effectively hedge in an asymmetric international system, and a regional strategic environment where New Delhi felt largely cornered.
- Maintaining a degree of political autonomy has driven independent India’s foreign policy choices. Major decisions that New Delhi took in the nuclear realm are representative of that. The grand bargain of NPT was certainly going to restrict India’s policy options.
- Domestic political imperatives also dictated the timing and the rhetoric about the nuclear power.

**Comprehensive Test Ban Treaty (CTBT)** intends to ban all nuclear explosions - everywhere, by everyone. It opened for signature on 24 September 1996 and since then 182 countries have signed the Treaty, most recently Ghana has ratified the treaty on 14 June 2011.

- The Treaty will enter into force after all 44 States listed in Annex 2 to the Treaty will ratify it. These States had nuclear facilities at the time the Treaty was negotiated and adopted.
- As of August 2011, 35 of these States have ratified the Treaty. Nine States still need to do so: China, the Democratic People’s Republic of Korea, Egypt, India, Indonesia, Iran, Israel, Pakistan and the United States. India, North Korea and Pakistan have not yet signed the Treaty.

**Reasons behind India’s rejection to CTBT**

- India has always stood by its demand for a nuclear weapons-free world but various procedural, political, and security concerns have stopped India to join the treaty.
- India’s relationship with the CTBT has undergone distinct changes. In 1954, Indian Prime Minister Jawaharlal Nehru championed the cause of a nuclear
test ban by calling for a "standstill" agreement. In 1993, India was among those that co-sponsored the call for a test ban treaty. However, in 1996, India’s reservations about the Treaty blocked its adoption by the Conference on Disarmament.

- India, after negotiation was ready to sign the treaty provided United States should presents a schedule for eliminating its nuclear stockpile, a condition the United States rejected.
- India believed that the universal and complete nuclear disarmament should be the end goal not a mean.
- India considered, Article XIV, the entry-into-force (EIF) clause of the treaty as a violation of its right to voluntarily withhold participation in an international treaty.
- The treaty initially made ratification by states, that were to be a part of the CTBT’s International Monitoring System (IMS), mandatory for the treaty’s EIF. Because of this, India withdrew its participation from the IMS.
- The treaty didn’t talk about the disarmament of the stocks by nuclear weapon states.
- Further, the treaty is vague on the ban of laboratory testing of nuclear weapons. It means sophisticated technology of developed countries permit them for laboratory testing and ban on field test only affect the developing countries nuclear programme.
- India’s scientific community believes that accepting the CTBT would hinder India’s strategic nuclear program development and the option to test must be kept open.
- On the security front, India thought that it faced uncertain dangers from Pakistan, and China, which had conducted nuclear tests even while the CTBT was being negotiated.

**Fissile Material Cut-off Treaty (FMCT)** is a proposed international agreement that would prohibit the production of two main components of nuclear weapons: highly-enriched Uranium and Plutonium.

- An FMCT would provide new restrictions for the five recognized nuclear weapon states (NWS—United States, Russia, United Kingdom, France, and China), and for the four nations that are not NPT members (Israel, India, Pakistan, and North Korea).

**Missile Technology Control Regime (MTCR)** is not a treaty and does not impose any legally binding obligations on Partners (members). Rather, it is an informal political understanding among states that seek to limit the proliferation of missiles and missile technology.

- The regime was formed in 1987 by the G-7 industrialized countries (Canada,
There are currently 35 countries that are members (Partners) of the MTCR. India has become the 35th full member MTCR in July 2016. MTCR membership enables India to buy high-end missile technology, strengthen its export control regime and it supports India’s bid to become the member of Nuclear Supplier Group (NSG).

India and Nuclear Suppliers Group (NSG)

- The NSG was created in response to India’s first nuclear test ‘Smiling Buddha’ (Pokharan-I) in 1974. The NSG first met in November 1975 in London, thus popularly referred to as the "London Club".
- It’s a group of nuclear supplier countries that seek to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports.
- NSG consists of 48 members, include the five nuclear weapon states US, UK, France, China, and Russia. It is not a formal organization, and its guidelines are not binding.
- A non-NPT state cannot become a member of NSG which keeps India out of the group.
- India was left outside the international nuclear order, which forced India to develop its own resources for each stage of the nuclear fuel cycle and power generation, including next generation reactors such as fast breeder reactors and thorium breeder reactors.
- More recently in January 2019, China has again reiterated its previous stand that India’s accession to the Non-Proliferation Treaty (NPT) is prerequisite for its membership to the NSG or else there should be a common guidelines for the membership of the non-NPT states.
- Rejecting India’s claims for NSG membership, China cited the reasons that there should be no double standards in enforcing the NPT and the international community should stick to multilateralism and promote the three pillars namely non-proliferation, disarmament and peaceful uses of nuclear energy.
- Except China, all P5 members have endorsed India’s membership of NSG based on India’s non-proliferation record.
- Pakistan has also applied for the NSG membership while being also a non-signatory to the NPT. But it has a dubious record and its credibility is very much doubtful as a peaceful nuclear state.
- Membership of the NSG will provide India, greater certainty and a legal foundation for India’s nuclear regime and thus greater confidence for those
countries investing billions of dollars to set up ambitious nuclear power projects in India.

- Though India is not a member of NPT and NSG, its track-record in observing the provisions of either body, is impeccable. NSG was able to grant a waiver to India in 2008 on the basis of its past performance, now it should have no objection to admitting the country as a member.

- **Australia Group** admitted India as the 43rd member on 19 January 2018. It’s an informal group that keeps a control over exports of substances used in making of chemical weapons.
- The group membership will help India to raise its stature in the field of non-proliferation, and help in acquiring the critical technologies. It will also strengthen India’s bid to gain NSG membership.
- **Wassenaar Agreement**, established in 1996, is a group of countries which subscribe to arms export controls. It seeks to bring about security and stability, by fostering transparent practices in the process of sale and transfer of arms and materials and technologies that can be used to make nuclear weapons.
- It is a grouping of 42 countries, of which India is the latest entrant on December 8, 2017. With the exception of China, all the other permanent members of the U.N. Security Council are signatories of this arrangement.
- After joining the group India will be able easily access dual use technologies and materials and military equipment that are proscribed for non-participating members. In addition India will also be able to sell its nuclear reactors and other materials and equipment indigenously produced without attracting adverse reactions.

**Way Forward**

- In his presidential address at the first International Conference on the Peaceful Uses of Atomic Energy in Geneva in August 1955, Homi J Bhabha, traced the growth of the civilization, correlating it with increase in energy consumption and the development of new energy sources.
- He emphasized that the acquisition by man of the knowledge of how to release and use atomic energy must be recognized as the third epoch of human history.
- To maintain pace of development, it is important to build a constant and reliable supply chain of nuclear materials.
- The fundamentals underlying the possibility of breakthrough growth in India’s
civil nuclear programme are strong: political will, bilateral agreements with most supplier countries, an NSG waiver for nuclear trade, domestic human resources and capability developed in the last 30 years of nuclear power operations.

- While the political will and commitment to nuclear power remains strong, the government in recent months tried hard to secure membership in the NSG, an effort that was ultimately unsuccessful.
- It is crucial to remember that India does not need NSG membership to import nuclear technology that was already cleared through the exemption given in 2008.

Source: Web
Hiroshima Black Rain

GS-Paper-3 Environment (PT)

Recently, a district court of Hiroshima (Japan) has recognised 84 survivors of the post-nuclear explosion “black rain” as the atomic bomb survivors enabling them to avail benefits like free medical care.

Nuclear Explosion: In 1945, the USA dropped the atomic bombs on Hiroshima and Nagasaki on 6th and 9th August respectively, which marked the end of World War II. 2020 marks the 75th anniversary of the incident.

The explosion and resultant firestorms are believed to have killed around 80,000 people in Hiroshima and around 40,000 people in Nagasaki. Thousands more died in the following years due to the exposure to radiation from the blast and also from the black rain that fell in the aftermath of the explosions.

Black Rain: The debris and soot from the destroyed buildings in Hiroshima (estimated 69% of the buildings was destroyed) mixed with the radioactive fallout from the bomb, rose high into the atmosphere in the form of a mushroom cloud. This material combined with the vapour in the atmosphere and came down as dark drops of liquid that have been called black rain.

Survivors describe it as consisting of large, greasy drops that are much heavier than normal raindrops. Nagasaki witnessed less black rain despite the fact that the nuclear bomb dropped on it was more powerful than Hiroshima’s. It killed fewer people and its effects were confined to a smaller area because of Nagasaki’s geographical position between hills. The blast did not produce firestorms and the material contributing to black rain was less.

Effects:
Black rain is full of highly radioactive material and exposure to it can result in serious illnesses. A study conducted in 1945 showed that black rain had come down as far as 29 km away from ground zero. In relation to nuclear explosions and other large bombs, ground zero is the point on the Earth's surface closest to a detonation.
In the case of an explosion above the ground, ground zero is the point on
the ground directly below the nuclear detonation and is sometimes called
the hypocenter. The rain contaminated everything it came in contact with. Dead
fish were reported floating in water bodies and severely ill cattle were seen lying in
the fields.

Black rain caused Acute Radiation Symptoms (ARS) in many who were exposed
to it. These symptoms include nausea, diarrhoea, fever, sore throat and loss of
hair. Over time, many people who were exposed to black rain have developed
cancer as well.

**Effects of the Ruling:**

The Hiroshima District Court ruling recognises the plaintiffs as Hibakusha
(Japanese term for the survivors of the nuclear blasts). It gives hope to many
others because the decision may pave the way for the government to reconsider
the limits it has set on who can be considered a survivor of the atomic bomb.

Source: TH

---

**AIM-iCREST: NITI Aayog**

**GS-III | 31 July, 2020**

AIM-iCREST: NITI Aayog

GS-PAPER- 3 S&T (PT-MAINS)

Recently, the Atal Innovation Mission (AIM) has launched an incubator capabilities
enhancement program ‘AIM-iCREST’. Atal Innovation Mission (AIM) is a flagship
initiative set up by the NITI Aayog to promote a culture of innovation and
entrepreneurship in the country.

- **AIM-iCREST is an Incubator Capabilities Enhancement** program for a
  Robust Ecosystem focused on creating high performing Startups.
- It has been designed to act as a growth support for AIM’s Atal and
  Established Incubators across the country.
For the same, AIM has joined hands with Bill & Melinda Gates Foundation and Wadhwani Foundation - organizations that can lend credible support and expertise in the entrepreneurship and innovation space.

- The AIM’s incubators are set to be upscaled and provided requisite support to foster the incubation enterprise economy, that will help them to significantly enhance their performance.
- This will be complemented by providing training to entrepreneurs, through technology driven processes and platforms.
- The focus will be on supporting start-up entrepreneurs in knowledge creation and dissemination as well as in developing robust and active networks.

AIM’s Atal and Established Incubators:

Business incubators are institutions that support entrepreneurs in developing their businesses, especially in initial stages. Incubation is usually done by institutions which have experience in the business and technology world.

Atal Incubation Centres: AIM intends to support the establishment of new incubation centres called Atal Incubation Centres (AICs) that would nurture
innovative start-ups in their pursuit to become scalable and sustainable business enterprises.

Established Incubation Centres: In recent years, academia, industry, investors, small and big entrepreneurs, government organizations, and non-governmental organizations have taken an initiative to set up incubation centres across the country. AIM envisions to upgrade these Established Incubation Centres (EICs) to world-class standards.

Atal Innovation Mission

- AIM is Government of India’s flagship initiative to promote a culture of innovation and entrepreneurship in the country.
- It’s objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.

Major Initiatives:

- Atal Tinkering Labs: Creating problem solving mindset across schools in India.
- Atal Incubation Centers: Fostering world class startups and adding a new dimension to the incubator model.
- Atal New India Challenges: Fostering product innovations and aligning them to the needs of various sectors/ministries.
- Mentor India Campaign: A national mentor network in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.
- Atal Community Innovation Center: To stimulate community centric innovation and ideas in the unserved /underserved regions of the country including Tier 2 and Tier 3 cities.
- Atal Research and Innovation for Small Enterprises (ARISE): To stimulate innovation and research in the MSME industry.

Source: PIB
Recently, the Dispute Settlement Body (DSB) of the World Trade Organisation (WTO) has set up two dispute settlement panels targeting import duties imposed by India on a number of Information and Communication Technology (ICT) products including mobile phones. It was done on the request of Japan and Taiwan, taking up the number of panels constituted to examine the same tariff-related issue to three. In June 2020, the European Union (EU) had a panel established against India on the same issue.

The panels would determine whether India’s customs duties on imports of certain ICT products infringe the WTO’s norms or not.

- The panels have been set up to decide on 20% customs duty levied by India on mobile phones and some other ICT products.
- India decided to levy 10% customs duty on these products for the first time in July 2017 which was increased to 15% in the same year.
- These custom duties were further increased to 20% despite opposition from a number of WTO members.
- The EU, USA, China, Singapore, Taiwan, Canada, Japan and Thailand initiated consultations with India on the matter claiming that the move substantially affects them.
- The goods covered in the complaint include telephones for cellular networks or for other wireless networks; base stations; machines for the reception, conversion and transmission or regeneration of voice, images or other data, etc.

Complainants’ Arguments:

- Japan and Taiwan said that their failed consultations with India prompted them to submit the requests for panels.
- Japan, Taiwan and the EU have argued that these products fall within the scope of the relevant tariff lines for which India has set the bound rate of 0% for its WTO schedule of commitments.
- Bound Rates are the legally bound commitments on customs duty rates, which act as ceilings on the tariffs that member governments can set.
- Once a rate of duty is bound, it may not be raised without
compensating the affected parties

- They held that India is applying tariffs on ITC goods falling under five tariff lines in excess of the 0% bound rate and that for some products, the applied tariff rate was as high as 20% some times.
- Tariff Line refers to the classification codes of goods, applied by individual countries, that are longer than the 6-digit level of the Harmonized System (HS).
- HS is a system of code numbers for identifying products. The codes are standard up to six digits. Beyond that countries can introduce national distinctions for tariffs and many other purposes.

India’s Stand:

India managed to block Japan’s first request for a panel on the grounds that the complaint undermined India’s sovereignty. India also rejected the EU’s suggestion of agreeing to one consolidated panel combining complaints from all three of them and saving time and resources. India argued that all three complainants are seeking to get the country to take on commitments under the Information Technology Agreement-II (ITA-II) which it never agreed to.

Information Technology Agreement

- It is a plurilateral agreement enforced by the WTO and concluded by 29 participants in the Ministerial Declaration on Trade in Information Technology Products at Singapore in 1996.
- It entered into force on 1st July 1997.
- It seeks to accelerate and deepen the reduction of trade barriers for the critically important ICT industry.
- Currently, the number of participants has grown to 82, representing about 97% of world trade in IT products.
- India is a signatory.

Information Technology Agreement-II

- Few developed countries proposed to broaden the scope and coverage of the ITA.
- At the Nairobi Ministerial Conference in December 2015, over 50 members concluded the expansion of the Agreement, which now covers an additional 201 products valued at over USD 1.3 trillion per year.
- Its aim was to increase the coverage of IT products on which customs duty would be bound at zero, addressing non-tariff measures and expanding the number of signatory countries to include countries such as Argentina, Brazil.
India has decided not to participate in this for the time being because India’s experience with the ITA-I has been most discouraging, which almost wiped out the IT industry from India. The real gainer from that agreement has been China which raised its global market share from 2% to 14% between 2000-2011. China is a significant exporter of ICT goods.

Source: TH

CHRI Report on Slavery

GS-Paper-2 Governance- Human Right (Mains)

Recently, the Commonwealth Human Rights Initiative (CHRI) and Walk Free (an international anti-slavery organisation) released a report on slavery on the occasion of World Day Against Trafficking in Persons (30th July).

The Report

- It assessed the progress made by Commonwealth countries on the promises made in 2018 to end modern slavery by 2030 and achieve the Sustainable Development Goal (Target 8.7) of ending forced labour, human trafficking and child labour.
- Commonwealth countries accounts for about 40% of people living in conditions of modern slavery in the world.
- It is estimated that 1 in every 150 people in the Commonwealth countries live in conditions of modern slavery.
- It found that Commonwealth countries have made little progress towards their commitment to eradicate modern slavery and have been lacking in actions to eradicate the modern slavery by 2030.
- One-third of the Commonwealth countries had criminalised forced marriage, while 23 had not criminalised commercial sexual exploitation of children. All Commonwealth countries report gaps in victim assistance.
India Specific Outcome:

- **India** had fared the worst in terms of coordination. It has no national coordinating body or National Action Plan in place to deal with modern day slavery.
- India accounted for **one-third of all child brides** in the world.
- India, like all other Commonwealth countries in Asia, had not ratified the International Labour Organisation’s 2011 Domestic Workers Convention or the 2014 Forced Labour Protocol.
- The 2014 Forced Labour Protocol obligates state parties to provide protection and appropriate remedies, including compensation, to victims of forced labour and to sanction the perpetrators of forced labour.
- It also obligates state parties to develop a national policy and plan of action for the effective and sustained suppression of forced or compulsory labour.

Provisions in India

Constitutional Provisions:

- **Article 21** deals with the Right to Life and Personal Liberty.
- **Article 23** of the Constitution prohibits forced labour.
- **Article 24** prohibits the employment of children (below the age of fourteen years) in factories, etc.
- **Article 39** directs the State to secure the health and strength of workers, men and women, and to see the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.
- **Article 42** directs the State to make provision for securing just and humane conditions of work and for maternity relief.

Legal Provision:

- Various sections in **Indian Penal Code (IPC)** such as 366A, 366B, 370 and 374.
- Section 370 and 370A of Indian Penal Code (IPC) provide for comprehensive measures to counter the menace of human trafficking including trafficking of children for exploitation in any form including physical exploitation or any form of sexual exploitation, slavery, servitude, or the forced removal of organs.
1956, the Bonded Labour (Abolition) Act 1976, among others aims to eradicate various forms of slavery.

Other Initiatives:

- India has ratified the United Nations Convention on Transnational Organised Crime (UNCTOC) which among others has a Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children.
- India has ratified the South Asian Association for Regional Cooperation (SAARC) Convention on Preventing and Combating Trafficking in Women and Children for Prostitution.
- A Memorandum of Understanding (MoU) between India and Bangladesh has been signed on bilateral Cooperation for Prevention of Human Trafficking in Women and Children, Rescue, Recovery, Repatriation and Re-integration of Victims of Trafficking was signed in June, 2015.
- Anti-Trafficking Nodal Cell was set up in the Ministry of Home Affairs (MHA) in 2006 to act as a focal point for communicating various decisions and follow up on action taken by the State Governments to combat the crime of Human Trafficking.
- Judicial Conferences: In order to train and sensitize the trial court judicial officers, Judicial conferences on human trafficking are held at the High court level. The aim is to sensitize the judicial officers about the various issues concerning human trafficking and to ensure speedy court process.
- To enhance the capacity building of law enforcement agencies and generate awareness among them, various Training of Trainers (TOT) workshops on ‘Combating Trafficking in Human Beings’ for Police officers and for Prosecutors at Regional level, State level and District level have been organized by the government throughout the country.
- Ministry of Home Affairs under a Comprehensive Scheme ‘Strengthening Law Enforcement Response in India against Trafficking in Persons’ through Training and Capacity Building, has released fund for establishment of Anti Human Trafficking Units for 270 districts of the country.
- The primary role of an Anti Human Trafficking Unit (AHTU) is law enforcement and liaising with other concerned agencies for care & rehabilitation of victims. MHA conducts coordination meetings with the Nodal Officers of Anti Human Trafficking Units nominated in all States/UTs periodically.

Modern Slavery: Modern slavery refers to situations of exploitation that a
person cannot escape because of threats, violence, coercion, and abuse of power or deception. They may be held in debt bondage on fishing boats, against their will as domestic servants or trapped in brothels.

Commonwealth Human Rights Initiative (CHRI)

It is an independent, non-partisan, international non-governmental organisation, headquartered in New Delhi, working for the practical realisation of human rights across the Commonwealth.

- The Commonwealth is a voluntary association of 54 independent and equal sovereign states.
- It is one of the world’s oldest political associations of states. Its roots go back to the British Empire when some countries were ruled directly or indirectly by Britain. Some of these countries became self-governing while retaining Britain’s monarch as Head of State. They formed the British Commonwealth of Nations.
- In 1949, the Commonwealth came into being. Since then, independent countries from Africa, the Americas, Asia, Europe and the Pacific have joined the Commonwealth.
- Membership is based on free and equal voluntary cooperation. Rwanda and Mozambique - have no historical ties to the British Empire.

Source: PIB

Higher Food Prices

GS-III | 31 July, 2020

Higher Food Prices

GS-Paper-3 Economy Inflation (Mains)

Recently, the Tata-Cornell Institute for Agriculture and Nutrition in New York has conducted a study titled “Pandemic Prices: Covid-19 Price Shocks and their Implications for Nutrition Security in India”. It analysed prices of cereals (wheat and rice) and non-cereals (onion, tomatoes, potatoes, five pulses and
eggs) in 11 tier-1 and tier-2 cities from 1st March-31st May 2020 compared to the same period in 2019.

- Following the lockdown, all food groups witnessed a rise in prices, but the rise in prices was higher for non-cereals compared to cereals.
- After the lockdown was lifted, prices of cereals and non-cereals stabilised quickly while those of protein-rich pulses continued to remain high.

Data Analysis:

- **Wheat and Rice:** Retail prices were either stable or cheaper than weeks preceding the lockdown and last year.
- **Potato, Onions and Tomatoes:** The prices went high initially but later on stabilised. Onion prices went as high as 200-250%.
- **Eggs:** The prices fell initially (because of fear of coronavirus through poultry) but increased by March-end and then stabilised two months later.
- **Pulses:** The prices rose during the lockdown and continued to remain higher than the pre-Covid-19 levels.

Concerns: The relative stability in cereal prices and enhanced prices of pulses will most likely distort spending and consumption decisions resulting in a staple-based, protein-deficient diet hampering the food security in the country. The relatively higher prices of more nutritious food make it difficult for the poor and marginal population to access such nutrient-rich food. As a result, the proportion of such foods in the diets goes further down and is replaced by less nutritious and calorie-dense foods. It will worsen the nutritional status of women and children across India, and more so in the impoverished regions of the country. The study also criticised the amendment to the Essential Commodities Act, 1955 which deregulated cereals, edible oils, oilseeds, pulses, onions and potatoes.

- **Suggestions:**
  The government can ensure the provision of supplementary protein by timely interventions to stabilise the increase in prices.
  Policies that insulate non-staple supply chains from price shocks and fluctuations are necessary.
  Abolishing outdated restrictions to address farm sector bottlenecks is very important.

Food and nutrition security is ensured if all of the citizens of a nation have enough
Aerial Seeding in Haryana

GS-Paper-3 Biodiversity (PT-MAINS) IFS EXAM

Recently, the Haryana government has employed aerial seeding techniques to improve green cover in the Aravalli area of the state. The project is being carried out on a pilot basis to regenerate the low vegetation density or denuded areas on inaccessible or difficult sites of Aravalli and Shivalik hills.

Aerial Seeding

Aerial Seeding is a plantation technique wherein seed balls — seeds covered with a mixture of clay, compost, char and other components — are sprayed using aerial devices, including planes, helicopters or drones.

Working: Seeds balls/pellets are dispersed in a targeted area by low-flying drones, with the coating providing the required weight for seeds to airdrop on a predetermined location rather than getting deterred by the wind. These pellets sprout when there is enough rain, with nutrients present within them helping in initial growth.

Advantages: Areas that are inaccessible, having steep slopes or no forest routes, can be targeted using this method.
The process of the seed’s germination and growth is such that it requires no attention after it is dispersed and thus seed pellets are known as the “fire and forget” way of plantation.

They **eliminate** any need for **ploughing** and do not need to be planted since they are already surrounded by soil, nutrients, and microorganisms. The clay shell also protects them from birds, ants and rats.

**Species to be Used for Aerial Seeding:** The plant species which are native to the area and hardy, with seeds that are of an appropriate size for preparing seedballs are usually used for aerial seeding, with a higher survival percentage.

**Use of Seeding Drone:**

The method involves spraying seed balls or seed pellets from the air using seeding drones. It is equipped with a precise delivery mechanism for seeds of different sizes from a height of 25 to 50 metres. A single drone can plant 20,000-30,000 seeds a day.

**Implementation:**

The method is being implemented on 100 acres of land to test efficacy of the seed dispersal mechanism and review the success rate.

The species that will be planted through aerial seeding include **Acacia senegal (Khairi)**, **Ziziphus mauritiana (Beri)**, and **Holarrhena spp (Inderjo)**, all of which have a higher chance of survival in these areas.

Also, **site specific grass seeds** will also be added to the mix as they serve as good soil binders.

It will provide work opportunities to the local community, especially women, who can prepare the seed balls. The method will be useful since there are many areas that are either difficult to reach or inaccessible altogether, making traditional methods of plantation difficult.

Source: IE
Antibiotic resistance analysis (RS TV)

GS-PAPER-3 Health (PT-MAINS)

Antibiotics are life saving medicines. But these very same medicines can threaten our lives, if used indiscriminately. Already, seven lakh people around the world die due to drug-resistant diseases each year. And if no radical changes are made, these drug-resistant diseases could kill 10 million people a year by 2050.

Antibiotics

- An antibiotic is a type of antimicrobial substance active against bacteria and is the most important type of antibacterial agent for fighting bacterial infections.
- Antibiotic medications are widely used in the treatment and prevention of such infections.
- They may either kill or inhibit the growth of bacteria.
- A limited number of antibiotics also possess antiprotozoal activity.
- Antibiotics are not effective against viruses such as the common cold or influenza; drugs which inhibit viruses are termed antiviral drugs or antivirals rather than antibiotics.

WHO: AWaRe.

It is an online tool aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively.

The tool, known as ‘AWaRe’, classifies antibiotics into three groups:

1. Access — antibiotics used to treat the most common and serious infections.
2. Watch — antibiotics available at all times in the healthcare system.
3. Reserve — antibiotics to be used sparingly or preserved and used only as a last resort.

Concerns
Antibiotic resistance is already one of the biggest health risks and is estimated to kill 50 million by 2050 worldwide.

The threat continues to escalate globally because more than 50 per cent of antibiotics in many countries are used inappropriately such as for treatment of viruses when they only treat bacterial infections or use of the wrong (broader spectrum) antibiotic.

Besides, reduced access to effective and appropriate antibiotics in many low- and middle-income countries contributes to childhood deaths and lack of funding and implementation of national plans to tackle antimicrobial resistance.

Superbug

- A superbug is usually defined as a microorganism that’s resistant to commonly used antibiotics – but not all superbugs are created equal.
- The number of different antibiotics to which it can be resistant determines the degree of the superbug. Some are resistant to one or two, but others can be resistant to multiple drugs.
- So, if a bug is resistant to every available antibiotic, it would be the superbug of all superbugs.
- Cases where people die from antibiotic-resistant infections are still comparatively rare, particularly in places like Australia, which doesn’t allow antibiotics to be sold without a doctor’s prescription.
- But around the world, the number of people dying because their infection can’t be treated by any available antibiotic is increasing.
- Currently, antibiotic-resistant bacteria cause 700,000 deaths worldwide each year, and a UK government review on antimicrobial resistance predicted this number could increase to 10 million by 2050.
- If superbugs are allowed to spread, we may reach a point where it is too dangerous to conduct surgeries such as c-sections and transplants because of the risk of superbug infection, which would have huge implications for the health of people around the world.

What is antibiotic resistance?

Antibiotics are medicine used to treat infections caused by bacteria. **Antibiotic Resistance refers to resistance developed by bacteria against antibiotics or the ability of bacteria to mutate or change so as to resist the effects of antibiotics.** The more we use them, and the more we abuse them, the less...
Antibiotics are unquestionably useful against bacterial infections. However, indiscriminate use has resulted in development of resistance in patients with bacterial infections thereby leading to long lasting illnesses.

Thanks to that annoying thing called evolution, bacteria are constantly adapting to counter-attack antibiotics. Antibiotic resistance is one of the most significant threats to patients’ safety. It is driven by overusing antibiotics and prescribing them inappropriately.

Negative effect:

- Antibiotic resistance causes people to be sick for longer and increases the risk of death.
- Resistance also increases the cost of health care with lengthier stays in hospital and more intensive care required.
- Antibiotic-resistant bacteria increase the chance and severity of illness and ultimately death.
- Few new antibiotics are being developed, which is exacerbating the situation as more antibiotic resistant bacteria adapts and arises.

Therefore, rational use of antibiotics is essential in order to minimize antibiotic resistance.

Antimicrobial Resistance in India

AMR is of particular concern in developing nations, including India, where the burden of infectious disease is high and healthcare spending is low. The country has among the highest bacterial disease burden in the world. Antibiotics, therefore, have a critical role in limiting morbidity and mortality in the country. The 2015 WHO multi-country survey revealed widespread public misunderstanding about antibiotic usage and resistance.

- AMR has huge implications for India. There is a need to have in place a good comprehensive AMR National Action Plan in line with the Global AMR action plan.
- For resistance, this means cutting the misuse of antibiotics in humans and
farm animals, fighting environmental pollution, improving infection control in hospitals, and boosting surveillance.

- While most of these goals need government intervention, individuals have a critical part to play too.
- This is especially true for India, which faces a unique predicament when it comes to restricting the sale of antibiotics — some Indians use too few antibiotics, while others use too many.
- Many of the 410,000 Indian children who die of pneumonia each year do not get the antibiotics they need, while others misuse drugs, buying them without prescription and taking them for viral illnesses like influenza.
- Sometimes this irrational use is driven by quacks. But just as often, qualified doctors add to the problem by yielding to pressure from patients or drug-makers.

This tussle — between increasing antibiotic use among those who really need them, and decreasing misuse among the irresponsible — has kept India from imposing blanket bans on the non-prescription sale of these drugs.

When policymakers did propose such a ban in 2011, it was met with strong opposition. Instead, India turned to fine-edged tools such as the Schedule H1, a list of 24 critical antibiotics such as cephalosporins and carbapenems, whose sale is tightly controlled.

**How can we prevent antibiotic resistant infections?**

It is important to understand that, although they are very useful drugs, antibiotics designed for bacterial infections are not useful for viral infections such as a cold, cough, or the flu.

- Before taking any antibiotic ask the physician if it is required and beneficial.
- Always take antibiotics as prescribed by the physician.
- Take antibiotics to treat only bacterial infections.
- Do not take antibiotics in viral infections such as cold, cough, or flu
- Do not repeat the same antibiotic for the next time you get sick.
- Do not stop antibiotic before complete prescribed course of treatment.
- Do not skip doses.
- Do not copy the antibiotic with the same diseases which is prescribed for someone else.

**Why is antibiotic resistance one of the biggest health challenges:-**

- Antimicrobial resistance will result in difficulty in controlling the diseases.
in the community and ineffective delivery of the health care services.

- Neonates and the elderly both are more prone to infections and are vulnerable.
- A very significant part of out-of-pocket expenditure on health care is on medicines. The ineffective drugs and/or second line expensive antibiotics is pushing the treatment costs higher.
- WHO has published its first ever list of antibiotic-resistant ‘priority pathogens’ a catalogue of 12 families of bacteria that pose the greatest threat to human health and most of these 12 superbugs have presence in India.
- Antibiotic resistance is emerging as a threat to the successful treatment of infectious diseases, organ transplantation, cancer chemotherapy and major surgeries.
- Even when the process happens naturally, it is accelerated by the wrong use of antibiotics in humans and animals, and the effectiveness of these in the treatment of diseases such as pneumonia, tuberculosis and gonorrhea has diminished.
- Treating fatal diseases like sepsis, pneumonia and tuberculosis (TB) are becoming tough because microbes that cause these diseases are increasingly becoming resistant to fluoroquinolones.

Excessive use of medicines in poultry:-

Unregulated sale of the drugs for human or animal use accessed without prescription or diagnosis has led to unchecked consumption and misuse. Of tested birds destined for meat consumption, 87% had the super germs based on a study published in the journal Environmental Health Perspectives.

The mutated robust microbe strain can invade the body and cause diseases that are difficult to treat. Even mild infections require stronger dosage. Annual healthcare cost due to antibiotic resistance is estimated to be as high as $20 billion, with an additional productivity loss of up to $35 billion in the US.

Way forward

Poultry:- Ban the use of antibiotics for growth promotion and mass disease prevention. It should only be used to cure the sick animals based on prescription of veterinarians. There is a need to introduce a labelling system wherein poultry raised without use of antibiotics should be labelled through reliable certified schemes to facilitate consumer choice.
Rationalizing antibiotic use to limit antibiotic resistance in India. Improving regulation of drug production and sale. Encouraging behavior change among doctors and patients are of immediate priority.

Regulation of the medical sector, particularly in the prescription of medicines. Improved management of the health care delivery systems, both public and private, will minimize conditions favourable for the development of drug resistance.

Improved awareness of antimicrobial resistance through effective communication. WHO’s World Antibiotic Awareness Week is one such event. Reducing the incidence of infection through effective infection prevention and control. As stated by WHO, making infection prevention and hand hygiene a national policy priority.

Discourage non-therapeutic use of antimicrobial agents in veterinary, agriculture and fishery practices as growth-promoting agents. Promoting investments for antimicrobial resistance activities, research and innovations. Strengthening India’s commitment and collaborations on antimicrobial resistance at international, national and sub-national levels. Regulate the release of antibiotic waste from pharmaceutical production facilities and monitoring antibiotic residues in wastewater.

Source: WEB

Antibiotic Use in Dairy Sector

GS-III | 31 July, 2020

Antibiotic Use in Dairy Sector

GS-PAPER-3 Health (Mains)

Recently, the Centre for Science and Environment (CSE) held an online meeting on antibiotic use in the dairy sector. The meeting was attended by experts from the Food Safety and Standards Authority of India (FSSAI), the National Dairy Development Board (NDDB), the World Health
India is the world's largest milk producer, and it also forms an integral part of Indian diets, especially of children’s. It produced 188 million tonnes (MT) of milk in 2018-19. Urban areas consume 52% of it and the unorganised sector, comprising milkmen and contractors, caters to 60% of this consumer base. The remaining demand is met by dairy cooperatives and private dairies which represent the organised sector.

Concerns

Inadequate Focus on Testing: There is an inadequate focus on testing for antibiotic residues in the milk collected by State federations, which process it and sell it as packaged milk.

- Extensive Misuse: Antibiotics are extensively misused in the dairy sector. Such chemical-intensive food leads to antibiotic resistance.
- No Professional Help: Farmers often inject animals on their own judgment of signs and symptoms of a disease without any veterinary supervision.
- Indiscriminate Usage: Dairy farmers indiscriminately use antibiotics for diseases such as mastitis (infection/inflammation of the udder) which is a common ailment in dairy animals.
- The antibodies used by them often include Critically Important Antibiotics (CIAs) for humans.
- The WHO has warned that the CIAs should be preserved in view of the growing crisis of antibiotic resistance.
- Farmers often sell milk while the animal is under treatment, which increases the chances of antibiotic residues.

Easy Availability: The antibiotics are easily available without the prescription of a registered veterinarian and stocked at farms.

Source: TH
Ammonia in Yamuna

GS-PAPER-3 Environment Pollution (PT-MAINS)

Recently, high levels (around 3 parts per million) of ammonia in the Yamuna river has been detected in Delhi which led to the disruption of water supply in Delhi. As per the Bureau of Indian Standards (BIS), the acceptable maximum limit of ammonia in drinking water is 0.5 parts per million (ppm).

Ammonia:

- Its chemical formula is NH$_3$.
- It is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
- It occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents, contamination by sewage or through agricultural runoff.

Effect of High Level of Ammonia:

Ammonia reduces the amount of oxygen in water as it is transformed to oxidised forms of nitrogen. Hence, it also increases Biochemical oxygen demand (BOD). If the concentration of ammonia in water is above 1 ppm it is toxic to fishes. In humans, long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs.

Treatment:
Mixing of freshwater with ammonia polluted water.

Chlorination: Chlorination is the process of adding chlorine or chlorine compounds such as sodium hypochlorite to water.

This method is used to kill certain bacteria and other microbes in tap water. However, chlorine is highly toxic.

Long Term Solution: Stringent implementation of guidelines against dumping harmful waste into the river. Making sure untreated sewage does not enter the river.

Ammonia in Yamuna

GS-III | 31 July, 2020

Ammonia in Yamuna

GS-PAPER-3 Environment Pollution (PT-MAINS)

Recently, high levels (around 3 parts per million) of ammonia in the Yamuna river has been detected in Delhi which led to the disruption of water supply in Delhi. As per the Bureau of Indian Standards (BIS), the acceptable maximum limit of ammonia in drinking water is 0.5 parts per million (ppm).

Ammonia:

- Its chemical formula is NH$_3$.
- It is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
- It occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents, contamination by sewage or through agricultural runoff.

Effect of High Level of Ammonia:

Ammonia reduces the amount of oxygen in water as it is transformed to oxidised forms of nitrogen. Hence, it also increases Biochemical oxygen demand (BOD). If the concentration of ammonia in water is above 1 ppm it is toxic to fishes. In humans, long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs.

Treatment:
Mixing of freshwater with ammonia polluted water.

Chlorination: Chlorination is the process of adding chlorine or chlorine compounds such as sodium hypochlorite to water.

This method is used to kill certain bacteria and other microbes in tap water. However, chlorine is highly toxic.

Long Term Solution: Stringent implementation of guidelines against dumping harmful waste into the river. Making sure untreated sewage does not enter the river.
water. Maintain a sustainable minimum flow, called the ecological flow.

Ecological flow is the minimum amount of water that should flow throughout the river at all times to sustain underwater and estuarine ecosystems and human livelihoods, and for self regulation.

Yamuna

- The river Yamuna, a major tributary of river Ganges, originates from the Yamunotri glacier near Bandarpooch peaks in the Mussoorie range of the lower Himalayas in Uttarkashi district of Uttarakhand.
- It meets the Ganges at the Sangam in Prayagraj, Uttar Pradesh after flowing through Uttarakhand, Himachal Pradesh, Haryana and Delhi. Important Dam: Lakhwar-Vyasi Dam (Uttarakhand), Tajewala Barrage Dam (Haryana) etc.
- Important Tributaries: Chambal, Sindh, Betwa and Ken.

Source: IE

India Report on Digital Education, 2020

GS-paper-3 Education (Mains)

Recently, the Ministry of Human Resource Development (MHRD) has launched India Report on Digital Education, 2020. Recently the MHRD has been renamed as the Ministry of Education.

The Report:

It has been prepared by the digital education division of MHRD in consultation with education departments of the states and union territories.

It elaborates the innovative methods adopted by the MHRD, for ensuring accessible and inclusive education to children at home and reducing learning gaps during the Covid-19 pandemic.
MHRD Initiatives:

It has initiated many projects to assist teachers, scholars and students in their pursuit of learning like DIKSHA platform, Swayam Prabha TV Channel, On Air - Shiksha Vani, e-PathShala and telecast through TV channels.

It also released guidelines on digital education called 'PRAGYATA'.

State Initiatives:

States and Union Territories have provided digital education at the doorstep of the students. Some of them are:

- **Social Media Interface for Learning Engagement (SMILE)** in Rajasthan.
- **Project Home Classes** in Jammu.
- **Padhai Tunhar Duvāar** (Education at your doorstep) in Chhattisgarh.
- **Unnayan Initiatives** in Bihar.
- **Mission Buniyaad** in NCT of Delhi.
- **Kerala's own educational TV channel (KITE VICTERS).**
- **E-scholar portal** as well as free online courses for teachers in Meghalaya.

They used social media tools like WhatsApp Group, Online classes through YouTube channel and Google meet to connect to the students. Some of the states/UTs like Lakshadweep, Nagaland and Jammu & Kashmir have also distributed tablets, DVDs and pendrives, equipped with e-contents to students.

They have also distributed textbooks at children’s doorsteps to ensure inclusive learning in remote areas where internet connectivity and electricity is poor. Several states have also focussed on the mental well-being of the children e.g Delhi conducted happiness classes. MHRD has also launched the 'Manodarpan' initiative, which aims to provide psychosocial support to students, family members and teachers for their mental health and well-being during the times of Covid-19.

**Conclusion**

The report will serve the purpose of cross-learning, adapting and adopting best practices across the country. While the education is moving towards blended learning through online and offline mode, it shall be the endeavour of all the stakeholders in the field of education to ensure that no student is left behind for
Protesting is a Fundamental Right

GS-Paper-2 International organisation (PT-MAINS)

Recently, the United Nations (UN) Human Rights Committee has reaffirmed that protesting peacefully, online or in person, is a fundamental human right. This statement has come in the backdrop of increasing demonstrations over issues like political rights and racial justice.

UN Human Rights Committee: It is tasked with monitoring how countries implement the International Covenant on Civil and Political Rights (ICCPR) 1976, which under Article 21 guarantees the right to peaceful assembly.

Latest Interpretation of the Right to Peaceful Assembly
Fundamental Human Right for People: To gather to celebrate or to air grievances in public and in private spaces, outdoors, indoors and online is a fundamental human right.

Protesters: Everyone, including children, foreign nationals, women, migrant workers, asylum seekers and refugees, can exercise the right of peaceful assembly.

Protection: Protesters have the right to wear masks or hoods to cover their face and that Governments should not collect personal data to harass or intimidate participants.

Role of Journalists and Human Rights Observers: They have the right to monitor and document any assembly, including violent and unlawful ones.

Government Obligations: Governments could not prohibit protests by
making “generalised references to public order or public safety, or an unspecified risk of potential violence”. Governments cannot block internet networks or close down any website because of their roles in organising or soliciting a peaceful assembly.

Significance

The Committee's interpretation will be important guidance for judges in national and regional courts around the world, as it now forms part of what is known as ‘soft law’.

The interpretation is a form of legal advice (not mandatory) from the Committee that monitors the International Covenant on Civil and Political Rights (ICCPR) 1976.

Indian Scenario:

India is a state party to the International Covenant on Civil and Political Rights (ICCPR).

The right to protest, to publicly question and force the government to answer, is a fundamental political right of the people that flows directly from a democratic reading of Article 19 of the Constitution of India.

Article 19 (1) (a) states that all citizens shall have the right to freedom of speech and expression.

Article 19 (1) (b) states that all citizens shall have the right to assemble peaceably and without arms.

However, the State can impose reasonable restrictions on the exercise of right of assembly on two grounds, namely, sovereignty and integrity of India and public order including the maintenance of traffic in the area concerned.

Further, Indian courts have reiterated that the right to protest is a fundamental right (Ramlila Maidan Incident v. Home Secretary, Union Of India & Ors. case -2012).

International Covenant on Civil and Political Rights

- The ICCPR is a key international human rights treaty, providing a range of
protections for civil and political rights.

- The ICCPR, together with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered the International Bill of Human Rights.
- The Bill influences the decisions and actions of Government, State and Non-State actors to make economic, social and cultural rights a top-priority in the formation and implementation of national, regional and international policy and law.
- The ICCPR obligates countries that have ratified the treaty to protect and preserve basic human rights, such as: the right to life and human dignity; equality before the law; freedom of speech, assembly, and association; religious freedom and privacy; freedom from torture, ill-treatment, and arbitrary detention; gender equality; the right to a fair trial; right family life and family unity; and minority rights.
- The Covenant compels governments to take administrative, judicial, and legislative measures in order to protect the rights enshrined in the treaty and to provide an effective remedy.
- The Covenant was adopted by the UN General Assembly in 1966 and came into force in 1976. 173 countries including India have ratified the Covenant.

Source: IE

AllIB and India

GS-Paper-2 International organisation (PT-MAINS)

Jin Liqun has been re-elected as the President of the China-based Asian Infrastructure Investment Bank (AllIB) for a second five-year term.

- The President stated that the bank would remain an “apolitical institution” and continue to back projects in India.
- The management will look at the proposed projects from the economic and
India and AIIB:

- India was among the AIIB’s 57 founding members in 2016.
- It is also its second-largest shareholder (with 7.62% voting shares) after China (26.06%).
- It has received USD 4.35 billion from the Bank.
- This is the highest of any country, with the bank so far approving loans of USD 19.6 billion to support 87 projects in 24 countries. Turkey is second with USD 1.95 billion.
- AIIB has approved financing projects in India in a host of sectors like energy, transport and water including the Bangalore metro rail project (USD 335 million), Gujarat rural roads project (USD 329 million) and Phase 3 of the Mumbai urban transport project (USD 500 million).
- In a recent virtual meeting, India said that it expects AIIB to introduce new financing instruments, provide financing for social infrastructure and to integrate development of climate resilient and sustainable energy access infrastructure into AIIB’s recovery response to the Covid-19 crisis.
- This implies that India is unlikely to alter its engagement with the China-led Asian Infrastructure Investment Bank (AIIB), despite a host of offensive measures announced recently to reduce its trade and investment links with China.

Chinese Angle:


USD 750 million loan was approved two days after the clash in Galwan Valley in Ladakh along the India-China border.

It has supported several projects under the Belt and Road Initiative (BRI) framework, but is not formally linked to the plan.

India has concerns over the China-Pakistan Economic Corridor - a part of the BRI.

Asian Infrastructure Investment Bank
The AIIB is a multilateral development bank with a mission to improve social and economic outcomes in Asia. Headquartered in Beijing (China), it began operations in January 2016 and has now grown to 103 approved members worldwide.

India should continue to engage with AIIB as it will be able to access resources for the financing of national and cross-border infrastructure projects from the Bank. AIIB is also significant as the World Bank is continued to be dominated by the USA while Japan has more influence over Asian Development Bank (ADB). Further, India needs to ensure that its own interests are served by its membership very explicitly. It should make sure that AIIB doesn’t end up becoming a tool of Chinese geopolitical agenda.

Source: TH
Hiroshima Black Rain

GS-Paper-3 Environment (PT)

Recently, a district court of Hiroshima (Japan) has recognised 84 survivors of the post-nuclear explosion “black rain” as the atomic bomb survivors enabling them to avail benefits like free medical care.

**Nuclear Explosion:** In 1945, the USA dropped the atomic bombs on Hiroshima and Nagasaki on 6th and 9th August respectively, which marked the end of World War II. 2020 marks the 75th anniversary of the incident.

The explosion and resultant firestorms are believed to have **killed around 80,000 people in Hiroshima and around 40,000 people in Nagasaki.** Thousands more died in the following years due to the exposure to radiation from the blast and also from the black rain that fell in the aftermath of the explosions.

**Black Rain:** The debris and soot from the destroyed buildings in Hiroshima (estimated 69% of the buildings was destroyed) mixed with the radioactive fallout from the bomb, rose high into the atmosphere in the form of a mushroom cloud. This material combined with the vapour in the atmosphere and came down as dark drops of liquid that have been called black rain.

Survivors describe it as consisting of large, greasy drops that are much heavier than normal raindrops. Nagasaki witnessed less black rain despite the fact that the nuclear bomb dropped on it was more powerful than Hiroshima’s. It killed fewer people and its effects were confined to a smaller area because of Nagasaki’s geographical position between hills. The blast did not produce firestorms and the material contributing to black rain was less.

**Effects:**
Black rain is full of **highly radioactive material and exposure to it can result in serious illnesses.** A study conducted in 1945 showed that black rain had come down as far as 29 km away from ground zero. In relation to nuclear explosions and other large bombs, ground zero is the point on the Earth's surface closest to a detonation.
In the case of an explosion above the ground, ground zero is the point on the ground directly below the nuclear detonation and is sometimes called the hypocenter. The rain contaminated everything it came in contact with. Dead fish were reported floating in water bodies and severely ill cattle were seen lying in the fields.

Black rain caused Acute Radiation Symptoms (ARS) in many who were exposed to it. These symptoms include nausea, diarrhoea, fever, sore throat and loss of hair. Over time, many people who were exposed to black rain have developed cancer as well.

Effects of the Ruling:

The Hiroshima District Court ruling recognises the plaintiffs as Hibakusha (Japanese term for the survivors of the nuclear blasts). It gives hope to many others because the decision may pave the way for the government to reconsider the limits it has set on who can be considered a survivor of the atomic bomb.

Source: TH

AIM-iCREST: NITI Aayog

GS-III | 31 July, 2020

AIM-iCREST: NITI Aayog

GS-PAPER- 3 S&T (PT-MAINS)

Recently, the Atal Innovation Mission (AIM) has launched an incubator capabilities enhancement program ‘AIM-iCREST’. Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote a culture of innovation and entrepreneurship in the country.

- **AIM-iCREST is an Incubator Capabilities Enhancement** program for a Robust Ecosystem focused on creating high performing Startups.
- It has been designed to act as a growth support for AIM’s Atal and Established Incubators across the country.
For the same, AIM has joined hands with Bill & Melinda Gates Foundation and Wadhwani Foundation - organizations that can lend credible support and expertise in the entrepreneurship and innovation space. The AIM’s incubators are set to be upscaled and provided requisite support to foster the incubation enterprise economy, that will help them to significantly enhance their performance. This will be complemented by providing training to entrepreneurs, through technology driven processes and platforms. The focus will be on supporting start-up entrepreneurs in knowledge creation and dissemination as well as in developing robust and active networks.

**AIM’s Atal and Established Incubators:**

Business incubators are institutions that support entrepreneurs in developing their businesses, especially in initial stages. Incubation is usually done by institutions which have experience in the business and technology world.

**Atal Incubation Centres:** AIM intends to support the establishment of new incubation centres called **Atal Incubation Centres (AICs)** that would nurture
innovative start-ups in their pursuit to become scalable and sustainable business enterprises.

Established Incubation Centres: In recent years, academia, industry, investors, small and big entrepreneurs, government organizations, and non-governmental organizations have taken an initiative to set up incubation centres across the country. AIM envisages to upgrade these Established Incubation Centres (EICs) to world-class standards.

Atal Innovation Mission

- AIM is Government of India’s flagship initiative to promote a culture of innovation and entrepreneurship in the country.
- It’s objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.

Major Initiatives:

- **Atal Tinkering Labs:** Creating problem solving mindset across schools in India.
- **Atal Incubation Centers:** Fostering world class startups and adding a new dimension to the incubator model.
- **Atal New India Challenges:** Fostering product innovations and aligning them to the needs of various sectors/ministries.
- **Mentor India Campaign:** A national mentor network in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.
- **Atal Community Innovation Center:** To stimulate community centric innovation and ideas in the unserved /underserved regions of the country including Tier 2 and Tier 3 cities.
- **Atal Research and Innovation for Small Enterprises (ARISE):** To stimulate innovation and research in the MSME industry.

Source: PIB
Recently, the Dispute Settlement Body (DSB) of the World Trade Organisation (WTO) has set up two dispute settlement panels targeting import duties imposed by India on a number of Information and Communication Technology (ICT) products including mobile phones. It was done on the request of Japan and Taiwan, taking up the number of panels constituted to examine the same tariff-related issue to three. In June 2020, the European Union (EU) had a panel established against India on the same issue.

The panels would determine whether India’s customs duties on imports of certain ICT products infringe the WTO’s norms or not.

- The panels have been set up to decide on 20% customs duty levied by India on mobile phones and some other ICT products.
- India decided to levy 10% customs duty on these products for the first time in July 2017 which was increased to 15% in the same year.
- These custom duties were further increased to 20% despite opposition from a number of WTO members.
- The EU, USA, China, Singapore, Taiwan, Canada, Japan and Thailand initiated consultations with India on the matter claiming that the move substantially affects them.
- The goods covered in the complaint include telephones for cellular networks or for other wireless networks; base stations; machines for the reception, conversion and transmission or regeneration of voice, images or other data, etc.

Complainants’ Arguments:

- Japan and Taiwan said that their failed consultations with India prompted them to submit the requests for panels.
- Japan, Taiwan and the EU have argued that these products fall within the scope of the relevant tariff lines for which India has set the bound rate of 0% for its WTO schedule of commitments.
- Bound Rates are the legally bound commitments on customs duty rates, which act as ceilings on the tariffs that member governments can set.
- Once a rate of duty is bound, it may not be raised without
compensating the affected parties

- They held that India is applying tariffs on ITC goods falling under five tariff lines in excess of the 0% bound rate and that for some products, the applied tariff rate was as high as 20% some times.
- Tariff Line refers to the classification codes of goods, applied by individual countries, that are longer than the 6-digit level of the Harmonized System (HS).
- HS is a system of code numbers for identifying products. The codes are standard up to six digits. Beyond that countries can introduce national distinctions for tariffs and many other purposes.

India’s Stand:

India managed to block Japan’s first request for a panel on the grounds that the complaint undermined India’s sovereignty. India also rejected the EU’s suggestion of agreeing to one consolidated panel combining complaints from all three of them and saving time and resources. India argued that all three complainants are seeking to get the country to take on commitments under the Information Technology Agreement-II (ITA-II) which it never agreed to.

Information Technology Agreement

- It is a plurilateral agreement enforced by the WTO and concluded by 29 participants in the Ministerial Declaration on Trade in Information Technology Products at Singapore in 1996.
- It entered into force on 1st July 1997.
- It seeks to accelerate and deepen the reduction of trade barriers for the critically important ICT industry.
- Currently, the number of participants has grown to 82, representing about 97% of world trade in IT products.
- India is a signatory.

Information Technology Agreement-II

- Few developed countries proposed to broaden the scope and coverage of the ITA.
- At the Nairobi Ministerial Conference in December 2015, over 50 members concluded the expansion of the Agreement, which now covers an additional 201 products valued at over USD 1.3 trillion per year.
- Its aim was to increase the coverage of IT products on which customs duty would be bound at zero, addressing non-tariff measures and expanding the number of signatory countries to include countries such as Argentina, Brazil
and South Africa.
- India has decided not to participate in this for the time being because India’s experience with the ITA-I has been most discouraging, which almost wiped out the IT industry from India.
- The real gainer from that agreement has been China which raised its global market share from 2% to 14% between 2000-2011. China is a significant exporter of ICT goods.

Source: TH

CHRI Report on Slavery
GS-II | 31 July, 2020

CHRI Report on Slavery
GS-Paper-2 Governance- Human Right (Mains)

Recently, the Commonwealth Human Rights Initiative (CHRI) and Walk Free (an international anti-slavery organisation) released a report on slavery on the occasion of World Day Against Trafficking in Persons (30th July).

The Report

- It assessed the progress made by Commonwealth countries on the promises made in 2018 to end modern slavery by 2030 and achieve the Sustainable Development Goal (Target 8.7) of ending forced labour, human trafficking and child labour.
- Commonwealth countries accounts for about 40% of people living in conditions of modern slavery in the world.
- It is estimated that 1 in every 150 people in the Commonwealth countries live in conditions of modern slavery.
- It found that Commonwealth countries have made little progress towards their commitment to eradicate modern slavery and have been lacking in actions to eradicate the modern slavery by 2030.
- One-third of the Commonwealth countries had criminalised forced marriage, while 23 had not criminalised commercial sexual exploitation of children. All Commonwealth countries report gaps in victim assistance
India Specific Outcome:

- India had fared the worst in terms of coordination. It has no national coordinating body or National Action Plan in place to deal with modern day slavery.
- India accounted for one-third of all child brides in the world.
- India, like all other Commonwealth countries in Asia, had not ratified the International Labour Organisation’s 2011 Domestic Workers Convention or the 2014 Forced Labour Protocol.
- The 2014 Forced Labour Protocol obligates state parties to provide protection and appropriate remedies, including compensation, to victims of forced labour and to sanction the perpetrators of forced labour.
- It also obligates state parties to develop a national policy and plan of action for the effective and sustained suppression of forced or compulsory labour.

Provisions in India

Constitutional Provisions:

- Article 21 deals with the Right to Life and Personal Liberty.
- Article 23 of the Constitution prohibits forced labour.
- Article 24 prohibits the employment of children (below the age of fourteen years) in factories, etc.
- Article 39 directs the State to secure the health and strength of workers, men and women, and to see the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.
- Article 42 directs the State to make provision for securing just and humane conditions of work and for maternity relief.

Legal Provision:

- Various sections in Indian Penal Code (IPC) such as 366A, 366B, 370 and 374.
- Section 370 and 370A of Indian Penal Code (IPC) provide for comprehensive measures to counter the menace of human trafficking including trafficking of children for exploitation in any form including physical exploitation or any form of sexual exploitation, slavery, servitude, or the forced removal of organs.
- The Juvenile Justice Act, 2015 and the Information Technology (IT) Act, 2000 and also the Immoral Traffic Act, Prevention of Child Labour Act...
1956, the Bonded Labour (Abolition) Act 1976, among others aims to eradicate various forms of slavery.

Other Initiatives:

- India has ratified the United Nations Convention on Transnational Organised Crime (UNCOC) which among others has a Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children.
- India has ratified the South Asian Association for Regional Cooperation (SAARC) Convention on Preventing and Combating Trafficking in Women and Children for Prostitution.
- A Memorandum of Understanding (MoU) between India and Bangladesh has been signed on bilateral Cooperation for Prevention of Human Trafficking in Women and Children, Rescue, Recovery, Repatriation and Re-integration of Victims of Trafficking was signed in June, 2015.
- Anti-Trafficking Nodal Cell was set up in the Ministry of Home Affairs (MHA) in 2006 to act as a focal point for communicating various decisions and follow up on action taken by the State Governments to combat the crime of Human Trafficking.
- Judicial Conferences: In order to train and sensitize the trial court judicial officers, Judicial conferences on human trafficking are held at the High court level. The aim is to sensitize the judicial officers about the various issues concerning human trafficking and to ensure speedy court process.
- To enhance the capacity building of law enforcement agencies and generate awareness among them, various Training of Trainers (TOT) workshops on ‘Combating Trafficking in Human Beings’ for Police officers and for Prosecutors at Regional level, State level and District level have been organized by the government throughout the country.
- Ministry of Home Affairs under a Comprehensive Scheme ‘Strengthening Law Enforcement Response in India against Trafficking in Persons’ through Training and Capacity Building, has released fund for establishment of Anti Human Trafficking Units for 270 districts of the country.
- The primary role of an Anti Human Trafficking Unit (AHTU) is law enforcement and liaising with other concerned agencies for care & rehabilitation of victims. MHA conducts coordination meetings with the Nodal Officers of Anti Human Trafficking Units nominated in all States/UTs periodically.

Modern Slavery: Modern slavery refers to situations of exploitation that a
person cannot escape because of threats, violence, coercion, and abuse of power or deception. They may be held in debt bondage on fishing boats, against their will as domestic servants or trapped in brothels.

Commonwealth Human Rights Initiative (CHRI)

It is an independent, non-partisan, international non-governmental organisation, headquartered in New Delhi, working for the practical realisation of human rights across the Commonwealth.

- The Commonwealth is a voluntary association of 54 independent and equal sovereign states.
- It is one of the world’s oldest political associations of states. Its roots go back to the British Empire when some countries were ruled directly or indirectly by Britain. Some of these countries became self-governing while retaining Britain’s monarch as Head of State. They formed the British Commonwealth of Nations.
- In 1949, the Commonwealth came into being. Since then, independent countries from Africa, the Americas, Asia, Europe and the Pacific have joined the Commonwealth.
- Membership is based on free and equal voluntary cooperation. Rwanda and Mozambique - have no historical ties to the British Empire.

Source: PIB

Higher Food Prices

GS-III | 31 July, 2020

Higher Food Prices

GS-Paper-3 Economy Inflation (Mains)

Recently, the Tata-Cornell Institute for Agriculture and Nutrition in New York has conducted a study titled “Pandemic Prices: Covid-19 Price Shocks and their Implications for Nutrition Security in India”. It analysed prices of cereals (wheat and rice) and non-cereals (onion, tomatoes, potatoes, five pulses and
eggs) in 11 tier-1 and tier-2 cities from 1\textsuperscript{st} March-31\textsuperscript{st} May 2020 compared to the same period in 2019.

- Following the \textit{lockdown}, all food groups \textit{witnessed a rise in prices}, but the rise in prices was higher for non-cereals compared to cereals.
- After the \textit{lockdown was lifted}, \textit{prices of cereals and non-cereals stabilised quickly} while those of \textit{protein-rich pulses continued to remain high}.

\textbf{Data Analysis:}

- \textbf{Wheat and Rice:} Retail prices were either stable or cheaper than weeks preceding the lockdown and last year.
- \textbf{Potato, Onions and Tomatoes:} The prices went high initially but later on stabilised. Onion prices went as high as 200-250%.
- \textbf{Eggs:} The prices fell initially (because of fear of coronavirus through poultry) but increased by March-end and then stabilised two months later.
- \textbf{Pulses:} The prices rose during the lockdown and continued to remain higher than the pre-Covid-19 levels.

\textbf{Concerns:} The relative stability in cereal prices and enhanced prices of pulses will most likely distort spending and consumption decisions resulting in a staple-based, protein-deficient diet hampering the food security in the country. The relatively higher prices of more nutritious food make it difficult for the poor and marginal population to access such nutrient-rich food. As a result, the proportion of such foods in the diets goes further down and is replaced by less nutritious and calorie-dense foods. It will worsen the nutritional status of women and children across India, and more so in the impoverished regions of the country. The study also \textit{criticised the amendment to the Essential Commodities Act,1955} which \textit{deregulated} cereals, edible oils, oilseeds, pulses, onions and potatoes.

- \textbf{Suggestions:}
  - The government can ensure the provision of supplementary protein by timely interventions to stabilise the increase in prices.
  - Policies that insulate non-staple supply chains from price shocks and fluctuations are necessary.
  - Abolishing outdated restrictions to address farm sector bottlenecks is very important.

Food and nutrition security is ensured if all of the citizens of a nation have enough
nutritious food available, all of them have the capacity to buy food of acceptable quality and there is no barrier on access to food. The right to nutritious food is a well-established principle of international human rights law. It has evolved to include an obligation for state parties to respect, protect and fulfil their citizens’ right to food and nutrition security.

Source: TH

Aerial Seeding in Haryana
GS-III | 31 July, 2020

Aerial Seeding in Haryana

GS-Paper-3 Biodiversity (PT-MAINS) IFS EXAM

Recently, the Haryana government has employed aerial seeding techniques to improve green cover in the Aravalli area of the state. The project is being carried out on a pilot basis to regenerate the low vegetation density or denuded areas on inaccessible or difficult sites of Aravalli and Shivalik hills.

Aerial Seeding

Aerial Seeding is a plantation technique wherein seed balls — seeds covered with a mixture of clay, compost, char and other components — are sprayed using aerial devices, including planes, helicopters or drones.

Working: Seeds balls/pellets are dispersed in a targeted area by low-flying drones, with the coating providing the required weight for seeds to airdrop on a predetermined location rather than getting deterred by the wind. These pellets sprout when there is enough rain, with nutrients present within them helping in initial growth.

Advantages:
Areas that are inaccessible, having steep slopes or no forest routes, can be targeted using this method.
The process of the seed's germination and growth is such that it requires no attention after it is dispersed and thus seed pellets are known as the “fire and forget” way of plantation.

They eliminate any need for ploughing and do not need to be planted since they are already surrounded by soil, nutrients, and microorganisms. The clay shell also protects them from birds, ants and rats.

**Species to be Used for Aerial Seeding:** The plant species which are native to the area and hardy, with seeds that are of an appropriate size for preparing seedballs are usually used for aerial seeding, with a higher survival percentage.

**Use of Seeding Drone:**

The method involves spraying seed balls or seed pellets from the air using seeding drones. It is equipped with a precise delivery mechanism for seeds of different sizes from a height of 25 to 50 metres. A single drone can plant 20,000-30,000 seeds a day.

**Implementation:**

The method is being implemented on 100 acres of land to test efficacy of the seed dispersal mechanism and review the success rate.

The species that will be planted through aerial seeding include *Acacia senegal* (Khairi), *Ziziphus mauritiana* (Beri), and *Holarrhena spp* (Inderjo), all of which have a higher chance of survival in these areas.

Also, site specific grass seeds will also be added to the mix as they serve as good soil binders.

It will provide work opportunities to the local community, especially women, who can prepare the seed balls. The method will be useful since there are many areas that are either difficult to reach or inaccessible altogether, making traditional methods of plantation difficult.

Source: IE
Antibiotic resistance analysis (RS TV)

GS-PAPER-3 Health (PT-MAINS)

Antibiotics are life saving medicines. But these very same medicines can threaten our lives, if used indiscriminately. Already, seven lakh people around the world die due to drug-resistant diseases each year. And if no radical changes are made, these drug-resistant diseases could kill 10 million people a year by 2050.

Antibiotics

- An antibiotic is a type of antimicrobial substance active against bacteria and is the most important type of antibacterial agent for fighting bacterial infections.
- Antibiotic medications are widely used in the treatment and prevention of such infections.
- They may either kill or inhibit the growth of bacteria.
- A limited number of antibiotics also possess antiprotozoal activity.
- Antibiotics are not effective against viruses such as the common cold or influenza; drugs which inhibit viruses are termed antiviral drugs or antivirals rather than antibiotics.

WHO: AWaRe.

It is an online tool aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively.

The tool, known as ‘AWaRe’, classifies antibiotics into three groups:

1. **Access** — antibiotics used to treat the most common and serious infections.
2. **Watch** — antibiotics available at all times in the healthcare system.
3. **Reserve** — antibiotics to be used sparingly or preserved and used only as a last resort.

Concerns
Antibiotic resistance is already one of the biggest health risks and is estimated to kill 50 million by 2050 worldwide. The threat continues to escalate globally because more than 50 per cent of antibiotics in many countries are used inappropriately such as for treatment of viruses when they only treat bacterial infections or use of the wrong (broader spectrum) antibiotic. Besides, reduced access to effective and appropriate antibiotics in many low- and middle-income countries contributes to childhood deaths and lack of funding and implementation of national plans to tackle antimicrobial resistance.

Superbug

A superbug is usually defined as a microorganism that’s resistant to commonly used antibiotics – but not all superbugs are created equal. The number of different antibiotics to which it can be resistant determines the degree of the superbug. Some are resistant to one or two, but others can be resistant to multiple drugs. So, if a bug is resistant to every available antibiotic, it would be the superbug of all superbugs. Cases where people die from antibiotic-resistant infections are still comparatively rare, particularly in places like Australia, which doesn’t allow antibiotics to be sold without a doctor’s prescription. But around the world, the number of people dying because their infection can’t be treated by any available antibiotic is increasing. Currently, antibiotic-resistant bacteria cause 700,000 deaths worldwide each year, and a UK government review on antimicrobial resistance predicted this number could increase to 10 million by 2050.

If superbugs are allowed to spread, we may reach a point where it is too dangerous to conduct surgeries such as c-sections and transplants because of the risk of superbug infection, which would have huge implications for the health of people around the world.

What is antibiotic resistance?

Antibiotics are medicine used to treat infections caused by bacteria. Antibiotic Resistance refers to resistance developed by bacteria against antibiotics or the ability of bacteria to mutate or change so as to resist the effects of antibiotics. The more we use them, and the more we abuse them, the less
Antibiotics are unquestionably useful against bacterial infections. However, indiscriminate use has resulted in development of resistance in patients with bacterial infections thereby leading to long lasting illnesses.

Thanks to that annoying thing called evolution, bacteria are constantly adapting to counter-attack antibiotics. Antibiotic resistance is one of the most significant threats to patients’ safety. It is driven by overusing antibiotics and prescribing them inappropriately.

Negative effect:

- Antibiotic resistance causes people to be sick for longer and increases the risk of death.
- Resistance also increases the cost of health care with lengthier stays in hospital and more intensive care required.
- Antibiotic-resistant bacteria increase the chance and severity of illness and ultimately death.
- Few new antibiotics are being developed, which is exacerbating the situation as more antibiotic resistant bacteria adapts and arises.

Therefore, rational use of antibiotics is essential in order to minimize antibiotic resistance.

Antimicrobial Resistance in India

AMR is of particular concern in developing nations, including India, where the burden of infectious disease is high and healthcare spending is low. The country has among the highest bacterial disease burden in the world. Antibiotics, therefore, have a critical role in limiting morbidity and mortality in the country. The 2015 WHO multi-country survey revealed widespread public misunderstanding about antibiotic usage and resistance.

- AMR has huge implications for India. There is a need to have in place a good comprehensive AMR National Action Plan in line with the Global AMR action plan.
- For resistance, this means cutting the misuse of antibiotics in humans and
farm animals, fighting environmental pollution, improving infection control in hospitals, and boosting surveillance.

- While most of these goals need government intervention, individuals have a critical part to play too.
- This is especially true for India, which faces a unique predicament when it comes to restricting the sale of antibiotics — some Indians use too few antibiotics, while others use too many.
- Many of the 410,000 Indian children who die of pneumonia each year do not get the antibiotics they need, while others misuse drugs, buying them without prescription and taking them for viral illnesses like influenza.
- Sometimes this irrational use is driven by quacks. But just as often, qualified doctors add to the problem by yielding to pressure from patients or drug-makers.

This tussle — between increasing antibiotic use among those who really need them, and decreasing misuse among the irresponsible — has kept India from imposing blanket bans on the non-prescription sale of these drugs.

When policymakers did propose such a ban in 2011, it was met with strong opposition. Instead, India turned to fine-edged tools such as the Schedule H1, a list of 24 critical antibiotics such as cephalosporins and carbapenems, whose sale is tightly controlled.

**How can we prevent antibiotic resistant infections?**

It is important to understand that, although they are very useful drugs, antibiotics designed for bacterial infections are not useful for viral infections such as a cold, cough, or the flu.

- Before taking any antibiotic ask the physician if it is required and beneficial.
- Always take antibiotics as prescribed by the physician.
- Take antibiotics to treat only bacterial infections.
- Do not take antibiotics in viral infections such as cold, cough, or flu.
- Do not repeat the same antibiotic for the next time you get sick.
- Do not stop antibiotic before complete prescribed course of treatment.
- Do not skip doses.
- Do not copy the antibiotic with the same diseases which is prescribed for someone else.

**Why is antibiotic resistance one of the biggest health challenges:-**

- Antimicrobial resistance will result in difficulty in controlling the diseases
in the community and ineffective delivery of the health care services.  
- Neonates and the elderly both are more prone to infections and are vulnerable.  
- A very significant part of out-of-pocket expenditure on health care is on medicines. The ineffective drugs and/or second line expensive antibiotics is pushing the treatment costs higher.  
- WHO has published its first ever list of antibiotic-resistant ‘priority pathogens’ a catalogue of 12 families of bacteria that pose the greatest threat to human health and most of these 12 superbugs have presence in India.  
- Antibiotic resistance is emerging as a threat to the successful treatment of infectious diseases, organ transplantation, cancer chemotherapy and major surgeries.  
- Even when the process happens naturally, it is accelerated by the wrong use of antibiotics in humans and animals, and the effectiveness of these in the treatment of diseases such as pneumonia, tuberculosis and gonorrhea has diminished.  
- Treating fatal diseases like sepsis, pneumonia and tuberculosis (TB) are becoming tough because microbes that cause these diseases are increasingly becoming resistant to fluoroquinolones.

Excessive use of medicines in poultry:-

Unregulated sale of the drugs for human or animal use accessed without prescription or diagnosis has led to unchecked consumption and misuse. Of tested birds destined for meat consumption, 87% had the super germs based on a study published in the journal Environmental Health Perspectives.

The mutated robust microbe strain can invade the body and cause diseases that are difficult to treat. Even mild infections require stronger dosage. Annual healthcare cost due to antibiotic resistance is estimated to be as high as $20 billion, with an additional productivity loss of up to $35 billion in the US.

Way forward

Poultry:- Ban the use of antibiotics for growth promotion and mass disease prevention. It should only be used to cure the sick animals based on prescription of veterinarians. There is a need to introduce a labelling system wherein poultry raised without use of antibiotics should be labelled through reliable certified schemes to facilitate consumer choice.
Rationalizing antibiotic use to limit antibiotic resistance in India. Improving regulation of drug production and sale. Encouraging behavior change among doctors and patients are of immediate priority.

Regulation of the medical sector, particularly in the prescription of medicines. Improved management of the health care delivery systems, both public and private, will minimize conditions favourable for the development of drug resistance.

Improved awareness of antimicrobial resistance through effective communication. WHO’s World Antibiotic Awareness Week is one such event. Reducing the incidence of infection through effective infection prevention and control. As stated by WHO, making infection prevention and hand hygiene a national policy priority.

Discourage non-therapeutic use of antimicrobial agents in veterinary, agriculture and fishery practices as growth-promoting agents. Promoting investments for antimicrobial resistance activities, research and innovations. Strengthening India’s commitment and collaborations on antimicrobial resistance at international, national and sub-national levels. Regulate the release of antibiotic waste from pharmaceutical production facilities and monitoring antibiotic residues in wastewater.

Source: WEB

Antibiotic Use in Dairy Sector

GS-III | 31 July, 2020

**Antibiotic Use in Dairy Sector**

GS-PAPER-3 Health (Mains)

Recently, the *Centre for Science and Environment (CSE) held an online meeting on antibiotic use in the dairy sector*. The meeting was attended by experts from the Food Safety and Standards Authority of India (FSSAI), the National Dairy Development Board (NDDB), the World Health
Organization (WHO), the Department of Animal Husbandry and Dairying (under the Ministry of Fisheries, Animal Husbandry and Dairying), the Central Drugs Standard Control Organisation, (CDSCO) etc. The meeting highlighted that the milk sold directly to consumers and the processed milk sold in packets are not tested and stay largely unchecked for antibiotic residues.

- India is the world's largest milk producer, and it also forms an integral part of Indian diets, especially of children's.
- It produced 188 million tonnes (MT) of milk in 2018-19.
- Urban areas consume 52% of it and the unorganised sector, comprising milkmen and contractors, caters to 60% of this consumer base.
- The remaining demand is met by dairy cooperatives and private dairies which represent the organised sector.

Concerns

Inadequate Focus on Testing: There is an inadequate focus on testing for antibiotic residues in the milk collected by State federations, which process it and sell it as packaged milk.

- Extensive Misuse: Antibiotics are extensively misused in the dairy sector. Such chemical-intensive food leads to antibiotic resistance.
- No Professional Help: Farmers often inject animals on their own judgment of signs and symptoms of a disease without any veterinary supervision.
- Indiscriminate Usage: Dairy farmers indiscriminately use antibiotics for diseases such as mastitis (infection/inflammation of the udder) which is a common ailment in dairy animals.
- The antibodies used by them often include Critically Important Antibiotics (CIAs) for humans.
- The WHO has warned that the CIAs should be preserved in view of the growing crisis of antibiotic resistance.
- Farmers often sell milk while the animal is under treatment, which increases the chances of antibiotic residues.

Easy Availability: The antibiotics are easily available without the prescription of a registered veterinarian and stocked at farms.

Source: TH
Ammonia in Yamuna

GS-PAPER-3 Environment Pollution (PT-MAINS)

Recently, high levels (around 3 parts per million) of ammonia in the Yamuna river has been detected in Delhi which led to the disruption of water supply in Delhi. As per the Bureau of Indian Standards (BIS), the acceptable maximum limit of ammonia in drinking water is 0.5 parts per million (ppm)

Ammonia:

- Its chemical formula is NH₃.
- It is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
- It occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents, contamination by sewage or through agricultural runoff.

Effect of High Level of Ammonia:

Ammonia reduces the amount of oxygen in water as it is transformed to oxidised forms of nitrogen. Hence, it also increases Biochemical oxygen demand (BOD). If the concentration of ammonia in water is above 1 ppm it is toxic to fishes. In humans, long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs.

Treatment:
Mixing of freshwater with ammonia polluted water.

Chlorination: Chlorination is the process of adding chlorine or chlorine compounds such as sodium hypochlorite to water.

This method is used to kill certain bacteria and other microbes in tap water. However, chlorine is highly toxic.

Long Term Solution: Stringent implementation of guidelines against dumping harmful waste into the river. Making sure untreated sewage does not enter the
Ecological flow is the minimum amount of water that should flow throughout the river at all times to sustain underwater and estuarine ecosystems and human livelihoods, and for self-regulation.

Yamuna

- The river Yamuna, a major tributary of river Ganges, originates from the Yamunotri glacier near Bandarpounch peaks in the Mussoorie range of the lower Himalayas in Uttarkashi district of Uttarakhand.
- It meets the Ganges at the Sangam in Prayagraj, Uttar Pradesh after flowing through Uttarakhand, Himachal Pradesh, Haryana and Delhi. Important Dam: Lakhwar-Vyasi Dam (Uttarakhand), Tajewala Barrage Dam (Haryana) etc.
- Important Tributaries: Chambal, Sindh, Betwa and Ken.

Source: IE

India Report on Digital Education, 2020

GS-paper-3 Education (Mains)

Recently, the Ministry of Human Resource Development (MHRD) has launched India Report on Digital Education, 2020. Recently the MHRD has been renamed as the Ministry of Education.

The Report:

It has been prepared by the digital education division of MHRD in consultation with education departments of the states and union territories.

It elaborates the innovative methods adopted by the MHRD, for ensuring accessible and inclusive education to children at home and reducing learning gaps during the Covid-19 pandemic.
MHRD Initiatives:

It has initiated many projects to assist teachers, scholars and students in their pursuit of learning like DIKSHA platform, Swayam Prabha TV Channel, On Air - Shiksha Vani, e-PathShala and telecast through TV channels.

It also released guidelines on digital education called 'PRAGYATA'.

State Initiatives:

States and Union Territories have provided digital education at the doorstep of the students. Some of them are:

- Social Media Interface for Learning Engagement (SMILE) in Rajasthan.
- Project Home Classes in Jammu.
- Padhai Tunhar Duvaar (Education at your doorstep) in Chhattisgarh.
- Unnayan Initiatives in Bihar.
- Mission Buniyaad in NCT of Delhi.
- Kerala’s own educational TV channel (KITE VICTERS).
- E-scholar portal as well as free online courses for teachers in Meghalaya.

They used social media tools like WhatsApp Group, Online classes through YouTube channel and Google meet to connect to the students. Some of the states/UTs like Lakshadweep, Nagaland and Jammu & Kashmir have also distributed tablets, DVDs and pendrives, equipped with e-contents to students.

They have also distributed textbooks at children’s doorsteps to ensure inclusive learning in remote areas where internet connectivity and electricity is poor. Several states have also focussed on the mental well-being of the children e.g Delhi conducted happiness classes. MHRD has also launched the 'Manodarpan' initiative, which aims to provide psychosocial support to students, family members and teachers for their mental health and well-being during the times of Covid-19.

Conclusion

The report will serve the purpose of cross-learning, adapting and adopting best practices across the country. While the education is moving towards blended learning through online and offline mode, it shall be the endeavour of all the stakeholders in the field of education to ensure that no student is left behind for
Protesting is a Fundamental Right

GS-Paper-2 International organisation (PT-MAINS)

Recently, the United Nations (UN) Human Rights Committee has reaffirmed that protesting peacefully, online or in person, is a fundamental human right. This statement has come in the backdrop of increasing demonstrations over issues like political rights and racial justice.

UN Human Rights Committee: It is tasked with monitoring how countries implement the International Covenant on Civil and Political Rights (ICCPR) 1976, which under Article 21 guarantees the right to peaceful assembly.

Latest Interpretation of the Right to Peaceful Assembly

Fundamental Human Right for People: To gather to celebrate or to air grievances in public and in private spaces, outdoors, indoors and online is a fundamental human right.

Protesters: Everyone, including children, foreign nationals, women, migrant workers, asylum seekers and refugees, can exercise the right of peaceful assembly.

Protection: Protesters have the right to wear masks or hoods to cover their face and that Governments should not collect personal data to harass or intimidate participants.

Role of Journalists and Human Rights Observers: They have the right to monitor and document any assembly, including violent and unlawful ones.

Government Obligations: Governments could not prohibit protests by
making “generalised references to public order or public safety, or an unspecified risk of potential violence”. Governments cannot block internet networks or close down any website because of their roles in organising or soliciting a peaceful assembly.

Significance

The Committee's interpretation will be important guidance for judges in national and regional courts around the world, as it now forms part of what is known as ‘soft law’.

The interpretation is a form of legal advice (not mandatory) from the Committee that monitors the International Covenant on Civil and Political Rights (ICCPR) 1976.

Indian Scenario:

India is a state party to the International Covenant on Civil and Political Rights (ICCPR).

The right to protest, to publicly question and force the government to answer, is a fundamental political right of the people that flows directly from a democratic reading of Article 19 of the Constitution of India.

Article 19 (1) (a) states that all citizens shall have the right to freedom of speech and expression.

Article 19 (1) (b) states that all citizens shall have the right to assemble peaceably and without arms.

However, the State can impose reasonable restrictions on the exercise of right of assembly on two grounds, namely, sovereignty and integrity of India and public order including the maintenance of traffic in the area concerned.

Further, Indian courts have reiterated that the right to protest is a fundamental right (Ramlila Maidan Incident v. Home Secretary, Union Of India & Ors. case -2012).

International Covenant on Civil and Political Rights

- The ICCPR is a key international human rights treaty, providing a range of
The ICCPR, together with the *Universal Declaration of Human Rights* and the *International Covenant on Economic Social and Cultural Rights*, are considered the *International Bill of Human Rights*. The Bill influences the decisions and actions of Government, State and Non-State actors to make economic, social and cultural rights a top-priority in the formation and implementation of national, regional and international policy and law.

The ICCPR obligates countries that have ratified the treaty to **protect and preserve basic human rights**, such as: the right to life and human dignity; equality before the law; freedom of speech, assembly, and association; religious freedom and privacy; freedom from torture, ill-treatment, and arbitrary detention; gender equality; the right to a fair trial; right family life and family unity; and minority rights.

- The Covenant **compels governments** to take administrative, judicial, and legislative measures in order to protect the rights enshrined in the treaty and to provide an effective remedy.

- The Covenant was adopted by the UN General Assembly in 1966 and came into force in 1976. **173 countries including India** have ratified the Covenant.

Source: IE

---

**AllIB and India**

**GS-Paper-2 International organisation (PT-MAINS)**

**Jin Liqun** has been **re-elected as the President of the China-based Asian Infrastructure Investment Bank (AllIB)** for a second five-year term.

- The President stated that the **bank would remain an “apolitical institution”** and continue to back projects in India.
- The management will look at the proposed projects from the **economic and**...
India and AIIB:

- India was among the AIIB's 57 founding members in 2016.
- It is also its second-largest shareholder (with 7.62% voting shares) after China (26.06%).
- It has received USD 4.35 billion from the Bank.
- This is the highest of any country, with the bank so far approving loans of USD 19.6 billion to support 87 projects in 24 countries. Turkey is second with USD 1.95 billion.
- AIIB has approved financing projects in India in a host of sectors like energy, transport and water including the Bangalore metro rail project (USD 335 million), Gujarat rural roads project (USD 329 million) and Phase 3 of the Mumbai urban transport project (USD 500 million).
- In a recent virtual meeting, India said that it expects AIIB to introduce new financing instruments, provide financing for social infrastructure and to integrate development of climate resilient and sustainable energy access infrastructure into AIIB’s recovery response to the Covid-19 crisis.
- This implies that India is unlikely to alter its engagement with the China-led Asian Infrastructure Investment Bank (AIIB), despite a host of offensive measures announced recently to reduce its trade and investment links with China.

Chinese Angle:


USD 750 million loan was approved two days after the clash in Galwan Valley in Ladakh along the India-China border.

It has supported several projects under the Belt and Road Initiative (BRI) framework, but is not formally linked to the plan.

India has concerns over the China-Pakistan Economic Corridor - a part of the BRI.
The AIIB is a multilateral development bank with a mission to improve social and economic outcomes in Asia. Headquartered in Beijing (China), it began operations in January 2016 and has now grown to 103 approved members worldwide.

India should continue to engage with AIIB as it will be able to access resources for the financing of national and cross-border infrastructure projects from the Bank. AIIB is also significant as the World Bank is continued to be dominated by the USA while Japan has more influence over Asian Development Bank (ADB). Further, India needs to ensure that its own interests are served by its membership very explicitly. It should make sure that AIIB doesn’t end up becoming a tool of Chinese geopolitical agenda.

Source: TH