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Basic Dimensions of India's Nuclear Liability Law & Status of India's Nuclear Business

India's Action in Sudan & Its
Strategy for Broader Interests
in Africa

Rationale of the Recent Direction
by the Supreme Court Regarding
Stalling of the Bill by the Governors

Recent Amendments in Money
Laundering Laws in India & Need
For Some Other Amendments

Effectiveness of the Draft National
Electricity Plan in Energy Efficiency
& Capacity Building

Significance of the Recent Decision
of the Supreme Court in the Context
of Eco-Sensitive Zone

Strategy to Deal with Naxalite
Attacks in India

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Vinay Kumar Singh
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Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly to the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the needs of mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on national, international, environment, ecology, art and culture, science and technology, economic issues.

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Best wishes.



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Effectiveness of the Draft National Electricity Plan in Energy Efficiency & Capacity Building

“As the saying goes, the Stone Age did not end because we ran out of stones; we transitioned to better solutions. The same opportunity lies before us with energy efficiency and clean energy.” - Steven Chu, Nobel Laureate and Former US Secretary of State.

Draft National Electricity Plan:

- Keeping in mind the immense role and importance of Energy Efficiency in containing the ill effects of climate change, the Union Ministry of Power has recently finalized the draft National Electricity Policy and has sought comments from the states and the Central Electricity Authority (CEA).
- As per Section 3(4) of the Electricity Act 2003, Central Electricity Authority (CEA) is required to prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such Plan once in five years. The Government of India (GoI) formulated the NEP as a guide for the augmentation of the power sector and optimal utilization of available resources. First devised in 2005, the NEP is being revisited after 16 years to consider the paradigm change in the climate, technological enhancements, and the burgeoning electricity needs of the nation.

Features of the Draft National Electricity Plan

- The new draft policy comes in the backdrop of the government's energy transition plans, wherein the government plans to achieve an installed renewable energy capacity of 500 GW by 2030 and net-zero carbon neutrality by 2070. The vision for the new policy would be: “A financially viable and environmentally sustainable power sector furthering energy security and providing reliable 24x7 power at a reasonable price.”
- Further, the objectives of the policy are Decarbonization & Energy Transition, a Resilient and Flexible Grid, Financial Viability of the power sector, and a Consumer-Centric Approach. The draft NEP 2021 aims to increase energy supply, ensure widespread access to electricity, and enhance energy efficiency in order to meet climate change goals and achieve sustainable development.
- With India's energy demand outpacing its supply, there is undoubtedly a need to bolster energy generation, transmission, and distribution. In this regard, NEP identifies thermal power, hydropower, nuclear energy, and renewables as potential sources of augmenting energy generation.
- Greater access to energy play a catalytic role in the socio-economic development of the nation. To promote universal access to energy, the NEP sets out a mechanism for distributed generation of electricity through the installation of rooftop solar photovoltaic systems, in areas where it is

not feasible to provide electricity through the main grid, by integrating such systems with microgrids.

- Further, in a bid to advance the generation of renewable electricity, the NEP also proposes that such distributed generation systems be installed in public offices.
- The NEP provides a broad roadmap that will lead India towards sustainable development. It makes a strong case in favour of the indigenization of raw materials, promoting electric vehicles, addressing cyber security risks, and having a proper disaster management framework. The NEP presents a picture of India's outlook toward becoming a self-sufficient energy economy.



Energy Independent India by 2047:

- On the 75th Independence Day of the country, the Prime Minister of India, Narendra Modi announced to make India an energy independent nation by the completion of 100 years of independence (by 2047). The stated goal includes a gas-based economy, a network of compressed natural gas (LNG network), piped natural gas, and a green hydrogen policy to make the country a hub for hydrogen production, with a focus on blending of petrol with ethanol. The Indian government is also working on the concept of hybrid energy. According to a study by Lawrence Berkeley National Laboratory of the US Department of Energy, India may achieve energy independence by 2047, when it will celebrate 100 years of independence.
- The study titled “Pathways to Atmanirbhar Bharat” also said that India's energy infrastructure requires an investment of \$3 trillion in the coming decades. Achieving energy independence would generate significant economic, environmental and energy benefits for India, including \$2.5 trillion in consumer savings by 2047, reducing fossil fuel import spending by 90 percent, or \$240 billion per year, increasing India's industrial footprint globally enhancing competition, and enabling its net-zero commitment ahead of schedule. This is why work is also being done in the direction of moving towards clean technologies like EV and green steel manufacturing.

Energy Efficiency Initiatives in India:

- Energy efficiency simply means using less energy to perform the same task – that is, eliminating energy waste. Energy efficiency brings a variety of benefits: reducing greenhouse gas emissions, reducing demand for energy imports, and lowering our costs on a household and economy-wide level. While renewable energy technologies also help accomplish these objectives, improving

energy efficiency is the cheapest – and often the most immediate way to reduce the use of fossil fuels. There are enormous opportunities for efficiency improvements in every sector of the economy, whether it is buildings, transportation, industry, or energy generation.

- India stands at the forefront of addressing the global challenge of climate change and has committed to ambitious Nationally Determined Contributions (NDCs) of reducing emission intensity by 45 % in 2030 against the levels of the year 2005.
- India is one of the very few countries on track to fulfilling its declared voluntary mitigation action up to 2020. As per the proposed NDCs, India is committed to achieving 500GW of non-fossil fuel electric power installed capacity by 2030, with the help of the transfer of technology and low-cost international finance including from the Green Climate Fund (GCF).
- The Government of India set up the Bureau of Energy Efficiency (BEE) on 1st March 2002 under the provisions of the Energy Conservation (EC) Act, 2001. As a quasi-regulatory body, BEE helps in developing policies and strategies that emphasize self-regulation and market principles to achieve the primary objective of reducing the energy intensity of the economy.

Objectives of the EC Act, 2001:

- Promote faster adoption of energy efficiency and conservation through regulation, participation, and cost-effective measures
- India has assumed a leadership role in the promotion of energy efficiency and conservation towards addressing the global issue of climate change. The government of India has undertaken a two-pronged approach to cater to the energy demand of its citizens while ensuring minimum growth in CO₂ emissions so that global emissions do not lead to irreversible damage to the ecosystem.
- On the generation side, the Government is promoting greater use of renewable in the energy mix mainly through solar and wind and at the same time shifting towards ultra-supercritical and supercritical technologies for coal-based power plants.
- On the demand side, the government have launched various schemes/programs targeted towards improving efficiency under the overall ambit of the Energy Conservation Act 2001
- Energy efficiency is one of the key pillars in the transition of the economy towards clean energy. India has progressed towards better energy efficiency in the past couple of years, by incorporating measures such as Energy Efficiency Building Code, National Mission

for Enhanced Energy Efficiency, and fuel consumption standards for the transport sector.

Role of Energy Efficiency in Climate Change:

- Energy efficiency delivers several environmental benefits. It notably reduces GHG emissions, both direct emissions from fossil fuel combustion or consumption, and indirect emissions reductions from electricity generation.
- Energy efficiency is one of the key ways the world can meet energy service demand with lower energy use, which is crucial for the goal of achieving the Intergovernmental Panel for Climate Change's emission reduction targets.
- Energy efficiency represents more than 40% of the emissions abatement needed by 2040, according to the IEA Sustainable Development Scenario. Maintaining global growth and supporting development in emerging economies implies a sharp rise in consumption habits. Meeting this need requires a transformation of the existing energy system. Energy efficiency is the “first fuel” which can support net zero energy goals at lower costs, and deliver a wide array of benefits for society.
- Further, digital technologies are transforming the energy landscape and creating a new generation of efficiency solutions. New digital solutions can limit production and distribution losses. In recent years, energy management systems in buildings have also become smarter, integrating external data sources, like weather conditions, traffic patterns, and more. Using artificial intelligence, these advanced systems can forecast energy demand and improve response capabilities.

Way Forward:

- Power infrastructure is one of the most critical components for the prosperity and economic growth of the country. The development of requisite power infrastructure is key for the sustained growth of the Indian economy. With the increase in economic activity, the demand for power is also increasing.
- The draft New Electricity Plan has its heart in the right place, but it needs to support the harmonious amendments to the National Tariff Policy and the Electricity Act, 2003, for India becoming a self-sufficient energy economy.
- Prime Minister Shri Narendra Modi in a speech stated that “Small acts can drive big reforms. What appears minor can actually be vital and fundamental. Generating 20,000 MW of power attracts a lot of attention. That is important. At the same time, 20,000 MW of power can be saved through a people's movement for energy efficiency. The second is more difficult but is as important as the first. Small indeed, is beautiful.”

India's Action in Sudan & Its Strategy for Broader Interests in Africa

When a dispute starts between the army and the paramilitary force in a country, then what will be the security situation in that country can be guessed. When there is a struggle between the military and paramilitary forces in an African country to control the power of the entire country, it seriously affects peace, security and stability. Power control, ethnic conflict, and civil war situations in many countries of Africa have been affecting the entire African continent from time to time. These countries have been grappling with the problems of democratic elections versus military government and civilian government versus authoritarian government and this has given a boost to genocide and ethnic cleansing. Something similar has happened again recently in the African country Sudan. It is also necessary from the point of view of development

Country Engulfed in Conflict Between Sudan's Army and Paramilitary Forces:

- Conflicts between the Sudanese army and Rapid Support Forces (RSF) have fueled unrest and instability in Sudan for a while now. Both sides claimed control of Khartoum's airport and other important locations in the city. The conflict began with a demand for the transfer of power to a civilian government in Sudan. After the coup in the country in October 2021, there has been a continuous confrontation between the interim government and the army.
- The army is running Sudan through the Sovereign Council. It is headed by General of the Army Abdel Fateh al-Burhan. The army supporting General Al Burhan and the other leader of the country i.e. RSF chief Mohammad Hamdan Dagalo, none of them is ready to bow down on the issue of control of power. In Sudan, there is a plan to merge the paramilitary force Rapid Support Force with the army, which has also been in dispute for years. The chief of the paramilitary Rapid Support Force says that their fight will continue till all the army bases are captured. While ruling out any possibility of talks, the army has said that its operations will continue till the dissolution of the paramilitary force RSF. Thus, the recent fierce conflict between the army and paramilitary forces in Sudan has once again started affecting the whole country.
- The presence of such a strong paramilitary security force, apart from the army, in Sudan has been considered the reason for the instability of Sudan. The Rapid Support Force

had its origins in Sudan's infamous 'Janjaweed' rebel organization that fought brutally against the rebels in Darfur. During that time it was accused of mass ethnic violence.

- Until recently the current head of Sudan's military and the country's second most powerful leader the head of the RSF, were allies who worked together to oust Sudan's President Omar al-Bashir in 2019 and had an instrumental role in a military coup in 2021. However, tensions arose during negotiations to integrate the RSF into the country's military as part of a plan to restore civilian rule in the country, which has sparked the civil war in Sudan. It is noteworthy that the head of the Rapid Support Force is currently the deputy head of Sudan's ruling Sovereign Council. It was created by Omar al-Bashir in the early 2000s as a Janjaweed militia before the Rapid Support Force was created by former Sudanese President Omar al-Bashir in 2013. It was used by Omar al-Bashir to suppress rebellions against his authority in the Darfur region. Repressive violence in Darfur has killed nearly 300,000 people and displaced 2.5 million since 2000.
- The International Criminal Court also tried to prosecute Sudan's government officials and administration on the basis of the violence in Darfur, accusing them of crimes against humanity, war crimes and crimes against prisoners of war, but the President of Sudan refused to accept the jurisdiction of the International Criminal Court. Over time, the Janjaweed militia grew stronger and was converted into the Rapid Support Force in 2013 and began to be used by the President of Sudan as border guards.
- Since 2015, the paramilitary Rapid Support Force was been sent to the military operation against Yemen (action against the Houthi rebels) along with the army of Sudan, Saudi Arabia and the United Arab Emirates. It was only in 2015 that the Rapid Support Force got the status of "Regular Force" in Sudan. In 2017, a law was made in Sudan to make the Rapid Support Force an independent security force. Due to this, the political status of this paramilitary force and its chief's ambitions grew and it was determined that it would not back down even if it meant fighting for political supremacy.
- Apart from the Darfur region, soldiers of this paramilitary force were also deployed to quell anti-establishment protests in the areas of Blue Nile and states such as South Kordofan. It was

accused of serious human rights violations in these areas. Human Rights Watch even gave these soldiers the nickname “Men with No Mercy”. As the role of the Rapid Support Force and its chief Dagalo in Sudan’s security affairs increased too much, the Sudanese army and its chief began to fear that the Rapid Support Force might take over all security duties and establish complete control over the country’s governance. This is the reason why fierce fighting broke out between this paramilitary force and the Sudanese army in the month of April, in which hundreds of people were killed.



in the African region namely Nigeria, Angola, Algeria, Egypt, Equatorial Guinea, Cameroon, Chad, Ghana and Cote d'Ivoire. These African countries account for about 15 per cent or 34 million tonnes of India's total oil imports. For trading partnership with these countries, stability in Sudan is necessary. As warring groups in Sudan agreed to a 72-hour truce brokered by the US-Saudi Arabia, several countries rushed to evacuate their citizens from the conflict zones. The Indian Embassy had advised Indian citizens to stay in their homes with caution. There are about 4,000 Indians

in Sudan. In the context of Sudan violence, Foreign Minister S Jaishankar said that the current situation in Khartoum is very worrying and India is monitoring it. There was also news of the death of an Indian in Khartoum, the capital of violence-hit Sudan. The Indian Embassy in Khartoum said Albert Augustine, who was working with the Dal Group in Sudan, died of bullet injuries.

➤ About 3862 Indians trapped in the war zone were evacuated by the Government of India in violence-hit Sudan under “Operation Kaveri”. People were airlifted from Port Sudan to Jeddah in Saudi

Arabia through 17 Indian Air Force flights and 5 Indian Navy ships. External Affairs Minister S. Jaishankar tweeted that This is New Delhi's second major operation after the evacuation of Indians from Ukraine, and the Sudan to bring back the citizens of our country safely. Earlier, the Government of India has also evacuated Indians from the troubled areas of Sudan through Operation Sankatmochan in 2015.

➤ Today, the world community, especially the western powers, are concerned about Sudan. There is a need to intensify diplomacy to make effective efforts to establish peace in the Sudan. Since Sudan is also a member of OPEC and a petroleum exporting country, its stability is also necessary for the stability and security of the African continent and it is also necessary from the point of view of development of the global economy.

Indian Interest in Sudan:

- At present, sea route is the main medium of import-export of goods between most of the countries of the world including India. That's why the importance of securing the sea trade route is continuously increasing. Considering the ongoing political developments in Sudan in the context of India's interests, it is geographically very important for India's trade relations due to the Suez Canal connecting the Mediterranean Sea and the Indian Ocean. Sudan, along with Nigeria and Angola, is integral part of India's policy of diversifying energy sources. India's political and diplomatic support to Sudan has allowed it to make significant inroads, particularly in the energy sector. India is seen by Sudan as an important partner to overcome its Western isolation and growing dominance of China.
- India has trade relations with several countries

Strategy to Deal with Naxalite Attacks in India

The Government of India has put the Union Home Ministry on active mode to make the country free from Left Wing Extremism i.e. Naxalism and Maoism. Effective measures were also taken and the Ministry of Home Affairs started claiming that in the last one year many areas have been freed from Naxalism. Amidst these claims, a serious Naxalite attack took place in Dantewada, Chhattisgarh, in which 11 soldiers were martyred. When the soldiers of the District Reserve Guard Force were returning from an operation, the Maoists blew up their vehicle with an IED. Naxalites had carried out this cowardly attack on a vehicle full of jawans in Palnar area of Arampur. The investigation of NIA probing the attack on DRG Group in Dantewada, Chhattisgarh reached Bihar Jharkhand in this connection. Central agency NIA has started search operation at more than 14 locations in these two states. Search operations have targeted people associated with CPI (Maoist) or their supporters. A statement issued by the NIA said that an FIR was registered on 25 April 2022. It was found that the already banned CPI (Maoist) is expanding its organization in the country. Apart from Chhattisgarh, this expansion is also being done in Bihar and Jharkhand. For this, the people associated with the organization are trying to trick the youth. Members of the Politburo and Central Committee of the organization have also been nominated in this regard.

The creation of Maoism-free India have now been taken up by the central government as the prime agenda because the central government believes that left-wing extremism is now at the last stage in the country. Thus, if a decisive attack is made on them at this time by the security forces, Central Armed Police Forces, then the day is not far when the country will be free from Naxalite and Maoist violence.

It is due to the security strategy of the Government of India that today Left Wing Extremism has been confined to only 46 districts in 10 states of the country. Before the present Central Government came to power, 126 districts of the country were under the Left Wing Extremism Affected Areas or Red Corridor, but at present, the Home Ministry has carried out such security operations this year to boost the morale of the Central Armed Forces. There has been a steady decline in the geographical spread of Left Wing Extremism in the country. This has been recently confirmed by the Ministry of Home Affairs of the country. Security forces have won a decisive victory in the ongoing war against Left Wing Extremism across the country.

As a result of Prime Minister Narendra Modi's policy of zero tolerance against Left Wing Extremism,

for the first time, by entering the extremely difficult areas of Budha Pahar and Chakrabandha and Bhimbandh in Bihar, on the border of Chhattisgarh and Jharkhand, the Maoists were successfully removed from their stronghold and permanent camps of security forces were established there. All these areas were under strongholds of top Maoists and a large quantity of arms, ammunition, foreign grenades, aero bombs and IEDs have been recovered by the security forces from these places. This is certainly a great achievement and reflects the commitment and prowess as well as the upbeat mindset of the Central Security Forces.

In the year 2022, in the fight against Left Wing Extremists, security forces have achieved unprecedented success in Operation Octopus, Operation Double Bull, and Operation Chakrabandha. 7 Maoists were killed in Chhattisgarh and 436 were either arrested or surrendered, while in Jharkhand 4 Maoists were killed and 120 of them were either arrested or surrendered. Further in Bihar, 36 Maoists were arrested or surrendered and in Madhya Pradesh, 3 Maoists have been killed by the security forces. This success becomes even more important because many of the killed Maoists had bounties on their heads. For instance, Mithilesh Mahato had a bounty of one crore.

Anti-Left Wing Extremism operations reaching the final stage is evident by a 39 percent reduction in Left Wing Extremism-related violence incidents and a 26 percent reduction in casualties by security forces in 2022 as compared to 2018. The number of casualty-struck citizens has decreased by 44 percent while the number of districts reporting violence has decreased by 24 percent and the number of these districts has reduced to just 46 in 2022.

Current Status of Left Wing Extremism in the Country:

➤ Left Wing Extremism includes Naxalism and Maoism and the violence associated with it. According to the latest data from the Ministry of Home Affairs, Government of India, 46 districts in 10 states were affected by Left Wing Extremism and its associated violence. In 2010, 96 districts in 10 Indian states were affected by it. There has been a significant decline in Left Wing Extremism since the last decade. In 2021, 505 cases of militancy were reported, which is 77 percent less as compared to 2258 cases in 2009. In 2021, 147 civilians and security forces have died in militant incidents, which is 85 percent less than the figure of 1005 deaths in 2010. Last year, while sharing the figure of reduction in the number of Left Wing Extremism

affected districts in the Parliament, the Central Government also informed that the number of Left Wing Extremism affected districts covered under the Security Related Expenditure Scheme has come down from 90 in 2018 to 70 in 2021. Before 2018, the number of Naxalism and Maoist affected districts covered under this scheme was 126.

- The reduction in the number of districts affected by Leftist extremism is an indicator that the programs of inclusive development are being made successful in such areas by the Central Government, but from time to time left wing extremism has emerged in many other new areas due to various reasons. Due to this, the Ministry of Home Affairs has to include new districts in the list of Left Wing Extremism affected districts. On the other hand, the districts where there is a big reduction in Left Wing Extremism violence or its effect is seen to be zero, then the Ministry of Home Affairs also excludes it from the list of Left Wing Extremism affected areas. As in the year 2018, the Ministry of Home Affairs excluded 44 districts from the list, however, along with this 8 new districts had to be included.

Front Organization as a Challenge:

- The Ministry of Home Affairs, Government of India, under the leadership of the Home Minister, held a review meeting with the Chief Ministers of various states on the issue of Left Wing Extremism last year. The major conclusion that came out during the meeting was that in the 10 states where there is Left Wing Extremism, Naxalism and Maoism have gained strength due to the role of Maoists and presence of front organisations. Thus, in the review meeting it has been talked about taking strict action against front organizations. State governments have been instructed to take action against front organizations under their respective laws. The central government can deal with front organizations under the Unlawful Activities Prevention Act, 1967.

Maoism and Naxalism as a Challenge:

- Maoism is an ideology that regards the system of rule established by law as the main instrument of injustice, exploitation, and oppression, and therefore aims at the elimination of everything that is a symbol of power. It focuses on destroying government funded schools, hospitals, and centres of security forces. Along with this, Maoism has traditionally not believed in the parliamentary system of government. That is why it has been boycotting the elections. Its

modus operandi includes preventing elections from being held in Left Wing Extremism affected areas, kidnapping and killing election personnel and security forces personnel.

- On the other hand, Naxalism is basically considered to be a product of the country's socio-economic disparity, inadequate land reforms, economic backwardness of various areas and displacement of tribal people due to development projects. After the formation of CPI(M) in 2004, Naxalites were also largely influenced by Maoist modus operandi and similarities were seen in their modus operandi.



About Front Organizations:

Front organizations play an important role in fulfilling the objectives of Maoists and Naxalites. These organizations are by-products of the original Maoist party (CPI Maoist) which have a separate existence of their own to avoid any statutory liability. Front organizations mainly spread disinformation or misleading information about the Maoist party, recruit professional revolutionaries to promote the underground movement, arrange the necessary finance for the insurgency, train cadres in legal matters. They assist and play an important role in providing safe haven and shelter to the underground cadres. Apart from this, those working in front organizations intellectually glorify the violence inherent in the Maoist ideology. In other words, these organizations try to justify the violent bloodshed in spreading the Maoist point of view to the urban communities and the media. According to the Ministry of Home Affairs, Government of India, front organizations are present in 10 states of the country and are especially active in Andhra Pradesh and Telangana.

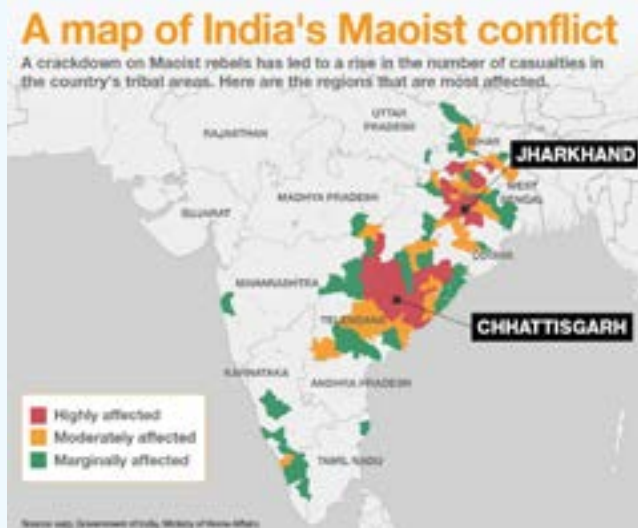
Central Government's Strategy to deal with Left-Wing Extremism:

- The Central Government is implementing a comprehensive policy to deal with Naxalism and Maoism. Under this, along with deployment of security forces in Naxal-affected areas, development works are being done. As a result, there are now only 10 states – Chhattisgarh, Jharkhand, Odisha, West Bengal, Bihar, Maharashtra, Telangana, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh – affected by Maoism, which pose a challenge to internal security. The approach of the Government of India to deal with Left Wing Extremism can be understood through the National Policy and Action Plan on Left Wing Extremism of 2015. The Ministry of Home Affairs, Government of

India has been implementing a National Policy and Action Plan to deal with Naxalism since 2015. It emphasizes 4 things which are:

- » Emphasis on security related measures as well as development works.
- » Emphasis on ensuring the rights and entitlements of local communities.
- » Reforms in the governance system.
- » Taking effective measures for Public Perception Management.

➤ At the same time, under Samadhan Scheme



of the Ministry of Home Affairs, the focus has been on efficient leadership, offensive strategy, incentive and training, effective intelligence, the standard of an action plan, effective technology, action plan of each strategy and strategy to thwart the financing of Naxalites.

- The Ministry of Home Affairs has stressed on the use of biometric enabled drones and smart guns, and trackers to trace the weapons of Left Wing Extremists to combat Left Wing Extremism. Also unique identification number for gelatine sticks and explosives has been talked about.
- The Ministry of Home Affairs has also started seriously considering the provision of at least one UAV (unmanned aerial vehicles) and mini UAVs (for Maoist areas) for CAPF battalions. There has been an emphasis on more helicopter support for counter-left-wing insurgency operations and the promotion of specially trained forces such as Greyhounds.
- In recent years, work has been actively done on providing solar lights, mobile towers with 3G connectivity and road rail connectivity in Left Wing Extremism affected areas.
- There has also been discussions on revising and

amending the Prevention of Money Laundering Act to prevent access to finance of Left Wing Extremist groups. Along with this, work is also being done on the formation of a joint task force for anti-Naxal and anti-Maoist operations, the use of effective intelligence systems, science and technology.

- Rs 6,578 crore was released from FY 2014-15 to FY 2021-22 under various schemes of the Ministry of Home Affairs to control Left Wing Extremism (LWE), this is in contrast to FY 2006-2007 to FY 2013 where only Rs 2,181 crore was released.
- For the inclusive development of Naxal-affected areas, the work of providing education, health and employment facilities has increased in the last few years. The Central Government is running many schemes in Naxalite affected areas, which include Special Infrastructure Scheme, Special Central Assistance Scheme, Road Connectivity, Skill Development Scheme, Jawahar Navodaya Vidyalaya, Eklavya Model Residential School, Mobile Connectivity Project and schemes like Economic Assistance.
- 32 Kendriya and 9 Jawahar Navodaya Vidyalayas have been opened in militancy affected areas. On the other hand, under the infrastructure scheme, the areas affected by Left Wing Extremism have been given about 1 thousand crore rupees for various projects between 2017 and 2021. In addition, 207 Eklavya residential schools have been sanctioned in Left Wing Extremism affected areas. 1,258 bank branches and 1,348 ATMs have been set up in most of the LWE affected districts. In addition, 4,903 new post offices have been opened in Left Wing Extremism affected districts.
- The Union Cabinet has also approved the upgradation of 2G mobile sites to 4G at security sites in Left Wing Extremism affected areas. The government aims to make better internet and data services possible in these areas affected by Left Wing Extremism. This meets the requirements of the Ministry of Home Affairs and the State Governments. It will also meet the communication needs of the security personnel deployed in these areas. The proposal is in line to provide mobile connectivity in rural areas. Apart from this, various e-governance services, banking services, telemedicine services, tele-education etc. services will be possible through mobile broadband in these areas.

Rationale of the Recent Direction by the Supreme Court Regarding Stalling of the Bill by the Governors

Reference:

Recently, the Supreme Court has given guidelines regarding the inaction of the Governor on the Bills.

Introduction:

- In India, there is often a dispute between the center and the states on the issue of federalism. Recently, the discretionary power of the governor and the delay in giving assent to the legislatures duly passed by the state legislatures of Punjab, Tamil Nadu, Telangana, and Kerala are being questioned. Where on one hand Telangana's Finance and Health Minister T. Harish Rao has questioned the Governor regarding the pendency of Bills for 7 months, Tamil Nadu has passed a resolution urging the President to set a deadline in this context. It may be noted that the Telangana state government has taken this issue to the Supreme Court.

Powers of the Governor in Respect of State Bills:

- Article 168 makes it clear that the legislature of the state will be constituted consisting of the assembly, the legislative council (if it is in the state), and the governor.
- According to Article 200, when a bill (not being a money bill) has been passed by the Legislative Assembly of the State or by both the Houses of the Legislature in a State having Legislative Council, it shall be presented to the Governor. It shall be then declared by the Governor, that he assents to or withholds assent to the bill or that he reserves the bill for the consideration of the President
- According to Article 201, when a Bill is reserved by the Governor for the consideration of the President, the President shall declare whether he assents to the Bill or withholds it.

Is it constitutional for the Governor to withhold his assent to a bill while exercising his discretionary powers?

- Prima facie, it is clear from the general text of Article 200 that the Governor can withhold his assent. However, if Article 200 is read with Article 154, we find that the Governor should exercise his executive powers only in accordance with the advice of the State Council of Ministers.
- Along with this, it is necessary to mention here that the President of India is also bound to follow the advice of the Union Cabinet.
- Although the discretionary powers given to the governor give him enough authority to stop the bill, here it is necessary to understand that the discretionary powers of the governor are for

emergencies and not for normal situations.

- The Supreme Court has made it clear many times that the governor should act following popular governments and that he is a nominal ruler and not a real ruler.
- In this case also, the court, referring to the provision of Article 200, said that the governors should not delay in giving assent to the legislation passed by the assembly.

Issues arising out of delay in acceptance of bills by the Governor:

Disrespect of Mandate:

- The state assembly consists of legislators elected by the public who act to pass necessary laws for the state. In this situation, the Governor's ban on those bills is an insult to the mandate.

Delay in Policy:

- Stalling a bill passed by the state legislature delays the process of decision-making. Therefore, in this situation, a problem also arises in the implementation of the policies related to the pending bill. For example, in Telangana, a bill to increase the age of medical professors is pending, which was brought because of the acute shortage of medical professors in the state.

Against the Federal Spirit:

- It is clear from the federalist nature of India that the states have been given autonomy in some matters. Therefore, banning the bills by the Governor somewhere violates the federal spirit by weakening the autonomy of the states.

Question mark on the Office of the Governor:

- If the MLAs are deliberately stopped or delayed by the Governor, then this act also tarnishes the reputation of the Governor somewhere. The Constitution of India has provided a dual role to the Governor, on one hand, he is the constitutional head of the states and on the other hand, he is also the agent of the President (Central Government). Although the Supreme Court has made it clear many times that the governors are expected to give more importance to the position of the constitutional head of the states, the orders of the central government are often followed by the governors.

Questions on the Credibility of Governments:

- Bills pending before the Governor, on the one hand, give a message of the inefficiency of the State Governments, on the other hand, they can also be indicative of the political ambition of the Central Government. Thus, this situation

questions the credibility of both the State Government and the Central Government. It may be noted that 10 Bills of the Telangana Legislature are still undecided by the Governor.

Lack of Accountable Governance:

- In case of withholding of assent to the Bill by the Governor, the responsibility of the State Governments decreases, which weakens the principles of transparency and accountability in governance.

The Decision of the Supreme Court Regarding the Holding of the Bill by the Governors:

While hearing the suit filed by the Government of Telangana, a bench of Chief Justice DY Chandrachud and Justice PS Narasimha directed that-

- The Constitution requires that a decision to return a bill to the state legislature for reconsideration should be made "sooner than later".
- The Court has drawn attention to the phrase mentioned in the first provision of Article 200, which conveys a sense of urgency in the matter of returning a Bill.
- The Court held that "The expression 'as soon as possible' contains important constitutional content and must be followed by constitutional officers, that is, it would be constitutionally improper for Governors to put on hold indefinitely their assent to Bills without conveying their decision to the House..

Justification of Supreme Court's Decision:

Constitutional Punctuality:

- The decision of the Supreme Court has attracted everyone's attention toward constitutional punctuality. Supreme Court's guidelines have clarified that if the time limit is not given in the constitution, it does not mean that the approval of the bills should be delayed, rather the constitution demands a decision very quickly and in a time-bound manner.

Time-bound governance:

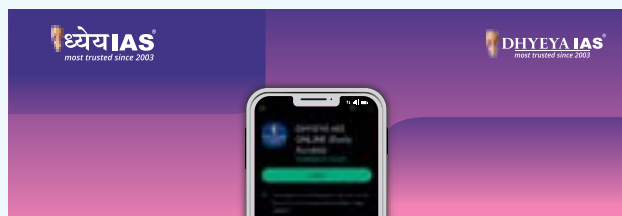
- The process of decision-making is very important in the dimensions of governance while the time limit is very important for decision-making. These guidelines of the Supreme Court will take India in the direction of time-bound good governance.

Significance of the concept of popular government:

- The direction of the Supreme Court made it clear that in a democracy, only a popular government (elected by the public) would be given importance. The nominal or constitutional head should not obstruct the functioning of the state legislature.

Conclusion:

- Article 200 does not have any clear time limit in case of consent on MLAs. In this situation, it is necessary to impose a time limit on it through constitutional amendment or judicial decision.
- Article 163 of the Indian Constitution states that the Governor will act on the aid and advice of the cabinet. This primary rule promotes conflict between the state government and the governor by promoting the discretionary powers of the governor. It is necessary to make it clear to the governor through constitutional amendment or the court that he is bound to follow the advice of the popular government.
- The dual role of the Governor is a matter of concern. On one hand, he works till the pleasure of the President, so he is responsible to the Central Government. On the other hand, he acts as the constitutional head of the states. The governor should be instructed that his second role is more important than the first.
- Dialogue between the Center and the States is very necessary to resolve such issues. Such issues should be raised and resolved in the Inter-State Council so that the governance can be run as per the constitutional provisions.
- It is necessary to increase public awareness of the standards of transparency, fairness, and timeliness of constitutional provisions. Civil society, media, pressure groups, etc. should make citizens aware of these standards so that the responsibility of the elected representatives towards the constitution will also increase.



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Recent Amendments in Money Laundering Laws in India & Need For Some Other Amendments

Reference:

Recently, with an intent to curb black money, the Central Government amended the Prevention of Money-Laundering Act (PMLA). It has included Chartered Accountants (CA), Company Secretaries (CS), and Cost and Works Accountants (CWA), who deal with financial transactions, under the purview of the money laundering law.

What is Money Laundering?

- Money laundering refers to the conversion of illegally earned black money into legal money. It is a method of concealing illegally obtained funds and through this, the money is used in such activities or investments that make it difficult for the investigating agencies to trace the main source of money. The person who launders this type of money is called 'the money launderer'. There are three stages involved in the money laundering process-
 - » Placement
 - » Layering
 - » Integration

Legal Framework in India to Prevent Money Laundering:

- **Prevention of Money Laundering Act 2002:** This Act was introduced in 2002 to combat the crime of money laundering and punish those who profit through this crime. This act enabled the government or any authorized public authority to confiscate property acquired through ill-gotten gains and ill-gotten wealth. Under this act, the Financial Intelligence Unit examines all the records to trace any suspicious transactions and then the investigation is done by the Enforcement Directorate.

Recent amendments in the Prevention of Money Laundering Act:

- The Finance Ministry amended the Prevention of Money-Laundering Act (PMLA) to bring Chartered Accountants (CA), Company Secretaries (CS), and Cost and Works Accountants (CWA) dealing with financial transactions under the purview of the Money Laundering Act.
- According to this amendment, now the responsibility has been imposed on Chartered Accountants (CA), Company Secretaries (CS), and Cost and Works Accountants (CWA). They are made responsible to know the real financial position and source of funds of their clients before any financial accounting.
- The PMLA now covers the management of client money, securities, or any other assets, purchases and sale of immovable property, management of

bank savings or securities accounts, and other subsidiaries for the formation, operation, or management of companies or limited liability companies. Activities such as the formation of partnerships or trusts, and the purchase and sale of business entities will also be included.

- After this amendment, Chartered Accountants (CA), Company Secretaries (CS), and Cost and Works Accountants (CWA) will have to get the KYC of their clients done and keep their data safe with them.

Benefits of the Amendment:

- Money laundering becomes a big challenge when professional service providers like accountants, lawyers, and company secretaries are involved in it and give legal cover to money laundering. Such service providers establish and manage entities with corporate status, thereby greatly aiding and abetting the mechanism of money laundering. With the new amendment, professionals like Chartered Accountants (CA), and Company Secretaries (CS) will not be able to cooperate in the mechanism of money laundering.
- The 'money laundering' is followed by 'layering' i.e. hiding the money by making disturbances in the book of account and concealing the real income. The advice of Chartered Accountants (CA) is very important at this stage. After layering, the money is sent to destinations in countries that do not have stringent laws related to money laundering.
- Integration is the last stage of the money laundering process. In this process, the money sent abroad is invested in real estate, luxury vehicles, etc. Therefore, the money laundering can be prevented to a great extent by bringing Chartered Accountants (CA), Company Secretaries (CS) under the ambit of PMLA.

Need of Other Amendments:

At present, the government is determined to prevent money laundering. Prior to this recent amendment, the amendments made in March 2023 brought Politically Empowered Persons (PEP), NGOs, etc. under the purview of PMLA. Nevertheless, there is a need of some further amendments which are described below –

- There is a need to bring legal professionals and lawyers under the ambit of PMLA.
- Further, the nexus of terrorism and organized crime needs to be stopped to curb money laundering.
- "Corruption in high offices is a major facilitator of money laundering". Therefore, necessary

provisions should be made in PMLA to prevent corruption.

- Lastly, very few cases are being taken up for investigation under PMLA when compared to the annual registration of cases under the Money Laundering Act, hence there is a need to increase the scope of PMLA.

Status of Money Laundering in India:

- According to the government, the total proceeds of crime in PMLA cases pending before the apex court amount to Rs. 67,000 crores.
- The number of PMLA cases investigated by the Enforcement Directorate (ED) has increased over five years from 111 to 981 in 2015-16 and 2020-21 respectively.
- Although it is much less than UK (7,900), US (1,532), China (4,691), Austria (1,036) Hong Kong (1,823), Belgium (1,862), and Russia (2,764). The reason behind such less number of cases in India is that very few cases are being taken up for investigation under PMLA as compared to the annual registration of cases under the Money Laundering Act.
- In a case related to PMLA, the Solicitor General told the Supreme Court that “corruption in high offices is a major enabler of money laundering”. This is especially true in the developing world. Corruption is an “insidious player” that undermines democracy. Money laundering, in turn, fuels organized crime and terrorism.
- The Solicitor General cited a United Nations report which stated that the proceeds of crime being siphoned off amount to \$2.1 trillion, which is 5% of the global GDP.

Major Provisions of the Prevention of Money Laundering Act (PMLA) 2002:

- The Prevention of Money Laundering Act was enacted in 2002 and came into force in 2005. The main objective of this law is to fight the process of converting black money into white (money laundering).

Objective:

Following are the main objectives of the Prevention of Money Laundering Act 2002-

- Preventing money laundering.
- To prevent the use of black money in illegal activities and economic offenses.
- Confiscation of property involved in or derived from money laundering.
- Seeking to prevent other types of related crimes involving money laundering.

Responsible Authority:

- The authority responsible for the investigation of offenses under the Prevention of Money

Laundering Act 2002 is the Enforcement Directorate.

Provision of Penalty under the Prevention of Money Laundering Act 2002:

- Various actions can be initiated against persons found guilty of money laundering. These include confiscation of property and records, etc. acquired through crime.
- Rigorous imprisonment of not less than 3 years for the offense of money laundering, which may extend to 7 years, along with a fine. If the offense of money laundering is also an offense under the Narcotic Drugs and Psychotropic Substances Act, 1985, the punishment can be up to 10 years with fine.

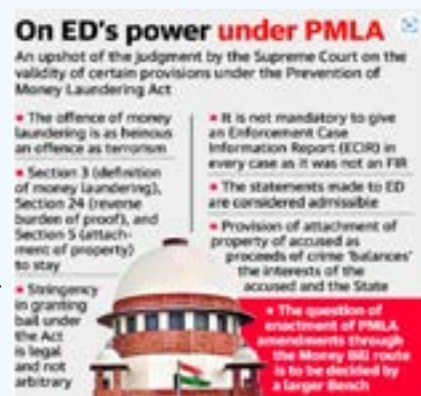
Enforcement Directorate:

- The Enforcement Directorate is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance, Government of India.
- The genesis of this Directorate dates back to May 1, 1956, when an ‘Enforcement Unit’ was formed in the Department of Economic Affairs under the Foreign Exchange Regulation Act, of 1947 to deal with violations of Exchange Control Laws. In the year 1957, the name of this unit was changed to ‘Enforcement Directorate’.

- The Enforcement Directorate enforces the following laws:
 - » Foreign Exchange Management Act, 1999
 - » Prevention of Money Laundering Act, 2002

Conclusion:

Money laundering is a global problem that has affected the economic sovereignty of India as well. It is necessary to stop money laundering and the government is making necessary efforts in this direction. However, some other necessary amendments (such as the inclusion of lawyers and legal professionals in the ambit of PMLA) are also crucial. Through such efforts, the government and the investigating agencies will certainly succeed in curbing money laundering.



Significance of the Recent Decision of the Supreme Court in the Context of Eco-Sensitive Zone

Environmental protection, protection of the ecosystem, biodiversity protection, wildlife protection, and rational control of human activities in ecological areas help achieve the goals of sustainable development.

The Supreme Court has observed in recent times that no environmental regulations should hinder the day-to-day activities and livelihood of traditional forest dwellers or tribal communities living in the buffer and transition zones of protected areas such as forests, national parks and sanctuaries. Although sustainable development is necessary, socio-economic justice is also a constitutional obligation for forest-dwelling tribals. Therefore, when the Supreme Court feels that any of its decisions may lead to an imbalance between the goal of development, social justice and environmental protection, then the Court remains ready to review its decisions. The Supreme Court is of the view that if the banning of various activities in a protected area endangers the livelihood of the people living in the area, the families living in these areas may be forced to relocate or move to several states. If any restriction harms their economic interests due to the mineral resources found in the eco-sensitive zone, then the Court is ready to make adjustments in its decisions related to the eco-sensitive zone.

The Supreme Court of India, introducing its Ecological Prudence from time to time, has given important decisions related to regulating activities, human activities, development activities, or construction work in protected areas like National Parks and Wildlife Sanctuaries. In this context, the Supreme Court has recently decided that all protected areas, wildlife sanctuaries and national parks should mandatorily have an eco-sensitive zone (ESZ) up to 1 km beyond their demarcated boundary. The Supreme Court has held that restrictions can be relaxed on development activities in eco-sensitive zones spread within one kilometer of protected areas. This means that within one kilometer of Protected Areas, the development or construction work may take place but the Court clarified that the ban on mining activities within a distance of one kilometer from the boundary of national parks and wildlife sanctuaries applies to areas falling under eco-sensitive zones as well. It is noteworthy that some construction or development activities have been approved in the eco-sensitive zone and there are some activities which have been entirely banned in the name of environmental damage.

➤ In the recent judgment of the Supreme

Court, the Ministry of Environment, Forest and Climate Change and all State/Union Territory Governments have been asked to strictly implement the provisions of the guidelines dated February 9, 2011, and the ESZ notifications relating to the respective protected areas concerning prohibited activities. A bench of Justices BR Gavai, Vikram Nath and Sanjay Karol made this observation while reserving its order on applications seeking modification of its June 2022 order.

On June 3 last year, the Court declared all places within one kilometer around protected areas as ESZ. The Supreme Court had then said in its order that permanent construction work should be banned in the sensitive zone and mining work should also be banned in the National Park and Wildlife Sanctuary. The order was given by a bench of Justices L Nageswara Rao, BR Gavai and Aniruddha Bose. The Supreme Court had said that if the existing eco-sensitive zone goes beyond the one kilometer buffer zone or if a statutory body prescribes a higher limit, such an extended limit would be valid. Along with this, the Chief Conservator of Forests of each state was directed to make a list of structures existing in the eco-sensitive zone and submit the report to the Court within three months. When the Supreme Court in 2022 ordered setting up of 1 kilometer eco-sensitive zones around all protected areas, wildlife sanctuaries and national parks, the order was opposed by Kerala farmers fearing displacement.

What are Eco-Sensitive Zones:

- Eco-sensitive zones act as a kind of “shock absorber” for protected areas by restricting, and regulating activities around protected areas. The purpose of ESZ notification is not to promote uncontrolled tourism, and certainly not to promote all kinds of development activities within any sanctuary boundary. The declaration of ESZ is meant to restrict or regulate the activities around the sanctuary. Eco-sensitive zones are areas that are created as buffer zones around protected areas (national parks, wildlife sanctuaries) to make the area more secure.
- Eco-sensitive zones are notified by the Ministry of Environment and Forests under Section 3 of the Environment Protection Act, 1986. In the past, the central government issued guidelines on the eco-sensitive zone and safeguarded its boundary up to 10 km from the protected areas.
- In case of sensitive corridors, connectivity and ecologically important places, areas beyond the 10 kilometer limit may also be included under

the eco-sensitive zone. For effective monitoring of the provisions of the notification relating to the Eco-Sensitive Zone under sub-section (3) of Section 3 of the Environment (Protection) Act, 1986, the Central Government constitutes a Monitoring Committee under Section 5 of the Act.

Ecologically Sensitive Zones(ESZ)



Restricted and Unrestricted Activities of Eco-Sensitive Zone:

- Activities that are prohibited in the eco-sensitive zone under the guidelines of the Ministry of Environment of India include:
 - » Sawmills for commercial mining generate dust and can harm biodiversity,
 - » Commercial use of wood etc.,
 - » Establishment of polluting industries,
 - » Establishment of large hydroelectric projects etc.
- Activities regulated in the Eco-Sensitive Zone include:
 - » Felling of trees,
 - » Establishment of hotels and resorts,
 - » Commercial use of natural water,
 - » Construction of electric cables,
 - » Drastic changes in the farming system,
 - » Adoption of heavy technology,
 - » Use of pesticides,
 - » Widening of roads,
- Development or construction activities that are permitted in the eco-sensitive zone include:
 - » Ongoing agricultural or horticultural practices,
 - » Rainwater harvesting,
 - » Organic farming, etc.

Eco-Sensitive Zones in India:

- The Rajya Sabha of India has been informed by

the Minister of State for Environment, Forest and Climate Change, Government of India, on March 23, 2023, that at present there are 92 eco-sensitive zones, 2 ecologically sensitive zones are notified in 13 states of the Indian Himalayan region. The Union Government has apprised Parliament that to manage and conserve biodiversity in protected areas, the Ministry of Environment, Forest and Climate Change notifies Eco-Sensitive Zones (ESZs) around protected areas.

- As part of the Wildlife Conservation Strategy, in the year 2002, it was decided that the area around each of the Protected Areas need to be notified as Eco-Sensitive Zone to create a buffer for further protection around the Protected Areas (PAs). The basic purpose of declaring an ESZ is to create some kind of “shock absorber” for the specific ecosystem, such as a protected area or other natural sites, to act as a transition zone from areas of higher protection to areas of less protection. In addition, to protect biodiversity in areas of ecological importance, the ministry also notifies Ecologically Sensitive Areas (ESAs), which have unique biological resources.
- As per the guidelines prepared by the Ministry of Environment, Forest and Climate Change (MoEF&CC), ESZs are surveyed and identified by the respective State Governments for consideration of the Central Government for declaration of ESZ in the respective States around National Parks and Wildlife Sanctuaries. Based on the proposals and recommendations of the state government, the ministry notifies ESZs under the Environment (Protection) Act, 1986.
- Section ‘3’ of the ESZ notification provides guidelines for the preparation of a Zonal Master Plan (ZMP). It mandates the preparation of a tourism master plan to be a part of the Zonal Master Plan based on the carrying capacity study of the State Government and the concerned ESZ. It is noteworthy that the Zonal Master Plan is based on a watershed approach and includes better management in the areas of forest and wildlife, watershed management, irrigation, energy, tourism, public health and sanitation, road infrastructure etc.
- The Ministry of Environment of India believes that the approval of the Zonal Master Plan will promote the conservation and ecology of the protected area and also enable the development activities approved under it to be taken up.

Basic Dimensions of India's Nuclear Liability Law & Status of India's Nuclear Business

Any emerging market economy, like India, aims to acquire the necessary capabilities to become a developed country or a superpower. Thus, it becomes necessary to emphasize on nuclear trade, space cooperation with various countries, technology cooperation, partnership and trade of high technology to increase its power. Further, it is also crucial for a country like India to take care of some important things in the context of doing nuclear business with other countries. It is no longer a difficult task for India to get nuclear technology, nuclear fuel, processing technology, high enrichment technology, nuclear reactor from any country, but the more important issue has become that how India can fulfill its nuclear liability. What efforts does India make to avoid nuclear accidents, in what form will India give nuclear compensation in the event of a nuclear accident? Which entity will finance the nuclear compensation? Will the country from which India has taken the nuclear reactor also be responsible or will India alone have to play the entire role as the operator of the nuclear reactor or plant? At present, Jaitapur in Maharashtra, which is the world's largest nuclear power generating plant, has 6 new nuclear power reactors to be installed, which are still pending due to the Nuclear Liability Act in India. Recently India's Nuclear Liability Act and its dimensions were in discussion for this reason.

Indian Law Regarding Nuclear Liability:

- The Civil Liability for Nuclear Damage Act (CLND) 2010 is an Indian law that establishes a legal framework for benefits arising in case of a nuclear incident. The responsibility of this law is to determine the compensation of the guilty and to make the nuclear facility operator responsible for any damage. The Government of India created an Indian Nuclear Insurance Pool (INIP) on 12 June 2015. General Insurance Corporation of India (GIC-Re), along with several other Indian insurers, launched the Indian Nuclear Insurance Pool (INIP) with a capacity of Rs.1500 crore to provide insurance to cover the liability prescribed under civil liability for nuclear technology. The Indian Nuclear Insurance Pool has been created under the provisions of the Civil Liability for Nuclear Damage Act, 2010.
- The central government enacted this law in Parliament in the year 2010 to set up a speedy compensation mechanism for the victims of nuclear accident. The Civil Liability for Nuclear Damage Act 2010 imposes certain liabilities

on a nuclear operator (one who is operating a nuclear reactor). This law states that the operator of a nuclear plant will have to discharge certain strict obligations to avoid a nuclear accident. It was also necessary to make such a law in order to remove the error or negligence related to nuclear accidents. This act states that nuclear operators are liable for any negligence and damages. Nuclear power plants or reactors or operators of nuclear plants will have to pay an amount of Rs 1,500 crore in case of damage caused due to nuclear accident. It also requires operators to cover liability through insurance or other financial security.

- The Civil Liability for Nuclear Damage Act 2010 requires the government to intervene if the damage claim exceeds Rs 1,500 crore. This law has limited the government liability amount in the event of a nuclear accident to the equivalent of 300 million Special Drawing Rights (SDR). It is noteworthy that SDR is the currency of the International Monetary Fund, which is usually marked in dollars only.
- A question also arises here as to what extent the foreign companies supplying nuclear reactors, nuclear spares, nuclear technology, processing technology etc. will be responsible in the event of a nuclear accident. Therefore, it is necessary to make provisions regarding the liability of nuclear operators as well as nuclear suppliers. It may be noted that faulty spare parts were largely responsible for the Bhopal gas tragedy in the year 1984. This is the reason that the Government of India has incorporated the Comprehensive Convention on Supplementary Compensation (CSC) of 1997 to include the liability of the nuclear operator as well as the nuclear supplier company and their owners going beyond the provisions of in the Civil Liability for Nuclear Damage Act 2010. Under this provision, if a nuclear incident occurs as a result of defective equipment or materials, poor services or conduct of supplier employees, the operator of a nuclear plant may approach the supplier(s) and seek appropriate compensation. The Convention on Supplementary Compensation (CSC) aims to establish a minimum national compensation amount. India ratified this international convention in 2016.

Present Status of Nuclear Energy Production in India:

- At present there are 22 nuclear reactors in India

in operation. In addition, the cabinet headed by the Indian Prime Minister in 2017 approved the setting up of 11 indigenous pressurized heavy water reactors with a total capacity of 7,000 MW at a total cost of Rs 1,05,000 crore. According to government statistics, the annual nuclear power generation in the year 2013-14 was 3533.3 million units, which increased to 4711.2 million units in the financial year 2021-22.

- The Government of India has also permitted joint ventures with Public Sector Undertakings (PSUs) to enhance the country's nuclear program. After a decision on this in 2015, Nuclear Power Corporation of India Limited (NPCIL) currently has two joint ventures, one with National Thermal Power Corporation Limited (NTPC) and the other with Indian Oil Corporation Limited (IOCL).
- The world's first thorium based nuclear plant "Bhavani" using Uranium-233 is being set up at Kalpakkam in Tamil Nadu. It is noteworthy that it would be completely indigenous and first of its kind plant. Further, the experimental thorium plant "Kamini" already exists at Kalpakkam. The upcoming nuclear power plant at Gorakhpur in Haryana will also be commissioned in the near future.
- On 5 April 2023, the Central Government has approved setting up of 10 more nuclear reactors which will be set up in five states. Kaiga, Chutka and Gorakhpur nuclear power plants will have two nuclear reactors each, while the Mahi Banswara nuclear power plant in Rajasthan will have four nuclear reactors. Public Sector Undertakings (PSUs) have been included for setting up nuclear reactors. These reactors are planned to be set up progressively in 'fleet mode' by the year 2031 at a cost of Rs 1,05,000 crore. The nuclear power plant in fleet mode is targeted to be built within 5 years. It is noteworthy that the government has amended the Atomic Energy Act in 2015 to set up nuclear power projects. At present, 6780 MW of electricity is being produced in India from atomic power plants and the target is to take this capacity to 22480 MW. Globally, the US (91.5 GW), France (61.3 GW), China (50.8 GW), Japan (31.7 GW) and Russia (29.6 GW) generate electricity from atomic power plants in gigawatts.

Cooperation for the Development of Nuclear Energy:

- India is globally recognized as a nation with

advanced nuclear technologies. India has developed comprehensive capabilities in all stages of the nuclear fuel cycle such as mining, uranium production, fuel fabrication, nuclear power generation, spent fuel reprocessing and waste management.



Nuclear Research Centers of India

- Atomic Energy Commission of India, Mumbai
 - Atomic Minerals Directorate for Exploration and Research, Hyderabad
 - Bhabha Atomic Research Center, Mumbai
 - Central Institute of Mining and Fuel Research, Dhanbad
 - Electronics Corporation of India Limited, Hyderabad
 - High Altitude Research Laboratory, Gulmarg
 - Indira Gandhi Center for Atomic Research, Kalpakkam
 - Indian Rare Earths, Mumbai
 - National Chemical Laboratory, Pune
 - Nuclear Fuel Complex, Hyderabad
 - National Center for Earth Science Studies, Thiruvananthapuram
 - Central Mechanical Engineering Research Institute, Durgapur
 - Physical Research Laboratory, Ahmedabad
 - Saha Institute of Nuclear Physics, Kolkata
 - Uranium Corporation of India, Singhbhum
 - Variable Energy Cyclotron Centre, Kolkata
 - Radio Astronomy Centre, Ooty
 - Tata Institute of Fundamental Research, Mumbai
- So far India has signed Inter Governmental Agreements (IGA) for cooperation in peaceful uses of nuclear energy with the following eighteen countries: Argentina, Australia, Bangladesh, Canada, Czech Republic, European Union, France, Japan, Kazakhstan, Mongolia, Namibia, Republic of Korea, Russia, Sri Lanka, United Kingdom, United States of America, Vietnam and Ghana. Currently, India has active partnerships in the field of nuclear energy with the US, France, Russia, Uzbekistan, Kazakhstan and Canada.
 - There is currently no cooperation with Israel on nuclear energy. The government has given 'in-principle' approval to sites at Kovvada in Andhra Pradesh and Chhaya Mithivirdi in Gujarat to set up nuclear power plants in collaboration with the United States.

1. IndiaHandmade Portal

Why in News:

Recently, Union Minister Piyush Goyal launched the e-commerce portal 'IndiaHandmade Portal' to make the products of more than 35 lakh handloom weavers and 27 lakh handicraft artisans available directly to consumers without middlemen.

About IndiaHandmade Portal:

- The portal, launched under the Ministry of Textiles, offers a wide range of products including clothing, home decor, jewelry, and accessories. With the help of this virtual Indian store, artisans will get fair remuneration without any middleman manipulating the prices.
- All the products in it are handmade by skilled artisans made using eco-friendly and sustainable materials. It is a suitable option for those who are conscious of the negative impact on the environment.
- It is a one-stop-shop for all things handmade in India where around 62 lakh weavers and artisans will get an opportunity to become e-entrepreneurs of the future. India is famous for its rich cultural heritage and traditional crafts, which include handloom and handicraft products.

Salient Features of the Portal:

- An authentic Indian Handloom & Handicraft Virtual Store.
- Free Shipping with return options for hassle-free shopping.
- Secure and multiple payment gateways for a smooth transaction experience.
- Various types of authentic vendors such as artisans, weavers, manufacturing companies, SHG cooperatives, etc. can be registered on this portal.
- Integration with multiple logistics partners for smooth order processing.
- Free seller support from registration to order fulfilment to ensure "Ease of Doing Business".
- Directly connecting artisans/weavers with buyers through a common platform.

Initiatives of the Government to Promote Handloom & Handicrafts:

- Handloom Weavers Comprehensive Welfare Scheme (HWCWS), National Handloom Development Program (NHDP), Comprehensive Handloom Cluster Development Scheme (CHCDS), Yarn Supply Scheme (YSS), One District-One Product(ODOP), Waver Mudra

Scheme, Ambedkar Handicraft Development Scheme, Mega Cluster Scheme, and Production Linked Scheme, etc.

Way Forward:

About 4 million people are employed in this sector. With the right support and business environment, the Indian crafts sector has the potential to become a multi-billion dollar market. Even in the era of globalization, the handicrafts sector has vast opportunities in the domestic as well as global markets. Careful intervention is needed to uplift the status of artisans so as to make handicraft products globally competitive.

2. Divorce Under Article 142 of the Indian Constitution

Why in News:

Recently, in *Shilpa Sailesh vs Varun Sreenivasan* case, a five-judge Constitutional Bench of the Supreme Court ruled, that it can exercise its plenary power to do "complete justice" under Article 142(1) of the Constitution to dissolve a marriage on the ground that it had broken down irretrievably, without referring the parties to a family court where they must wait 6-18 months for a decree of divorce by mutual consent. The Bench also held that the court could, in the exercise of this power, waive the mandatory six-month waiting period for divorce under The Hindu Marriage Act (HMA), 1955, and allow the dissolution of the marriage on grounds of an irretrievable breakdown even if one of the parties was not willing.



The Procedure of Divorce Under the Hindu Marriage Act:

- Section 13B of the HMA provides for "divorce by mutual consent". Both parties to the marriage must together file a petition to the district court "on the ground that they have been living

separately for a period of one year or more, that they have not been able to live together, and that they have mutually agreed that the marriage should be dissolved”.

- Under Section 13B(2) of the Act, the mandatory six-month wait is intended to give the parties time to withdraw their plea. This period is called cooling period.
- Thereafter, “the court shall, on being satisfied, after hearing the parties and after making such inquiry as it thinks fit, pass a decree of divorce declaring the marriage to be dissolved with effect from the date of the decree”.

About Article 142 of the Constitution:

- Under Subsection 1 of Article 142, the Supreme Court may pass such decree or make such order as is necessary for doing complete justice in any cause or matter and any decree so passed or order so made shall be enforceable throughout the territory of India.

Condition of Irretrievable Breakdown of the Marriage:

- The first and most “obvious” condition is that the court should be fully convinced and satisfied that the marriage is “totally unworkable, emotionally dead and beyond salvation and, therefore, dissolution of marriage is the right solution and the only way forward”.
- The court laid down the following factors:
 - » The period of time that the parties had cohabited after marriage;
 - » When the parties had last cohabited;
 - » Nature of allegations made by the parties against each other and their family members;
 - » Orders passed in the legal proceedings from time to time;
 - » The cumulative impact on the personal relationship;
 - » Whether, and how many attempts were made to settle the disputes by a court or through mediation, and when the last attempt was made.
 - » The court also noted that the period of separation should be sufficiently long, and anything above six years or more will be a relevant factor.

Conclusion:

The court’s decision has been welcomed by many legal experts and social activists who believe that it will help reduce the backlog of matrimonial cases and provide relief to couples who are suffering in unhappy marriages. However, some critics have also raised concerns about the possible misuse of

this power by the court and the impact it may have on the sanctity of marriage as an institution.

3. Smart Cities Mission

Why in News:

The Union Housing and Urban Affairs Ministry (MoHUA) has extended the deadline for the Smart Cities Mission from June 2023 to June 2024.

About Smart Cities Mission

- Smart Cities Mission in India was launched by Prime Minister Narendra Modi on June 25, 2015. It is an urban renewal and retrofitting program launched by the Government of India to develop smart cities and make them citizen friendly and sustainable. The Ministry of Housing and Urban Affairs is responsible for implementing the mission in collaboration with state governments.



Objective:

- The objective of the smart city initiative is to promote sustainable and inclusive cities that provide core infrastructure to give a decent quality of life, and a clean and sustainable environment through the application of some smart solutions such as data-driven traffic management, intelligent lighting systems, etc.

Coverage:

- The mission is covering 100 cities that have been distributed among the States /Union Territories (UT) on the basis of equitable criteria. The formula gives equal weightage (50:50) to the urban population of the State/UT and the number of statutory towns (a town with a municipality, corporation, cantonment board or notified town area committee) in the State/UT. Based on this formula, each State/UT will, therefore, have a certain number of potential Smart Cities, with each State/UT having at least one.

Administrative Structure:

- Guidelines on Smart Cities provide monitoring at three levels – national, state, and city
- **National:** An Apex Committee, headed by the Secretary of the Ministry of Urban Development and comprising representatives from related ministries and organizations have the mandate to approve proposals, monitor progress, and release funds.
- **State:** A High Powered Steering Committee (HPSC) headed by the Chief Secretary of the State, would steer the Smart City Mission as a whole.
- **City:** A Smart City Advisory Forum in all Smart Cities to release funds, and implement, monitor, and evaluate the Smart City development projects.

Countries Supporting India's Smart Cities Mission:

- Spain has proposed to cooperate with India to develop Delhi into a smart city.
- The United States has decided to develop Visakhapatnam (Andhra Pradesh), Allahabad (Uttar Pradesh), and Ajmer (Rajasthan) as smart cities.
- Germany has inked a deal with India to develop Bhubaneswar (Odisha), Kochi (Kerala), and Coimbatore (Tamil Nadu) as smart cities.
- Japan has decided to assist India with the development of Chennai, Ahmedabad, and Varanasi as smart cities.
- France has decided to support three Indian cities—Chandigarh, Lucknow, and Puducherry.
- Singapore has developed Amravati, the new capital of Andhra Pradesh, as a smart city.

Conclusion:

The biggest challenge that smart cities face is of financing. Smart city infrastructure requires large capital investments. The government needs to speed up the implementation of smart city projects in India by focusing on encouraging Public-Private Partnerships (PPP) for successful implementation.

4. National Medical Devices Policy

Why in News:

Recently, the Union government notified the National Medical Device Policy, 2023. The new National Medical Devices Policy aims to reduce India's import dependence to nearly 30% in the next few years and make India one of the top five global manufacturing hubs. The policy also aims to promote export-driven manufacturing of affordable high-end offerings, increase India's per capita spending on medical devices, and make costly medical devices accessible and affordable.

Size of the Medical Devices Sector:

- The Indian medical devices sector is highly dependent on imports, with around 80-85% of the devices being imported, which comprise mainly high-end ones.
- India's current market share in the medical devices category is 1.5% of the global space or \$11 billion (Rs. 90,000 crores) in 2020.
- The policy aims to achieve a 10-12% global market share in the next 25 years, with the immediate short-term goal being a \$50 billion industry by 2030.
- The US dominates the global market with a 40% market share, followed by Europe and Japan at 25% and 15% respectively.

Policy Framework:

- The National Medical Devices Policy will promote research and development, establish Centres of Excellence in academic and research institutions, promote innovation hubs, and support start-ups.
- It will encourage private investments, venture capital funding, and public-private partnerships in the segment.
- The policy will also focus on skilling, reskilling, and upskilling professionals in the medical device sector through the Ministry of Skill Development and Entrepreneurship.
- It will support dedicated multidisciplinary courses in existing institutions to ensure the availability of skilled manpower and produce future-ready MedTech human resources.
- The policy will make partnerships with foreign academic institutes and industry organizations to develop med-tech.
- It will also create a dedicated export promotion council for the sector to improve brand positioning and awareness, promote studies and projects to learn the best global practices of manufacturing, and adopt globally successful models in India.

About Medical Devices in India:

- A medical device can be any instrument, apparatus, implement, machine, appliance, implant, reagent for in vitro use, software, material, or other similar or related article, intended by the manufacturer to be used, alone or in combination for a medical purpose.
- India's medical devices sector is regulated by the Drugs and Cosmetics Act of 1940, which has been rather inadequate in regulating medical devices.
- The lack of regulatory mechanism was exposed after the revelation of faulty hip implants marketed by Johnson & Johnson.

- In February 2020, changes were notified in the Medical Devices Rules, 2017, to regulate medical devices on the same lines as drugs.

Conclusion:

The National Medical Devices Policy is a significant step towards reducing India's import dependence on high-end medical devices and promoting affordable, high-end offerings. The policy will also increase India's per capita spending on medical devices and make costly medical devices accessible and affordable.

5. Violence in Manipur

Why in News:

A tribal student union in Manipur organized a march to protest against the demand of the non-tribal Meitei community to be included in the Scheduled Tribe (ST) list. The march turned violent when some protesters set fire to houses and shops belonging to Meiteis in the Churachandpur district and other parts of the state. The Manipur government has imposed a curfew in most of the districts and suspended mobile internet services in the entire state after a mass rally organized by the All Tribal Students' Union Manipur (ATSUM) turned violent. The rally was organized in protest against the demand for inclusion of the state's Meitei community in the Scheduled Tribe (ST) category.

The History Behind Conflict:

- The conflict between the Meiteis and the tribals has a long history of political, economic, and cultural grievances.
- The valley, which accounts for roughly 10% of Manipur's geography, is dominated by Meitei, who account for more than 64% of the state's population and produce 40 of the state's 60 MLAs.
- The Meiteis, have been demanding ST status since 2012.
- They argue that they are an indigenous tribe that has lost their land, culture, and identity due to migration and assimilation of outsiders.
- They also claim that ST status will help them preserve their ancestral land, tradition, culture, and language.
- The tribals, who inhabit the surrounding hills and account for more than 35% of the population, are opposed to the Meitei demand for ST status.
- They fear that it will reduce their share of political representation, reservation benefits, and land rights.
- They also accuse the Meiteis of encroaching on their ancestral lands and exploiting their natural resources.

About the Meitei Community:

- The Meiteis are the largest community in Manipur.
- **Language:** They speak the Meitei language (officially called Manipuri), one of the 22 official languages of India and the sole official language of Manipur State.
- **Distribution:** The Meiteis are primarily settled in the Imphal Valley region in modern-day Manipur, though a sizable population has settled in the other Indian states of Assam, Tripura, Nagaland, Meghalaya, and Mizoram.
- There is also a notable presence of Meitei in the neighboring countries of Myanmar and Bangladesh.
- **Clans:** They are divided into clans, the members of which do not intermarry.
- **Festivals:** The various types of festivals that are the most significant, and are celebrated with great joy by Meiteis are Lai Haraoba, Cheiraoba, and Yaosang among others.
- The Manipuri martial art Thang-ta is a combative sport that had its origin in the Meitei knights during the king's rule

Conclusion:

The Meitei community, which forms the majority of the population in the state, has been demanding ST status for almost 10 years. The Meitei Tribe Union approached the High Court for not being considered by the state government. The High Court had directed the state government to send a recommendation within four weeks to the central government for granting ST status to the Meitei community. This led to violence and unrest in the state, affecting the lives and livelihoods of both communities. For this, the government should take an inclusive decision by taking all the parties into account.

6. Talaq-e-Hasan

Why in News:

Recently, the Supreme Court agreed to take up Muslim women's petitions challenging the validity of talaq-e-hasan under the Muslim personal law, which allows a man to unilaterally divorce his wife by pronouncing talaq, either orally or in writing, three times with a gap of one month between two consecutive pronouncements. Many women have challenged the validity of talaq-e-hasan and said its unilateral use by men to annul their marriages in collusion with qazis leaves women in the lurch.

Arguments By the Petitioner:

- Talaq-e-hasan is discriminatory as it allows only men to use it in their favour and violates Articles 14, 15, 21, and 25 of the Constitution.

- Talaq-e-Hasan and other forms of unilateral extra-judicial Talaq are neither in accordance with human rights nor the principles of gender equality nor they are an integral part of the Islamic faith.
- It was also argued that many Islamic countries have restricted such practice, however, in India, it continues to affect the rights of Muslim women in India. Also due to these one-sided arbitrary decisions of divorce, the lives of many children as well as females are affected.

About Talaq-e-Hasan:

- Talaq-e-Hasan is a divorce practice which is mentioned in Quran.
- Talaq-e-Hasan is pronounced with a gap of at least one month or one menstrual cycle.
- Only a single revocable divorce takes place through the first pronouncement of Talaq-e-Hasan and the couples are supposed to live together after this pronouncement and have the option of rapprochement.
- At the end of this month, the husband has to pronounce divorce for the second time which is revocable, and the couple may resume their conjugal relationship anytime they so desire.
- If the third pronouncement is made after at least one menstrual cycle, then irrevocable divorce takes place.
- No divorce can be administered when the woman is undergoing her menstrual cycle or pregnancy.

Conclusion:

The law of the land as well as the culture evolves with the requirement of an ongoing era. A culture in general looks for the betterment and development of every individual as a community together which includes women too. On August 22, 2017, in the Shayara Bano judgment, a five-judge constitution bench struck down talaq-e-biddat, instant talaq granted through the pronouncement of triple talaq by a Muslim man, as unconstitutional. This was a major step towards this evolution nevertheless, while giving any judgement the constitutional morality as well as the cultural sentiments must be kept in consideration as well.

7. i-Drone Initiative

Why in News:

On 10th May, 2023, the iDrone program by the Indian Council of Medical Research (ICMR) completed a test to transport blood bags using drones, which was successful.

Key Points:

- For the first time in the country, a groundbreaking validation study included a

trial run conducted by the ICMR, Lady Hardinge Medical College (LHMC), Government Institute of Medical Sciences (GIMS), Greater Noida, and the Jaypee Institute of Information Technology (JIIT), Noida.

- The first experimental drone flight transported 10 whole blood samples from GIMS and LHMC within the operator's direct line of sight.
- The i-Drone project transported various medical supplies such as COVID-19 vaccines, routine immunisation vaccines, antenatal care vaccines, multi-vitamins, syringes, and gloves.
- The drone-based logistic transportation system had a specific emphasis on the entire process from start to end, and it achieved a notable milestone by being the first successful instance of delivering vaccines.
- The implementation of this technology has the potential to bridge the existing gaps between the transportation and distribution of medical supplies.

About i-Drone initiative:

- The Indian Council of Medical Research (ICMR) made this initiative to ensure that essential vaccines are accessible to all, even in difficult and remote areas of India.
- The 'i-DRONE' initiative, evaluated the practicality of utilising drones for dispensing vaccines and medical equipment in challenging terrains such as land, islands, foothills, and hills.
- The initiative helped in overcoming the gaps in the vaccine delivery system.

About ICMR (Indian Council of Medical Research):

- The organisation, funded by the government of India, is the highest authority in India responsible for developing, organising, and encouraging medical research.
- Its purpose is to carry out, coordinate, and execute medical research that benefits society, by transforming medical advancements into usable products and procedures, and integrating them into the public healthcare system.

Other Drone Related Projects:

- Medicine from the sky by the Telangana government.
- The International Crops Research Institute (ICRISAT) was permitted to deploy drones for agricultural research activities.

Way Forward:

The experiment's results will offer scientific proof from India on how drone transportation affects blood products. This will lead to the creation of standard operating procedures (SOP) that can be used more widely, enabling the use of drones to deliver blood bags and components.



International Issue

1. United Nations Permanent Forum on Indigenous Issues

Why in News:

In the recently concluded 22nd meeting of the United Nations Permanent Forum on Indigenous Issues (UNPFII), the focus of the meeting was socio-economic, culture, language development as well as environmental protection of the indigenous peoples. Meanwhile, Vital Bambanze, a UNPFII member from Burundi, presented a report from the international group of experts meeting on the 'Truth, Transitional Justice and Reconciliation Processes' held in Chile in 2022.

About UNPFII:

- It is a high-level advisory body to the Economic and Social Council (which is one of the 6 principal organs of the United Nations) which was established on July 28, 2000. Its first meeting was held in May 2002, since then it has been held annually in New York.

Major Functions of UNPFII:

- Providing expert advice on Indigenous issues to UN programmes, funds and agencies through the Economic and Social Council.
- Promote the integration and coordination of activities related to Indigenous issues within the United Nations system through awareness.
- It is one of the three UN bodies specifically mandated to deal with the issues of Indigenous peoples.
- The other two bodies are the Expert Mechanism on the Rights of Indigenous Peoples and the Special Rapporteur Rights of Indigenous Peoples.

Members of UNPFII:

- It consists of sixteen independent experts, who act in their individual capacity. They have a three-year term as members who can be re-appointed for another term. Eight of the experts are nominated by governments, while the other eight are nominated directly by Indigenous organizations in their regions. Experts nominated by Indigenous organizations are appointed by the President of the Economic and Social Council.

About Indigenous Peoples:

- These people have a historical association with their homeland prior to colonization. They have distinct languages, cultures, beliefs and knowledge systems. They are determined to maintain and develop their own identity and specific institutions. They form a non-dominant

sector of society.

Way Forward:

It is the collective duty of all of us to protect the rights of indigenous people to maintain environmental balance and humanity. Social harmony can be established by recognizing their cultural diversity, linguistic identity and attachment to the environment.

2. Japan's New Ocean Policy

Why in News:

Recently, Japan adopted a new five-year ocean policy that calls for stronger maritime security, including bolstering its coast guard's capability and cooperation with the military as China grows increasingly assertive in regional seas.

About the Policy:

- The new Basic Plan on Ocean Policy says Japan must accelerate the development of autonomous underwater vehicles and remotely operated robots to strengthen its surveillance capability.
- It has cited a list of threats like-
 - » Repeated intrusions of Chinese coast guard ships into Japanese territorial waters
 - » Growing unauthorized maritime activity by 'foreign survey boats' inside Japan's exclusive economic zone
 - » Increasing joint military exercises by China and Russia, and North Korea's repeated missile launch.



- The ocean plan also says the capability of Japan's coast guard, which has been on the front line of border disputes, needs to be improved.
- The Basic Plan on Ocean Policy also calls for Japan to better use maritime resources to achieve carbon neutrality including greater use of the exclusive economic zone outside territorial waters to build offshore wind-power generators.
- The new ocean policy recommends the adoption

of more proactive approach towards conducting surveys of the undersea region and exploiting its energy resources.

Problems faced by Japan:

- The coast guard of Japan frequently confronted with Chinese coast guard vessels approaching Japanese-controlled disputed islands in the East China Sea, North Korean poachers and suspected spy boats, and Russian coast guard vessels near disputed northern islands.
- Japan has repeatedly protested Chinese research ships' entry into Japanese waters or the exclusive economic zone just outside it for apparent surveys of undersea deposits and other marine resources. It is also one of the biggest reason for change in ocean policy.

Conclusion:

The new ocean policy is in line with Japan's new national security strategy. The new national security strategy provides for the strengthening of Japan's military power with a strike capability and doubles its defence budget within five years. The strategy also calls for closer cooperation between the military and the coast guard in any emergency over Taiwan or other possible conflicts.

3. CORSIA & LTAG of ICAO

Why in News:

In a recent meeting chaired by Union Minister Jyotiraditya Scindia, it was decided that India will start participating in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and Long-Term Aspirational Goals (LTAG) of the International Civil Aviation Organization (ICAO) from 2027.

Key Points:

- The International Civil Aviation Organization has adopted several key ambitious targets, including a 2% annual fuel efficiency improvement by 2050, carbon-neutral growth, and a net zero target by 2050.
- Joining of CORSIA by the Ministry of Civil Aviation from 2027 will help India's airlines achieve greater growth and avoid adverse financial consequences.
- The financial impact due to offsetting will be borne by individual airlines depending on their international operations. CORSIA applies to flights originating from one country to another.

About Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA):

- It is a global plan developed by the International Civil Aviation Organization (ICAO) to reduce

CO2 emissions from international flights. It aims to achieve carbon-neutral development for international flights by offsetting any increase in emissions through the purchase of carbon credits from eligible projects. It will be implemented in a phased manner with Phase I (2021-2023), Phase II (2024-2026) and Phase III (2027-2035). This includes all international flights except to least developed countries, small island developing states, and landlocked developing countries.

About International Civil Aviation Organisation:

- It was established by 193 countries who were signatories to the Chicago Convention (1944) to support their diplomacy and cooperation in air transport. It is a specialized agency of the United Nations whose objective is to ensure the safe and orderly development of the international aviation industry. It works with member states to develop and implement regulations related to air navigation and air transport. December 7 is observed as International Civil Aviation Day. Its headquarter is located in Montreal (Canada).

Way Forward:

Increasing environmental pollution and climate change are affecting every aspect of human life. Launching of Carbon Neutral Initiative by International Civil Aviation Organization for the smooth operation of air services is definitely a welcome step in which every country should cooperate.

4. India ASEAN Maritime Exercise

Why in News:

India participated in the inaugural ASEAN-India Maritime Exercise (AIME), which took place in the South China Sea. The maritime exercise was held in Singapore and the South China Sea where China is the key player. INS Delhi, India's first indigenously-built guided missile destroyer, and INS Satpura, an indigenously-built guided missile stealth frigate participated in the exercise.

About ASEAN-India Maritime Exercise (AIME-2023):

- AIME-2023 was the first time when India participated in exercises with the ASEAN as an organization, though there have been exercises with ASEAN nations separately.
- Aim: Enhancing interoperability and exchange of best practices among participating navies.
- With AIME-2023, India becomes the 4th ASEAN dialogue partner, after Russia, China, and the US, to hold the ASEAN+1 maritime exercise.

About ASEAN:

- The Association of Southeast Asian Nations, or ASEAN, was established on 8 August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the Founding Fathers of ASEAN: Indonesia, Malaysia, Philippines, Singapore, and Thailand.
- Brunei Darussalam joined ASEAN on 7 January 1984, followed by Vietnam on 28 July 1995, Lao PDR and Myanmar on 23 July 1997, and Cambodia on 30 April 1999, making up the ten Member States of ASEAN.
- Aim: To promote intergovernmental cooperation and facilitate economic, political, security, military, educational, and socio-cultural integration among its members and other Asian states.
- Members: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia, and Vietnam.



About India-ASEAN Relationship:

- India and ASEAN established a comprehensive strategic partnership at the 19th ASEAN-India Summit in Cambodia.
- Act East policy was launched by India in 2014, to make a strong relationship between ASEAN and India.
- The year 2022 was celebrated as a friendship year to mark the 30 years of relationship between India and ASEAN.
- ASEAN is India's fourth-largest trading partner after USA, EU and China.
- India's trade with ASEAN stands at US\$ 110 billion, which is approx. 10.6% of India's overall trade.
- India's export to ASEAN stands at 11.28% of total exports.
- The ASEAN-India Free Trade Area has been completed in 2015.
- PM Modi announced the Indo-Pacific Oceans Initiative (IPOI) in 2019, aimed at forging partnerships to create a safe, secure, stable, prosperous, and sustainable maritime domain with maritime ecology; maritime security;

marine resources; capacity building, and resource sharing.

- India has also hosted the Special ASEAN-India Foreign Ministers' Meeting (SAIFMM) in June 2022.

Conclusion:

The Indian Navy is keeping a close watch on the movement and increasing presence of the Chinese PLA Navy vessels in the Indian Ocean region and docking of PLAN ships at the ports of Pakistan. New Delhi's move to increase its maritime security cooperation with the ASEAN region comes amidst China's growing threats in the region of the Indian Ocean, South China Sea, East China Sea, and Taiwan Strait.

5. World Press Freedom Index

Why in News:

On the occasion of World Press Freedom Day (May 3), the global media monitoring organization, Reporters Without Border, published its annual World Press Freedom index. This France-based NGO publishes reports every year on freedom of the press in countries around the world.

About the Ranking:

- The top three countries on the ranking are Norway, Ireland, and Denmark, while Vietnam, China, and North Korea are placed at the bottom.
- In the report, concern is being expressed over India's position in the World Press Freedom Index. India dropped 11 places to rank 161 in the 2023 World Press Freedom Index.
- Last year, RSF ranked India 150th in a survey of 180 countries.
- The report said, "The situation in three countries - Tajikistan (down one place to 153rd), India (down 11 places to 161st) and Turkey (down 16 places to 165th) - has moved from 'problematic' to 'very poor'.
- Another situation that dangerously restricts the free flow of information is the takeover of media institutions by oligarchs who maintain close ties to politicians.

Reason for Decline in the Ranking:

- The growing use of disinformation and propaganda to manipulate public opinion and undermine trust in journalism.
- The arbitrary detention and prosecution of journalists on various charges such as sedition, terrorism, defamation and contempt of court.
- The digital space and democracy are being threatened by online harassment, trolling, cyberattacks, surveillance and censorship.

- The violence against journalists has resulted in at least 10 deaths in the past year, making India one of the most dangerous countries for media workers.

About the Index:

- It is published every year since 2002 by Reporters Without Borders (an independent NGO based in Paris).
- Each country or territory's score is evaluated using five contextual indicators:
 - » Political context
 - » Legal framework
 - » Economic context
 - » Sociocultural context
 - » Safety
- 100 is the highest possible level of press freedom, and 0 is the worst

About World Press Freedom Day:

- The day was proclaimed by the UN General Assembly in 1993, following the recommendation of UNESCO's General Conference in 1991.
- The day also marks the 1991 Windhoek Declaration (adopted by UNESCO).
- It aimed towards the 'development of a free, independent and pluralistic press'.
- The theme of this year is "Shaping a Future of Rights: freedom of expression as a driver for all other human rights".

Suggestions Regarding Freedom of Press:

- Respecting and protecting the constitutional right to freedom of expression and information for all citizens, including journalists.
- Repealing or amending laws that can be used to harass and silence journalists, such as sedition, defamation and contempt of court.
- Ensuring that journalists can work safely and securely without facing threats or attacks from any quarter.

Conclusion:

Free and independent media is a pillar of democracy, as it enables citizens to access reliable information, express their opinions and participate in public debate. Free and independent media also acts as a catalyst for development, as it exposes corruption, human rights violations, social injustices and environmental issues.

6. Global Report on Food Crises

Why in News:

Recently, the Food Security Information Network (FSIN) created the Global Report on Food Crises (GRFC) for 2023, which was released by the Global Network Against Food Crises. The report's primary

goal was to provide independent and consensus-based evidence and analysis to inform humanitarian and development initiatives.

Key Features of the Report:

- According to research in 2023, about 35 million individuals in 39 countries suffered emergency levels of acute hunger, with more than half of them residing in just four countries:- Afghanistan, the Democratic Republic of the Congo, Sudan, and Yemen.
- More than half of the people who were on the brink of starvation were in Somalia (57 per cent). At the same time, such extreme circumstances also occurred in Afghanistan, Burkina Faso, Haiti (for the first time in the country's history), Nigeria, South Sudan and Yemen.
- Ending hunger and improving food security and nutrition by 2030 is Sustainable Development Goal (SDG) 2, dubbed "zero hunger." This report will help the world make progress towards the SDG 2 goal of ending hunger, achieving food security and improving nutrition by 2030.
- Economic shocks, conflict/insecurity, and weather/climate extremes were key drivers of this catastrophe. In some significant food crises, economic shocks (the socioeconomic effects of COVID-19 and the ramifications of the Ukrainian war) have exceeded violence as the dominant source of severe food shortages and malnutrition.
- According to a recent assessment, the number of people facing acute hunger and in need of immediate food, nutrition, and livelihood help climbed to 258 million in 2022 from 193 million in 2021, a 34% rise in only one year.
- The report serves as a reminder of the world's failure to make progress towards the SDG 2 goal of eradicating hunger, achieving food security, and improving nutrition by 2030.

International Food Policy Research Institute (IFPRI)

- The International Food Policy Research Institute (IFPRI), founded in 1975, delivers research-based policy solutions to alleviate hunger and malnutrition.
- Headquarters: Washington, D.C
- Its research is organised around five main study areas:-
 - » Developing a Climate-Resilient and Sustainable Food Supply.
 - » Healthy eating and nutrition for all.
 - » Creating Inclusive and Efficient Markets, Trade Systems, and the Food Industry.
 - » Agricultural and rural economies are being transformed.

» Institutional and governance strengthening.

Global Network Against Food Crises (GNAFC):

- The Global Network Against Food Crises (GNAFC) is an alliance of humanitarian and development actors committed to addressing the root causes of food crises and promoting long-term solutions through shared analysis and knowledge, strengthened coordination in evidence-based responses, and collaborative efforts across sectors.
- It was established in 2016 by the European Union, FAO, and WFP.
- It is an alliance of humanitarian and development actors working together to avoid, prepare for, and respond to food crises, as well as to support the SDG 2.

Way Forward:

- The international community must anticipate and act to lessen the terrible repercussions of people who are already suffering from acute food insecurity.

7. Violation of Religious Freedom In India

Why in News:

Recently, U.S. Commission for International Religious Freedom (USCIRF) in its annual report on religious freedom, asked the U.S. State Department to designate India as a “country of particular concern” on the status of religious freedom along with several other nations. The USCIRF has been making similar recommendations to the State Department since 2020, which have not been accepted.

Recommendations by the Commission:

- The commission has urged the Biden administration to impose targeted sanctions on Indian Government agencies and officials responsible for “severe violations” of religious freedom in the country by freezing their assets.
- The U.S. Commission for International Religious Freedom (USCIRF) also recommended to Congress to raise the issue of religious freedom during U.S.-India bilateral meetings and hold hearings on it.
- USCIRF alleged that in 2022, religious freedom conditions in India continued to worsen. Throughout the year, the Indian Government at the national, State, and local levels promoted and enforced religiously discriminatory policies, including laws targeting religious conversion, interfaith relationships, the wearing of hijabs, and cow slaughter, which negatively impact

Muslims, Christians, Sikhs, Dalits, and Adivasis.

- The USCIRF alleged that the national government also continued to suppress critical voices -- particularly religious minorities and those advocating on their behalf including through surveillance, harassment, demolition of property, and detention under the Unlawful Activities Prevention Act (UAPA) and by targeting nongovernmental organizations (NGOs) under the Foreign Contribution Regulation Act (FCRA).

About religious freedom in India

- The Preamble of the Constitution states that India is a secular country.
- Articles 25 to 28 of Part-3 (Fundamental Rights) of the Constitution confer the Right to freedom of religion.
- Article 25(1) of the Constitution guarantees the freedom of conscience and the right freely to profess, practice and propagate religion. However, the state can restrict the right for grounds of public order, decency, morality, health, and other state interests.
- Article 26 talks about the freedom to manage religious affairs subject to public order, morality and health.
- Article 27 states that no person shall be compelled to pay any taxes for the promotion or maintenance of any particular religion.
- Article 28 talks about the freedom to attendance at religious instruction or religious worship in certain educational institutions.

Conclusion:

- Expert thinks that the report’s recommendations for designations overlap to some extent with the State Department’s lists of countries of particular concern, it is not entirely conclusive. The U.S.-based non-profit organisation, Foundation of Indian and Indian Diaspora Studies (FIIDS) slammed the USCIRF for its “biased” report.
- Furthermore, the report fails to acknowledge the cultural and economic significance of cows to Indian villagers, not to mention the constitutional ban on cow slaughter.
- It conveniently ignores the fact that the bulldozed houses were illegal and notified, and the list of omissions goes on.
- Moreover, there seems to be a biased agenda of USCIRF generalizing isolated incidents without considering the complexities of India’s diverse population of 1.3 billion people.



Environmental Issue



1. North Sea Set to be the Green Power Plant

Why in News:

9 European countries signed a declaration aimed at transforming the North Sea into a green power plant.

About the Declaration:

- It was signed at the second North Sea Summit in Ostend, Belgium.
- The declaration sets ambitious targets including the production of at least 120 gigawatts (GW) of offshore wind energy in the North Sea by 2030.
- The signatory countries also aim to double their total offshore wind capacity to at least 300 GW by 2050.
- It focuses on the mass production of offshore wind and renewable hydrogen interconnections and national projects.
- It also indicates the possibility of co-financing by countries that do not have direct access to the sea.
- The nine signatory countries have committed to take measures to promote the balanced coexistence of renewable energy deployment, biodiversity, and environmental protection, as well as to contribute to the health and robustness of marine ecosystems.
- This declaration is the successor to the Esbjerg declaration, which resulted from the first summit.

North Sea Summit:



- This first summit took place in 2022 in Denmark.
- The first edition resulted in a declaration formalizing the ambition of the four folding countries (Belgium, Denmark, Germany, and the Netherlands) to quadruple their combined offshore power generation capacity to 150 GW by

2050.

- This second edition of the North Sea Summit brought together the heads of the state and government and energy ministers of Belgium, Denmark, Germany, the Netherlands, Luxembourg, France, Iceland, Norway, and the UK, as well as the president of the European Commission and the Commissioner for Energy.

About the North Sea:

- Countries around the North Sea: Great Britain, Denmark, Norway, Germany, the Netherlands, Belgium, and France.
- The North Sea connects to the Atlantic Ocean through the English Channel in the south and the Norwegian Sea in the north.

Way Forward:

The declaration once again brought the green energy discussions to the fore. This initiative is aimed to accelerate the deployment of offshore renewable and connectivity within the maritime area encompassed by the signatory countries.

2. Trans-Border Conservation of Red Panda

Why in News:

Recent zoological studies show that Red Pandas are found in a sizable number across the border in Eastern Himalayan Ecosystem. Red Pandas are facing survival crises due to increasing stress over their limited habitable zone and other anthropogenic activities. So it is inferred that along with traditional conservation measures, their trans-border conservation should also be focused.

Red Pandas:

- Red Pandas are shy, solitary, and arboreal animals and are considered an indicator species for ecological change. According to the Zoological Survey of India, India is home to two types of species of Red Pandas- i.e. the Himalayan Red Panda and the Chinese Red Panda.

Habitat:

- Red pandas usually live in chilly, cold, mountainous mixed deciduous and coniferous forests of the eastern Himalayas, at the altitude of 2,200-5,000 mt. The suitable temperature range for them is 10 to 25 degrees Celsius.

Distribution:

- Himalayan Red Pandas are present in Sikkim (state animal), Darjeeling-Kalimpong districts of West Bengal, Nepal, Bhutan, and Southern Tibet. In India largest suitable habitat for them is Kangchenjunga National Park (Sikkim), Singalila, and Neora Valley National Park, Darjeeling (West Bengal).

- Whereas Chinese Red Pandas are distributed in southeastern Tibet, Northern Myanmar, and the Sichuan and Yunnan provinces of China. The study confirmed the Yarlung-Zangbo River (upper Brahmaputra stream) as the actual geographical barrier between the distributions of these two species. These mammals can also be found in the ex-situ regions of Padmaja Naidu Himalayan Zoological Park (PNHNP) in West Bengal.

Protection Status:

Red Pandas are listed under,

- Schedule I of the Wildlife Protection Act-1972
- Appendix I of CITES
- Endangered under IUCN's list

Challenges:

- Red Pandas are facing stiff challenges due to ongoing climate change and changing Himalayan ecology. But their protection measures are not succeeding, as most of their habitats and connectivity corridors are falling out of the ambit of the Protected Area Network (PAN). Therefore, they face risks of habitat fragmentation, destruction, and poaching due to ongoing developmental activities. Their illegal trafficking for their red lucrative skin and meat, and for having them as pets is also a grave concern.

Significance:

- Red Pandas are important ecological species as they have a crucial role in the natural regeneration of floral diversity in the eastern Himalayas. They act as a pollinator, as they disperse seeds, and pollen through their feces.
- They also add manure and organic matter into the soil and have a significant role in pre-predator pyramid of the food chain of the eastern Himalayan ecosystem.
- They are also a center of eco-tourists and indirectly boost the tribal economy of eastern Himalayan communities.

Way Forward:

Red Pandas are more concentrated in the southeastern part of Tibet therefore mere national conservatory steps may not suffice. Therefore inter-governmental steps are required in this direction. Along with this corridor mapping and management with enrichment of bamboo species, habitat conservation, and community participation are the need of the hour.

3. Death of Melanistic Tiger

Why in News:

A male melanistic tiger was found dead in the core area of Similipal Tiger Reserve (STR) located in the Mayurbhanj district of Odisha. The wildlife officials of STR stated the prima facie cause of death was infighting with other tigers.

Melanistic Tiger:

- In general, melanism means a mutation that results in dark skin. Melanistic Tigers are rare kinds of tigers, and the presence of a melanistic breed of big cats in a reserve indicates that there is restricted breeding without genetic variations.
- Similipal Tiger Reserve, being an isolated (not connected to adjacent tiger reserves) landscape, offered little scope for tigers to mate with big cats of neighboring reserves. It has resulted in in-breeding (mating among themselves) and thus offspring developed melanism (black pigmentation).

Similipal Tiger Reserve:

- STR is located in the tribal district of Mayurbhanj. This reserve derives its name from the 'Simul' (silk cotton) tree. It geographically lies in the eastern end of Eastern Ghat. It was designated as a tiger reserve in 1956, and brought under the Project Tiger in the year 1973.
- It was declared a Biosphere Reserve in 1994 and it is part of the UNESCO World Network of Biosphere Reserves since 2009.
- The STR first reported the presence of melanistic tigers in 2007. The 2016 tiger reserve census accounted for the presence of 6 such tigers in the reserve.
- Other than melanistic tigers, STR is home to a wide range of flora and fauna including elephants, 304 species of birds, 20 species of amphibians, and 1,076 flowering species. It also has tropical semi-evergreen forests, tropical moist deciduous forests, dry deciduous hill forests, and sprawling meadows.

The Clash:

- The fierce clash in STR among tiger which led to death of rare melanistic tiger is under investigation by the team of National Tiger Conservation Authority. The National Tiger Conservation Authority (NTCA) conducted the big cat count in 2022, the result of which is expected in July 2023.

National Tiger Conservation Authority:

- NTCA is a statutory body under the Ministry of Environment, Forests, and Climate Change. It was established in 2005 following the recommendation of the Tiger Task Force.

Way Forward:

The tiger population in India is increasing due to various efforts like Project Tiger, increasing habitat under protected areas, and set up of NTCA but human-animal conflict, stress over connecting corridors and infighting clashes are posing a threat to the population of India's national animal. Therefore community-led participation and effective coordinative steps are required in this direction.

4. Role of Technology in the Study of Marine Life

Why in News:

The study conducted by the researchers from the Council of Scientific and Industrial Research's National Institute of Oceanography, published in the Journal of Acoustical Society of America, has paved the way to analyze the impacts of climate change and anthropogenic activities on aquatic ecosystems.

Key Pillars of Study:

- The research is based on the usage of hydrophones and artificial technology. The hydrophone is an instrument designed to be used underwater for recording or listening to underwater sound. They are a low-cost means of monitoring species.
- The researchers have recorded the bustling sounds of marine organisms in coral reefs off the coast of south Goa to understand their behavior. The collected sound data has been analyzed using artificial intelligence.
- It is based on the following marine aquatic ecological concept:
 - » In healthy coral reef system, soniferous (sound producing) fish will be found in numerous numbers. They will produce sound which can be easily monitored by hydrophone sensors.
 - » Planktivorous (plankton) produce sound while feeding and soniferous fishes (group of vocal vertebrates) produce sound during social-interactions.
 - » Soniferous based technology will help to study the abundance, diversity and behavior of organisms.
- The study can also reveal how marine/aquatic life responds to climate change and anthropogenic disturbances.

The Findings of Research:

- The researchers have identified 84,69,28 and 22 fish calls belonging to Sciandae (a family of ray-finned fish), terapon theraps (an omnivorous species), planktivorous, and type A (unknown fish), respectively.
- The studies have found that marine/fish communication and activities are connected with the diurnal effect. That implies that some fish communities are active during the daytime and some are active at night.
- It also concluded that fish communication is more active in the pre-monsoon than in the post-monsoon season. The mating activities of fish are dominant in the pre-monsoon period.
- The large group of fish is ectothermic, which means their activities are controlled by

temperature.

Marine Life and Climate Change:

- The Climate Risk Index for Marine Life captures the climate risk for nearly 25,000 marine species and their ecosystems. This index concluded that the warming of oceans is driving species into deeper, more northern, and cooler locations, altering their behavior.

Way Forward:

The hydrophone-based study indicated long-term implications for analyzing the aftermaths of rising sea temperatures and increasing climate extremities over marine life. As deep sea mining missions are going to be executed soon, therefore tech-assisted researches are the need of the hour.

5. Using Sludge as Fertiliser

Why in News:

Recently IIT Roorkee examined the sludge found in sewage treatment facilities (STP) in India, which were built to remediate dirty water from the Ganga river. The study found that the majority of the sludge has a high potential for use as fertiliser, but it must be processed before it can be used on farms without limits or as a possible biofuel.

Key Points:

- The effort intends to turn sewage into useful items like manure and bricks.
- According to the regulations of the United States Environmental Protection Agency, treated sludge can be classed as class A or B.
- Class A sludge is suitable for open disposal and can be used as organic fertiliser, whereas class B sewage can be utilised in "restricted" agricultural uses.
- The majority of the sludge analysed after drying, falls into the class B group, according to the study.
- Nitrogen and phosphate levels in the sludge exceeded those recommended by India's fertiliser regulations, but potassium levels were lower in some samples.
- The total organic carbon content of the sludge was more than 16%, which was greater than FCO requirements, while the level of pathogens and heavy metal contamination was higher than the suggested norm.
- Because India does not currently have criteria for categorising sludge as A or B, further information regarding the chemical properties of the sludge is required to identify appropriate treatment and safe disposal practises.

Sludge:

- Sludge is a thick residue found in Sewage

Treatment Plants, which are designed to remediate dirty water.

- They are rich in organic compounds but are also a store of heavy metals, industrial effluents and bacterial pollutants.

Arth Ganga Project:

- The concept was first introduced by India's Prime Minister during the first National Ganga Council meeting in Kanpur in 2019, where he urged a shift from Namami Gange to the Arth Ganga model.
- Under Arth Ganga, six verticals are being worked upon:-
 - » Zero Budget Natural Farming.
 - » Monetization and Reuse of Sludge & Wastewater.
 - » Livelihood Generation Opportunities.
 - » Public Participation.
 - » Cultural Heritage & Tourism.
 - » Institutional Building.

Namami Ganga Project:

- The Namami Gange Programme is an Integrated Conservation Mission that was designated as a 'Flagship Programme' by the Union Government in June 2014 to achieve the dual goals of effective pollution abatement and conservation and restoration of the National River Ganga.
- It is managed by the Ministry of Jal Shakti's Department of Water Resources, River Development, and Ganga Rejuvenation.
- The National Ganga Council (established in 2016 to replace the National Ganga River Basin Authority- NGRBA) is the implementation agency of the National Ganga Council.

Way Forward:

According to the study, sludge should be held for at least three months to eliminate pathogens and combined with bovine dung, husk, or local soil to minimise heavy metals.

6. Role of Atmospheric Rivers in Indian Floods

Why in News:

Recently a study was jointly conducted by climate scientists from the Indian Institute of Technology (IIT) Gandhinagar, the National Institute of Technology, Srinagar, and the University of Washington. According to the study published in the latest issue of Communications Earth and Environment journal, around 70% of India's major flood events in the summer monsoon season were directly associated with Atmospheric rivers (ARs) during the 1985–2020 period.

Key Highlights:

- To study the impact of ARs formed during the summer monsoon season on flooding in India, the research team used the high-resolution atmospheric fields from the European Reanalysis Version, along with observed precipitation from the India Meteorological Department and a historical flood database from the Dartmouth Flood Observatory of the University of Colorado (USA).
- According to the Dartmouth Flood Observatory data, during each year of the last decade, more than 3% of the total geographical area of India has been affected by floods.
- An Asian Development Bank report said that between 1990 and 2020 floods in India caused damage of over USD 50 billion.

Importance of Reports:



- Seven out of the ten floods with the highest mortality between 1985-2020 were associated with ARs.
- 2013 Uttarakhand floods, which claimed 6000 lives, the 2007 floods in South East Asia, including India, with 2000 human lives lost, the 1988 floods in Punjab, the 2018 floods in Kerala that claimed 400 lives, the 2006 floods in Gujarat, the 1993 floods in Assam, and the 2004 floods that caused extensive damage in Eastern India and Bangladesh were all due to severe ARs.
- The warming climate is increasing the moisture-holding capacity of atmospheric rivers, which leads to concerns about more devastating floods in the future.
- Warmer sea surface temperatures over the

south-central Indian Ocean play a crucial role in the development of ARs.

- Evaporation from the Indian Ocean has significantly increased in recent decades due to an increase in Vapour Pressure Deficit (VPD).

Atmospheric River:

- Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds which are vulnerable to flooding.
- While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack.

Way Forward:

This is the first time that the study was conducted to understand the connection between ARs and flooding in India. Much more needs to be studied regarding the impact of global warming on ARs. ARs should be an integral part of the existing flood early warning systems in India, which can help in adaptation and mitigation.

7. Nourishing Ocean Ecosystems by Dust

Why in News:

Recently, a new study led by researchers at Oregon State University has explored the extent to which dust particles from land-based sources play a role in nourishing global ocean ecosystems and regulating atmospheric carbon dioxide levels.

The Role of Atmospheric Dust in Nourishing Ocean Ecosystems:

- Dust particles from soil that are lifted by the wind and affect the Earth's climate have been difficult to estimate in terms of their impact on ocean ecosystems.
- In the new research, published in the journal, Science, the scientists estimated the contribution of dust deposition to supporting 4.5% of the global annual export production or sink, of carbon, with regional variation in this contribution reaching 20% to 40%.
- At lower latitudes, phytoplankton growth and predation were more balanced, so when dust improved the growth rate, the new production was rapidly consumed and immediately transferred up the food chain.
- At higher latitudes, the constantly changing environmental conditions weakened the link between phytoplankton and their predators, so

the phytoplankton populations showed both improved health and increased abundance.

Importance of Dust in the Carbon Cycle:

- The ocean plays a significant role in the carbon cycle through a process known as the biological pump.
- Carbon dioxide from the atmosphere dissolves in surface waters, and through photosynthesis, the carbon gets converted into organic matter by phytoplankton.
- Some of this organic matter sinks from the surface ocean to the deep sea, where it gets locked away.

Importance of Study:

- The study provides a better understanding of how dust plays a crucial role in the biological pump of the ocean, which helps to remove carbon dioxide from the atmosphere and lock it away in the deep ocean.
- Researchers emphasized the importance of the biological pump as one of the key controls on atmospheric carbon dioxide, which is a dominant factor driving global warming and climate change.
- The findings of the study can help policymakers better understand the impact of dust on ocean ecosystems and make more informed decisions to protect and preserve these delicate systems.
- Impact of Atmospheric Dust on Ocean Ecosystems:
- Phytoplankton are the foundation of the marine food web and rely on dust from land-based sources for key nutrients.
- While vital nutrients for phytoplankton growth are mainly provided through the physical movement of nutrients from deep waters up to the surface, atmospheric dust also plays an important role.
- The study shows that atmospheric dust contributes significantly to carbon export production in the ocean.
- The study's findings provide valuable insights into the impact of dust particles on ocean ecosystems, which can inform future research and conservation efforts.

Way Forward:

The current analysis demonstrates measurable ocean biological responses to an enormous dynamic range in atmospheric inputs. It is anticipated that as the planet continues to warm, this link between the atmosphere and oceans will change. The research will help in better policy formulation and informed decision-making in this regard and promote further research in the field.



1. Psychedelic Treatment for Depression

Why in News:

Many Journals and scientific studies based on the treatment utility of psychedelic substances for drug-resistant depression and other mental disorders have shown positive results. US-based medical Journal published in November 2022 reasserts this medical theory.

What is Psychedelic Substance?

- Psychedelics are non-addictive and non-toxic group of drugs that alter perception, mood and thought processing while a person is still clearly conscious. The two most common psychedelics are d-lysergic acid diethylamide (LSD) and psilocybin.
- The main psychedelic or psychoactive ingredient found in specific mushrooms can significantly reduce symptoms of difficult to treat depression.

How does it work?

- It allows the neural system to break free from negative habitual patterns. It temporarily decreases blood flow to default mode network, provide access to unconscious mind allowing humans to process trauma and gain insights to problems.
- It also allows us to experience the connectivity of all things. The psychedelic substances are less harmful than the illicit drugs.

Findings of the Research:

- The work published in The New England Journal of Medicine evaluated that a single dose of 25 mg of psilocybin reduced the symptoms of depression in people for whom several conventional treatments have failed.

Status in India:

- In India, the psychedelic substances are banned under the Narcotic Drugs and Psychotropic Substances Act 1985. The Ketamine, a dissociative anesthetic with psychedelic properties, is used under strict medical supervision for anesthesia and to treat treatment resistant depression.

NDPS Act-1985:

- The Narcotic Drugs and Psychotropic Substances Act was enacted in 1985 and deals with the drugs and trafficking in the country. The act prohibits the production, sale, purchase transportation and consumption of many narcotic drugs and psychotropic substances including cannabis, heroin, opium etc.

- Narcotics Control Bureau is tasked with the responsibility of enforcement of NDPS provision. It works under the ambit of Ministry of Home Affairs.

OBJECTIVES OF NDPS ACT:

- 1.To consolidate and amend the law relating to narcotic drugs.
- 2.To make stringent provisions for the control and regulation of operations relating to narcotic drugs and psychotropic substances.
- 3.To provide for the seizure of property derived from or used in illicit traffic in narcotic drugs.
- 4.To implement the recommendations of the International Conventions on narcotic drugs and psychotropic substances.



Mental Health Issue in India:

- According to National Mental Health Survey 2015-16, almost 150 million people across India are in need of mental health care interventions. The research by WHO shows that depression and anxiety cases have increased by 25% in the first year of pandemic. This issue is more concerning in working age population of India which is estimated to be the largest in world. Therefore medical inventions are needed in this field.
- The initiatives like Manodarpan under Atmanirbhar Bharat Abhiyan, Kiran Helpline and Mental Healthcare Act 2017 are serious government efforts to tackle this issue.

Way Forward:

The mental healthcare is gaining more social acceptability in modern times. But the coverage of medical treatment related to depression is inadequate, so large scale research and development of effective treatment structure is needed in this field of medicine.

2. Industrial Gas leak in Punjab's Ludhiana

Why in News:

Recently, 11 people died due to gas leak in Punjab's Ludhiana, while four people were admitted to the hospital. Air quality sensors used by the National Disaster Response Force (NDRF) team detected high levels of hydrogen sulphide (a type of neurotoxin) gas.

About Hydrogen Sulphide Gas:

- It is a colourless and flammable gas that smells like rotten eggs at low concentrations. It is like a neurotoxin and its concentration above 50 ppm is life-threatening and above 700 ppm can be fatal. Its intensity is measured on three levels:
 - » Low-level eye, nose, and throat irritation.
 - » Moderate level headache, dizziness, vomiting, cough, and difficulty in breathing.
 - » High levels can cause shock, coma, and even death.
- This gas naturally occurs in sewers and is chemically oxidized to remove gases such as hydrogen sulphide from wastewater, where oxidants such as hydrogen peroxide are added to the wastewater.
- It is used in industries such as mining, tanning, rayon manufacturing, oil and gas refining, and pulp and paper processing.

What is Neurotoxin?

- Neurotoxins are poisonous substances that directly affect the nervous system. Neurotoxicity occurs when exposure to natural or man-made toxins alters the normal activity of the nervous system. It directly attacks the respiratory tract of the body, affecting the oxygen concentration of the body and then the nervous system.

What are Neurotoxic Gases?

- Dr. Vitul Kumar Gupta, president of the Association of Physicians of India in Malwa (Punjab), said that methane, hydrogen sulphide, carbon monoxide, and carbon dioxide are common neurotoxic gases. He said that methane and carbon monoxide are odorless gases, while hydrogen sulphide has a pungent odor and can be lethal to humans in high concentrations.

Way Forward:

This type of gas leak accident causes the untimely death of the workers working there, thus it is something that needs to be constantly checked and addressed, with preventive as well as timely curative measures. To prevent such accidents in factories, it is crucial to take precautions on a wide scale so that the surrounding air quality is maintained and the loss of life is minimized.

3. SUPREME Initiative

Why in News:

The Ministry of Science and Technology has launched the "Support for Up-gradation Preventive Repair and Maintenance of Equipment" (SUPREME) initiative to provide financial support for the upgradation and maintenance of analytical instrumentation facilities (AIFs).

About SUPREME Initiative:

- It seeks to provide financial support for the upgradation and maintenance of analytical instrumentation facilities (AIFs) created under the Ministry of Science and Technology support.
- It is a first-of-its-kind programme by the government which extends financial support for repair, upgradation, maintenance, retrofitting, or acquiring additional attachments to increase the functional capabilities of existing AIFs.
- Such facilities at institutions recognised by the University Grants Commission (UGC) are eligible to apply for grants under SUPREME.
- The duration of support will be for a period not exceeding 3 years.
- The funding pattern in the scheme would be 75:25 for all private and government-owned institutions (except for state-funded institutions for which 100% funding would be considered).
- Nodal Ministry: Ministry of Science and Technology

The Criterion for Selection:

- Apart from the academic and research merits of the organizations, details on how the revival of the research facility will benefit the scientific community and MSME/Startups will be taken into account for evaluating the proposals.
- Proven records of the sample(s) analysed, publications, patents, different beneficiaries, stakeholders associated with the facility and other parameters like Scientific Social Responsibility or industrial R&D components will be considered for screening of the proposals.
- The selection process will be through a peer review mechanism and a visit to the organizations, if necessary.
- Expert Committee will evaluate the proposals and assist DST in making the final selection.

Conclusion:

The Department of Science & Technology (DST) has set up Sophisticated Analytical Instrument Facilities (SAIFs) in different parts of the country under its Sophisticated Analytical Instrument Facilities Programme to provide the facilities of sophisticated analytical instruments to research workers in general and especially from the institutions which do not have access to such instruments to enable them to pursue R&D activities requiring such facilities and keep pace with developments taking place globally.

4. PRET Initiative

Why in News:

Recently, the World Health Organization (WHO)

has launched the PRET initiative to be better prepared for future outbreaks of a similar scale and devastation as the COVID-19 pandemic. The initiative was announced at the Global Meeting for Future Respiratory Pathogen Pandemics held in Geneva, Switzerland.



About PRET Initiative:

- The Preparedness and Resilience for Emerging Threats (PRET) initiative is an innovative approach for improving disease pandemic preparedness.
- It recognizes that the same systems, capacities, knowledge, and tools can be leveraged and applied for groups of pathogens based on their mode of transmission (respiratory, vector-borne, foodborne, etc.).
- PRET incorporates the latest tools and approaches for shared learning and collective action established during the COVID-19 pandemic and other recent public health emergencies.
- It places the principles of equity, inclusivity, and coherence at the forefront.
- PRET provides a platform for national, regional, and global stakeholders to collaborate to strengthen preparedness.
- It recognizes that there are three tiers of systems and capacities relevant to pandemic preparedness:
 1. Those that are cross-cutting for all or multi-hazards
 2. Those that are relevant for groups of pathogens (respiratory, arboviruses, etc.)
 3. Those that are specific to a pathogen.

About WHO:

- WHO was established on April 7, 1948.
- WHO headquarter is located in Geneva, Switzerland.

- WHO is governed by the World Health Assembly, which is composed of representatives from all member states.
- The Assembly meets annually to set policies, approve budgets and elect the Director-General.
- WHO work focuses on promoting health and preventing disease, preparing for and responding to health emergencies, and improving access to health services and medicines.
- It works closely with a range of partners, including other UN agencies, governments, NGOs, and the private sector, to achieve its objectives.
- It is primarily funded by contributions from its member states.
- It also receives funding from philanthropic organizations and other sources.

Conclusion:

The PRET Initiative is a timely and relevant initiative that can help countries enhance their readiness and response capacities for any emerging threat. The PRET Initiative is aligned with the World Health Assembly resolutions on strengthening preparedness for health emergencies. It will support countries in achieving global targets for developing or updating their respiratory pathogen pandemic plans by 2024.

5. Listeria Contamination in Chocolates

Why in News:

A host of Cadbury chocolates have been recalled in the United Kingdom over fears of potential contamination by *Listeria monocytogenes*, a bacterium that causes infection with flu-like symptoms.

What is *Listeria monocytogenes*?

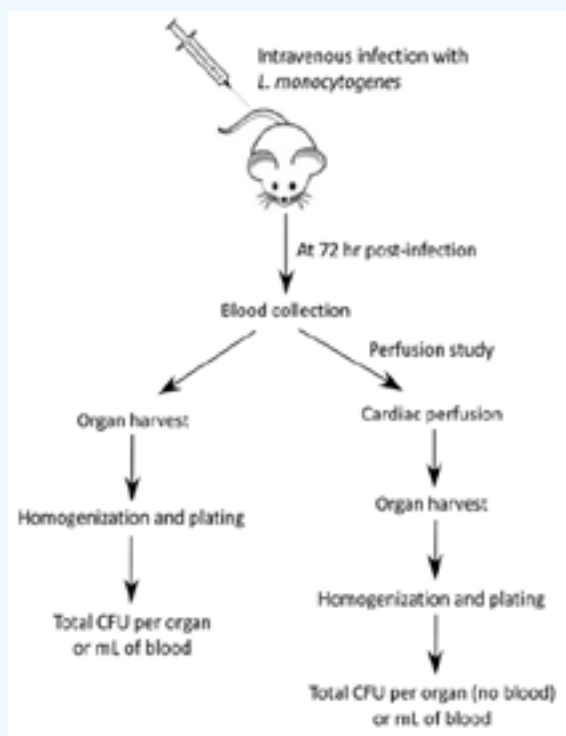
- *Listeria* infection is typically a food-borne illness caused by *Listeria monocytogenes* bacteria.
- The bacteria exist in the environment. It is found in water, soil and some animals' intestines.
- According to the Food and Drug Administrator of the UK, *Listeria monocytogenes* is rare but very serious.
- The World Health Organization (WHO) characterises it as a serious but preventable disease with 0.1 – 10 cases per million people a year, depending on the countries and regions of the world, the high rate of death associated with this infection makes it a significant public health concern.

Effects on Human Health:

- The symptoms caused by this organism can

be similar to flu including high temperature, muscle ache or pain, chills, feeling of being sick and diarrhoea, all depending on the severity of the illness.

- As per FDA, people infected may start showing symptoms in a few hours or as long as two to three days after eating the contaminated food.
- The usually self-limiting disease can prove to be dangerous for a certain set of populations—pregnant people, newborn babies, those above 65 years of age, those with a weakened immune system or living with diabetes.



Mode of Contamination:

- While these are the most common sources of Listeria infection, it has also been known to spread from infected humans and close contact with farm animals.
- The bacteria usually find their way into humans through cold, ready-to-eat foods such as cooked sliced meats and cured meats, smoked fish and cooked shellfish, pre-prepared sandwiches and salads, etc.

Way Forward:

Recalling the chocolates by Cadbury shows responsible behaviour by the company. However, consumers should be aware of ill effects before buying such products and food safety regulations need to be adhered to strictly.

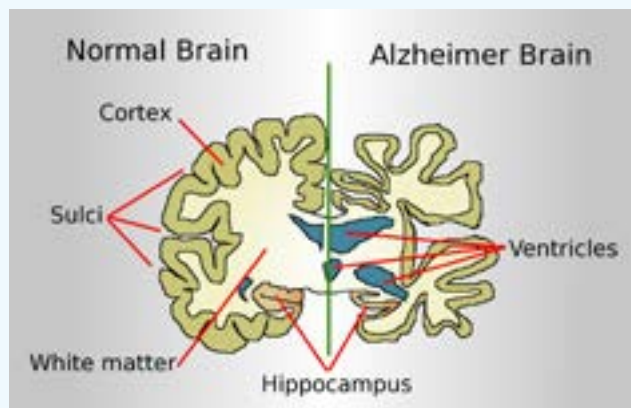
6. Donanemab: Alzheimer's Treatment

Why in News:

The new breakthrough has been achieved by the US based pharmaceutical company Eli Lilly for the treatment of Alzheimer disease. The Eli Lilly's developed drug Donanemab has shown positive results in phase 3 trials.

Alzheimer and Donanemab:

- Alzheimer is a neurological brain disorder that causes the brain to shrink and brain cells to eventually die. Its most common form dementia leads to gradual decline of memory, thinking, behavior and social skills. These changes affect person's ability to function.
- This disease is thought to be caused by the abnormal build-up of proteins in and around brain cells.
- The Eli Lilly company has after months of research and experiment stated that Donanemab has shown positive results in the phase 3 trials.
- Five months ago USFDA (Food and Drug Administration) granted 'accelerated' approval for a drug called as Lecanemab, developed by Biogen and Eisai pharmaceutical company.



Donanemab and Lecanemab:

- Donanemab is not a cure for Alzheimer but an antibody-based therapy which targets different forms of amyloid-beta proteins that can clump together to form amyloid plaques in people's brain, resulting in their cognitive decline. This drug aims to remove plaques from the brain and slow progression of the disease. Plaque is a small raised area on surface inside the body, often caused by a build-up of material. Donanemab is not approved by FDA till now while Lecanemab is approved by FDA and under evaluation phase of European Medicine Agency.
- The report suggests that Donanemab shows

cognitive decline by 35% while trial results showed by Lecanemab drug, slowed cognitive decline by 27%. Both drugs are tested on the people with early stages of Alzheimer's.

Challenges Related to Alzheimer's Treatment:

- According to WHO, Alzheimer's disease affects at least 55 million people worldwide and its most common form dementia is the 7th leading cause of death. It is one of the major causes for the disability and dependency among older people at world level.
- The increasing life span and very high burden of diseases like disabilities, obesity etc. are expected to increase the prevalence of dementia in India. In 2020 there are 5.3 million people above 60 years old living with dementia in India. It is expected this figure will rise to 14 million by 2050.

Way Forward:

The both suggested treatment have a high risks of side effects according to 'Nature' journal. As of now the burden of disease is increasing exponentially and adequate treatment is not available, therefore further research and incentive based development of Alzheimer is need of the hour.

7. IIT Madras, DRDO Develop Sensor Technology for Underwater Communications

Why in News:

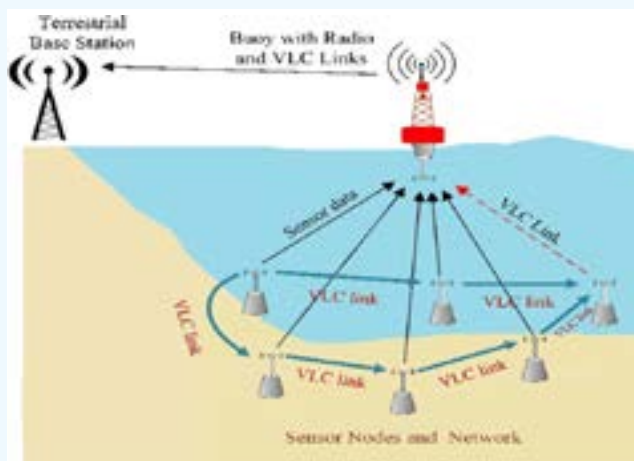
Researchers at the Indian Institute of Technology Madras and scientists of the Defence Research and Development Organisation (DRDO) have developed a cutting-edge sensor technology, PIEZOELECTRIC MEMS (micro-electric mechanical system) for underwater communications that the Navy can apply.

About the PIEZOELECTRIC MEMS:

- The piezoelectric effect is a phenomenon where a body develops an electric current when it is squeezed.
- In the reverse piezoelectric effect, a crystal becomes mechanically stressed when a voltage is applied across its opposite faces.
- In piezoelectric materials, mechanical energy is converted to electrical energy and vice versa.
- Materials which exhibit this phenomenon include natural quartz crystals, semi-crystalline polyvinylidene polymer, polycrystalline piezoceramic, bone and even wood.
- The indigenous technology will enable the fabrication of devices at a relatively lower cost

as compared to international foundries, where not only the cost of fabrication is high but also the number of foundries is limited.

- Researchers developed piezoelectric MEMS (micro electromechanical system) technology where they fabricated 100mm diameter piezoelectric thin films.



Potential Applications of the Technology:

- Piezoelectric devices are used at Audio Frequencies as pickups, microphones, earphones, beepers, etc.
- They are used to create different types of sensors and actuators.
- They are also employed commonly in ultrasonic applications, such as intrusion detectors and alarms.
- Piezoelectric devices are useful in wireless applications as they make it possible to use crystals and ceramics as oscillators that generate predictable and stable signals at Radio Frequencies.
- The device is needed to develop high-performance thin films and convert 'piezo thin film', which are a vital component of piezo MEMS devices and are considered for acoustics and vibration-sensing applications.
- The Navy can use this technology to fabricate high-performance piezo MEMS acoustic devices at a lower cost.

Way Forward:

By overcoming the major challenge in the piezo MEMS process technology, which is the need for high reliability and durability in harsh underwater environments, high pressure and the corrosive nature of seawater, this development would provide an edge to the defence forces.



Economic Issues



1. De-Dollarisation Of Economies

Why in News:

In recent times, a movement called “de-dollarization” has gained momentum, as countries seek to reduce their dependence on the US dollar and promote greater economic sovereignty. This trend has been driven by economic and geopolitical challenges faced by many countries under US sanctions or influence. Several countries are actively pursuing de-dollarization, including China, Russia, Brazil, India, ASEAN nations, Kenya, Saudi Arabia, and the UAE..

About Dedollarisation:

- De-dollarisation refers to the replacement of the U.S. dollar by other currencies as the global reserve currency. A reserve currency refers to any currency that is widely used in cross-border transactions and is commonly held as reserves by central banks.

Factors for Dedollarisation:

- The U.S. imposed several sanctions that restricted the use of the U.S. dollar to purchase oil and other goods from Russia, and this has been seen by many countries as an attempt to weaponise the dollar.
- The overreliance on the US dollar as a reserve currency has led to vulnerabilities and imbalances in the global economy, which remains susceptible to fluctuations in US monetary policy.
- The growing economic power of emerging markets aim for diversified and resilient financial architecture.
- There was a need for a stable and equitable financial system due to increasing interconnectedness of the world.

Role of Reserve Currencies:

- Reserve currencies are foreign currencies held by central banks and other monetary authorities to facilitate international transactions, stabilize exchange rates, and bolster financial confidence.
- They are typically stable, liquid, and have wide acceptance in global markets
- This makes them attractive for holding and conducting international transactions.

Advantages of dollar as a reserve currency:

- It is very popular among investors.
- Trade deficit of U.S provide a huge reserve for rest of the worlds to invest in U.S dollar.
- It was ubiquitous in global trade, finance, and investment.

- It has lower transaction costs, reduced exchange rate risk, and the ability to finance deficits at relatively lower costs.
- It has higher stability due to strong and stable US economy.

Challenges:

- A recent attempt by India and Russia to carry out trade between the two countries in Indian rupees rather than in U.S. dollars has hit a roadblock because the value of India’s imports from Russia far outweighs its exports to the country. This led to Russian demands for the settlement of bilateral trade in U.S. dollars.
- So, even Russia, a long-time friend of India and a long-time foe of the United States, preferred to carry out its trade with India using U.S. dollars since the dollar is far more widely acceptable than the Indian rupee.

Conclusion:

- For de- dollarisaton, an alternate currency needs to achieve some stability, liquidity, acceptability underpinned by a stable economy with sound financial markets, and monetary and fiscal policy frameworks.
- Currently, no single currency fully meets these criteria. Absence of rule of law in China ruled out yuan also.
- However, several efforts are being made to de-dollarize—for example-India unveiled its new foreign trade policy, which allows the use of rupees in trade with countries facing dollar shortages or currency crises. India already trades in rupees with Russia, Mauritius, Iran, and Sri Lanka.

2. India-EFTA Countries Discuss Resumption of Talks for Trade Pact

Why in News:

India and the four-nation bloc of the European Free Trade Association (EFTA) recently met to discuss ways to resume negotiations for a Trade and Economic Partnership Agreement (TEPA) and work towards strengthening the economic partnership.

What is EFTA?

- It is an intergovernmental organization established in 1960 by the Stockholm Declaration for the promotion and intensification of free trade.
- It was founded as an alternative for states that did not wish to join the European Community.
- The EFTA includes Iceland, Liechtenstein,

Norway, and Switzerland as its members.

- The EFTA countries have developed one of the largest networks of Free Trade Agreements (FTAs), which spans over 60 countries and territories, including the EU.
- EFTA is different from EU in the terms that it is not a customs union. The EFTA members are free to set their own customs tariffs and arrange other foreign trade measures vis-à-vis the non-EFTA States.
- The highest governing body of EFTA is EFTA Council which generally meets 8 times a year at the ambassadorial level and twice a year at the ministerial level.
- Headquarters of EFTA Secretariat- Geneva.
- It assists the EFTA Council in the management of relations between the 4 EFTA members and deals with the negotiations and operation of EFTA's FTAs.
- EFTA Surveillance Authority (ESA)- monitors compliance with European Economic Area (EEA) rules in Iceland, Liechtenstein, and Norway.
- EFTA Court- based in Luxembourg, it has the competence and authority to settle internal and external disputes regarding the implementation, application, or interpretation of the EEA agreement.

European Economic Area (EEA):

- It includes member states of the European Union (EU) and the three countries of the European Free Trade Association (EFTA) (excluding Switzerland).
- The EEA seeks to strengthen trade and economic relations between the member states.

About Trade and Economic Partnership Agreement (TEPA):

- The TEPA aims to facilitate trade procedures and customs cooperation along with effective mechanisms for dispute resolution.
- Objective: to ensure fair and transparent market access conditions for service providers and investors and to enhance cooperation on intellectual property rights protection and enforcement.
- Coverage: trade in goods, services, investment, competition, government procurement, trade facilitation, dispute settlement, and other areas of mutual interest.

Way Forward:

The resumption of discussions on TEPA will resolve all outstanding issues and will facilitate deepening and strengthening economic partnerships while contributing to a more inclusive global trading system.

3. Mahila Samman Saving Certificate Account

Why in News:

The Union Minister of Women and Child Development recently opened a Mahila Samman Savings Certificate (MSSC) account.

About Mahila Samman Savings Certificate (MSSC) Scheme:

- The Mahila Samman Savings Certificate (MSSC) is a new small savings scheme introduced by the Indian government in the budget 2023 designed exclusively for women in India.
- The main objective was to promote investment among women. The scheme was announced to commemorate the Azadi Ka Amrit Mahotsav.
- Mahila Samman savings scheme is a one-time scheme that is available for a tenure of 2 years.
- The scheme offers a deposit security of up to INR 2 lakhs for a tenure of 2 years, with an annual interest rate of 7.5%.



- Accounts opened under this scheme will be single-holder accounts that can be opened at any registered bank.
- The returns are higher than bank FDs and partial withdrawal makes liquidity less of a concern.
- **Investment Limits:** The minimum amount to be invested under this is Rs 1,000 and any amount in multiples of 100 can be invested. The maximum investment limit in this is Rs 2 lakh.
- The scheme also offers tax-saving benefits under section 80C of the Income-tax Act, 1961.
- Payment on maturity: The eligible balance will be paid to the depositor after two years from the account opening date.
- The account holder may also withdraw up to 40% of the balance after the first year from the date of account opening but before the account matures.

Who can open Mahila Samman Savings account?

- Mahila Samman Savings account can be opened

by a woman for herself, or by the guardian on behalf of a minor girl.

- Women investors have to fill Form - I, on or before the 31st March 2025.

Benefits of Mahila Samman Savings Certificate:

- The scheme is backed by the central government making it a secure investment option.
- A partial withdrawal option is available under this scheme.
- The account cannot be prematurely closed. However, under certain conditions premature closure facility is available.
- There are some exceptions in which you can close the account before maturity such as the death of the account holder or the account holder's life-threatening disease, the guardian's death, etc.

Documents Required for Mahila Samman Savings Account:

The following documents are required to open Mahila Samman Savings Scheme Account:

- MSSC account opening form,
- KYC Documents – Address Proof (Aadhaar Card, Voter's ID, or Driver's license) and Pan Card,
- KYC form for first-time investors, and
- Pay-in slip

Way Forward:

The Mahila Samman Savings Certificate (MSSC) Scheme will encourage more women to adopt formal financial saving instruments which will lead to more financial inclusion.

4. National Manufacturing Innovation Survey 2021-22

Why in News:

The National Manufacturing Innovation Survey (NMIS) 2021-22 was released by the Department of Science and Technology on April 27, 2023. NMIS is the joint study conducted by the Department of Science and Technology and United Nations Industrial Development Organisation (UNIDO) under the objective of enhancing competitiveness of Indian Manufacturing and increasing its share in GDP.

About NMIS:

- National Manufacturing Innovation Survey is conducted to evaluate the innovation performance of manufacturing firms in India. The first NMIS was conducted in 2011. This study has been conducted in two phases. The two specific components of survey include:

- » **The Firm Level Survey:** It captured data related to types of innovations and innovative measures taken by firms, including the process of innovation, access to finance,

resources and information for innovation.

- » **The Sectorial System of Innovation Survey:** It mapped the manufacturing innovation system and its enabling role in achieving innovation in firms.

- The survey focuses on the Triple-Helix model. It refers to relationships between universities, knowledge-bases institutions (KBIs), firms, governments and organizations.



Significance of Survey:

- It is believed that NMIS findings will contribute to strengthening the baselines to some of capacities and capabilities opportunities and challenges in manufacturing value-chains that require immediate action. This will add significant value to the Make-in-India programme objective, especially PLI schemes, that are implemented to boost manufacturing in variety of sectors.

Findings of the Survey:

- In firm level survey it is found that 1 in 4 firms was found to have successfully implemented an innovation in the observation period, and over 80% of these firms benefitted significantly in expanding markets and production and reducing costs.
- The NMIS 2021-22 survey shows that innovation is not yet common in manufacturing but has proved to be profitable for firms. The emphasis on manufacturing innovation is needed to expand the production.
- More than 45% of firms reported that the most frequent barrier was the lack of funds within the firm or group, followed by high innovation costs (40.30%) and the lack of finance from external sources.
- The responses obtained from the firm level survey have been converted into an India Manufacturing Innovation Index (IMII) 2022. All 28 states and 6 UTs were ranked based on their IMII scores. The state of Karnataka ranked highest on IMII 2022 and the lowest was north-eastern states excluding Assam.

Way Forward:

This survey has provided the explicit picture of standard of innovation level in Indian manufacturing

sector and barriers in this way. Therefore collaborative efforts of government agencies and private research firms can alter the situation in Indian favor. The establishment of innovation centers in state, availability of affordable financing services and investment can play crucial role in this regard.

5. CGTMSE Scheme

Why in News:

Union MSME Minister Narayan Rane launched the revamped Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme, which will provide a guarantee for additional Rs.2 lakh crore loans and advances to the micro and small enterprises. The move comes in the wake of Rs.9,000 crore allocations to the scheme in the Union Budget 2023-23 to revamp the scheme.

About the Scheme:

- The government's Credit Guarantee Fund for Micro and Small Enterprises (CGTMSE) is among the biggest and most prominent initiatives taken to provide micro and small enterprises (MSEs) with collateral-free loans. Introduced back in July 2000, with an initial outlay of Rs 2,500 crore from the government and the Small Industries Development Bank of India (SIDBI), the scheme was later strengthened with an additional Rs 5,000 crore.



Who can raise credit under CGTMSE?

- All new and existing MSEs in manufacturing or service activity excluding agriculture, and self-help groups (SHGs) can seek loans with CGTMSE cover. The loan can be granted up to 5 crore to a single MSEs.
- A loan can be raised by more than one bank and/or financial institution jointly and/or separately up to Rs 5 crore subject to the ceiling amount of individual lenders.

Limit of guarantee cover on loans raised under

CGTMSE:

- The revamped scheme included a reduction in guarantee fees for loans up to Rs.1 crore by 50% bringing the minimum guarantee fee to the level of 0.37% per annum only. Another major change announced was rising of ceiling for guarantee from Rs. 2 crore to Rs.5 crore and enhancing the threshold limit for claim settlement without initiation of legal action up to Rs.10 lakh.
- For loans up to Rs 5 lakh, the guarantee cover available for micro-enterprises is up to 85 percent, for loans between Rs 5 lakh and Rs 5 crore, the cover is up to Rs 75 percent. For women entrepreneurs/ SC-ST entrepreneurs/ MSEs situated in aspirational districts/ ZED-certified MSEs, etc., the guarantee cover available is up to 85 percent for loans up to Rs 5 crore. For MSEs based Northeast region, Jammu & Kashmir, and Ladakh, the cover limit is up to 80 percent for loans up to Rs 50 lakh and up to 75 percent for loans between Rs 50 lakh and Rs 5 crore.
- The scheme added microfinance institutions (MFIs) last year to the list of member lending institutions (MLIs). MFIs joined public and private banks, regional rural banks, foreign banks, small finance banks, urban cooperative banks, and other MLIs in lending to new enterprises with credit guarantee cover.
- MSEs seeking guarantee cover under CGTMSE for the collateral-free credit will have to provide their Udyam registration number. It was made mandatory from January 16, 2023.

Conclusion:

This move is expected to encourage the public and private sector banks, Member Financial Institutions, and foreign banks to step up loans to MSEs. Ultimately it will benefit our MSEs and youth who are actively engaged in this sector.

6. B-READY by World Bank

Why in News:

The World Bank unveiled Business Ready (B-READY), a new methodology for assessing the business climate in up to 180 countries. It is done following the cancellation of the Ease of Doing Business Index rankings in September 2021.

About Business Ready (B-READY) Ranking:

- It will assess the business and investment environment worldwide annually.
- B-READY improves upon and replaces Doing Business.
- **Aim:** To help countries attract investment and boost jobs and productivity to accelerate development.

- It was shaped by recommendations from World Bank experts, governments, the private sector, and civil society groups.
- It will be published in the 2024.
- It will be covering an initial group of 54 economies in Asia, Latin America, Europe, the Middle East, and Sub-Saharan Africa,
- More countries will be added in the next two years.
- It will include worker rights for the first time.
- It will reflect a more balanced and transparent approach toward evaluating a country's business and investment climate.

Data Transparency in B-READY:

- To ensure full transparency, WB would publish all collected data - raw data, scores and the calculations used to obtain the scores.
- WB will also make available the tools needed by outsiders to replicate the results of the data assessments.

World Bank indexes:

- World Development Report
- Global Economic Prospect (GEP) Report
- Remittance Report
- Ease of Living Index
- India Development Update
- Universal Health Coverage Index
- The Service Trade Restriction Index

Conclusion:

Due to data irregularities The Ease Of Doing Business Ranking was scrapped. However new ranking will pay more attention on transparency and accuracy so that its internal mechanism could not affect. The new project focuses on 10 topics covering the lifecycle of a firm, including business entry, utility services, labor, dispute resolution, market competition, taxation and insolvency - another move aimed at addressing criticism of the earlier product.

7. CBDC is more Environment Friendly: RBI

Why in News:

According to a recently released report of Reserve Bank of India (RBI), Central Bank Digital Currency (CBDC) or e-rupee, if designed keeping in mind the environment, social and governance (ESG) objectives, can be more environment friendly compared to alternative cashless methods. The pilot phase of CBDC or digital rupee for both wholesale and retail uses was launched by the RBI in 2022.

How CBDC is more environment-friendly?

- CBDCs are significantly more energy efficient than current credit card processing centres, in

part because the latter involve energy-inefficient legacy systems.

- The CBDC helps curb emissions by nullifying operations such as printing, storage, transportation, and replacement of physical currency.
- Payments effected through CBDC would be instantaneous and final, and reduced reliance on clearing corporations and other settlement infrastructure could cut down energy consumption.

RBI Report on currency and finance (2022-23):

- Theme of report: "Towards a Greener Cleaner India".
- The results of a climate stress-test revealed that public sector banks (PSBs) may be more vulnerable than private sector banks in India, according to the report.
- Climate-stress tests are scenario-based exercises that assess the loss to the financial system/entities due to climate related risks by adapting the methodology of traditional stress tests to climate related exigencies.
- Macroeconomic impact of Climate change- India could lose anywhere around 3-10% of its GDP annually by 2100.
- Job Loss- 34 million job losses from heat stress associated with productivity decline by 2030.
- Finance Requirements- An additional annual investment of about 2.5 Percent of GDP by 2030 would be required to fill the infrastructure gap due to Climate Change.

What is Central Bank Digital Currency (CBDC)?

- RBI defines the CBDCs are a digital form of a paper currency issued by the central bank.
- They can be transacted using wallets backed by blockchain and is regulated by the central bank.

Features of CBDC:

- Sovereign currency issued by Central Banks.
- Liability on the central bank's balance sheet.
- Accepted as a medium of payment, legal tender.
- Freely convertible against commercial bank money and cash.
- Holders need not have a bank account.
- Lowers the cost of issuance of money and transactions.

Way Forward:

Supported by state-of-the-art payment systems of India that are affordable, accessible, convenient, efficient, safe and secure, the Digital Rupee system will further bolster India's digital economy, make the monetary and payment systems more efficient and contribute to furthering financial inclusion.



Miscellaneous Issues

1. Thirunelli Temple

Why in News:

Recently, the Indian National Trust for Art and Cultural Heritage (INTACH) has urged the government to conserve the 600-year-old 'Vilakkumadom', at the Sree Mahavishnu Temple at Thirunelli, Kerala.

About Vilakkumadom:

- Vilakkumadom is an exquisite granite structure believed to be constructed in the 15th century AD, at the Sree Mahavishnu Temple at Thirunelli in the Wayanad district of Kerala.
- It is said that the work of Vilakkumadom was launched by the king of Coorg without the permission of the temple's custodian, Kottayam Raja. Later, the Kottayam Raja ordered the construction work, and the structure remained untouched afterward.

About Thirunelli Temple:

- Thirunelli Temple, also known as Amalaka or Sidha Temple, is a Vishnu temple in the Wayanad district, Kerala.
- The temple gets its name from an idol of Lord Vishnu resting on an amla tree in a valley, which was discovered by Lord Brahma while circling the globe.
- The Thirunelli temple's architecture follows the traditional Kerala style. The temple has an inner sanctum, surrounded by a tile roof structure, and an open courtyard around it.
- The east entrance of the temple is decorated with a granite lamp post. The outer wall of the temple is bound by granite pillars that are cut in cubicle style, which is not commonly seen in Kerala.
- There exists documentary proof that Thirunelli at the time of Chera king Bhaskara Ravi Varma I (962–1019 CE) was an important town and pilgrim center in South India.

About Indian National Trust for Art and Cultural Heritage (INTACH):

- The Indian National Trust for Art and Cultural Heritage (INTACH) was founded in 1984 in New Delhi with the vision to spearhead heritage awareness and conservation in India.
- INTACH is recognized as one of the world's largest heritage organizations, with over 190 Chapters across the Country.
- Headquartered in New Delhi, it operates through various divisions.
- The Indian National Trust for Art and Cultural

Heritage is a non-profit charitable organisation registered under the Societies Registration Act, 1860.

- In 2007, the United Nations awarded INTACH a special consultative status with United Nations Economic and Social Council.

Conclusion:

Conservation of heritage buildings is very important because it provides a sense of identity and continuity in a fast changing world for future generations. Heritage buildings represent the past history and culture of a nation. They constitute together the architectural heritage of an area. The Indian government has undertaken to protect the cultural heritage sites in India. For example, the government has launched Adopt a Heritage Programme, Project Mausam, and PRASHAD Scheme to conserve Indian heritage. At the same time, constitutional protection is also available under Article 49 of the Indian constitution.

2. Celebrated Sanskrit Poetess Shilabhattacharika

Why in News:

Recently, researchers from the Pune-based Bhandarkar Oriental Research Institute (which houses South Asia's largest collection of manuscripts and rare texts) have shed new light on the celebrated Sanskrit poetess Shilabhattacharika in a grand adventure. Through the decoding of copper plates by the researchers of this institute, the poetess Shilabhattacharika claimed to be the daughter of Chalukya ruler Pulakesin II.

Key Points of the New Research:

- In this new research, a copper plate charter consisting of 5 copper plates belonging to the reign of Badami Chalukya ruler Vijayaditya (696-733 CE) was analysed. It was held together by a copper ring bearing a Varaha (boar) seal. This Varaha seal was the trademark of the Badami Chalukya.
- This charter shows that King Vijayaditya Chalukya donated the village of Chigateri to a scholar named Vishnu Sharma on the recommendation of Mahendravarma, son of Shilabhattacharika. In this charter, a Sanskrit text of 65 lines was inscribed in Brahmi script.
- The Badami Chalukya rulers adopted the title of 'Satyashraya-protector of truth' along with their names. The names of Shilabhattacharika's father-in-law Mookara or Mushkara and his father Durvinita (the most important ruler of

the Western Ganga dynasty—529–579 CE) are also given in the plates.

About Poetess Shilabhattacharika:

- Shilabhattacharika was a celebrated Sanskrit poetess in India around the 9th century AD who lived near the Narmada River and the Vindhya Mountains. Her poetic skills have also been praised by medieval Sanskrit literary critics. It is speculated that she may be identical to Shilamahadevi, the queen of the 8th-century Rashtrakuta ruler Dhruva.

About Pulakeshin II:

- He was the most famous ruler of the Badami Chalukya dynasty who ruled from 610-642 CE. During this time the Chalukya dynasty expanded to most of the Deccan region of peninsular India.
- Pulakeshin II defeated the Kadambas of Banavasi in the south and also subdued the Mauryan rulers of Konkan, South Kosala, and Kalinga.
- The Chinese pilgrim Hsiuen Tsang, mentions that it defeated Harshavardhana, the ruler of Kannauj in 618 AD on the banks of the Narmada River.
- The Aihole inscription by poet Ravikirti refers to the subjugation of Latas, Malavas, and Gurjars by Pulakeshin II. He was a Vaishnava, but tolerant towards other religions.

Way Forward:

Researching the history of the ancient world is a very rare task because of the lack of solid sources. Nevertheless, the tireless work being done by the researchers is commendable. In this work, the government should help the researchers in every possible way.

3. Zero Shadow Day

Why in News:

Recently, Bengaluru experienced a 'Zero Shadow Day', when vertical objects appear to cast no shadow.

About Zero Shadow Day:

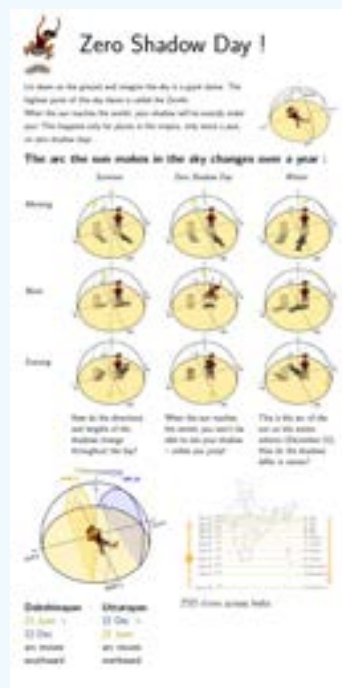
- For every point on Earth between the Tropic of Cancer and the Tropic of Capricorn, there are two Zero Shadow Days a year.
- The Earth's rotation axis is inclined at 23.5 degrees to the plane of its revolution around the Sun, which is why we have seasons.
- During Zero Shadow Day, vertical objects appear to cast no shadow at local noon, when the sun is at its zenith directly above the object.
- It occurs when the sun's location moves from

23.5°N to 23.5°S of Earth's equator and back, causing the shadow to disappear beneath objects at local noon.

- All places whose latitude equals the angle between the Sun's location and the equator on that day experience zero shadow day, with the shadow beneath an object at local noon.

About the Solstice:

- On 21st June, the northern hemisphere is tilted towards the sun. The rays of the sun fall directly on the Tropic of Cancer. As a result, these areas receive more heat.
- Since a large portion of the northern hemisphere is getting light from the sun, it is summer in the regions north of the equator. The longest day and the shortest night at these places occur on 21st June.
- At this time in the southern hemisphere, all these conditions are reversed. It is winter season there. The nights are longer than the days. This position of the earth is called the summer solstice.



- On 22nd December, the Tropic of Capricorn receives direct rays of the sun as the south pole tilts towards it. As the sun's rays fall vertically at the Tropic of Capricorn (23½° s), a larger portion of the southern hemisphere gets light.
- Therefore, it is summer in the southern hemisphere with longer days and shorter nights. The reverse happens in the northern hemisphere. This position of the earth is called the winter solstice.

4. Bihan Mela

Why in News:

Recently, members of the Kondh tribe (Odisha) added a festival, in their annual calendar of the festivals, named Bihan Mela. This festival is also known as the seed festival.

About the Bihan Mela:

- This event involves the collection and preservation of indigenous seeds, and farmers from 40 villages in Dasapalla block participate in the festival.
- After harvesting kharif crops, women collect the seeds of indigenous varieties and store them in earthen pots.
- On a designated day in December, they decorate the pots with red and white motifs, place them in a bamboo basket and carry them on their heads to the village where the fair is being organized.
- Men accompany them, beating drums and other traditional instruments.

Reasons for Introduction of the Festival:

- Farmers in the region have abandoned local crops and kinds that are naturally resistant to pests and better suited to the region's environment since the Green Revolution.
- Farmers in the region are largely subsistence farmers who rely on monsoon rainfall. Crop failures have occurred on many occasions in recent years, either as a result of unpredictable rainfall or insect infestations.
- This has not only harmed their food and nutritional security, but it has also deteriorated the land and rendered farmers more vulnerable to crop failure.
- The seed festival was thus established to assist farmers in returning to ancient traditional methods such as mixed cropping so that they can happily survive.

About Kondh Tribe:

- The Kondhs are the largest tribal group in the state of Odisha. They are known for their rich cultural heritage, valorous martial traditions, and indigenous values which centre on harmony with nature.
- They have various sub-tribes, including the Dongria, Kovi, Kuttia, Languli, Penga, Jharnia, Raj Kondhs, and so forth.
- Kondhs speak the Kui language and write it in the Odia script.
- The Kandhamal district in Odisha comprises fifty-five percent of Kondh population and is named after the tribe.

Conclusion:

In addition to promoting seed conservation, Bihan Mela also plays an important role in building community resilience and supporting local food systems. By encouraging the exchange of seeds and knowledge, these festivals help to create a more decentralized and diverse food system that is less dependent on industrial agriculture and multinational corporations.

5. Bluebugging

Why in News:

Recently, the Prakasam district's superintendent of police asked people to be vigilant about bluebugging. She also cautioned that stolen data might be used for blackmailing. She also launched the toll-free helpline number on which any aggrieved persons could lodge their complaints by dialling 1930.

About Bluebugging

- It is a form of hacking that lets attackers access a device through its discoverable Bluetooth connection.
- For an attacker to successfully execute a bluebugging attack, they must be within close range of the target device (usually within 10 m).
- Once within range, the hacker uses specialized software and hardware tools to scan for and identify vulnerable Bluetooth devices.
- A hacker can gain unauthorized access to these apps and devices and control them as per their wish through bluebugging.
- Any Bluetooth-enabled device including True Wireless Stereo (TWS) devices or earbuds is susceptible to blue bugging.
- Once a device or phone is blue-bugged, a hacker can listen to the calls, read and send messages and steal and modify contacts.
- Even the most secure smartphones like iPhones are vulnerable to such attacks.



Preventive Measures for Bluebugging:

- Turning off Bluetooth and disconnecting paired Bluetooth devices when not in use (make it undiscoverable) from Bluetooth settings
- Updating the device's system software to the latest version
- Limiting the use of public Wi-Fi
- Using VPN as an additional security measure
- Reset the device to its factory settings or uninstall any apps you don't recognize

- Monitor sudden spikes in data usage.
- Modern anti-virus software can also help thwart such attacks by helping users to detect strange and spam-like content by filtering, blocking, and consistently reminding people to be alert

Government Initiatives for Cyber Security:

- National Cyber Security Strategy 2020
- Cyber Surakshit Bharat Initiative
- Online Cybercrime Reporting Portal
- Indian Cyber Crime Coordination Centre (I4C)
- National Critical Information Infrastructure Protection Centre (NCIIPC)
- Information Technology Act, 2000

Conclusion:

Bluebugging is a serious security risk, but by following the precautionary measures, one can reduce the risk. One should make sure that their bluetooth settings are always secure and updated, and they use a VPN when connecting to public Wi-Fi networks, and remove any paired devices that they no longer need. By taking these precautions, one can stay safe from bluebugging and other Bluetooth attacks.

6. India Internet Report-2023

Why in News:

According to Nielsen's India Internet Report 2023, India had over 700 million active internet users aged 2 and above as of December 2022.

Active Internet Users:

- Rural India had 425 million while, metropolitan areas had 295 million active internet users.
- According to the survey, there is still substantial room for growth in rural markets, as over half of the rural population does not regularly use the internet.
- Year over year (YoY), the active internet user population aged 12 and up increased by more than 20% to 595 million in 2022.
- Female active internet users grew by 27%, whereas male users increased by around 18%.
- According to the research, the country has over 450 million smartphone users, with video streaming and video calling being the top two internet activities among those aged 12 and older. Digital news has also grown significantly, with roughly one in every five Indians now watching digital news, a 20% increase from the previous year.
- According to Internet in India Report 2022, 759 million are 'active' internet users, accessing the internet at least once a month. By 2025 the number is expected to grow to 900 million. This

is for the first time that the majority of Indians have become active internet users.

Rural India at forefront of internet usage



YOUTH DRIVING ONLINE ACTIVITIES ACROSS RURAL AND URBAN

About Digital India Mission:

- The Government of India launched Digital India to provide high-speed internet networks to rural areas. PM Narendra Modi inaugurated the Digital India Mission on July 1, 2015, as a beneficiary of other government programmes such as Make in India, Bharatmala, Sagarmala, Startup India, BharatNet, and Standup India. The Digital India Mission is primarily concerned with three areas:-
 - » Providing digital infrastructure as a utility to all citizens.
 - » Governance and on-demand services.
 - » To oversee each citizen's digital empowerment.

About TRAI:

- The Government of India established the Telecom Regulatory Authority of India (TRAI) under Section 3 of the Telecom Regulatory Authority of India Act, 1997.
- It is India's telecoms sector regulator.
- It is made up of a chairperson and no more than two full-time and two part-time members.
- The TRAI Act was revised by an ordinance that took effect on January 24, 2000, and established the Telecom Disputes Settlement and Appellate Tribunal to take over the adjudicatory and dispute functions from TRAI.

Way forward:

The report suggests that digital penetration has improved not only in terms of spread but also in terms of depth. By 2025, it is expected that rural India would account for 56% of all new internet users in India.

7. Ubhali Festival

Why in News:

Ubhali festival is celebrated by the Kirant group on the full moon day of the lunar month of Baishakh.

The celebration is very important to the community since it commemorates the start of farming and the migration phase upwards to the hilly regions when the summer season starts.

About Ubhau Festival:

- This is the most important festival of the Kirant community and is celebrated with great joy and enthusiasm.
- This festival is mostly celebrated in the Koshi Province and Kathmandu districts of Nepal.
- Ubhau festival is celebrated every year on the full moon day of the month of Baishakh in the Lunar calendar.
- During the event, the Kiranti people congregate in a planned manner to celebrate the festival and exchange good wishes.
- According to the religious book Mundhum of the Kirants, time is divided into two parts, Udhau and Ubhau. The Kirant community believe that these two periods are divided on the basis of farming. Ubhau is a festival celebrated to mark the beginning of farming.
- Kiranti people celebrate the holiday with the Sunuwar, Rai, Limbu, and Yakkha populations of Nepal, India, and other areas of the world.
- Members of the Kiranti community gather in an organised manner to celebrate the event and give pleasant thoughts during the celebration.

Kirat community:

- The Kirat ("Kiranti") are an ancient people who have been associated with the history of Nepal for thousands of years.
- Kirat means lion-hearted people or people of a lion's nature. It also means mountain people. The word Kirata is a derivation from Kirati to

name the group of people in Eastern Nepal and Northeast India.

- The Kirati people, also spelt as Kirant or Kiranti, are a Sino-Tibetan ethnic group.
- The Kirat have a strong belief in the dead and ancestors and nature.
- They believe that ancestors would get angry if they are not properly worshipped.

Important Festival of Nepal:

Bisket Jatra:

- Famous as Nepali New Year, this is yet another main festival of Nepal.
- This ceremony marks the end of serpents, hence also known as Bisau Jatra or the slaying of serpents.
- A huge tug of war is organised at Durbar Square, between the eastern and western parts of the country, on the day of Bisket Jatra.

Dashain:

- Observed for 15 days, the Dashain festival is one of the most widely celebrated festivals in Nepal.
- The victory of Goddess Durga over the devil Mahishasura is celebrated during Dashain through worship, feast, fairs and family gatherings.
- Nepalis also celebrate the Dashain festival for the fertility of the land and good harvest.

Way Forward:

The Kirat civilization had developed before the seven or eighth century B.C. in the present Kathmandu Valley and its surrounding areas. The Kirat kings ruled there approximately from 650 B.C. to 290 A.D. The Nepali civilization and culture developed from the Kirat period.

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News Of National and International Importance

1. Yangtze Giant Softshell Turtle

- The last known remaining female of the species was found dead recently, on the shores of Dong Mo Lake in Hanoi's Son Tay district, Vietnam.

Key Highlights:

- The Yangtze giant softshell turtle (*Rafetus swinhoei*) is the world's largest freshwater turtle and one of the most endangered species on Earth.
- It can grow up to 1.5 meters (5 feet) in length and weigh over 200 pounds (90 kilograms). It has a flat, soft shell, a long neck, and a pig-like snout.
- The shell is typically olive or brown in colour.



2. Kaladan Multimodal Transit Transport Project (KMTTP)

- The waterway part of the Kaladan Multimodal Transit Transport project will become operational in May 2023, 15 years after it was approved.

Key Highlights:

- The project is aimed at boosting trade and commerce between India and Myanmar and easing access to other South Asian countries.
- It will also provide a strategic alternate link connecting the landlocked northeastern states to the rest of India and easing the pressure on the existing narrow Siliguri corridor.
- The port will transport bulk cargo such as cement, pulses, and food grains.
- KMTTP connects Kolkata to Sittwe port, which is further linked to Paletwa in Myanmar through a waterway route along the river Kaladan.
- A 110 km road is being built from Paletwa to Zorinpui at Mizoram on the Indo-Myanmar border.
- Zorinpui is further connected to Lawngtlai through a 100 km road, and an existing highway connects it to Aizawl, which in turn is linked to other northeastern cities, including Guwahati.



3. Territorial Army

- Recently, the Union Ministry of Defence amended the cadre management provisions for women officers in the Territorial Army.

Key Highlights:

- The amendment allows women officers to be posted along the Line of Control (LOC) and expands their career opportunities within the organization.
- The Territorial Army (TA) was established in 1948 as a replacement for the Indian Defence Force and the Indian Territorial Force.
- The TA is led by a Lieutenant General-ranking officer and falls under the supervision of the Chief of Defence Staff. It consists of two units: a departmental unit comprising ex-servicemen and public sector undertakings, and a non-departmental unit consisting of privately employed citizens.
- The TA's primary role is to relieve the regular army from monotonous duties and assist civil administration during natural calamities and essential services maintenance.
- It also provides units to the regular army when needed and has actively participated in various wars and operations. Women officers were first enlisted in the Territorial Army in 2019 and initially assigned to ecological task force units, TA oil sector units, and TA railway engineer regiments.

Significance of the Amendment:

- The recent amendment expands the role of women officers, allowing them to be posted with engineer regiments along the Line of Control.
- Women officers can also serve as staff officers at TA Group Headquarters/Directorate General of Territorial Army in New Delhi, based on organizational requirements.
- This amendment is a significant step towards gender equality in the military and enhances the career prospects of women officers in the Territorial Army.

4. Orinoco Crocodile

- Venezuela's Orinoco Crocodile is on the brink of extinction.

Key Highlights:

- Known to scientists as *Crocodylus intermedius*, the enormous reptile is native to the Orinoco basin that Venezuela shares with Colombia.
- It can grow to more than six meters (19.7 feet) in length and over 400 kilograms (882 pounds), making it one of the largest crocodiles in the world.
- According to the International Union for Conservation of Nature, it is critically endangered, having suffered an 80% population reduction in just 3-generations in the early and mid-1900s.

5. Project 15B

- Imphal, third indigenous stealth destroyer of the Indian Navy's Project 15B class, has successfully completed its maiden sea trial.

About Project 15B:

- The Project 15B class is follow-on of the Project 15A. It was initiated in 2011 to build four indigenous stealth guided missile destroyers.
- These ships are 163 meters long, 17 meters wide, and have a displacement of 7400 tonnes when fully loaded, with a maximum speed of 30 knots.
- Equipped with BrahMos supersonic cruise missiles and long-range surface-to-air missiles, they also have several indigenous weapons systems such as medium-range SAMs, indigenous torpedo tube launchers, indigenous anti-submarine rocket launchers, and a 76-mm super rapid gun mount.



6. Hemis Monastery

- The Y20 pre-summit meeting under G20 started in Leh of Ladakh on Wednesday. More than 100 delegates from 30 countries visited the Hemis and Thiksey monasteries as part of this pre-summit.

Hemis Monastery:

- Hemis Monastery is a Himalayan Buddhist monastery (gompa) of the Drukpa Lineage, in Hemis, Ladakh, India. Situated 45 km from Leh, it was re-established in 1672 by the Ladakhi King Sengge Namgyal.
- The annual Hemis festival honouring Padmasambhava is held there in early June.

History of Hemis Monastery :

- The history of Hemis Monastery states that it is considered to have existed before the 11th century. The monastery of Hemis is connected with Naropa, the pupil of the yogi Tilopa, and teacher of the translator Marpa. It is believed that Naropa and yogi Tilopa met at Hemis and together from here they proceeded to the ancient kingdom of Magadha. Naropa was the founding father of the Kagyu-lineage of the Himalayan esoteric Buddhism. Therefore, Hemis Monastery is the main seat of the Kagyu lineage of Buddhism.

7. Right To Walk

- Amid a consistent rise in deaths of pedestrians and cyclists, Punjab has taken the lead among the states and UTs to implement the 'right to walk'.

Key Highlights:

- The state government has issued these directions following two court orders after PILs were filed at Punjab and Haryana HC and another in the Supreme Court.
- It has been made mandatory for all road-owning agencies, including the NHAI, to provide footpaths and cycle tracks in all future expansion of roads and construction of new ones.

8. Malcha Mahal

- The much-awaited 'Haunted Walks' was launched by the Delhi Tourism Department recently. The first heritage walk of the first-of-its-kind initiative will start with the Tughlaq-era monument 'Malcha Mahal'.
- Malcha Mahal, also known as Malcha Kothi, is a historical monument located in the city of Delhi, India.
- It holds a unique place in history and is often shrouded in intrigue and mystery. It was built by Sultan Firoz Shah Tughlaq and located inside Ridge forest.
- The palace complex consists of several structures, including a main building, courtyards and gardens.
- In the early 20th century, the palace came under the ownership of the royal family of Oudh (Awadh).
- After the Indian subcontinent gained independence in 1947 and the princely states were abolished, the last residents of Malcha Mahal, Princess Wilayat Mahal and her descendants, continued to live there.

9. Washington Declaration

- The President of South Korea and the US President recently signed the Washington Declaration on the anniversary of 70 years of their bilateral relationship. The agreement outlines cooperation towards deterrence.

According to the declaration:

- An American nuclear ballistic submarine would be deployed in the Korean peninsula;
- A nuclear consultative group would be formed to formulate principles of joint response tactics;
- South Korea would receive Intel from the U.S. regarding nuclear advancements;
- The U.S. will strengthen South Korea's nuclear deterrence capabilities through joint military training programs and an annual intergovernmental simulation.
- The declaration reaffirmed the Non-Proliferation Treaty implying that South Korea would not venture into the creation of its own independent nuclear capabilities and would instead focus on deterrence measures through an alliance-based approach.
- It also mandates the U.S. President as the only 'sole authority' to use the nuclear arsenal of the U.S. in the event of a nuclear confrontation.
- While the existence of the agreement is based on the security needs of South Korea, the policy reflects big power politics where the interests of the larger power (U.S.) takes precedence.

10. Bandhavgarh National Park

- Archaeologists have stumbled on a 1,500-year-old rock painting and numerous 1,800- 2,000-year-old man-made waterbodies in Bandhavgarh National Park.

About Bandhavgarh National Park:

- Bandhavgarh National Park is a renowned wildlife sanctuary located in the Umaria district of Madhya Pradesh, India.
- It covers an area of about 450 square kilometers and is known for its rich biodiversity, including dense forests, grasslands & an abundance of wildlife. Bandhavgarh National Park is home to a variety of species, including the Royal Bengal Tiger, which is the park's main attraction.
- Other animals that can be spotted here include leopards, wild dogs, hyenas, Indian bison, Sambar deer, spotted deer & Barking deer. The park is also home to over 250 species of birds.



11. Channapatna Toys

- Toy manufacturers in Channapatna, Karnataka, appreciated the Government's decision to prohibit the import of toys from China and said that the government's action is contributing to augment their profitability.

About Channapatna Toys:

- Channapatna toys are a particular form of wooden toys and dolls that are manufactured in the town of Channapatna in the Ramanagara district of Karnataka state, India.
- This traditional craft is protected as a geographical indication (GI) under the World Trade Organization, administered by the Government of Karnataka.
- As a result of the popularity of these toys, Channapatna is known as the Gombegala Ooru (toy-town) of Karnataka.
- Traditionally, the work involved lacquering the wood of the Wrightia tinctoria tree, colloquially called Aale mara (ivory-wood).
- The greater prominence of the Channapatna toys can be traced to patronage from Tipu Sultan.
- The art underwent dramatic changes over the years.
- A man by the name of Bavas Miyan undertook the responsibility to introduce Japanese doll making techniques to improve production and reduce the effort that went into making each piece of toy.
- For nearly two centuries, ivory-wood was the main wood used in the making of these toys, though rosewood and sandalwood were also occasionally used.
- They are also painted in organic colours extracted from vegetables and plants and natural dyes, making the Channapatna Toys 100% chemical free.



12. Krishi Mapper

- The Union Minister of Agriculture and Farmers launched an integrated app called Krishi Mapper, which incorporates geospatial data in agriculture.

Key Highlights:

- Geospatial data refers to information that identifies objects or events with a specific location on or near the earth's surface.
- The app is expected to provide various benefits such as better resource management, crop outcome predictions, increased yields, and improved farm practices.



13. Royal Ransomware

- Recently, the Indian cyber security agency issued a warning against "Royal ransomware" virus.

Key Highlights:

- It attacks critical sectors like communications, healthcare, education and even individuals and seeks pay-off in Bitcoins for not leaking personal data in the public domain.
- It was first detected in January 2022 and it got activated around September last year even as the US authorities issued advisories against its spread.

About Ransomware:

- Ransomware is a type of malicious software, used by cyber criminals, to infect a computer system by blocking access to the stored data by encrypting the files.
- A ransom is then demanded from the owner in exchange for the decryption key.
- The malware may usually be injected remotely by tricking the user into downloading it upon clicking an ostensibly safe web link sent via email or other means, including hacking.
- It can spread throughout the network by exploiting existing vulnerabilities.
- Ransomware attacks can also be accompanied by theft of sensitive data for other sinister motives.

Current Affairs at a Glance

1. The US Senate has appointed Dr. Geeta Rao Gupta, an Indian-American, as ambassador for the Office of Global Women's Issues in the State Department.
2. Indian pair Divya TS and Sarabjot Singh won gold medal at ISSF World Cup 2023.
3. GMR Hyderabad International Airport has become the most punctual airport in the world.
4. 50% villages in India achieved ODF Plus status under Swachh Bharat Mission Gramin (SBM-G) Phase II.
5. Union ministries of power and environment, forests & climate change will develop a carbon credit trading scheme for decarbonisation.
6. Sixth Indian Ocean Conference was held in Dhaka on 12 to 13 May, 2023. The sixth edition of the conference was organized by the India Foundation in collaboration with the Ministry of Foreign Affairs of Bangladesh and the S Rajaratnam School of International Studies. The conference was inaugurated by Bangladesh Prime Minister Sheikh Hasina.
7. Badminton Association of India (BAI) announced on Tuesday that Omar Rashid, the Joint Secretary of BAI will be appointed as the Chair for the Technical Officials Committee of Badminton Asia for the term 2023-2025.
8. Chief Minister Yogi Adityanath was conferred with the Bharat Ratna Dr Ambedkar Award for creating a "fear-free Uttar Pradesh". The award was given by former Indian President Ram Nath Kovind.
9. The annual five-day-long Great Prayer Festival, "Ladakh Monlam Chenmo," a mass prayer camp by Buddhist monks and nuns for world peace and happiness is starting in Leh, Ladakh. The annual Mass Prayer is resuming this year after three years of discontinuation due to Covid. This program has been organized by All Ladakh Gonpa Association.
10. According to a UN study, India tops the list of 10 countries that are responsible for 60 per cent of global maternal deaths.
11. Union Minister for Women and Child Development Smriti Irani on Wednesday launched the Centre's flagship programme 'Poshan Bhi, Padhai Bhi', which will focus on Early Childhood Care and Education (ECCE) at anganwadis across the country.
12. Green Port Guidelines 2023 "Green Sea" launched to achieve zero carbon emission target.
13. Indian boxers Deepak Kumar, Mohd Hussamuddin and Nishant Dev won a historic three bronze medals at the World Boxing Championships.
14. RBI fined HSBC Rs 1.73 crore for incorrect credit card data.
15. Punjab became the first state in the country to implement the 'right to walk'.
16. From August 1, there will be same uniform for officers from the rank of brigadier and above in the army.
17. The 42nd ASEAN Summit began on 10 May 2023 in Labuan Bajo City, Indonesia.
18. Central Government to set up a task force for land governance in the North-Eastern states.
19. Amitabh Kant's new book "Made in India: 75 Years of Business and Enterprise" was released. Amitabh Kant played a key role in many major initiatives like Make in India, Start-up India, Performance Linked Incentive Scheme (PLI), Aspirational Districts, E-mobility, Green Hydrogen etc.
20. The Pulitzer Prize 2023 was awarded to The New York Times and The Associated Press for wartime coverage in Ukraine. The Pulitzer Prizes were initiated by the Hungarian-American journalist Joseph Pulitzer. The awards were first presented in 1917.
21. A Robotics Framework has been introduced by the Government of Telangana. Under the initiative, a Telangana Robotics Innovation Center (TRIC) will be set up by the government to implement the framework. It has been introduced to provide a roadmap to boost the robotic ecosystem in the state. This is the first of its kind policy in the country.

Why In Broadcast

The Electricity (Amendment) Bill, 2022 was introduced within the Lok Sabha on August 8, 2022. The Government has sent the bill to Parliamentary Standing Committee for further deliberations. The Bill amends the Electricity Act, 2003.

Opposition of the Bill

- Few Opposition parties are against the bill because it goes against the federal structure of the country and gives more powers in the hands of the Centre.
- The provision to encourage competition may lead to more entities entering into profitable urban areas, while loss-making areas such as small cities, towns and villages may continue to be ignored.
- Farmers are concerned that this will eventually lead to the end of power subsidies.
- The Employees of the power sector are concerned that this will privatize the distribution sector and will adversely affect the interests of employees.
- There are also concerns that the amendments will give more power to the centre on appointment and removal of members of regulatory bodies, thereby reducing the role of the state.

Objectives of the Bill

- The Act aims to regulate the electricity sector in India.
- It sets up the Central and State Electricity Regulatory Commissions (CERC and SERCs) to regulate inter-state and intra-state electric matters, respectively.

Key Features

- Multiple discoms in the same area.
- Power procurement and tariff.
- Cross-subsidy Balancing Fund.
- License for distribution in multiple states.
- Payment security.
- Recovery of prudent costs of supply.
- Contract enforcement.
- Renewable purchase obligation.
- Composition of Commissions and APTEL.

Benefits of Amendments

- The bill tries to boost the competition and gives more choice to the consumers.
- The Amendments are aimed towards reducing inordinate delays that plague the electricity system right now.
- It further improves the compliance mechanism in the electricity sector.
- The amendments also seek to improve the functioning of the regulators and streamlining tariff revision.

The Electricity (Amendment) Bill, 2022

- If the center dictates the minimum level of Renewable Purchase Obligation for states, the latter's powers are reduced.

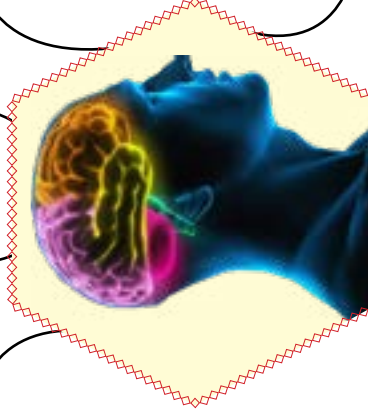
Why In Broadcast

The current outbreak of lumpy skin disease started in Gujarat and Rajasthan in July, 2022. After this it had spread to Punjab, Himachal Pradesh, Andaman & Nicobar, Uttarakhand, Jammu and Kashmir, Uttar Pradesh, Haryana, Maharashtra, Madhya Pradesh, Delhi and Jharkhand.

Preventing the Spread

- Successful control and eradication of LSD relies on early detection, followed by a rapid and widespread vaccination campaign.
- The cattle-sheds should be sanitized by eliminating vectors through application of insecticides and spraying disinfectant chemicals.
- The infected cattle should be immediately isolated from the healthy stock and the nearest veterinarian should be contacted for treatment of the infected animal.
- The outbreak to the state government so that the rest of the healthy herd can be vaccinated using goat pox vaccine.

Lumpy Skin Disease



Risk to Humans

- The disease is not zoonotic i.e. it does not spread from animals to humans, and humans cannot get infected with it.
- The milk produced by an infected animal will be fit for human consumption after boiling or pasteurisation as these processes will kill the viruses, if any, in the milk.

Challenges

- The disposal of the dead animals is a major issue as improper handling of the carcasses can cause health and sanitation issues.
- Proper disposal of the carcasses can include incineration or burning of the bodies at high temperatures, along with disinfection of premises.

About Lumpy Skin Disease

- The Lumpy Skin Disease (LSD) is caused by a virus called the Capripoxvirus and this is an emerging threat to livestock worldwide.
- It is genetically associated to the goatpox and sheepox virus family.
- It infects cattle and water buffalo through vectors such as blood-feeding insects.

Symptoms

- Major symptoms include the appearance of circular, firm nodes on the animal's hide or skin that look similar to lumps.
- Infected animals immediately start losing weight, will have reduced milk yield and also can have fever and lesions in the mouth.
- Excessive nasal and salivary secretion are other symptoms.
- Pregnant cows and buffaloes may suffer miscarriage due to this disease and can die.

History of Outbreaks

- The disease has been endemic to most African countries. Since 2012 the outbreak has been more rapidly in the Middle East, Southeast Europe and West and Central Asia.
- Since 2019, several outbreaks of LSD have been reported in Asia. In May this year, Pakistan's Punjab also reported the deaths of over 300 cows due to LSD.
- In September 2020, a strain of the virus was discovered in Maharashtra. Gujarat too has reported cases over the last few years sporadically.
- The point of concern is the number of deaths being reported, and whether vaccination catches up to the rate at which the disease is spreading.
- According to the World Organization for Animal Health (WOAH), of which India is a member, mortality rates of 1 to 5 percent are considered as normal.

Why In Broadcast

The Ministry of Education has shortlisted around 9,000 schools from across the country for its flagship Pradhan Mantri Schools for Rising India (PM SHRI). The institutions were selected from over 2.5 lakh government schools.

Beneficiaries

More than 18 lakh students are expected to be direct beneficiaries of the scheme. Further impact will be generated through the mentoring and handholding of the schools in vicinity of PM SHRI schools.

Quality Assurance of PM SHRI Schools

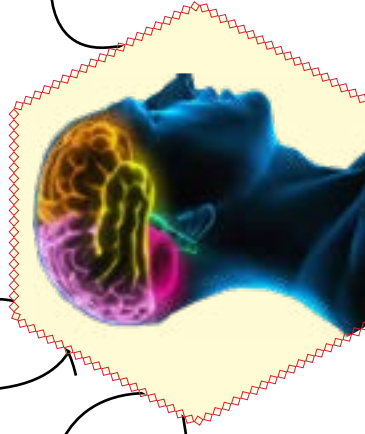
- Showcase of NEP 2020.
- Student registry for tracking enrolment and learning progress.
- Improvement in learning outcomes of each child to achieve levels above state and national average.
- Every middle grade child exposed/oriented to cutting edge and 21st century skills.
- Every secondary grade child passes out with at least one skill.
- Sports, Arts, ICT for every child.
- These schools will be developed as vibrant schools focusing on all round development of children.

About PM SHRI Schools

- This scheme is for development of more than 14500 schools across the country.
- PM SHRI Schools will showcase all components of the National Education Policy 2020.
- The PM SHRI schools will deliver quality teaching for the cognitive development of students.
- It will strive to create and nurture holistic and well-rounded individuals equipped with key 21st century skills.
- Scheme of PM SHRI schools is to be implemented as a Centrally Sponsored Scheme.
- The total cost of project is Rs. 27360 crore with central share of Rs. 18128 crore for the period of five years from year 2022-23 to 2026-27.

Key Features

- PM SHRI will provide high-quality education in an equitable, inclusive and joyful school environment.
- It will take care of the diverse background, multilingual needs, and different academic abilities of children.
- It will make them active participants in their own learning process as per the vision of NEP 2020.
- The PM SHRI Schools will be developed as Green schools, incorporating the following environment friendly aspects:
 - » Solar panels and LED lights,
 - » Nutrition gardens with natural farming,
 - » Waste management, plastic free,
 - » Water conservation and harvesting,
 - » Study of traditions/practices related to protection of environment,
 - » Climate change related hackathon
 - » Awareness generation to adopt sustainable lifestyle.
- Pedagogy adopted in these schools will be:
 - » More experiential, holistic,
 - » Integrated, play/toy-based
 - » Inquiry-driven, discovery-oriented,
 - » Learner-centred, discussion-based
 - » Flexible and enjoyable.



PM SHRI Schools

Major Illustrative Interventions

- Quality and Innovation
- Beneficiary oriented entitlements under RTE Act. 100% of PM SHRI Schools will receive Science and Math Kits.
- Annual School Grants
- Encouraging flexibility in choice of subjects offered to students.
- SHRI Schools will be covered under ICT, smart classrooms and digital initiatives.
- Strengthening of existing infrastructure
- Green School initiatives.

Why In Broadcast

India improved in the logistics ranking of the World Bank by jumping 6 places to Rank 38 out of 139 countries in the 7th edition of Logistics Performance Index (LPI 2023).

Government's Role in the Development of the Logistics Sector

National Logistics Policy:

- The government has planned to release the National Logistics Policy.
- The proposed policy's objective is to boost the nation's economy and corporate competitiveness by establishing an integrated, seamless, effective, dependable, green, sustainable and cost-efficient logistics network that makes use of best-in-class tools, procedures and qualified personnel.
- The policy aims to reduce the logistics cost, which stands at 14% of GDP to 9-10%.
- The strategy will establish a single-window e-logistics market and emphasize developing skills, competitiveness and employment for MSMEs.

National Logistics Law:

- A national logistics law has been drafted and is under consultation. Through a unified legal framework for the paradigm of One Nation, One Contract, it would support the One Nation, One Market objective and provide a flexible regulatory environment (single bill of lading across modes).

Logistics Master Plan:

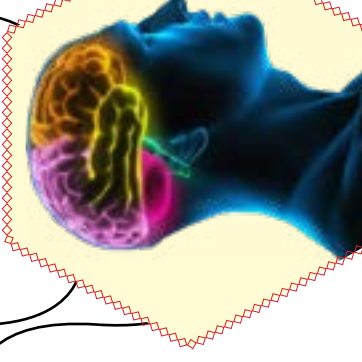
- This initiative is in the works which takes a geographical strategy as opposed to an industry approach.
- Several projects and activities will be integrated into the plan to expand the mix

About LPI

- It 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.
- It analyzes countries through six components:
 - » The efficiency of customs and border management clearance.
 - » The quality of trade- and transport-related infrastructure.
 - » The ease of arranging competitively priced international shipments.
 - » The competence and quality of logistics services.
 - » The ability to track and trace consignments.
 - » The frequency with which shipments reach consignees within the scheduled or expected delivery time.

Logistics Sector

The logistics industry comprises all supply chain activities, mainly transportation, inventory management, flow of information and customer service. The effectiveness of logistics helps to determine the degree of ability that enterprises can keep up with demand.



World Bank's LPI

of intermodal and/or multimodal transportation. Coordinated construction of relevant infrastructure (gas and utility pipelines, optical fibre cable networks) is planned to prevent problems in the future. .

National Multimodal Facilities and Warehousing:

- The government is trying to promote intermodal and Multimodal Logistics Parks (MMLPs) as a separate class of

infrastructure.

- Furthermore, the government has begun to devise certain standards and guidelines that will be implemented for the development of warehousing.

National Logistics Workforce Strategy:

- For the integrated skill development of professionals in the logistics sector, the government is developing a national logistics workforce strategy.

Why In Broadcast

The Markets in Crypto Assets (MiCA) Regulation have been adopted on April 20, 2023, by the European Parliament.

About MiCA

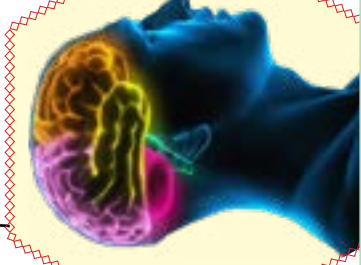
The Markets in Crypto Assets (MiCA) Regulation is the EU regulation governing issuance and provision of services related to crypto assets. MiCA is the first and only legislation of its kind in the world and leads the way for other jurisdictions. MiCA will enter into force at some point between mid-2024 and early 2025.

Crypto Regulation in India

India is yet to have a comprehensive regulatory framework for crypto assets. A draft legislation on the same is reportedly in the works. The Indian government has taken certain steps to bring cryptocurrencies under the ambit of specific authorities and taxation. In March this year, the government placed all transactions involving virtual digital assets under the purview of the Prevention of Money Laundering Act (PMLA).

India is now calling for consensus in the G20 grouping, where it currently holds the presidency, to have a globally coordinated policy response on crypto assets that takes into consideration the full range of risks, including those specific to emerging markets and developing economies.

Markets in Crypto Assets (MiCA) Regulation



The Reaction

- The broad view is that it is better to have a regulatory framework than having no rules at all and attracting regulatory action on a case-by-case basis without clarity.
- Since it's been three years since MiCA has been in development, some experts feel that the regulation is already lagged in covering newer vulnerabilities in the crypto industry.

Objectives

- Ensuring legal certainty by establishing a sound legal framework for crypto-assets in its scope that are not covered by existing financial services legislation;
- Supporting innovation and fair competition in order to promote the development of crypto-assets by instituting a safe and proportionate framework;
- Protecting consumers, investors and market integrity in consideration of the risks associated with crypto-assets; and
- Ensuring financial stability, with the inclusion of safeguards to address potential risks to financial stability.

Obligations for Issuers of Crypto-Assets under MiCA

- The publication of a whitepaper having some similarities with prospectuses published under the prospectus regulation.
- The necessity to be authorised to issue crypto-assets.
- Compliance with certain prudential rules when marketing crypto-assets.
- The obligation to act honestly, fairly and professionally vis-à-vis crypto-asset holders, in relation to conflict management and prevention or maintenance of security access protocols.

Why In Broadcast

The Jal Shakti Ministry is working on a plan to deploy a vast network of groundwater sensors that will continuously measure the quality and contamination levels of groundwater in India.

What is Need for Rainwater Harvesting and Artificial Recharge of Groundwater?

- To overcome the inadequacy of surface water to meet our demands.
- To arrest decline in groundwater levels.
- To enhance availability of groundwater at specific place and time and utilize rainwater for sustainable development.
- To increase infiltration of rainwater in the subsoil which has decreased drastically in urban areas due to paving of open area.
- To improve groundwater quality by dilution.
- To increase agriculture production.
- To improve the ecology of the area by increase in vegetation cover etc.

Initiatives for Groundwater Conservation

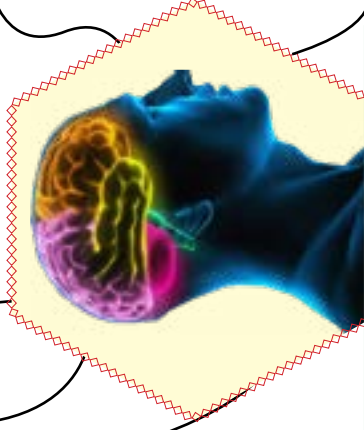
- Central Ground Water Board (CGWB):
- Jal Shakti Abhiyan: National Water Policy: Atal Bhujal Yojana: National Aquifer Mapping and Management programme (NAQUIM)

Current Monitoring System and its Limitations

- The Central Groundwater Board currently relies on a network of around 26,000 groundwater observation wells that require manual measurement by technicians a few times a year.
- The information is communicated via reports from the Central Groundwater Board.
- This system has limitations as it only provides a snapshot of the groundwater levels and quality at a given time.

Digital Water Level Recorders

- Under the new initiative, around 16,000-17,000 digital water level recorders will be connected to piezometers in the wells.
- Piezometers measure groundwater levels, and recorders digitally transmit the information.
- The Central Ground Water Authority aims to increase its network from the existing 26,000 to about 40,000 in the next three years.
- When combined with similar networks possessed by other institutions, India will have about 67,000 digitally recordable units to monitor groundwater dynamics.



Network of Groundwater Sensors

Causes of Groundwater Depletion in India

Green revolution

- While the expansion in groundwater-based irrigation helped meet the rising food demands of a large population of India, it has resulted in several environmental implications.

Groundwater pumping for irrigation

- It remains the primary driver of groundwater depletion, which can further affect food and water security in India under climate change.

Pumping groundwater from aquifers

- Water flows freely through the saturated rocks known as aquifers. There are large and small aquifers, and they are the underground water reserves that absorb water and hold it, enabling us to pump it for use.

Climate change

- The activities that lead to groundwater depletion come mostly from humans, but a portion of it also comes from changes in our climate and can speed up the process.

Why In Broadcast

The recent meeting between India's NSA and his counterparts from the US, Saudi Arabia, and the UAE marks a significant deepening of India's outreach towards West Asia.

Challenges and Hurdles

- Despite the opportunities, land connectivity with West Asia remains a challenge for India due to strained relations with Pakistan.
- Balancing relations with Russia, China, and the West will continue to be tested as India engages in projects with diverse partners.

Significance of LWA

Economic Integration:

- The LWA aims to enhance economic integration between India and West Asian countries.
- It promotes trade, investment, and economic cooperation, leading to increased regional connectivity and economic growth.

Energy Security:

- West Asia is a crucial region for India's energy security due to its abundant oil and gas reserves.
- It facilitates closer cooperation in the energy sector, ensuring a steady and reliable supply of energy to India.

Infrastructure Development:

- The initiative focuses on building connectivity through rail networks, roads, and sea lanes between West Asia and South Asia.

More Info

- Recent events, such as the US withdrawal from Afghanistan and China's involvement in peace treaty between Iran and Saudi Arabia, have highlighted a diminishing American role and a rising Beijing-Moscow presence in the region.
- India's engagement in West Asia helps navigate these shifting dynamics.
- The meeting signifies a broader, integrated approach to India's engagement in the West, similar to the Indo-Pacific strategy.

Balancing Act

- India has previously focused on the eastern maritime domain to counter China's assertiveness while maintaining strategic autonomy.
- Initiatives like the Malabar exercise and the Quad have strengthened partnerships with the US, Japan, and Australia without limiting diplomatic options.
- The "Look West" approach (LWA) aims to apply a similar strategy in West Asia.



India's 'Look West' Approach

Counterbalancing China's Influence:

- China's Belt and Road Initiative (BRI) has expanded its influence in the region.
- India's LWA serves as a counterbalance to China's growing presence, offering an alternative model of connectivity and development.

Diplomatic Partnerships:

- By engaging with countries in West Asia, India enhances its diplomatic ties and promotes strategic cooperation on various regional and global issues, including security, counterterrorism, and stability in the region.

Cultural and People-to-People Exchanges:

- The LWA fosters cultural exchanges, tourism, and people-to-people contacts between India and West Asian countries.
- This leads to a better understanding of each other's cultures and strengthens people-to-people bonds, contributing to closer regional ties.

Security Cooperation:

- Security cooperation includes joint military exercises, intelligence sharing, and counterterrorism efforts, contributing to regional stability and security.

MCQs based on Preliminary Exam

1. "Rapid Financing Instrument" and "Rapid Credit Facility" are related to the provisions of lending by which one of the following?
 - (a) Asian Development Bank
 - (b) International Monetary Fund
 - (c) United Nations Environment Programme Finance Initiative
 - (d) World Bank
2. With reference to the *Indian Economy*, consider the following statements:
 1. An increase in Nominal Effective Exchange Rate (NEER) indicates the appreciation of rupee.
 2. An increase in the Real Effective Exchange Rate (REER) indicates an improvement in trade competitiveness.
 3. An increasing trend in domestic inflation relative to inflation in other countries is likely to cause an increasing divergence between NEER and REER.
 Which of the above statements are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
3. With reference to the "G20 Common Framework", consider the following statements:
 1. It is an initiative endorsed by the G20 together with the Paris Club.
 2. It is an initiative to support Low Income Countries with unsustainable debt.
 Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
4. With references to the Indian economy, what are the *advantages* of "Inflation-Indexed Bonds (IIBs)"?
 1. Government can reduce the coupon rates on its borrowing by way of IIBs.
 2. IIBs provide protection to the investors from uncertainty regarding inflation.
 3. The interest received as well as capital gains on IIBs are not taxable.
 Which of the statements given above are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
5. Which of the following *activities constitute real sector in the economy*?
 1. Farmers harvesting their crops
 2. Textile mills converting raw cotton into fabrics
 3. A commercial bank lending money to a trading company
4. A corporate body issuing Rupee Denominated Bonds overseas
 Select the correct answer from the code given below:
 - (a) 1 and 2 only
 - (b) 2, 3 and 4 only
 - (c) 1, 3 and 4 only
 - (d) 1, 2, 3 and 4
6. Which one of the following *situations best reflects "Indirect Transfers" often talked about in media* recently with reference to India?
 - (a) An Indian company investing in a foreign enterprise and paying taxes to the foreign country on the profits arising out of its investment
 - (b) A foreign company investing in India and paying taxes to the country of its base on the profits arising out of its investment
 - (c) An Indian company purchases tangible assets in a foreign country and sells such assets after their value increases and transfers the proceeds to India
 - (d) A foreign company transfers shares and such shares derive their substantial value from assets located in India
7. Consider the following statements:
 1. A bill amending the Constitution requires a prior recommendation of the President of India.
 2. When a Constitution Amendment Bill is presented to the President of India, it is obligatory for the President of India to give his/her assent.
 3. A Constitution Amendment Bill must be passed by both the Lok Sabha and the Rajya Sabha by a special majority and there is no provision for joint sitting.
 Which of the statements given above are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
8. Consider the following statements:
 1. The Constitution of India classifies the ministers into four ranks viz. Cabinet Minister, Minister of State with Independent Charge, Minister of State and Deputy Minister.
 2. The total number of ministers in the Union Government, including the Prime Minister, shall not exceed 15 percent of the total number of members in the Lok Sabha.
 Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only

- (c) Both 1 and 2 (d) Neither 1 nor 2
9. Which of the following is/are the *exclusive power(s) of Lok Sabha*?
- To ratify the declaration of Emergency
 - To pass a motion of no-confidence against the Council of Ministers
 - To impeach the President of India
- Select the correct answer from the code given below:
- (a) 1 and 2 (b) 2 only
(c) 1 and 3 (d) 3 only
10. With reference to *Anti-Defection Law in India*, consider the following statements:
- The law specifies that a nominated legislator cannot join any political party within six months of being appointed to the House.
 - The law does not provide any time-frame within which the presiding officer has to decide a defection case.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
11. With reference to *Deputy Speaker of Lok Sabha*, consider the following statements:
- As per the Rules of Procedure and Conduct of Business in Lok Sabha, the election of Deputy Speaker shall be held on such date as the Speaker may fix.
 - There is a mandatory provision that the election of a candidate as Deputy Speaker of Lok Sabha shall be from either the principal opposition party or the ruling party.
 - The Deputy Speaker has the same powers as of the Speaker when presiding over the sitting of the House and no appeal lies against his rulings.
 - The well established parliamentary practice regarding the appointment of Deputy Speaker is that the motion is moved by the Speaker and duly seconded by the Prime Minister.
- Which of the statements given above are correct?
- (a) 1 and 3 only (b) 1, 2 and 3
(c) 3 and 4 only (d) 2 and 4 only
12. Among the following crops, which one is the most important anthropogenic source of both methane and nitrous oxide?
- (a) Cotton (b) Rice
(c) Sugarcane (d) Wheat
13. Which one of the following lakes of West Africa has become dry and turned into a desert?
- (a) Lake Victoria (b) Lake Faguibine
(c) Lake Oguta (d) Lake Volta
14. The term "*Levant*" often heard in the news roughly corresponds to which of the following regions?
- Region along the eastern Mediterranean shores
 - Region along North African shores stretching from Egypt to Morocco
 - Region along Persian Gulf and Horn of Africa
 - The entire coastal areas of Mediterranean Sea
15. Consider the following countries:
- Azerbaijan
 - Kyrgyzstan
 - Tajikistan
 - Turkmenistan
 - Uzbekistan
- Which of the above have borders with Afghanistan?
- (a) 1, 2 and 5 only
(b) 1, 2, 3 and 4 only
(c) 3, 4 and 5 only
(d) 1, 2, 3, 4 and 5
16. With reference to India, consider the following statements:
- Monazite is a source of rare earths.
 - Monazite contains thorium.
 - Monazite occurs naturally in the entire Indian coastal sands in India.
 - In India, Government bodies only can process or export monazite.
- Which of the statements given above are correct?
- (a) 1, 2 and 3 only (b) 1, 2 and 4 only
(c) 3 and 4 only (d) 1, 2, 3 and 4
17. With reference to *Web 3.0*, consider the following statements:
- Web 3.0 technology enables people to control their own data.
 - In Web 3.0 world, there can be blockchain based social networks.
 - Web 3.0 is operated by users collectively rather than a corporation.
- Which of the statements given above are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
18. With reference to "*Software as a Service (SaaS)*", consider the following statements:
- SaaS buyers can customise the user interface and can change data fields.
 - SaaS users can access their data through their mobile devices.
 - Outlook, Hotmail and Yahoo! Mail are forms of SaaS.
- Which of the statements given above are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

19. Which one of the following is the context in which the term “qubit” is mentioned?

- (a) Cloud Services
(b) Quantum Computing
(c) Visible Light Communication Technologies
(d) Wireless Communication Technologies

20. Consider the following statements:

1. Biofilms can form on medical implants within human tissues.
2. Biofilms can form on food and food processing surfaces.
3. Biofilms can exhibit antibiotic resistance.

Which of the statements given above are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

21. If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth?

1. GPS and navigation system could fail.
2. Tsunamis could occur at equatorial regions.
3. Power grids could be damaged.
4. Intense auroras could occur over much of the Earth.
5. Forest fires could take place over much of the planet.
6. Orbits of the satellites could be disturbed.
7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer from the code given below:

- (a) 1, 2, 4 and 5 only
(b) 2, 3, 5, 6 and 7 only
(c) 1, 3, 4, 6 and 7 only
(d) 1, 2, 3, 4, 5, 6 and 7

22. Consider the following statements:

1. “The Climate Group” is an international non-profit organization that drives climate action by building large networks and runs them.
2. The International Energy Agency in partnership with the Climate Group launched a global initiative “EP100”.
3. EP100 brings together leading companies committed to driving innovation in energy efficiency and increasing competitiveness while delivering on emission reduction goals.
4. Some Indian companies are members of EP100.
5. The International Energy Agency is the Secretariat to the “Under2 Coalition”.

Which of the statements given above are correct?

- (a) 1, 2, 4 and 5 (b) 1, 3 and 4 only
(c) 2, 3 and 5 only (d) 1, 2, 3, 4 and 5

23. The “Miyawaki method” is well known for the:

- (a) Promotion of commercial farming in arid and semi-arid areas
(b) Development of gardens using genetically modified flora
(c) Creation of mini forests in urban areas
(d) Harvesting wind energy on coastal areas and on sea surfaces

24. In medieval India, the term “Fanam” referred to:

- (a) Clothing (b) Coins
(c) Ornaments (d) Weapons

25. With reference to the *proposals of Cripps Mission*, consider the following statements:

1. The Constituent Assembly would have members nominated by the Provincial Assemblies as well as the Princely States.
2. Any Province, which is not prepared to accept the new Constitution would have the right to sign a separate agreement with Britain regarding its future status.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

26. What is/are the *advantage/advantages of implementing the ‘National Agriculture Market’ scheme*?

1. It is a pan-India electronic trading portal for agricultural commodities.
2. It provides the farmers access to nationwide market, with prices commensurate with the quality of their produce.

Select the correct answer using the code given below :

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

27. Consider the following statements :

1. The motion to impeach a Judge of the Supreme Court of India cannot be rejected by the Speaker of the Lok Sabha as per the Judges (Inquiry) Act, 1968.
2. The Constitution of India defines and gives details of what constitutes ‘incapacity’ and ‘proved misbehaviour’ of the Judges of the Supreme Court of India.
3. The details of the process of impeachment of the Judges of the Supreme Court of India are given in the Judges (Inquiry) Act, 1968.
4. If the motion for the impeachment of a Judge

is taken up for voting, the law requires the motion to be backed by each House of the Parliament and supported by a majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.

Which of the statement/s given above is/are correct?

- (a) 1 and 2 (b) 3 only
(c) 3 and 4 only (d) 1, 3 and 4

28. Consider the following statements :

1. Coal sector was nationalized by the Government of India under Indira Gandhi.
2. Now, coal blocks are allocated on lottery basis.
3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is self-sufficient in coal production.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 and 3 only
(c) 3 only (d) 1, 2 and 3

29. Consider the following statements :

1. The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification on the grounds of 'Office of Profit'.
2. The above-mentioned Act was amended five times.
3. The term 'Office of Profit' is well defined in the Constitution of India.

Which of the statement/s given above is/are correct?

- (a) 1 and 2 only (b) 3 only
(c) 2 and 3 only (d) 1, 2 and 3

30. Which of the following statements is/are true of the *Fundamental Duties of an Indian citizen*?

1. A legislative process has been provided to enforce these duties.
 2. They are correlative to legal duties.
- Select the correct answer using the code given below:

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

31. Consider the following pairs :

1. Radhakanta Deb : First President of the British Indian Association
2. Gazulu Lakshminarasu Chetty : Founder of the Madras Mahajana Sabha
3. Surendranath Banerjee : Founder of the Indian Association

Which of the above pair/s is/are correctly matched?

- (a) 1 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

32. With reference to the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?

- (a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
- (b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.
- (c) In the event of grave financial crisis in the country, the President of India can declare Financial Emergency without the counsel from the Cabinet.
- (d) State Legislatures cannot make laws on certain matters without the concurrence of Union Legislature.

33. With reference to the *Legislative Assembly of a State in India*, consider the following statements :

1. The Governor makes a customary address to Members of the House at the commencement of the first session of the year.
2. When a State Legislature does not have a rule on a particular matter, it follows the Lok Sabha rule on that matter.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

34. Which of the following is a most likely consequence of implementing the 'Unified Payments Interface (UPI)'?

- (a) Mobile wallets will not be necessary for online payments.
- (b) Digital currency will totally replace the physical currency in about two decades.
- (c) FDI inflows will drastically increase.
- (d) Direct transfer of subsidies to poor people will become very effective.

35. As per the *Solid Waste Management Rules, 2016* in India, which one of the following statements is correct?

- (a) Waste generator has to segregate waste into five categories.
- (b) The Rules are applicable to notified urban

local bodies, notified towns and all industrial townships only.

- (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
- (d) It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.

36. The terms Event Horizon', 'Singularity', 'String Theory' and 'Standard Model' are sometimes seen in the news in the context of :

- (a) Observation and understanding of the Universe
- (b) Study of the solar and the lunar eclipses
- (c) Placing satellites in the orbit of the Earth
- (d) Origin and evolution of living organisms on the Earth

37. In the context of India, which of the following factor/s is/are contributor/ contributors to reducing the risk of a currency crisis?

1. The foreign currency earnings of India's IT sector.
2. Increasing the government expenditure.
3. Remittances from Indians abroad.

Select the correct answer using the code given below:

- (a) 1 only (b) 1 and 3 only
- (c) 2 only (d) 1, 2 and 3

38. If you travel by road from Kohima to Kottayam, what is the minimum number of States within India through which you can travel, including the origin and the destination?

- (a) 6 (b) 7
- (c) 8 (d) 9

39. The Parliament of India exercises control over the functions of the Council of Ministers through:

1. Adjournment motion
2. Question hour
3. Supplementary questions

Select the correct answer using the code given below:

- (a) 1 only (b) 2 and 3 only
- (c) 1 and 3 only (d) 1, 2 and 3

40. In India, which of the following review the independent regulators in sectors like telecommunications, insurance, electricity, etc.?

1. Ad Hoc Committees set up by the Parliament
2. Parliamentary Department Related Standing Committees
3. Finance Commission
4. Financial Sector Legislative Reforms

Commission

5. NITI Aayog

Select the correct answer using the code given below:

- (a) 1 and 2 (b) 1, 3 and 4
- (c) 3, 4 and 5 (d) 2 and 5

41. With reference to *India's Five-Year Plans*, which of the following statements is/are correct?

1. From the Second Five-Year Plan, there was a determined thrust towards substitution of basic and capital good industries.
2. The Fourth Five-Year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.
3. In the Fifth Five-Year Plan, for the first time, the financial sector was included as an integral part of the plan.

Select the correct answer using the code given below:

- (a) 1 and 2 only (b) 2 only
- (c) 3 only (d) 1, 2 and 3

42. With reference to the *religious history of India*, consider the following statements:

1. Sautrantika and Sammitiya were the sects of Jainism.
2. Sarvastivadin held that the constituents of phenomena were not wholly momentary, but existed forever in a latent form.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2

43. With reference to communications technologies, what is/are the difference/differences between LTE (Long-Term Evolution) and VoLTE (Voice over Long-Term Evolution)?

1. LTE is commonly marketed as 3G and VoLTE is commonly marketed as advanced 3G.
2. LTE is data-only technology and VoLTE is voice-only technology.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2

44. In the context of any country, which one of the following would be considered as part of its *social capital*?

- (a) The proportion of literates in the population
- (b) The stock of its buildings, other infrastructure and machines
- (c) The size of population in the working age

- group
 (d) The level of mutual trust and harmony in the society

- 45.** With reference to the Constitution of India, consider the following statements:
 1. No High Court shall have the jurisdiction to declare any central law to be constitutionally invalid.
 2. An amendment to the Constitution of India cannot be called into question by the Supreme Court of India.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

- 46.** Which one of the following is **not** the most likely measure the Government/ RBI takes to stop the slide of Indian rupee?

- (a) Curbing imports of non-essential goods and promoting exports
 (b) Encouraging Indian borrowers to issue rupee denominated Masala Bonds
 (c) Easing conditions relating to external commercial borrowing
 (d) Following an expansionary monetary policy

- 47.** With reference to Indian Ocean Dipole (IOD) sometimes mentioned in the news while forecasting Indian monsoon, which of the following statement/s is/are correct?

1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
 2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

- 48.** In the context of digital technologies for entertainment, consider the following statements :

1. In Augmented Reality (AR), a simulated environment is created and the physical world is completely shut out.
 2. In Virtual Reality (VR), images generated from a computer are projected onto real-life objects or surroundings.
 3. AR allows individuals to be present in the world and improves the experience using the camera of smart-phone or PC.
 4. VR closes the world, and transposes an individual, providing complete immersion experience.

Which of the statement/s given above is/are correct?

- (a) 1 and 2 only (b) 3 and 4
 (c) 1, 2 and 3 (d) 4 only

- 49.** With reference to the recent developments in science, which one of the following statements is **not** correct?

- (a) Functional chromosomes can be created by joining segments of DNA taken from cells of different species.
 (b) Pieces of artificial functional DNA can be created in laboratories.
 (c) A piece of DNA taken out from an animal cell can be made to replicate outside a living cell in a laboratory.
 (d) Cells taken out from plants, and animals can be made to undergo cell division in laboratory petri dishes.

- 50.** Organic Light Emitting Diodes (OLEDs) are used to create digital display in many devices. What are the advantages of OLED displays over Liquid Crystal displays (LCDs)?

1. OLED displays can be fabricated on flexible plastic substrates.
 2. Roll-up displays embedded in clothing can be made using OLEDs.
 3. Transparent displays are possible using OLEDs.

Select the correct answer using the code given below:

- (a) 1 and 3 only (b) 2 only
 (c) 1, 2 and 3 (d) None of the above statements is correct

ANSWER

1.	(b)	14.	(a)	27.	(c)	40.	(a)
2.	(c)	15.	(c)	28.	(a)	41.	(a)
3.	(c)	16.	(b)	29.	(a)	42.	(b)
4.	(a)	17.	(d)	30.	(d)	43.	(d)
5.	(a)	18.	(d)	31.	(b)	44.	(d)
6.	(d)	19.	(b)	32.	(b)	45.	(d)
7.	(b)	20.	(d)	33.	(a)	46.	(d)
8.	(b)	21.	(c)	34.	(a)	47.	(b)
9.	(b)	22.	(b)	35.	(c)	48.	(b)
10.	(b)	23.	(c)	36.	(a)	49.	(a)
11.	(a)	24.	(b)	37.	(b)	50.	(c)
12.	(b)	25.	(b)	38.	(b)		
13.	(b)	26.	(c)	39.	(d)		

MCQs Based on Current Affairs

1. Consider the following statements regarding bluebugging.

1. It is a form of hacking that lets attackers access a device through its discoverable Bluetooth connection.

2. To successfully execute a bluebugging attack, attacker must be within close range of the target device (usually within 10 m).

Which of the statements given above is/are true?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

2. Consider the following statements regarding ASEAN-India Maritime Exercise (AIME).

1. AIME-2023 is the first exercise when India is involved in exercises with the ASEAN though there have been exercises with ASEAN nations separately.

2. India becomes the 4th ASEAN dialogue partner, after Russia, China and the US, to hold the ASEAN+1 maritime exercise.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

3. Consider the following statements regarding Divorce.

1. Section 13B of the HMA, 1955 provides for “divorce by mutual consent”.

2. Under Section 13B(2) of the Act, before granting the divorce, the mandatory six-month wait is intended to give the parties time to withdraw their plea.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. None of the above

Answer – D

4. Consider the following statements regarding Smart Cities Mission.

1. Smart Cities Mission in India was launched by Prime Minister Narendra Modi on June 25, 2015.

2. The Union Housing and Urban Affairs Ministry (MoHUA) has extended the deadline for the Smart Cities Mission from June 2023 to June 2024.

Which of the statements given above is/are true?

- A. 1 only B. 2 only
C. Both 1 and 2 D. None of the above

Answer – C

5. Consider the following statements regarding World

Press Freedom Index.

1. World Press Freedom Index is published by Reporters without Border.

2. In the index, top three countries on the ranking are Norway, Ireland, and Denmark, while Vietnam, China, and North Korea are placed at the bottom.

3. India dropped 11 places to rank 161 in the 2023 World Press Freedom Index.

Which of the statements given above is/are correct?

- A. 1, 2 B. 2, 3
C. 1, 3 D. 1, 2, 3

Answer- D

6. What are main threats cited by Japan in its New Ocean Policy.

1. Chinese coast guard ships' repeated intrusions into Japanese territorial waters.

2. Growing unauthorized maritime activity by 'foreign survey boats' inside Japan's exclusive economic zone.

3. Increasing joint military exercises by China and Russia, and North Korea's repeated missile launches.

Which of the given statements is/are correct?

- A. 1, 2 B. 2, 3
C. 1, 3 D. 1, 2, 3

Answer- D

7. Which of the following statements are correct regarding B-READY Ranking.

1. It will assess the business and investment environment worldwide annually.

2. B-READY improves upon and replaces ease of Doing Business.

3. It will be published in the 2024 by World Bank.

Which of the statements given above is/are correct?

- A. 1, 2 B. 1, 2, 3
C. 2, 3 D. 1, 3

Answer – B

8. Which of the following statements is/are correct regarding Talaq-e-Hasan.

1. Talaq-e-Hasan is divorce practice which is clearly mentioned in quran.

2. Talaq-e-Hasan is pronounced with a gap of at least one month or one menstrual cycle.

3. No divorce can be administered when the woman is undergoing her menstrual cycle or pregnancy.

Which of the statements given above is/are true?

- A. 1, 2 B. 2, 3
C. 1, 3 D. 1, 2, 3

Answer – D

9. Which of the following statements is/are correct?
1. De-dollarisation refers to the replacement of the U.S. dollar by other currencies as the global reserve currency.
 2. A reserve currency refers to any currency that is widely used in cross-border transactions and is commonly held as reserves by central banks.
- Which of the statements given above is/are true?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

10. Consider the following statements with respect to National Medical Device Policy 2023.
1. The new National Medical Devices Policy aims to reduce this dependence to nearly 30% in the next few years and make India one of the top five global manufacturing hubs.
 2. The Indian medical devices sector is highly dependent on imports, with around 80-85% of the devices being imported, mainly high-end ones.
- Which of the statements given above is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

11. Consider the following statements:
1. Union MSME Minister Narayan Rane launched the revamped Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme.
 2. The scheme will provide guarantee for additional Rs. 2 lakh crore loans and advances to the micro and small enterprises.
- Which of the above statements is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

12. Consider the following statements regarding Meiteis tribe.
1. The Meiteis are the largest community in Manipur.
 2. They speak the Meitei language (officially called Manipuri), one of the 22 official languages of India and the sole official language of Manipur State.
- Which of the statements given above is/are not true?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – D

13. Consider the following statements regarding PRET

initiative.

1. World Health Organization (WHO) has launched the PRET initiative to be better prepared for future outbreaks of a similar scale and devastation as the COVID-19 pandemic.
 2. The initiative was announced at the Global Meeting for Future Respiratory Pathogen Pandemics held in Geneva, Switzerland.
- Which of the statements given above is/are true?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

14. Consider the following statements regarding Bihan Mela.
1. Bihan Mela involves the collection and preservation of indigenous seeds, and farmers from 40 villages in Dasapalla block participate in the festival.
 2. Bihan Mela also play an important role in building community resilience and supporting local food systems.
- Which of the above statements is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

15. Consider the following statements about SUPREME initiative.
1. It is a first-of-its-kind programme by the government, extends financial support for repair, upgradation, maintenance, retrofitting, or acquiring additional attachments to increase functional capabilities of existing AIFs.
 2. The duration of support will be for a period not exceeding 3 years.
- Which of the statements given above is/are true?
- A. 1 only B. 2 only
C. Both and 2 D. Neither 1 nor 2

Answer – C

16. Consider the following statements regarding Zero Shadow Days.
1. For every point on Earth between the Tropic of Cancer and the Tropic of Capricorn, there are two Zero Shadow Days in a year.
 2. All places whose latitude equals the angle between the Sun's location and the equator on that day experience zero shadow day, with the shadow beneath an object at local noon.
- Which of the statements given above is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

Answer – C

Personality



Vinayak Damodar Savarkar

Vinayak Damodar Savarkar was born on May 20, 1883 in Bhagur village (Nashik district) of Maharashtra. He is also known as Veer Savarkar. Savarkar was educated both in India and London. In 1904 Savarkar founded Abhinav Bharat Sabha in Poona. Apart from this, he also founded the Free India Society. Savarkar was also associated with a nationalist organization called India House. Sir William Curzon Wylie was assassinated in London in 1909 by Madan Lal Dhingra. The strings of this murder were linked to Savarkar because the British said that the pistol used in the murder was provided by Savarkar. Therefore, Vinayak Damodar Savarkar was sentenced to life imprisonment and sent to the Cellular Jail located in the Andaman and Nicobar Islands for the murder of Nashik Collector Jackson, being associated with the India House institution, etc. However, in 1921, the British government released Savarkar under an agreement. In this agreement, he would remain under political arrest till 1937 and would not engage in any kind of nationalist activity. Savarkar died in independent India on 26 February 1966 in Mumbai.

Savarkar's contribution

Vinayak Damodar Savarkar was greatly influenced by Ambedkar's upliftment of the lower strata and his other contributions to the society.

In many of his speeches and articles, he used to give the example of Dr. Bhimrao Ambedkar. Many historians say that both (Ambedkar Mehr community) and Savarkar (Brahmin) came from the extreme section of casteism but both the nationalist leaders had a lot of similarities in terms of ideology.

Savarkar wanted reforms in the then Indian society. That is why in 1920, he wrote a letter to his brother Narayan Rao and said in it that as much struggle is needed against the colonial power, as much struggle is needed against caste discrimination and untouchability.

Savarkar was against the 'White Man's Burdenship Theory' of the British. He scripted history in an authentic manner and tried to instill confidence in Indians, that is, he exposed Indian history so that people would know their past and awaken in their consciousness. He believed that once the public awakening would come, the people would be able to easily face the lies being spread by the British and would pave the way for their own freedom.

Veer Savarkar was in favor of science in religious rituals. He believed that religious practices must be viewed with scientific thinking and rationality. Savarkar was the first nationalist who first spoke of Swaraj in the first decade of the twentieth century (around 1904-05). While the Congress talked about Swaraj after a long time in the Lahore session of 1929. Savarkar was in favor of a united India. He wanted people of different cultures to live together and create an India that is inclusive and dynamic. Savarkar had also emphasized that we should learn from European society and emphasize on technology like them. Apart from this, Savarkar also supported exploration and innovative ideas. Savarkar's futuristic approach to Indian cinema was commendable.

In 1907, Savarkar celebrated the golden jubilee of the 1857 revolution in London. Savarkar established through his book 'India Freedom Struggle, 1857' that the revolt of 1857 was India's first freedom struggle. The British government considered the revolt of 1857 as a rebellion by the Indian Army. Savarkar was an early revolutionary among those who aroused the revolution of nationalism in India. Savarkar's book (Indian Freedom Struggle) was an inspiration for the revolutionaries.

Savarkar was a freedom fighter, social reformer, politician, writer, sharp thinker, brilliant orator and visionary politician who made an incomparable contribution in getting Indians out of inferiority complex.

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