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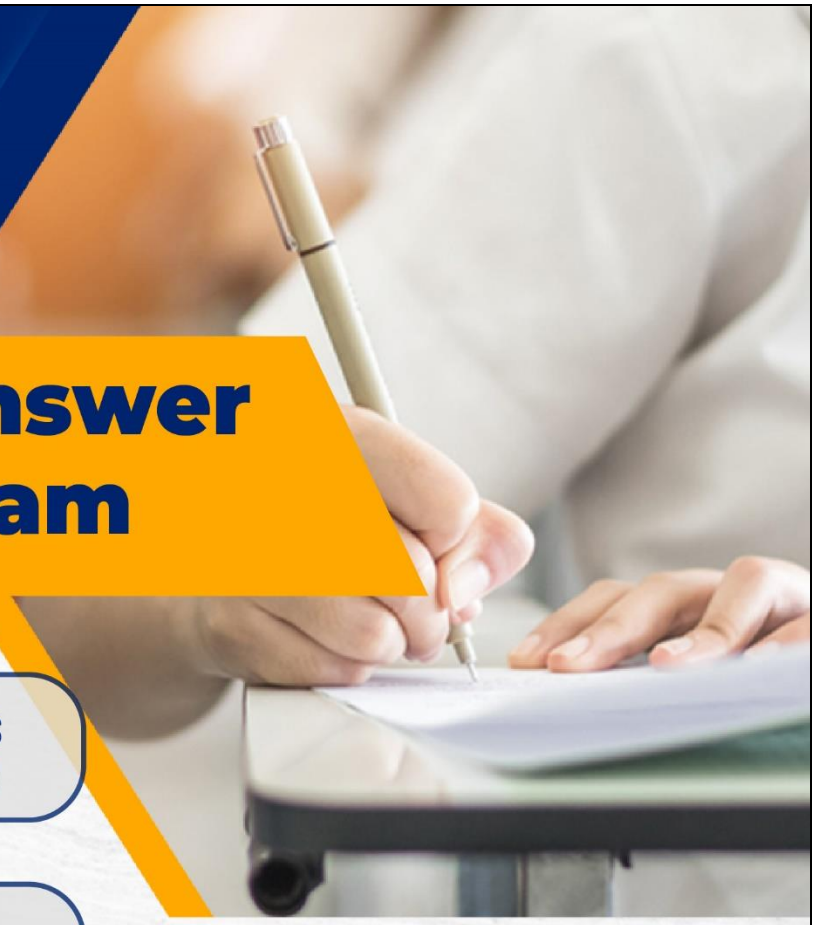

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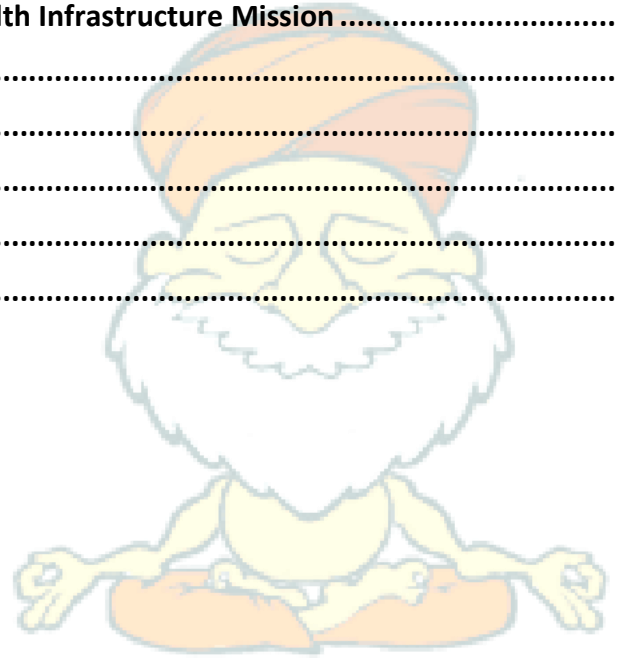

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| **Foreign Contribution (Regulation) Act (FCRA)** | **Context** The Ministry of Home Affairs (MHA) has extended the deadline till December 31 for NGOs to apply for renewal of their Foreign Contribution (Regulation) Act (FCRA) registration certificates.<br>The registration is mandatory for associations and NGOs to receive foreign funds.<br>**What is Foreign Contribution (Regulation) Act (FCRA)?**<br>• Foreign funding of persons in India is regulated under FCRA Act and is implemented by the Ministry of Home Affairs.<br>• The Act ensures that the recipients of foreign contributions adhere to the stated purpose for which such contribution has been obtained.<br>• Under the Act, organisations are required to register/renew themselves every five years.<br>• Registered NGOs can receive foreign contributions for five purposes — social, educational, religious, economic and cultural.<br>**Foreign Contribution (Regulation) Amendment Act, 2020**<br>• Prohibition to accept foreign contribution: The Act bars public servants from receiving foreign contributions.<br>• Transfer of foreign contribution: The Act prohibits the transfer of foreign contribution to any other person not registered to accept foreign contributions.<br>• Aadhaar for registration: The Act makes Aadhaar number mandatory for all office bearers, directors or key functionaries of a person receiving foreign contribution, as an identification document.<br>• FCRA account: Foreign contribution must be received only in an account designated by the bank as FCRA account in such branches of the State Bank of India, New Delhi.<br>• Reduction in use of foreign contribution for administrative purposes: Not more than 20% of the total foreign funds received could be defrayed for administrative expenses. In FCRA 2010 the limit was 50%.<br>• Surrender of certificate: The Act allows the central government to permit a person to surrender their registration certificate. |
| **OCI candidates can appear in general category** | **Context** The Supreme Court has permitted Overseas Citizens of India (OCI) candidates to participate in the NEET-UG 2021 counselling in the general category.<br>The court clarified that the order allowing the OCIs to compete in the general category was confined to the 2021-2022 academic year alone.<br>Background<br>• Ministry of Home Affairs had directed OCI candidates to be treated on a par with Non-Resident Indians (NRIs) for the purpose of NEET.<br>• This would have meant that successful OCI candidates would have to pay the higher fee paid by NRIs for medical seats in India.<br>**What is the difference between NRI and OCI?**<br>• NRI is given to provide a residential status to a citizen of India with an Indian Passport who resides in a foreign country for the purpose of work/business, or education.<br>• OCI is an immigration status which is provided to a foreign citizen of Indian origin as an alternative for dual citizenship which is not allowed by the Indian Constitution. |
| **Right to seek bail implicit in Constitution: Supreme Court** | **Context** The Supreme Court has held that the right to apply for bail is an "individual right" implicit in the Constitution. |

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| | • The right of an accused, an undertrial prisoner or a convicted person awaiting appeal court's verdict to seek bail on suspension of sentence is recognised in Sections 439, 438 and 389 of the Code of Criminal Procedure.<br>• If there is a blanket ban on listing of these applications, even for offences with lesser degree of punishment, it would effectively block access for seekers of liberty to apply for bail and suspend the fundamental rights of individuals in or apprehending detention.<br>• Such an order also has the effect of temporarily eclipsing statutory provisions.<br>**Background**<br>• A Single Judge of the Rajasthan High Court had in March passed an order to not to list bails, appeals, applications for suspension of sentence in appeals and revisions in the category of extreme urgent matters. |
| **Renunciation of Indian citizenship** | **Context** The Ministry of Home Affairs (MHA) has simplified the process for Indians who want to renounce their citizenship.<br>Provisions have been made for applicants to upload documents online, with an upper limit of 60 days for the renunciation process to be completed.<br>About Citizenship<br>• In India, Articles 5 – 11 of the Constitution deals with the concept of citizenship. The term citizenship entails the enjoyment of full membership of any State in which a citizen has civil and political rights.<br>• Termination of citizenship is possible in three ways according to the Citizenship Act, 1955.<br>• Renunciation: If any citizen of India who is also a national of another country renounces his Indian citizenship through a declaration in the prescribed manner, he ceases to be an Indian citizen.<br>• Termination: Indian citizenship can be terminated if a citizen knowingly or voluntarily adopts the citizenship of any foreign country.<br>• Deprivation: The government of India can deprive a person of his citizenship in some cases. It is applicable only in the case of citizens who have acquired the citizenship by registration, naturalization, or only by Article 5 (c) |
| **Panel set up to implement Assam Accord** | **Context** The Assam government has set up an eight-member sub-committee to examine and prepare a framework for the implementation of all clauses of the Assam Accord of 1985.<br>• The sub-committee has also been mandated to examine and prepare a framework for updating the National Register of Citizens, issues of flood and erosion, rehabilitation of martyrs' families and victims of Assam Agitation besides the potential of the State's all-round development.<br>**What is Assam Accord?**<br>• It was a tripartite accord signed between the Government of India, State Government of Assam and the leaders of the Assam Movement in 1985.<br>• The signing of the Accord led to the conclusion of a six-year agitation that was launched by the All Assam Students' Union (AASU) in 1979, demanding the identification and deportation of illegal immigrants from Assam.<br>• It sets a cut-off of midnight of 24th March 1971, for the detection of illegal foreigners in Assam.<br>• However, the demand was for detection and deportation of migrants who had illegally entered Assam after 1951.<br>**Do you know?**<br>• The Clause 6 of the Accord pertains to the constitutional, legislative and administrative safeguards to "protect, preserve and promote the cultural, social, linguistic identity and heritage of the Assamese people". |

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| **Supreme Court allows girls to appear for RIMC test** | **Context** Supreme Court has allowed girls to appear in the entrance examination scheduled for December 2021 for admission to the Rashtriya Indian Military College (RIMC).<br>• Recently, SC had asked the armed forces to allow women to write the National Defence Academy (NDA) entrance exam in November 2021 as well.<br>**About RIMC**<br>• Rashtriya Indian Military College (RIMC) is a military school for boys situated in Doon Valley, Dehradun in India.<br>• It was established in 1922.<br>• The RIMC is a feeder institution for the National Defence Academy, Indian Naval Academy and subsequently the Indian Armed Forces. |
| **E-shram portal** | **In News:** More than 3 crore unorganized workers are now registered on E-shram portal.<br>• By Ministry of Labour and Employment (MoLE)<br>• It is the web portal for creating a National Database of Unorganized Workers (NDUW), which will be seeded with Aadhaar.<br>• It seeks to register an estimated 398-400 million unorganised workers and to issue an E-Shram card containing a 12-digit unique number.<br>• Registered workers will be eligible for Rs 2 Lakh on death or permanent disability and Rs 1 lakh on partial disability.<br><br>**Significance of e-Shram portal – National Database on Unorganized Workers (NDUW)**<br>• Targeted identification of the unorganized workers was a much-needed step and the portal which will be the national database of our nation builders will help take welfare schemes to their doorstep, who are the builders of our Nation.<br>• Targeted delivery and last mile delivery, has been a major focus of the schemes of government of India and the National Database of Unorganised workers (E-Shram portal) is another key step towards that.<br>**Issues**<br>• Tedious Process: Given the gigantic nature of registering each worker, it will be a long-drawn process.<br>• Data Security issues: Given the mega-size of the database, there is potential for its misuses especially in the absence of Data Protection legislation. The Union government would have to share data with State governments whose data security capacities vary.<br>• Definitional issues: By excluding workers covered by EPF and ESI, lakhs of contract and fixed-term contract workers will be excluded from the universe of UW.<br>• Ever-changing identities: Unorganised may have complex and ever-changing identities where they move between formal and informal sectors.<br>• Gig workers – Gig workers are included by the Labour ministry while they are excluded by the other three Labour Codes creating legal confusions over the classification of gig/platform workers.<br>• Federal Challenges: Union chalks out the plan but states have to implement it. Differences in state capacities can create hurdles in the implementation.<br>• Corruption – Middle service agencies such as Internet providers might charge exorbitant charges to register and print the E-Shram cards.<br>**Way Ahead**<br>• Involvement of surveillance agencies is crucial to address the issues of corruption.<br>• Government must publish statistics at the national and regional levels of the registrations to assess the registration system's efficiency. |

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| | • Triple linkage of One-Nation-One-Ration Card , E-Shram Card (especially bank account seeded) and the Election Commission Card can be done, for efficient and leakage-less delivery. |
| **National Human Rights Commission (NHRC)** | **Context** The National Human Rights Commission (NHRC) has issued notices to the Jammu and Kashmir Government and the police over the recent spate of targeted killings of civilians from minority communities of Kashmiri Pandits.<br><br>**What is National Human Rights Commission (NHRC)?**<br>• NHRC was established in 1993.<br>• It is in conformity with the Paris Principles, adopted at the first international workshop on national institutions for the protection of human rights held in Paris in 1991.<br>• Status: It is a statutory organization established under the Protection of Human Rights Act (PHRA), 1993<br>• Headquarters: New Delhi.<br>**Functions:**<br>○ To investigate the violation of human rights/ the failures of the states/other to prevent a human rights violation<br>○ Research about human rights, create awareness campaigns through various mediums, and encourage the work of NGOs.<br>**Composition:**<br>Chairperson, four full-time Members and four deemed Members.<br>A Chairperson, should be retired Chief Justice of India or a Judge of the Supreme Court.<br>Appointment: The Chairperson and members of the NHRC are appointed by the President of India, on the recommendation of a committee consisting of:<br>○ The Prime Minister (Chairperson)<br>○ The Home Minister<br>○ The Leader of the Opposition in the Lok Sabha<br>○ The Leader of the Opposition in the Rajya Sabha<br>○ The Speaker of the Lok Sabha<br>○ The Deputy Chairman of the Rajya Sabha<br>They hold office for a term of three years or until they attain the age of 70 years, whichever is earlier. The President can remove them from the office under specific circumstances. |
| **E-voting** | **Context** Former Chief Election Commissioners (CEC) have raised a range of concerns around the idea of online voting and remote voting, at a time the Telangana State Election Commission (SEC) is set to carry out an e-voting experiment and the Election Commission of India (EC), too, is exploring remote voting.<br>• The Telangana SEC would be carrying out a smartphone app-based online voting experiment on October 20, the State Government had announced last week.<br>• The EC, on the other hand, had said last year that it was looking at the option of remote voting for those electors unable to reach the polling stations they are registered at.<br>**What are the concerns?**<br>• Secrecy of ballots will be difficult to maintain.<br>• If Electronic Voting Machine which is based on simplest technology is still a matter of legal disputes, it is quite possible that an app-based voting will not be foolproof.<br>• It was not clear how verification of voter identification, maintaining a free voting environment and secrecy of ballots would be maintained.<br>• It will face political hurdles.<br>• Campaigning for outstation voters would also crop up. |

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| **Part-time employees not entitled to regularisation: SC** | **Context:** The Supreme Court has held that part-time employees are not entitled to seek regularisation as they are not working against any sanctioned post in the Government.<br>• It said that Regularisation could be only as per the policy declared by the State/Government and "nobody can claim the regularisation as a matter of right".<br>• The status of permanency cannot be granted when there is no post.<br>• Mere continuance every year of seasonal work during the period when work was available does not constitute a permanent status. |
| **Anticipatory bail** | **Context** The Supreme Court has held that a superior court can set aside an anticipatory bail order if there was enough material to suggest that factors like gravity of the offence and the role of the accused in the crime were not considered by the lower court.<br>What is The concept of anticipatory bail?<br>• The provision of anticipatory bail under Section 438 was introduced when Criminal Procedure Code (CrPC) was amended in 1973.<br>• As opposed to ordinary bail, which is granted to a person who is under arrest, in anticipatory bail, a person is directed to be released on bail even before arrest made.<br>• Time limit: The Supreme Court (SC) in Sushila Aggarwal v. State of NCT of Delhi (2020) case ruled that no time limit can be set while granting anticipatory Bail and it can continue even until the end of the trial.<br>• It is issued only by the Sessions Court and High Court.<br>What is the Need for such protection?<br>• An accused, besides being an accused, may also be the primary caregiver or sole breadwinner of the family. His arrest may leave his loved ones in a state of starvation and neglect.<br>• In the 1980 Gurbaksh Singh Sibbia vs State of Punjab case, a five-judge Supreme Court bench led by then Chief Justice Y V Chandrachud ruled that 438 (1) is to be interpreted in the light of Article 21 of the Constitution (protection of life and personal liberty). |
| **Model Code of Conduct (MCC)** | **Part of:** Prelims and Mains GS-II- Governance, Elections<br>**In News:** In case the constituency is comprised in State Capital/Metropolitan Cities/Municipal Corporations, then MCC instructions would be applicable in the area of concerned Constituency only.<br>**Model Code of Conduct (MCC)**<br>• **A set of guidelines** issued by the Election Commission of India for conduct of political parties and candidates during elections mainly with respect to speeches, polling day, polling booths, portfolios, election manifestos, processions and general conduct. This is in keeping with **Article 324** of the Constitution, which gives the Election Commission the power to supervise elections to the Parliament and state legislatures.<br>• **Philosophy:** Parties and candidates should show respect for their opponents, criticise their policies and programmes constructively, and not resort to mudslinging and personal attacks. The MCC is intended to help the poll campaign maintain high standards of public morality and provide a level playing field for all parties and candidates.<br>• **Comes into force** immediately on announcement of the election schedule by the commission for the need of ensuring free and fair elections. At the time of the Lok Sabha elections, both the Union and state governments are covered under the MCC.<br>• The MCC is not enforceable by law. |

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| **National Fund to Control Drug Abuse** | **Context** The Social Justice and Empowerment Ministry has recently recommended that the National Fund to Control Drug Abuse be used to carry out de-addiction programmes, rather than just policing activities.<br>**Key takeaways**<br>● The fund was created in accordance with a provision of the Narcotic Drugs and Psychotropic Substances Act, 1985, and had a nominal corpus of Rs. 23 crore.<br>● The Fund shall be applied by the Central Government to meet the expenditure incurred in connection with the measures taken for combating illicit traffic in, or controlling abuse of, narcotic drugs and psychotropic substances for all or any of the purposes specified in sub-section (1) of section 71.<br>**About The Narcotic Drugs and Psychotropic Substances Act, 1985**<br>● It is also known as the NDPS Act.<br>● It prohibits any individual from engaging in any activity consisting of production, cultivation, sale, purchase, transport, storage, and/or consumption of any narcotic drug or psychotropic substance.<br><br>**About psychotropics and Narcotics**<br>• From a medical point of view, psychotropics designate chemical substances that act upon the mind, that is on the conscious or unconscious mental life of an individual.<br>• Narcotics include substances that cause stupor (unconscious), muscular relaxation and a reduction or elimination of sensitivity. |
| **Matrilineal Meghalaya to give land rights to men** | **Context** Matrilineal Meghalaya is set to break the tradition of parents hand down a major share of parental property to the khatduh, which means the youngest daughter in the Khasi language.<br>• The Khasi Hills Autonomous District Council (KHADC) is scheduled to introduce the Khasi Hills Autonomous District Khasi Inheritance of Property Bill, 2021, for equal distribution of parental property among siblings, both male and female.<br>• The bill will enable equitable distribution of property among the heirs irrespective of gender.<br>• The Bill also has a provision for denying share of property to any ward who marries a non-tribal and accepts the culture and tradition of his or her spouse.<br>About the tradition of the Khasis<br>• Khasis – who account for Meghalaya's largest ethnic community -– are one of the last existing matrilineal societies in the world.<br>• Here, children receive their mother's last name, husbands move into their wife's home, and the youngest daughters inherit the ancestral property.<br>• Khasi is used as an umbrella phrase to refer to many subgroups in Meghalaya who have distinguishing languages, rites, ceremonies, and habits, but share an ethnic identity as Ki Hynniew Trep (The Seven Huts). |
| **SC sets up committee to examine Pegasus allegations** | **Context** The SC has stressed that the power of the state to snoop in the name of national security into the "sacred private space" of individuals is not absolute.<br>● Thus, it has appointed an expert technical committee overseen by former Supreme Court judge R.V. Raveendran to examine allegations that the Centre used Israeli software Pegasus to spy on citizens.<br>● The court has also said that in a democratic country governed by the rule of law, indiscriminate spying cannot be allowed except with sufficient statutory safeguards.<br>○ The use of technology for surveillance by the state must be evidence-based.<br>**What is Pegasus?**<br>● It is a spyware tool developed by an Israeli firm, the NSO Group. |

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| | • Spyware spies on people through their phones.<br>• Pegasus works by sending an exploit link, and if the target user clicks on the link, the malware or the code that allows the surveillance is installed on the user's phone.<br>• Once Pegasus is installed, the attacker has complete access to the target user's phone.<br>**What can Pegasus do?**<br>• Pegasus can "send back the target's private data, including passwords, contact lists, calendar events, text messages, and live voice calls from popular mobile messaging apps".<br>• The target's phone camera and microphone can be turned on to capture all activity in the phone's vicinity, expanding the scope of the surveillance. |
| **Mullaperiyar dam issue** | **Context** The Supreme Court has directed the Supervisory Committee to take an immediate and firm decision on the maximum water level that can be maintained at Mullaperiyar dam, amid torrential rain in Kerala.<br>**Background**<br>The SC constituted a permanent Supervisory Committee in 2014 to oversee all the issues concerning Mullaperiyar dam. The dam is a source of friction between Tamil Nadu and Kerala.<br>What's the issue?<br>• Kerala said the water level should not go above 139 feet, the same as what the court had ordered on August 24, 2018, when the State was hit by floods. It is because the lives of 50 lakh people would be in danger if the water level in the dam is raised.<br>• However, Tamil Nadu objected to this decision citing the Supreme Court judgments of 2006 and 2014, which fixed the maximum water level at 142 feet.<br>• Latest recommendation of the Supervisory Committee<br>• The Supervisory Committee recommended in the Supreme Court that there is no need to change the water level in the Mullaperiyar dam.<br>• Tamil Nadu states that its water level is at 137feet.<br>• However, Kerala did not agree with its opinion citing that its eventual release would risk floods and endanger the lives of lakhs of people in Kerala.<br>What does Tamil Nadu say?<br>• Tamil Nadu claims that although it has undertaken measures to strengthen the dam, the Kerala government has blocked any attempt to raise the reservoir water level – resulting in losses for Madurai farmers.<br>What are Kerala's arguments?<br>• Kerala, however, highlights fears of devastation by residents living downstream in the earthquake-prone district of Idukki.<br>• Scientists have argued that if there is an earthquake in the region measuring above six on the Richter scale, the lives of over three million people will come under grave danger.<br>Mullaperiyar Dam<br>• It is a masonry gravity dam built at the confluence of Mullayar and Periyar rivers.<br>• Although the dam is located in Kerala, it is operated by Tamil Nadu following an 1886 lease indenture for 999 years (the Periyar Lake Lease Agreement) that was signed between the Maharaja of Travancore and the Secretary of State for India for the Periyar Irrigation works.<br>• It was Constructed between 1887 and 1895.<br>• It redirected the river to flow towards the Bay of Bengal, instead of the Arabian Sea and provide water to the arid rain region of Madurai in Madras Presidency. |

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| **UIDAI seeks indemnity from Data Bill** | **Context** The Unique Identification Authority of India (UIDAI) has asked for exemption from the Personal Data Protection (PDP) Law.<br>● In an interaction with the Joint Parliamentary Committee on Data Protection Bill 2019, UIDAI functionaries said the authority is already being governed by the Aadhaar Act and there cannot be duplicity of laws.<br>**About Personal Data Protection (PDP) Law**<br>● The law is a comprehensive piece of legislation that seeks to give individuals greater control over how their personal data is collected, stored and used.<br>● The Bill also establishes a Data Protection Authority for the same.<br>**Genesis of the Bill**<br>● The genesis of this Bill lies in the report prepared by a Committee of Experts headed by Justice B.N. Srikrishna.<br>● The committee was constituted by the government in the course of hearings before the Supreme Court in the right to privacy case (Justice K.S. Puttaswamy v. Union of India).<br>**Contentious section 35**<br>● Section 35, which invokes "sovereignty and integrity of India," "public order", "friendly relations with foreign states" and "security of the state" to give powers to the Central government to suspend all or any of the provisions of this Act for government agencies.<br>About UIDAI<br>● UIDAI was created with the objective to issue Unique Identification numbers (UID), named as "Aadhaar", to all residents of India that is:<br>● robust enough to eliminate duplicate and fake identities<br>● can be verified and authenticated in an easy, cost-effective way.<br>● It is a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016.<br>**Under the Aadhaar Act 2016, UIDAI is responsible for**<br>● Aadhaar enrolment and authentication<br>● Developing system for issuing Aadhaar numbers<br>● Perform authentication<br>● To ensure the security of identity information<br>● Ministry: Electronics & IT ministry. |
| **Amendments to the Registration of Births and Deaths Act, 1969** | **Context** The Centre has proposed amendments to the Registration of Births and Deaths Act, 1969 that will enable it to "maintain the database of registered birth and deaths at the national level".<br>● As of now, the registration of births and deaths is done by the local registrar appointed by States.<br>**Key takeaways**<br>● The database may be used to update the Population Register and the electoral register, and Aadhaar, ration card, passport and driving licence databases.<br>**Proposed amendments by the Centre**<br>● It is proposed that the Chief Registrar (appointed by the States) would maintain a unified database at the State level and integrate it with the data at the "national level," maintained by the Registrar General of India (RGI). The amendments will imply that the Centre will be a parallel repository of data.<br>● "Special Sub-Registrars" shall be appointed, in the event of disaster, with any or all of his powers and duties for on the spot registration of deaths and issuance of extract thereof, as may be prescribed." |

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| **Meghalaya Enterprise Architecture Project (MeghEA)** | **Context** Recently, Meghalaya Enterprise Architecture Project (MeghEA) was launched.<br>● The project aims to improve service delivery and governance for the people using the power of Digital technologies.<br>● Enterprise Architecture (EA) is the process by which organizations standardize and organize IT (Information Technology) infrastructure to align with business goals.<br>**Key takeaways**<br>● The initiative is spread across 6 pillars i.e. Governance, Human Resources, Entrepreneurship, Primary Sector, Infrastructure and Environment, and envision to make Meghalaya a high income state by 2030.<br>● It is envisioned to make Meghalaya a high income state by 2030.<br>● MeghEA is conceived to support the following digital government goals:<br>○ A planned state government transformation initiative which demands efficient coordination between strategies, policies, processes, services and organizational capacity<br>● Coordinate all ICT initiatives under one umbrella to get a better holistic perspective<br>● Implement and ICT enable state government process reengineering to provide multi-channel service delivery<br>● Ensure that state government applications and systems provide end-users with information they need<br>● Craft an ecosystem for the digital economy to boost shared prosperity, by leveraging ICT for employment and growth. |
| **Launch of Swachh Bharat Mission-Urban 2.0 and AMRUT 2.0** | **Context:** SBM-U 2.0 and AMRUT 2.0 have been designed to realize the aspiration to make all our cities 'Gasrbage Free' and 'Water Secure'. These flagship Missions signify a step forward in our march towards effectively addressing the challenges of rapidly urbanizing India and will also help contribute towards achievement of the Sustainable Development Goals 2030.<br>**About Swachh Bharat Mission-Urban 2.0** envisions to<br>• Make all cities 'Garbage Free' and ensure grey and black water management in all cities other than those covered under AMRUT,<br>• Make all urban local bodies as ODF+ and those with a population of less than 1 lakh as ODF++<br>• The Mission will focus on source segregation of solid waste, utilizing the principles of 3Rs (reduce, reuse, recycle), scientific processing of all types of municipal solid waste and remediation of legacy dumpsites for effective solid waste management.<br>**About AMRUT 2.0**<br>• Aims to provide 100% coverage of water supply to all households in around 4,700 urban local bodies by providing about 2.68 crore tap connections and 100% coverage of sewerage and septage in 500 AMRUT cities by providing around 2.64 crore sewer/ septage connections, which will benefit more than 10.5 crore people in urban areas.<br>• AMRUT 2.0 will adopt the principles of **circular economy** and promote conservation and rejuvenation of surface and groundwater bodies.<br>• The Mission will promote data led governance in water management and Technology Sub-Mission to leverage latest global technologies and skills.<br>• 'Pey Jal Survekshan' will be conducted to promote progressive competition among cities. |

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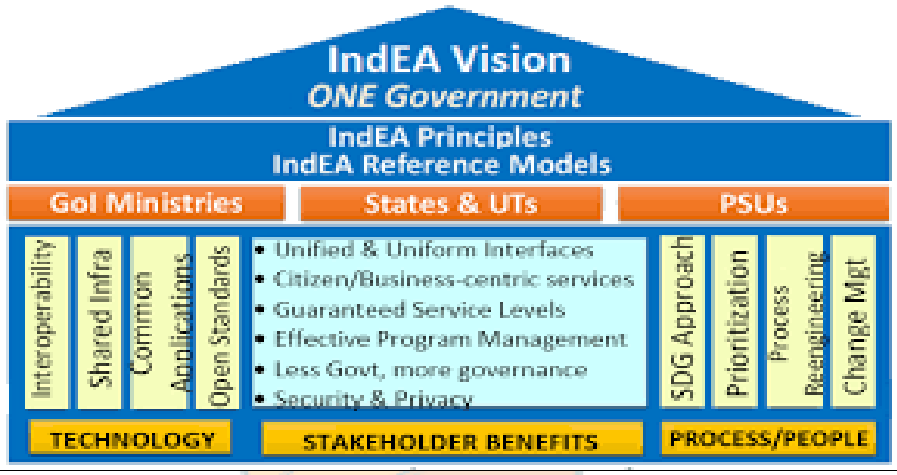
| **India Enterprise Architecture (IndEA)** | • It is a framework that enables the development and implementation of Enterprise Architectures independently and in parallel by all governments and their agencies across India, conforming to the same models and standards.<br>• It was notified as an e-Governance standard by the Ministry of Electronics and Information Technology (MeitY) in October 2018.<br>• The primary purpose of IndEA is to help state governments, ministries and departments in the governments at various levels to adopt a structured approach for developing their enterprise architecture.<br>  |
| **PM Poshan Shakti Nirman Scheme** | **Context** The existing Mid-Day Meal scheme, which provides hot meals to students, has been renamed as the National Scheme for PM Poshan Shakti Nirman.<br>**Key propositions in the PM POSHAN Scheme**<br>• Supplementary nutrition: Supplementary nutrition for children in aspirational districts and those with high prevalence of anaemia.<br>• States to decide diet: It essentially does away with the restriction on the part of the Centre to provide funds only for wheat, rice, pulses and vegetables. Currently, if a state decides to add any component like milk or eggs to the menu, the Centre does not bear the additional cost. Now that restriction has been lifted.<br>• Nutri-gardens: They will be developed in schools to give children "firsthand experience with nature and gardening".<br>• Women and FPOs: To promote vocals for local, women self-help groups and farmer producer organisations will be encouraged to provide a fillip to locally grown traditional food items.<br>• Social Audit: "Inspection" by students of colleges and universities for ground-level execution.<br>• Tithi-Bhojan: Communities would also be encouraged to provide the children food at festivals etc.<br>• DBTs to school: States will be asked to do direct benefit cash transfers of cooking costs to individual school accounts, and allowances to the bank accounts of cooks and helpers.<br>• Holistic nutrition: Use of locally grown traditional foods will be encouraged, along with school nutrition gardens.<br>**About the Mid-Day meal scheme**<br>• The National Programme of Nutritional Support to Primary Education (NP-NSPE) was launched as a Centrally Sponsored Scheme in 1995.<br>• Objective: To enhance enrolment, retention and attendance and simultaneously improve nutritional levels among children.<br>• In 2001 it became a cooked Mid Day Meal Scheme. |

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| | ● The Scheme covers children of classes I-VIII studying in government, government-aided schools, special training centres (STC) and madarsas/ maqtabs supported under Sarva Shiksha Abhiyan (SSA).<br>● It is the largest school feeding programme in the world.<br>● It is covered by the National Food Security Act, 2013.<br> <br> |
| **Jal Jeevan Mission** | **Context Five crore households** had been provided with water connections since the launch of the Jal Jeevan Mission in 2019.<br>● Tap water was now reaching every household in about 1.25 lakh villages.<br>● Jal **Jeevan Mission app** has also been launched for improving awareness among stakeholders and for greater transparency and accountability of schemes under the mission.<br>● The **Rashtriya Jal Jeevan Kosh** has also been launched, where any individual, institution or philanthropist, be it in India or abroad, could contribute to help provide tap water connections.<br>**What is Jal Jeevan Mission?**<br>● It is envisioned to provide safe and adequate drinking water through individual household tap connections by **2024 to all households in rural India.**<br>○ It envisages supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.<br>○ It also includes functional tap connection to Schools, Anganwadi centres, GP buildings, Health centres, wellness centres and community buildings<br>● The programme will also implement **source sustainability measures** as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. |

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| | • JJM focuses on integrated **demand and supply-side management** of water at the local level.<br>• The Mission is based on a **community approach to water**. It looks to create a jan andolan for water, thereby making it everyone's priority.<br>• It promotes and ensures voluntary ownership among local communities by way of contribution in cash, kind and/ or labour and voluntary labour.<br>• **Parent Ministry**: Department of Drinking Water & Sanitation, Ministry of Jal Shakti<br>• **Funding Pattern**: The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.<br>• **Four-tier implementation** & monitoring of the scheme at National, State, District & village level. |
| **Electricity Rules** | **In News:** The launch of the Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules 2021 has paved the way for overhauling of transmission system planning, towards giving power sector utilities easier access to the electricity transmission network across the country.<br>Transmission system is the vital linkage in the power sector value chain connecting the generation and the demand. The Rules will<br>• Streamline the process of planning, development and recovery of investment in the transmission system.<br>• The rules are aimed at encouraging investments in the generation and transmission sectors.<br>• The rules will enable the country to develop deeper markets.<br>• Underpins that "*electricity transmission planning shall be made in such way that the lack of availability of the transmission system does not act as a brake on the growth of different regions and the transmission system shall, as far as possible, to be planned and developed matching with growth of generation and load and while doing the planning, care shall be taken that there is no wasteful investment*". |
| **Sovereign Credit Rating** | **Context** Rating agency Moody's Investors Service has upgraded India's sovereign rating outlook to 'stable' from 'negative', citing an decrease of risks from COVID-19.<br>• It retained India's rating at Baa3, reflecting the lowest investment grade rating.<br>• Moody's considers a Baa3 or higher rating to be of investment grade, and a rating of Ba1 and below is speculative.<br>• It expects 2021-22 to record 9.3% growth in GDP, followed by 7.9% next year.<br>• The growth projections take into account structural challenges, including weak infrastructure, rigidities in labour, land and product markets that continue to constrain private investment and contribute to post-pandemic economic scarring.**Sovereign Credit Rating:**<br>• A sovereign credit rating is an independent assessment of the creditworthiness of a country or sovereign entity.<br>• It can give investors insights into the level of risk associated with investing in the debt of a particular country, including any political risk. Another common motivation for countries to obtain a sovereign credit rating is to attract foreign direct investment (FDI).<br>• The Economic Survey 2020-21 has called for sovereign credit ratings methodology to be made more transparent, less subjective and better attuned to reflect an economy's fundamentals.<br>• In India, there are six credit rating agencies registered under Securities and Exchange Board of India (SEBI) namely, CRISIL, ICRA, CARE, SMERA, Fitch India and Brickwork Ratings.<br>**India's present scenario**<br>• India has a higher debt burden and weaker debt affordability. |

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| | • However, India's narrower current account deficits and historically high foreign exchange reserves have reduced the country's vulnerabilities to external shocks. |
| **The Draft Electricity (Rights of Consumers) Amendment Rules, 2021** | **Context** The Draft Electricity (Rights of Consumers) Amendment Rules, 2021 were recently published.<br>**Overview of the new rules**<br>• Distribution licensees should **ensure 24×7 uninterrupted power supply** to all consumers so that there is no requirement of running Diesel Generating (DG) sets.<br>• The electricity regulatory commission could consider a **separate reliability charge** for the distribution company, if it required funds for investment in infrastructure.<br>• The state electricity regulatory commission should also make a **provision of penalty** in case the standards laid down are not met by the distribution company. |
| **Electricity (Rights of Consumers) Rules, 2020** | • These rules serve to "empower" consumers with rights that would allow them to access continuous supply of quality, reliable electricity.<br>• The areas covered under the rules include metering arrangement; billing and payment; reliability of supply, etc.<br>**Key Provisions**<br>• States will have to implement these rules and discoms will be held more accountable for issues like delays in providing and renewing connections of electricity.<br>• They are also obligated to provide round-the-clock electricity to consumers, as per the Ministry of Power.<br>• To ensure compliance, the government will apply penalties that will be credited to the consumer's account.<br>• There are certain exceptions to these rules, especially where use for agricultural purposes is concerned.<br>Do you know?<br>• Electricity is a Concurrent List (Seventh Schedule) subject and the central government has the authority and the power to make laws on it. |
| **Industrial Park Rating System Report 2.0** | **In News:** 41 Industrial Parks have been assessed as "Leaders" in the Industrial Park Ratings System Report released by DPIIT.<br>• 90 Industrial Parks have been rated as under Challenger category while 185 have been rated as under "Aspirers".<br>• These ratings are assigned on the basis of key existing parameters and infrastructure facilities etc. About 98% of these parks are from **western** (Maharashtra, Rajasthan and Gujarat) and **northern** (Uttarakhand) regions.<br>• With this system (GIS-enabled database), the investors can even remotely refer to this report to identify the suitable investable land area, as per the various parameters of infrastructure, connectivity, business support services and environment and safety standards and make informed investment decisions.<br>• The GIS-enabled IILB acts as a one-stop source of information on Industrial Infrastructure.<br>The IPRS pilot exercise was launched in 2018, with an objective of enhancing industrial infrastructure competitiveness and supporting policy development for enabling industrialization across the country as the Government pushes ahead a high-growth trajectory with an aim to scale the $5 trillion mark for the Indian economy by 2025. |
| **National Mission on Edible Oils-Oil Palm (NMEO-OP)** | **Context** Arunachal Pradesh has finalised the National Mission on Edible Oils-Oil Palm (NMEO-OP) implementing it across 1.33 lakh hectares soon.<br>• Besides, Integrated oil palm development firm 3F Oil Palm plans to invest Rs. 1,750 crore in oil palm cultivation in Assam and Arunachal Pradesh.<br>• Oil palm area under cultivation in the two States would increase in the next five years by about 31 times to 62,000 hectares and employment opportunities would be created. |

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| | **What are the key features of the NMEO-OP Scheme?**<br>● **Objective**: To ensure self-sufficiency in edible oil production.<br>● **Aim**: To reduce import dependence from 60% to 45% by 2024-25, by increasing domestic edible oil production from 10.5 million tonnes to 18 million tonnes which is a 70% growth target.<br>● Farmers will get all needed facilities, from quality seeds to technology.<br>● Along with promoting the cultivation of oil palm, this mission will also expand the cultivation of our other traditional oilseed crops.<br>**What is the need for such schemes?**<br>● India is the largest consumer of vegetable oil in the world.<br>● India's Palm oil imports are almost 60% of its total vegetable oil imports.<br>● Recently, India's dependence on expensive imports has driven retail oil prices to new highs.<br>● In India, 94.1% of its palm oil is used in food products, especially for cooking. Thus, palm oil is extremely important to India's edible oils economy.<br>● **Top consumers**: India, China, and the European Union (EU).<br>**Do you know?**<br>● The NMEO-OP's predecessor was the National Mission on Oil Seeds and Oil Palm. |
| **PM MITRA Parks** | **In News:** Government has approved setting up of 7 Mega Integrated Textile Region and Apparel (PM MITRA) Parks with a total outlay of Rs. 4,445 crore in a period of 5 years.<br>• Will be developed by a Special Purpose Vehicle which will be owned by State Government and Government of India in a Public Private Partnership (PPP) Mode.<br>• World-class industrial infrastructure would attract cutting age technology and boost FDI and local investment in the sector<br>• Will offer an opportunity to create an integrated textiles value chain right from spinning, weaving, processing/dyeing and printing to garment manufacturing at 1 location<br>• Intended to generate ~1 lakh direct and 2 lakh indirect employment per park<br>• The Park will have –<br>○ Core Infrastructure: Incubation Centre & Plug & Play facility, Developed Factory Sites, Roads, Power, Water and Waste Water system, Common Processing House & CETP and other related facilities e.g. Design Centre, Testing Centres etc.<br>○ Support Infrastructure: Workers' hostels & housing, logistics park, warehousing, medical, training & skill development facilities<br>***'5F' Formula encompasses -*** *Farm to fibre; fibre to factory; factory to fashion; fashion to foreign* |
| **SVAMITVA scheme** | • The acronym SVAMITA stands for Survey of Villages and Mapping with Improvised Technology in Village Areas.<br>• It is a Central Sector Scheme (100% by Union Government) implemented by Union Ministry of Panchayat Raj<br>• It is aimed at "providing 'record of rights' to village household owners possessing houses in inhabited rural areas in villages and issuance of property cards to the property owners."<br>• The government aims to provide such property cards to each household in the next three to four years in every village across the country.<br>• The plan is to survey all rural properties using drones and prepare GIS based maps for each village. |
| **G-Sec Acquisition Programme** | **Context** The Reserve Bank of India (RBI) on Friday said it was halting its bond buying under the G-Sec Acquisition Programme (GSAP).<br>● GSAP had succeeded in ensuring adequate liquidity and stabilising financial markets.<br>**What is Government Securities Acquisition Programme (G-SAP)** |

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| | • The G-Sec Acquisition Programme (G-SAP) is basically an unconditional and a structured Open Market Operation (OMO), of a much larger scale and size.<br>• **Objective**: To achieve a stable and orderly evolution of the yield curve along with management of liquidity in the economy.<br>  ○ A yield curve is a line that plots yields (interest rates) of bonds having equal credit quality but differing maturity dates.<br>  ○ The slope of the yield curve gives an idea of future interest rate changes and economic activity.<br>• By purchasing G-secs, the RBI infuses money supply into the economy which inturn keeps the yield down and lower the borrowing cost of the Government.<br>**What are Government Securities?**<br>• A G-Sec is a tradable instrument issued by the Central Government or the State Governments.<br>• Such securities are short term or long term.<br>• G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments. |
| **MoU for Capacity Building in Faecal Sludge & Septage Management** | **In News:** National Mission of Clean Ganga (NMCG) has signed an MoU with Water, Sanitation and Hygiene Institute (WASH Institute) to conduct a series of trainings to enhance the quality of service of officials in Urban Local Bodies (ULBs).<br>• **Aim:** To efficiently address and improve preparedness towards FSSM (faecal sludge and septage management) and Wastewater Management in Indian towns and cities.<br>• The project will be funded by USAID and supported by The Bill and Melinda Gates Foundation.<br>*Background*<br>In India, untreated faecal sludge and urban sewage are the primary source of water pollution, particularly in the cities around Ganges. Under Prime Minister's visionary initiative, the Swachh Bharat Mission, more than 62 lakh toilets are built. Half of these toilets rely on on-site sanitation system (OSS). Managing the waste collected from these toilets is the next big challenge for India. Considering these challenges, systematic capacity building initiatives need to be undertaken to build the skill and knowledge of the Government, Urban Local Body (ULB) officials, STP/FSTP Operators, Sanitary workers, entrepreneurs, NGO professionals and other stakeholders involved in the FSSM sector across India.<br>**Do you know?**<br>• Considering the importance of FSSM solutions, the Ministry of Housing and Urban Affairs came up with the national policy on FSSM in 2017.<br>• More than 24 states have adopted it and 12 of them have come up with their own policies.<br>• Universal access to toilets was achieved in urban India with the construction of 66 lakh household toilets and more than 6 lakh community and public toilets.<br>• After achieving the target of 'Open-Defecation-Free' (ODF), India has now moved towards becoming ODF+ and ODF++.<br>• These targets go beyond the concept of access to sanitation and aim for safely managed sanitation systems, with adequate treatment and safe disposal of toilet waste. |
| **Commercial cultivation of bamboo begins** | **Context** With the threat of Yellow Leaf Disease spreading to vast tracts of arecanut plantations looming large, farmers in Karnataka's coastal belt have now begun commercial cultivation of bamboo in a small way.<br>**About Yellow leaf disease**<br>• Abnormal yellowing of leaf tissue is called chlorosis. |

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| | • Leaves lack the essential green pigment chlorophyll. Possible causes include poor drainage, damaged roots, compacted roots, high soil pH, and nutrient deficiencies in the plant.<br>**About Bamboo plantation**<br>• Bamboo can be used in 1,500 different ways including as food, a substitute for wood, building and construction material, for handicrafts and paper.<br>• The advantage of bamboo is manifold compared to monoculture tree plantations.<br>• After planting, bamboo can become part of agroforestry practice in small land holdings.<br>• New bamboo plantations may curb the pressure from deforestation by serving as wood substitutes. Due to its versatile nature and multiple uses, it is also called 'poor man's timber'.<br>• It can be planted to reclaim severely degraded sites and wastelands.<br>• It is a good soil binder owing to its peculiar clump formation and fibrous root system and hence also plays an important role in soil and water conservation.<br>• It is the fastest growing canopy, releasing 35% more oxygen than trees.<br>• There are studies reporting that bamboo stands sequester 12 tonnes of carbon dioxide from per hectare.<br>• Though it grows tall like a tree, it belongs to the grass family. |
| **Nobel prize in Economics 2021** | **Context** The Nobel prize for economics was awarded to economist David Card for research that showed<br>• An increase in minimum wage does not hinder hiring<br>• An influx of immigrants into a city doesn't cost native workers jobs or lower their earnings<br>Two others shared the award for developing ways to study these types of societal issues.<br>**Key takeaways**<br>• Canadian-born Dr. Card of the University of California, Berkeley, was awarded one half of the prize for his research on how minimum wage, immigration and education affect the labour market.<br>• The other half was shared by Joshua Angrist from the Massachusetts Institute of Technology and Dutch-born Guido Imbens from Stanford University for their framework for studying issues that can't rely on traditional scientific methods.<br>• Unlike the other Nobel prizes, the economics award wasn't established in the will of Alfred Nobel but by the Swedish central bank in his memory in 1968, with the first winner selected a year later. It is the last prize announced each year. |
| **India's Renewable Energy** | • 39% of India's installed capacity is from non-fossil based sources. By 2022 India will reach its target of 40%.<br>• India surpassed the 100 GW milestone (excluding large hydro) in 2021.<br>• India has only tapped a fraction of the vast potential for renewable energy and, therefore, India has raised the target to 450 GW RE installed capacity by 2030.<br>• Launching the Green Corridor Phase 2 and generally expanding transmission to put in place systems for renewable power evacuation from sites where irradiation is high, or wind speed is high.<br>• India is developing the National Green Hydrogen Energy Mission to scale up green hydrogen production and utilization across multiple sectors; targeting initially approximately 1 million tonnes annual green hydrogen production by 2030.<br>• Government is coming out with bids for battery storage. Intermittency of renewable power is another challenge for the entire world highlighting that battery storage per unit currently is high and needs to come down. There is a Production Linked Incentive for battery storage already in place and demand needs to be encouraged to bring down the prices of storage. |

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| | • The Government of India has recently launched the Production Linked Incentive scheme for the manufacture of High Efficiency Solar PV Modules. India expects to add 10 Gigawatt of solar PV manufacturing capacity over the next five years.<br>• Three new areas of emerging opportunities for investors – green hydrogen, off-shore wind, and solar PV manufacturing. Mandatory purchase obligations are intended to increase use of green hydrogen in sectors like fertilizers, petroleum refining, and city gas distribution. |
| **Agriculture Infrastructure and Development Cess (AIDC)** | **Context** In a bid to curb the persistently high inflation in edible oils, the government has decided to exempt **crude palm, soya-bean and sunflower seed oils** from customs duty, and slash the Agriculture Infrastructure and Development Cess (AIDC) levied on their imports from October 14 till March 31, 2022.<br>**Key takeaways**<br>• Imports of crude palm, soya-bean and sunflower seed oils attract a basic customs duty of 2.5% and an AIDC of 20%.<br>• The customs duty has been dropped to zero, while the cess has been reduced to 5% for crude soya-bean and sunflower seed oil. In the case of crude palm oil, the AIDC cess has been reduced to 7.5% instead of the original 20%.<br>• Benefits: The decision would help in reducing price burden on ultimate consumers amid the surging edible oil prices.<br>What is Agriculture Infrastructure and Development Cess (AIDC)?<br>• Agriculture Infrastructure and Development Cess (AIDC) was proposed in the Budget 2021-22.<br>• Purpose: To raise funds to finance spending on developing agriculture infrastructure aimed at not only boosting production but also in helping conserve and process farm output efficiently.<br>• The new cess will be levied on 29 products, prominent among which are gold, silver, imported apple, imported alcohol (excluding beer), imported pulses, imported palm oil, imported urea, and petrol/diesel including branded ones.<br>• It will only offset the reduction in customs or excise duty and thus will not raise the tax incidence for consumers.<br>Do you know?<br>• Drawing power from Articles 270 and 271 of the Constitution, the Centre collects cess and deposits it in the Consolidated Fund of India.<br>• However, the money is then supposed to be transferred to a segregated fund to be used for specific purposes. |
| **Input Tax Credit (ITC)** | **Context** GST Network has said it has blocked Rs 14,000 crore worth of input tax credit (ITC) of 66,000 businesses registered under the Goods and Service Tax.<br>**What is Input Tax Credit (ITC)?**<br>• ITC is a mechanism to avoid cascading of taxes. Cascading of taxes, in simple language, is 'tax on tax'.<br>• Input Tax Credit refers to the tax already paid by a person at time of purchase of goods or services and which is available as deduction from tax payable .<br>• In simple terms, input credit means at the time of paying tax on output, you can reduce the tax you have already paid on inputs and pay the balance amount.<br>• **Exceptions**: A business under composition scheme cannot avail of input tax credit. ITC cannot be claimed for personal use or for goods that are exempt.<br>**Concerns over its misuse**<br>• Currently there is a time gap between ITC claim and matching them with the taxes paid by suppliers. There could be a possibility of misuse of the provision by businesses by generating fake invoices just to claim tax credit.<br>• As much as 80% of the total GST liability is being settled by ITC and only 20% is deposited as cash. |

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| | • Under the present dispensation, there is no provision for real time matching of ITC claims with the taxes already paid by suppliers of inputs. |
| **PLI Scheme: Promoting Telecom and Networking Products Manufacturing in India** | **In News:** India is set to receive an investment of about ₹3,300 crore from 31 domestic and multinational companies over a period of four years under the ambitious production-linked incentive or PLI scheme that is expected to employ as many as 40,000 individuals in the telecom sector.<br>• To boost domestic manufacturing in the telecom and networking products by incentivising incremental investments<br>• Will help in reducing India's dependence on other countries for import of telecom and networking products with incentives and support to promote world class manufacturing in the country<br>• Would boost research and development (R&D) activities locally with companies committed to spend 15% of their revenues for the development of new products.<br>Details<br>• The support under the Scheme shall be provided for a period of five (5) years, i.e. from FY 2021-22 to FY 2025-26.<br>• 31 companies comprising 16 MSMEs and 15 Non-MSMEs (8 Domestic and 7 Global companies), gets approval under the Scheme<br>• Expected Incremental production of around ₹1.82 Lakh Crore<br>The scheme for the telecom sector includes<br>• Manufacturing of transmission equipment,<br>• Next generation (4G and 5G) radio access network and wireless equipment,<br>• Customer premise equipment (CPE), access devices, routers and switches |
| **e-Shram Portal** | **In News:** More than 4 crore unorganized workers have been registered at e-Shram Portal, India's first national database on unorganized workers.<br>• **Highest number of registrations:** Odisha, West Bengal, Uttar Pradesh, Bihar and Madhya Pradesh<br>• Largest number of workers register from agriculture and construction sector<br>• Registration at E-shram will facilitate unorganized workers to get the benefits of various social security and employment-based schemes<br>• 4.09 crore workers have registered on the portal. Of these around 50.02% beneficiaries are female and 49.98% are male.<br>**e-Shram portal**<br>• It is a portal through which the government aims to register 38 crore unorganised workers, such as construction labourers, migrant workforce, street vendors and domestic workers, among others.<br>• The workers will be issued an e-Shram card containing a 12-digit unique number, which, going ahead, will help in including them in social security schemes.<br>**Significance of e-Shram portal – National Database on Unorganized Workers (NDUW)**<br>• Targeted identification of the unorganized workers was a much-needed step and the portal which will be the national database of our nation builders will help take welfare schemes to their doorstep, who are the builders of our Nation.<br>• Targeted delivery and last mile delivery, has been a major focus of the schemes of government of India and the National Database of Unorganised workers (E-Shram portal) is another key step towards that. |
| **Kushinagar International Airport** | **Context** Kushinagar International Airport in Uttar Pradesh shall be inaugurated on 20th October by the Indian Prime Minister.<br>• The airport is expected to provide seamless connectivity to tourists from Sri Lanka, Japan, Taiwan, South Korea, China, Thailand, Vietnam, Singapore and so on.<br>• The Sri Lankan contingent, led by a member of the first family, will also be present, owing to the historical importance of the place.<br>**Mural painting as a token of gift** |

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| | • To mark the occasion, Sri Lanka will present to India photographs of two murals painted by renowned Sri Lankan artist Solias Mendis at the **Kelaniya Rajamaha Vihara**, a popular Buddhist temple near Colombo<br>• One of the murals depicts **'Arahat Bhikkhu' Mahinda**, son of Emperor Ashoka delivering the message of the Buddha to King Devanampiyatissa of Sri Lanka.<br>• The other shows the arrival of **'Theri Bhikkhuni' Sanghamitta**, the daughter of the Emperor Ashoka, in Sri Lanka, bearing a sapling of the **'sacred Bodhi tree**' under which Siddhārtha Gautama is believed to have attained enlightenment.<br>**Importance of Kushinagar**<br>• **Kushinagar** is the centre of the **Buddhist circuit,** which consists of pilgrimage sites at **Lumbini**, **Sarnath** and **Gaya**.<br>• Buddhist pilgrims consider Kushinagar a sacred site where, they believe, Gautama Buddha delivered his last sermon and attained **'Mahaparinirvana'** or salvation. |
| **NGOs and their right to foreign funds** | **Context** The Centre has told the Supreme Court that NGOs have no fundamental right to receive uncontrolled foreign contributions without regulations.<br>• The Centre said the amendments were meant to ensure that foreign funds were not used to impinge upon the functioning of parliamentary institutions, political associations and other organisations in India.<br>• It was responding to petitions challenging amendments made in the Foreign Contributions Regulations law in 2020.<br>The background<br>• The petitions had argued that the amendments severely restricted the use of foreign funds by the NGOs for their activities.<br>• They found it cumbersome that the new law expected 23,000 NGOs to open accounts in the main branch of the State Bank of India (SBI) in the capital to receive their foreign funds.<br>• What is Foreign Contribution (Regulation) Act (FCRA)?<br>• Foreign funding of persons in India is regulated under FCRA Act and is implemented by the Ministry of Home Affairs.<br>• The Act ensures that the recipients of foreign contributions adhere to the stated purpose for which such contribution has been obtained.<br>• Registered NGOs can receive foreign contributions for five purposes — social, educational, religious, economic and cultural.<br>**Foreign Contribution (Regulation) Amendment Act, 2020**<br>• Prohibition to accept foreign contribution: The Act bars public servants from receiving foreign contributions.**Transfer of foreign contribution**: The Act prohibits the transfer of foreign contribution to any other person not registered to accept foreign contributions.<br>• **Aadhaar for registration**: The Act makes Aadhaar number mandatory for all office bearers, directors or key functionaries of a person receiving foreign contribution, as an identification document.<br>• **FCRA account**: Foreign contribution must be received only in an account designated by the bank as FCRA account in such branches of the State Bank of India, New Delhi.<br>• **Reduction in use of foreign contribution for administrative purposes**: Not more than 20% of the total foreign funds received could be defrayed for administrative expenses. In FCRA 2010 the limit was 50%.<br>• **Surrender of certificate**: The Act allows the central government to permit a person to surrender their registration certificate. |
| **PM MITRA** | **Context**: The Ministry of Textiles has issued the Notification on 21 October 2021 for setting up of 7 PM MITRA Parks as announced in Union Budget for 2021-22 and approved by the Central Government. |

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| | • PM MITRA Parks is envisaged to help India in achieving the United Nations Sustainable Development Goal 9 ("*Build resilient infrastructure, promote sustainable industrialization and foster innovation*").<br>• The scheme aims to position India strongly on the Global textiles map.<br>• PM MITRA is inspired by the 5F vision of Hon'ble Prime Minister. The '5F' Formula encompasses –<br>  ○ Farm to fibre;<br>  ○ fibre to factory;<br>  ○ factory to fashion;<br>  ○ fashion to foreign.<br>• The scheme is to develop integrated large scale and modern industrial infrastructure facility for entire value-chain of the textile industry. It will reduce logistics costs and improve competitiveness of Indian Textiles.<br>• The scheme will **help India in attracting investments**, boosting employment generation and position itself strongly in the global textile market.<br>• These parks are envisaged to be located at sites which have inherent strength for Textile Industry to flourish and have necessary linkages to succeed.<br>• The 7 PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks will be setup at **Greenfield / Brownfield sites** located in different willing States.<br>• Proposals of State Governments having ready availability of contiguous and encumbrance-free land parcel of 1,000+ acres along with other textiles related facilities & ecosystem are welcome.<br>• For a Greenfield PM MITRA park, the GOI Development Capital Support will be 30% of the Project Cost, with a cap of ₹500 Cr.<br>• For Brownfield sites, after assessment, Development Capital Support @30% of project cost of balance infrastructure and other support facilities to be developed and restricted to a limit of Rs. 200 Crore. State Government supports will include provision of 1,000 Acre land for development of a world class industrial estate.<br>• **Competitiveness Incentive Support (CIS)** of ₹300 Crore will also be provided to each PM MITRA park for early establishment of textiles manufacturing units in PM MITRA Park.<br>• PM MITRA park will be developed by a **Special Purpose Vehicle** which will be owned by State Government and Government of India in a Public Private Partnership (PPP) Mode.<br>• The Master Developer will not only develop the Industrial Park but also maintain it during the concession period. Selection of this Master Developer will happen based on objective criteria developed jointly by State and Central Governments. |
| **Di-Ammonium Phosphate (DAP)** | **Context** An acute shortage of di-ammonium phosphate (DAP) in Haryana has seen desperate farmers pelting stones at the police, blocking roads in protest.<br>**Why is DAP important for farmers?**<br>• Diammonium phosphate (DAP) is the world's most widely used phosphorus fertilizer.<br>• DAP fertilizer is an excellent source of Phosphorus and nitrogen (N) for plant nutrition.<br>• It's highly soluble and thus dissolves quickly in soil to release plant-available phosphate and ammonium.<br>• A notable property of DAP is the alkaline pH that develops around the dissolving granule.<br>• Being a basic nutrient for Rabi crops, the DAP fertiliser has to be sprinkled at the time of sowing crops like mustard and wheat.<br>• Any delay in its supply could adversely impact the sowing of crops.<br>**Non-agricultural uses** |

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| | • DAP also acts as a fire retardant. For example, a mixture of DAP and other ingredients can be spread in advance of a fire to prevent a forest from burning. It then becomes a nutrient source after the danger of fire has passed.<br>• DAP is used in various industrial processes, too, such as metal finishing.<br>• It's commonly added to wine to sustain yeast fermentation and to milk to produce cheese cultures. |
| **Directorate General of Civil Aviation (DGCA)** | **Part of**: Prelims and GS III - Aviation industry<br>**Context** The United States' aviation watchdog, Federal Aviation Administration (FAA) started its five-day audit of India's safety regulator, Directorate General of Civil Aviation (DGCA).<br>**Key takeaways**<br>• Under its International Aviation Safety Assessment (IASA) program, the FAA determines whether another country's oversight of its airlines that operate to the U.S. or have a codeshare agreement with a U.S. airline comply with safety standards laid down by the global aviation watchdog International Civil Aviation Organisation.<br>**About Directorate General of Civil Aviation (DGCA)**<br>• It is a statutory body of the Indian Central Government to regulate civil aviation in India.<br>• It was Formed under the Aircraft (Amendment) Bill, 2020.<br>• **Functions:** I t investigates aviation accidents and incidents, maintains all regulations related to aviation and is responsible for issuance of licenses. |
| **Green Day Ahead Market (GDAM)** | **In News:** India is the only large electricity market in the world to implement a Green Day Ahead Market (GDAM) exclusively for renewable energy.<br>• Will operate in an integrated way with the conventional day-ahead market. The Exchanges will offer the market participants to submit bids together for both conventional and renewable energy through the separate bidding windows.<br>• The clearance will take place in a sequential manner - renewable energy bids will be cleared first in accordance with the must run status of the renewables, followed by conventional segment.<br>• This mechanism will allow renewable energy sellers to subsequently bid in the conventional segment should their bids remain uncleared in the green market. There will be separate price discoveries for the both the conventional and renewables.<br>The introduction of GDAM is expected to create a domino effect that will lead to a gradual shift from PPA based contract to market-based models which will build and deepen the markets to the next level, paving the way for India to meet its ambitious target of **450 GW green capacity by 2030**.<br>• Will deepen the green market and will provide competitive price signals, besides offering an opportunity to the market participants to trade in green energy, in the most transparent, flexible, competitive, and efficient manner.<br>• The market-based competitive prices will provide another option to renewable generators to sell power as well as accelerate the renewable capacity addition towards the Government's vision of building India as a sustainable and efficient energy economy.<br>• Reduction of curtailment of green power, unlocking untapped renewable energy potential, ensuring instant payment to RE generators ie on the day of delivery itself.<br>• **Enable Energy Transition:** Energy transition is happening across the world and India is also committed to energy transition from fossil fuel to non-fossil fuel. Accordingly, the dynamics of the power market is changing. The buyer's behavior is shifting from long term contracts to short term contracts and also towards the power market. |
| **Mahatma Gandhi National Rural Employment** | **Context** According to its own financial statement, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme shows a negative net balance of Rs. 8,686 crore. |

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| **Guarantee Act (MGNREGA)** | • The Centre's flagship rural employment scheme has run out of funds halfway through the financial year, and supplementary budgetary allocations will not come to the rescue for at least another month when the next Parliamentary session begins.<br>**Key takeaways**<br>• The scheme's 2021-22 budget was set at just Rs. 73,000 crore.<br>• The Central government argued that the nationwide lockdown was over, and that supplementary budgetary allocations would be available if the money ran out.<br>• However, as on October 29, the total expenditure, including payments due had already reached Rs. 79,810 crore.<br>• 21 States show a negative net balance, with Andhra Pradesh, Tamil Nadu and West Bengal faring the worst.<br>**What is Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)?**<br>• Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) was notified in 2005.<br>• **Goal** – To improve the livelihood security of people in rural areas.<br>• It is a universal scheme guaranteeing 100 days of wage employment in a year to every rural household that expresses a demand.<br>• It aims to guarantee the 'Right to Work'.<br>• Every registered household receives a Job Card (JC) to track their work completed.<br>• The scheme is implemented by the gram panchayat.<br>• The failure of provision for employment within 15 days of the receipt of a job application will result in the payment of unemployment allowance to the job seekers.<br>• Employment is to be provided within 5 km of an applicant's residence<br>• Employment under MGNREGA is a legal entitlement |
| **GST Compensation** | **Context** The Ministry of Finance has released ₹44,000 crore to the States and UTs with Legislature under the back-to-back loan facility in lieu of GST Compensation.<br>**Key takeaways**<br>• After taking into account earlier release of ₹1,15,000 crore, total amount released in the current financial year as back-to-back loan in-lieu of GST compensation is ₹1,59,000 crore.<br>• This release is in addition to normal GST compensation being released every 2 months out of actual cess collection.<br>**Background**<br>• Subsequent to the 43rd GST Council Meeting held on 28th May 2021, it was decided that the Central Government would borrow ₹1.59 lakh crore and release it to States and UTs with Legislature on a back-to-back basis to meet the resource gap due to the short release of Compensation.<br>**About GST Compensation**<br>• Before GST, States had the power to levy some indirect taxes on economic activity. Therefore, after GST regime was introduced (in 2017), the Centre promised guaranteed compensation to the States for the first five years, for the revenues they lost after the shift from the earlier system.<br>• The compensation is calculated at a growth rate of 14% keeping 2015-16 as the base year and by levying a Compensation Cess on Sin and luxury goods. |
| **India, ADB sign $251 million loan** | **In News:** The Government of India and the Asian Development Bank (ADB) have signed a $251 million loan for climate-resilient, integrated urban flood protection and management in the Chennai-Kosasthalaiyar basin to strengthen resilience of Chennai city to floods.<br>• Will help reduce the vulnerability of Chennai–Kosasthalaiyar basin residents to frequent floods, which have in recent years destroyed property and livelihoods |

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| | • Building disaster-resilient infrastructure would help communities cope with intensifying rainfall, a higher sea level rise, and a storm surge caused by cyclones and protect lives, economy and the environment.<br>• The innovative designs and interventions for climate-resilient flood management promoted by the project along with integrated urban planning and enhanced municipal resource mobilization can be widely replicated for other Indian cities that are vulnerable to climate and disaster risks.<br>• Aims to enhance stakeholders' involvement, including proactive participation of women, in flood preparedness by raising community knowledge and awareness of flood risks and impacts and its relationship with solid waste management, sewerage, and protection of water bodies. |

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| **Ethanol production** | **Context** Almost two million tonnes (MT) of sugar were diverted for ethanol production during the last sugar season (October 2020 to September 2021).<br>**About Ethanol and its production**<br>● Ethanol can be produced from sugarcane, maize, wheat, etc which are having high starch content.<br>● In India, ethanol is mainly produced from sugarcane molasses by fermentation process.<br>● Ethanol can be mixed with gasoline to form different blends.<br>● As the ethanol molecule contains oxygen, it allows the engine to more completely combust the fuel, resulting in fewer emissions and thereby reducing the occurrence of environmental pollution.<br>● Since ethanol is produced from plants that harness the power of the sun, ethanol is also considered as renewable fuel. |
| **National Mission for Clean Ganga (NMCG)** | **In News:** Chacha Chaudhary declared Mascot for Namami Gange Programme.<br>● Content to be designed with the objective of bringing about behavioral change amongst children towards Ganga and other rivers.<br>**Proposal for conserving and sustainably managing Gangetic floodplain wetlands in Bihar:**<br>● Major components of the project will be Wetland inventory and assessment, Wetland management planning, Wetland's monitoring, and Capacity development and outreach.<br>● Aims at creating a knowledge base and capacities for effective management of floodplain wetlands in the 12 Ganga districts in Bihar to ensure sustained provision of wetlands ecosystem services and securing biodiversity habitats.<br>**Kalpvas:** Simariya Ghat is popular for Kalpvas, an ancient tradition in which devotees live on ghats, sing and meditate during the Magh Mela. |
| **Alibaug White Onion** | **Context** The Alibaug white onion was given the Geographical Indication (GI) tag, bringing worldwide recognition to its medicinal properties.<br>● Alibaug, is a coastal town, just south of Mumbai, in the state of Maharashtra<br>● Local farmers have preserved the seed for over two centuries. The onion is also mentioned in a government gazette published in 1883.<br>Key takeaways<br>● The soil of Alibaug taluka has low sulphur content.<br>● The onions have low pungency, sweet taste, 'no tear' factor, low pyruvic acid, high protein, fat and fibre content, besides high antioxidant compounds (quercetin).<br>● It boosts immunity, helps with insomnia, blood cleaning, blood pressure and heat-related ailments.<br>**What is GI tag?**<br>● It is an indication which is definite to a geographical territory.<br>● It is used for agricultural, natural and manufactured goods.<br>● The goods need to be produced or processed or prepared in that region.<br>● The product must have a special quality or reputation.<br>● The Geographical Indications of Goods (Registration and Protection) Act, 1999 provides registration and also protection of GI goods in India.<br>● The Geographical Indications Registry for India is located in Chennai.<br>● A registered GI tag prohibits a third party to use such products.<br>● GI is a collective intellectual property right and is thus owned by all the producers within the defined GI territory.<br>● Patents and trademarks are owned by an individual or a business entity. |

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| **Mumbai blind eel** | **Context** A new species of swamp eel was discovered from a well in Mumbai<br>**Key takeaways**<br>● The eel is called Rakthamichthys Mumba, the Mumbai blind eel.<br>● It belongs to the genus Rakthamicthys that is endemic to India.<br>● This is the fifth species from the genus to be described from India.<br>● Unlike other species of its genus, the mumba lacks eyes, fins and scales, has jaws equal in forward extent, different gill aperture, crescentic-shaped cephalic.<br>● This is the first completely blind subterranean freshwater fish species to be described from Maharashtra and the Northern western Ghats.<br> <br> |
| **Launch of 'Wetlands of India' Portal** | **Context:** On the occasion of Gandhi Jayanti and heralding the Iconic Week of Azadi ka Amrit Mahotsav of MoEFCC (4-10th October 2021), a web portal – 'Wetlands of India Portal' (http://indianwetlands.in/), giving details on wetlands of the country, was launched by the Minister of Environment, Forest and Climate Change.<br>● The portal is a single point access to all information relating to wetlands – capacity building material, data repository, videos and and information for students.<br>● A dashboard for each State and UT has been developed to access the portal and populate it with information of wetlands in their administration.<br>● The project is commissioned by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under the International Climate Initiative (IKI).<br>**Important value additions**<br>**Wetlands**<br>● They are highly productive ecosystems that provide the world with nearly two-thirds of its fish harvest.<br>● They play an integral role in the ecology of the watershed.<br>● They provide an ideal environment for organisms that form the base of the food web and feed many species of aquatic animals.<br>● They help in carbon sequestration (removal of carbon dioxide from the atmosphere).<br>● They provide habitat for animals and plants and support plants and animals that are found nowhere else.<br>● They are also an important source of ground water recharge.<br>**There are six kinds of wetlands:**<br>1. **Marine or coastal wetlands** which include coastal lagoons, rocky shores, and coral reefs<br>2. **Estuarine wetlands** including deltas, tidal marshes and mangrove swamps<br>3. **Lacustrine wetlands** associated with lakes<br>4. **Riverine wetlands** along rivers and streams |

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| | 5. **Palustrine wetlands**, essentially marshes, swamps and bogs<br>6. **Man-made wetlands** like fish, shrimp and farm ponds, irrigated agricultural land, salt pans, reservoirs, gravel pits and canals.<br>**Threats to Wetlands**<br>• Urbanization<br>• **Agriculture**: Construction of a large number of reservoirs, canals and dams have altered the hydrology of the associated wetlands.<br>• **Pollution:** Due to mercury from industrial sources<br>• **Climate Change**: Increased air temperature; increased frequency of storms, droughts, and floods; increased sea level rise<br>• **Dredging and sand mining**: Dredging of streams lowers the surrounding water table and dries up adjacent wetlands.<br>• **Exotic Species**: Exotic introduced plant species such as water hyacinth and salvinia clog waterways and compete with native vegetation. |
| | **Government proposes changes to Forest Act**<br>**Part of**: Prelims and GS II - Policies and interventions and GS-III - Environment<br>**Context** The Union Government has proposed exempting agencies which are involved in national security projects and border infrastructure projects from obtaining prior forest clearance from the Centre.<br>● This proposal is a part of amendments to the existing Forest Conservation Act (FCA). The document is open to public discussion for 15 days after which it could be readied for Cabinet and parliamentary approval.<br>● The FCA, which first came in 1980 and was amended in 1988, requires such permission.<br>**What are the recent proposals?**<br>● To exempt land acquired before 1980 by public sector bodies such as the Railways.<br>● As of today, a landholding agency (Rail, NHAI, PWD, etc.) is required to take approval under the Act and pay stipulated compensatory levies such as Net Present Value (NPV), Compensatory Afforestation (CA), etc. for use of such land which was originally been acquired for non-forest purposes.<br>● To make offences under the modified Act punishable with simple imprisonment for a period which may extend to one year and make it cognisable and non-bailable.<br>● Provisions for penal compensation to make good for the damage already done.<br>● Removing zoos, safaris, Forest Training infrastructures from the definition of "non-forestry" activities.<br>**What is Forest Conservation Act (FCA)?**<br>● The Forest (Conservation) Act of 1980 (FCA, 1980) ensures conservation of forest and its resources.<br>● It was enacted to control the ongoing deforestation of the forests of India.<br>● It came into force on October 25, 1980 containing five sections.<br>● The Act restricts the state government and other authorities to take decisions first without permission from the central government.<br>● It gives complete authority to the Central government to carry out the objectives of the act.<br>● The Act levies penalties in case of violations of the provisions of FCA.<br>● It will have an advisory committee which will help the Central government with regard to forest conservation. |
| **Madrid Protocol & Antarctic Treaty** | **Context:** India at International Conference commemorating the signing of the Madrid Protocol on Environmental Protection to the Antarctic Treaty<br>• Committed to curtail carbon emissions in the Antarctic atmosphere |

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| | • Has already adopted the green energy initiative by experimenting with the feasibility of wind energy production and installed moderate output of Wind Energy Generators (WEG) on an experimental basis.<br>• The choice of Combined Heat and Power (CHP) for Bharati station to reduce carbon emissions in the Antarctic also promotes India's pledge to protect the environment.<br>**India reaffirms its commitment to the Protocol on Environmental Protection to the Antarctic Treaty and at this moment claims to:**<br>1. Implement all Decisions, Resolutions and Measures adopted at ATCM in the Indian Antarctic programme effectively.<br>2. Use green alternate energy system in both the Indian Antarctic research stations; Maitri and Bharati like solar panels and wind energy generators so compromising use of fossil fuel gradually and make station efficient with alternate green energy.<br>3. Reduce carbon footprints by using vehicles and machinery only when required at the most<br>4. Use shared supply ship to deliver human resources, materials and machines to Antarctica<br>5. Control the introduction of non-native species into Antarctica by any means or through vector transfer.<br>**India and Antarctic Treaty**<br>• India signed the Antarctic Treaty on 19th August 1983 and soon thereafter received consultative status on 12th September 1983.<br>• The Madrid Protocol was signed by India which came into force on 14th January, 1998.<br>• India is one of the 29 Consultative Parties to the Antarctic Treaty.<br>• India is also a member of Council of Managers of National Antarctic Programme (COMNAP) and Scientific Committee of Antarctica Research (SCAR). All these representations show the significant position that India holds among the nations involved in Antarctic research.<br>*The Protocol on Environmental Protection to the Antarctic Treaty was signed in Madrid on October 4, 1991 and entered into force in 1998. It designates Antarctica as a "natural reserve, devoted to peace and science".*<br>**India in Antarctica**<br>• India has two active research stations; Maitri (commissioned in 1989) at Schirmacher Hills, and Bharati (commissioned in 2012) at Larsemann Hills in Antarctica.<br>• India has successfully launched 40 annual scientific expeditions to Antarctica till date.<br>• With Himadri station in Ny-Alesund, Svalbard, Arctic, India now belongs to the elite group of nations that have multiple research stations within the Polar Regions. |
| **Uttar Pradesh largest emitter of PM2.5: CEEW** | **Context** According to an analysis by the Council on Energy, Environment and Water (CEEW), Uttar Pradesh is the largest emitter of PM2.5, the class of particulate matter considered most harmful to health.<br>**Key takeaways**<br>• The high emissions from U.P. were largely due to a significant share of PM2.5 emissions from solid-fuel use in households and, by virtue of being India's most populous State, it had a higher proportion of households relying on this form of fuel.<br>• **Other top polluters:** Maharashtra, Gujarat, Odisha, West Bengal, Madhya Pradesh, Bihar, Tamil Nadu, and Rajasthan |

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| | ● **Common pollutants that were analysed**: PM2.5, PM10, NOx (nitrous oxides), SO2 (sulphur dioxide), CO (carbon monoxide), NH3 (ammonia), and NMVOC (non-methane volatile organic compounds).<br>**Indian Government's initiatives**<br>● The Government of India has launched the National Action Plan on Climate Change (NAPCC) in 2008 outlining eight National Missions on climate change. These include:<br>○ National Solar Mission: To establish India as a global leader in solar energy by creating the policy conditions for its deployment across the country<br>○ **National Mission for Enhanced Energy Efficiency**: To promote the market for energy efficiency by fostering innovative policies and effective market instruments.<br>○ **National Mission on Sustainable Habitat**: To promote understanding of climate change, its adaptation and mitigation, energy efficiency and natural resource conservation.<br>○ **National Water Mission**: Conservation of water, minimizing wastage and ensuring its more equitable distribution<br>○ **National Mission for Sustaining the Himalayan Ecosystem:** To develop a sustainable National capacity to continuously assess the health status of the Himalayan Ecosystem<br>○ National Mission for a Green India: Protecting; restoring and enhancing India's diminishing forest cover<br>○ National Mission for Sustainable Agriculture: Enhancing agricultural productivity especially in rainfed areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation<br>○ National Mission on Strategic Knowledge for Climate Change: To build a vibrant and dynamic knowledge system that would inform and support national action for responding effectively to the objective of ecologically |
| **Global Coral Reef Monitoring Network and its report** | **Context** Global Coral Reef Monitoring Network (GCRMN) has released a report on the status of coral reefs across the world.<br>● The report, the first of its kind in 13 years, underlined the catastrophic consequences of global warming but said that some coral reefs can be saved by arresting greenhouse gases.<br>**Highlights of the report**<br>● In the last decade, the world lost about 14 percent of its coral reefs.<br>● **Threats**: Ocean-acidification, warmer sea temperatures and local stressors such as overfishing, pollution, unsustainable tourism and poor coastal management.<br>● **Impact of global warming**: Coral reefs across the world are under relentless stress from warming caused by climate change. Coral bleaching events caused by rise in elevated sea surface temperatures (SST) were responsible for coral loss.<br>● **Loss of hard coral cover**: There has been a steady decrease in hard coral cover in the last four decades since 1978 when the world lost nine per cent of its corals. The decrease is disconcerting because live hard coral cover is an indicator of coral reef health.<br>● **Algal bloom:** Algal bloom on coral ridges are a sign of stress on the structures. Since 2010, the amount of algae on the world's coral reefs has increased by about 20 per cent.<br>**Why should we conserve corals?**<br>● Corals occupy less than one per cent of the ocean floor but over one billion people benefit directly from the reefs. |

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| | • The value of goods and services provided by coral reefs is estimated to be $2.7 trillion per year. This includes $36 billion in coral reef tourism.<br>• The net economic value of the world's coral reefs could be nearly tens of billions of dollars per year.<br>**What is bleaching?**<br>• Bleaching occurs when healthy corals become stressed by changes in ocean temperatures, causing them to expel algae living in their tissues which drains them of their vibrant colours.<br>• Bleaching was first seen on the reef in 1998 — at the time, the hottest year on record — but as temperature records continue to tumble its frequency has increased, giving coral less time to recover. |
| **India's Newest Tiger Reserve in Chhattisgarh** | **Context** The National Tiger Conservation Authority (NTCA) approved Chhattisgarh's proposal to declare the combined areas of the **Tamor Pingla Wildlife Sanctuary** and the **Guru Ghasidas National Park** as a Tiger Reserve.<br>• Part of Sanjay **Dubri National Park** originally, Guru Ghasidas Park was set up as a separate entity in Sarguja region of Chhattisgarh after the state came into being in 2001.<br>**Key takeaways**<br>• The new Reserve also borders Jharkhand and Madhya Pradesh.<br>• This will be Chhattisgarh's fourth Tiger Reserve after the Udanti-Sitanadi, Achanakmar, and Indravati Reserves.<br>• the proposal was approved under Section 38V(1) of The Wildlife (Protection) Act, 1972.<br>• Significance<br>  ○ Guru Ghasidas National Park is significant as the Asiatic cheetah's last-known habitat in India.<br>  ○ Wildlife activists and experts believe that converting Guru Ghasidas into a Tiger Reserve is an important step as it connects Madhya Pradesh and Jharkhand and provides the tigers with a corridor to move between the Palamau and Bandhavgarh reserves.<br>• On the other hand, Bhoramdeo connects Chhattisgarh's Indravati Tiger Reserve with Madhya Pradesh's Kanha Tiger Reserve.<br>**National Tiger Conservation Authority**<br>• It was established in December 2005 following a recommendation of the Tiger Task Force which was constituted by the Prime Minister of India for reorganised management of Project Tiger and the many Tiger Reserves in India.The Wildlife Protection Act of 1972 was amended in 2006 to provide for its constitution.<br>• It is responsible for implementation of the Project Tiger to protect endangered tigers. |
| **Sources of aerosols in the central Himalayan region** | **Sources:** Mineral dust, biomass burning, secondary sulfate, secondary nitrate from northwest India and Pakistan, polluted cities like Delhi, the Thar Desert, and the Arabian Sea area, and long-range transported marine mixed aerosols.<br>• This dust transport and forest fires are the main sources of total suspended particles (TSP), particularly in pre-monsoon period (March-May) when TSP concentration peaks in the region.<br>• There was predominance of mineral dust in spring and summer and biomass burning and secondary sulfate in winter.<br>• The transported marine mixed aerosol source was mainly associated with SW monsoon air masses during the summer season.<br>• Carbonaceous aerosols (Organic Carbon (OC) and Elemental Carbon (EC) were the maximum in winter due to the intensification of biomass burning over the Indo Gangetic Plains and the Himalayas because of domestic heating and shallower mixing layer. |

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| | *Background*<br>With a unique role in the Asian climate, the Himalayan region is considered a vulnerable environment. Several chemical speciation studies have been performed for carbonaceous aerosols and inorganic species over the western and central Himalayan regions during the last decade, reporting the dominance of transported aerosol plumes from the Indo-Gangetic Plains. |
| **Stubble burning** | **Context** The Centre-constituted Commission for Air Quality Management said in a statement that a reduction in the area under paddy cultivation in Haryana, Punjab and Uttar Pradesh, and a shift away from paddy varieties that take long to mature, could see a reduction in stubble burning this year.<br>**Key takeaways**<br>● Both Central and State Governments of Haryana, Punjab and U.P. have been taking measures to diversify crops as well as to reduce the use of PUSA-44 variety of paddy.<br>● Crop diversification and moving away from PUSA-44 variety with short duration High Yielding Varieties are part of the framework and action plan for control of stubble burning.<br>● The total paddy area in Haryana, Punjab and the eight NCR (National Capital Region) districts of UP has reduced by 7.72%.<br>● Similarly, total paddy straw generation from the non-basmati variety of rice is likely to be reduced by 12.42%.<br>● It's the non-basmati variety of rice, whose stalk remains, that is usually burnt off by farmers ahead of sowing wheat.<br>**What is Stubble Burning?**<br>● Stubble burning is the act of setting fire to crop residue to remove them from the field to sow the next crop<br>● It is a traditional practice in Punjab and Haryana to clean off the rice chaff to prepare the fields for winter sowing<br>● It begins around October and peaks in November, coinciding with the withdrawal of southwest monsoon.<br>● On December 10, 2015, the National Green Tribunal (NGT) had banned crop residue burning in the states of Rajasthan, Uttar Pradesh, Haryana and Punjab |
| **Google to ban climate denial ads** | **Context** Google will ban digital ads promoting false climate change claims from appearing next to other content.<br>● The restrictions will prohibit ads for content that contradicts well-established scientific consensus around climate change.<br>● It will help in limiting revenue for climate change deniers and stop the spread of misinformation on its platforms.<br>● The new policy will also apply to YouTube, which last week announced a sweeping crackdown of vaccine misinformation. |
| **Javan Gibbon**<br> | **Context** Indonesia is taking steps to protect the habitat of Javan Gibbon (Hylobates moloch), which is endangered by climate change and human encroachment.<br>● The species is also hunted for both meat and pet trade.<br>**About Javan Gibbon**<br>● The silvery gibbon or Javan gibbon, is a primate. They are found in groups only, usually in a pair of two.<br>● It is endemic to the Indonesian island of Java, where it inhabits undisturbed rainforests<br>● It helps in regenerating forest vegetation by dispersing seeds.<br>● There are around 4,000 Javan gibbons left. |

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| | • It was declared Critically Endangered in 2004 but since has recovered to status of Endangered as per IUCN criterion. However, the latest IUCN estimate shows that their population is decreasing.<br>• **Habitat**: Java, Indonesia.<br>• **Protection Status**:<br>  ○ IUCN: Endangered (EN)<br>  ○ CITES: Appendix I |
| **India asked to update Climate goals** | **Context** UK has urged India to announce a "more ambitious" Nationally Determined Contribution (NDC) ahead of a United Nations climate change summit in the U.K. in a few weeks.<br>• As president of the coming climate change conference, the U.K. is asking all countries to update their NDCs to reflect climate targets for the next few decades.<br>• UK also noted that India already lead(s) the world in renewable technology.<br>**What is a Nationally Determined Contribution (NDC)?**<br>• Nationally Determined Contributions (NDC) or Intended Nationally Determined Contributions (INDC) are non-binding national plans highlighting climate actions that governments aim to implement in response to climate change and as a contribution to achieve the global targets set out in the Paris Agreement.193 countries filed their first NDCs, but only 19 have so far updated them. |
| **SC on National Green Tribunal (NGT)** | **Context** The Supreme Court has declared the National Green Tribunal's (NGT) position as a "unique" forum endowed with suo motu (action taken by a court of its own accord) powers to take up environmental issues across the country.<br>Key takeaways from SC's judgement<br>• The exercise of power by the NGT is not circumscribed by the receipt of applications.<br>• When substantial questions relating to the environment arise and the issue is civil in nature and those relate to the Act, the NGT, even in the absence of an application, can self-ignite action either towards Improvement or towards prevention of harm.<br>• The court explained that the role of the NGT was not simply adjudicatory in nature. The Tribunal has to perform equally vital roles that were preventative, ameliorative (improvement) or remedial in nature.<br>• NGT is a complimentary, competent, specialised forum to deal with all environmental multidisciplinary issues both as original and also as an appellate authority.<br>**What is NGT?**<br>• It is a statutory body established in 2010, as per the National Green Tribunal Act.<br>• It is a specialised judicial body equipped with expertise solely for the purpose of adjudicating environmental cases in the country.<br>• The chairperson of the NGT is a retired judge of the Supreme Court<br>• It shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908 but shall be guided by principles of natural justice.<br>• Tribunal's orders are binding and it has power to grant relief in the form of compensation and damages to affected persons. |
| **UN biodiversity Summit** | **Context** A key UN summit tasked with protecting biodiversity opened in China online, as countries meet to protect ecosystems and prevent mass extinction weeks before the COP26 climate conference.<br>**Key takeaways**<br>• Beijing is the world's biggest polluter.<br>• It has sought to position itself in recent years as a world leader on environmental issues.<br>• The online summit shall hold a face-to-face meeting in April 2022. |

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| | • It will see parties to the Convention on Biological Diversity (CBD) discuss new targets for protecting ecosystems by 2030.<br>• It shall also debate on the "30 by 30" plan to give 30% of land and oceans protected status by 2030<br>  ○ It is a measure supported by a broad coalition of nations, as well as a goal to halve the use of chemicals in agriculture and stop creating plastic waste.<br>**The Convention on Biological Diversity (CBD)**<br>• It is known informally as the Biodiversity Convention, is a multilateral treaty.<br>• The convention has three main goals:<br>  ○ the conservation of biological diversity (or biodiversity);<br>  ○ the sustainable use of its components;<br>  ○ and the fair and equitable sharing of benefits arising from genetic resources.<br>• **Objective**: To develop national strategies for the conservation and sustainable use of biological diversity.<br>• It is often seen as the key document regarding sustainable development.<br>• The convention was opened for signature at the Earth Summit in Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993.<br>• It has two supplementary agreements, the Cartagena Protocol and Nagoya Protocol. |
| **Clean India programme** | **In News:** The Ministry of Youth Affairs and Sports, Government of India launched the Clean India programme in collaboration with State Governments on the eve of 75th year of Independence.<br>• **Key activities:** Collection and disposal of Waste through collection drive and door to door Campaign, Village Beautification, Maintenance beautification drives for historical monuments and heritage sites, community centres, Youth club/ Mahila Mandals, school and panchayat buildings etc. and Traditional Water Sources: Cleanliness and maintenance of water bodies through work camps.<br>• Collection and disposal of 75 Lakh kg waste mainly plastic waste throughout the Country covering 744 districts. On an average of 10,080 kg waste per District will be collected and accordingly on an average of 30kg waste per village will be collected & disposed off |
| **Climate Resilience Information System and Planning (CRISP-M) tool** | **In News:** Govt. of India launched Climate Resilience Information System and Planning (CRISP-M) tool under Mahatma Gandhi NREGA.<br>• For integration of climate information in Geographic Information System (GIS) based watershed planning<br>• Open up new possibilities for our rural communities to deal with the issues of climate change - to cope with climate change and protecting them from weather-related disasters. |
| **Commission for Air Quality Management report** | **Context** According to a report by the Commission for Air Quality Management, there is a 70% reduction so far in instances of stubble burning in Punjab and 18% in Haryana from last year.<br>• This, however, is a preliminary analysis as harvesting is still under way and the day-to-day variation in the number of fires is extremely high.<br>**Key takeaways**<br>• There are several initiatives taken to decrease stubble burning such as the increased use of happy seeder [harvesting equipment] and the use of bio-decomposers but this will take time for results to show.<br>• Over the years it has been observed that fire counts increase when there is too little time between the paddy being ready for harvesting and the right time to sow wheat. |

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| | • This year, excessive moisture in northern India due to an overhanging monsoon and a delay in the markets opening for trading, may further squeeze the time available for farmers to harvest and sow, further forcing them to set their fields alight (fire).<br>**What is Stubble Burning?**<br>• Stubble burning is the act of setting fire to crop residue to remove them from the field to sow the next crop<br>• It is a traditional practice in Punjab and Haryana to clean off the rice chaff to prepare the fields for winter sowing<br>• It begins around October and peaks in November, coinciding with the withdrawal of southwest monsoon.<br>• On December 10, 2015, the National Green Tribunal (NGT) had banned crop residue burning in the states of Rajasthan, Uttar Pradesh, Haryana and Punjab |
| **Fourth International Solar Alliance General Assembly** | **In News:** The Fourth Assembly of the ISA will deliberate on<br>• The key initiatives around the operationalisation of the OSOWOG initiative,<br>• The $1 trillion Solar Investment Roadmap for 2030<br>• Approval of a Blended Financial Risk Mitigation Facility<br>• Discuss the strategic plan of the ISA for the next five years encompassing a Country Partnership Framework, Strategy for Private Sector Engagement, and initiatives such as Viability Gap Financing scheme to facilitate affordable finance for solar energy projects across ISA's membership.<br>• Discuss the partnership with Global Energy Alliance (GEA) to scale up technical and financial support to LDCs and SIDS.<br>**'One Sun One World One Grid' (OSOWOG) initiative proposed by India**<br>*Proposed by India to set up a framework for facilitating global cooperation which aims at building a global ecosystem of interconnected renewable energy resources that can be easily shared*<br>• Envisions building and scaling inter-regional energy grids to share solar energy across the globe, leveraging the differences of time zones, seasons, resources, and prices between countries and regions<br>• Help decarbonise energy production, which is today the largest source of global greenhouse gas emissions.<br>• With India's Ministry of New and Renewable Energy, the World Bank and the ISA signing a tripartite agreement on OSOWOG, the initiative could be the world's most important renewables catalyst. It can unlock unprecedented economies of scale in energy generation and transmission.<br>• Rigorous assessments and modelling have confirmed the initiative's technical and economic viability, building a strong business case.<br>• Its commercial feasibility has been further augmented by multilateral development banks such as World Bank, which are helping create markets by driving down costs of solar power. |
| **India's Bio-Economic Hub** | **Context:** The Eastern Himalayan Region is one of the mega-biodiversity rich zones and is among the 34 biodiversity Hotspots of the world. There is a need to put these invaluable genetic resources to use for the economic growth of the region in particular and to the nation in general, through biotechnological interventions.<br>The Department of Biotechnology has played a pivotal role to build capacity in the North Eastern region for carrying out **biotechnology research** to address issues specific to the region and implement programmes for the **societal upliftment of the local communities** as the North Eastern region is a genetic treasure house of plant, animal and microbial resources.<br>• **Phyto-pharmaceutical Mission of North Eastern Region** aims to promote the documentation, scientific validation and evaluation of traditional healthcare |

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| | practices - assumes special significance in the context of the vast plant resources and diverse traditional healthcare practices of the North-East.<br>• The transformational approaches in developing products, processes and technologies with local bio-resources will help in development of traditional knowledge-based therapeutic agents leading to the socio-economic development of the region as well as benefits to traditional health care practitioners.<br>• DBT has designed a programme to improve the production and productivity in *Khasi Mandarin*, an important fruit crop by producing quality planting material through shoot-tip grafting technology (target of producing four lakhs certifiable disease-free quality plants of Khasi Mandarin and Sweet Orange and build capacity of at least 1,000 farmers in the region)<br>• DBT has established a Biotech-KISAN Hub at Horticultural Research Station, Assam Agricultural University (AAU), Kahikuchi, for large scale production of quality planting material of Malbhog banana, which is in high demand in the state of Assam.<br>*India's Bio-Economy is on its way to achieve 150-billion-dollar target from the current 70 billion-dollar by 2025 and will contribute effectively to the vision of a 5 trillion-dollar economy by 2024-25.* |
| **Genetic Engineering Appraisal Committee** | **Context** The Central government is yet to decide on a research proposal from Scientists at the Indian Agricultural Research Institute (IARI) which would allow plants to be genetically modified without the need for conventional transgenic technology.<br>• The better quality rice variety<br>• Scientists at the IARI are in the process of developing resilient and high-yield rice varieties using gene editing techniques, which have already been approved by many countries.<br>• They hope to have such rice varieties in the hands of the Indian farmers by 2024.<br>• This technique is equivalent to conventional breeding methods, since it does not involve inserting any foreign DNA.<br>• The proposal, however, has been pending with the Genetic Engineering Appraisal Committee for almost two years.<br>**Benefits:**<br>• They aim to bring precision and efficiency into the breeding process using gene editing tools such as CRISPR.<br>• It is much faster and far more precise than natural mutation or conventional breeding methods which involve trial and error and multiple breeding cycles.**What is Genetic engineering appraisal committee?**<br>• Regulatory Framework for approval of GM crops is covered under the Environment protection Act 1986<br>• Genetic engineering appraisal committee under Ministry of Environment, forest and climate change is Apex body that allows for commercial release of GM crops in India<br>• Cartagena protocol on biosafety provides well-defined mechanism of regulation of GM crops including biosafety evaluation and environmental release.<br>**Do you know?**<br>• The IARI has previously worked on golden rice, a traditional GM variety which inserted genes from other organisms into the rice plant, but ended trials over five years ago due to agronomic issues. |
| **Georissa mawsmaiensis** | **Context** Recently, researchers have discovered a micro snail species named Georissa mawsmaiensis in Mawsmai Cave in Meghalaya.<br>**About the new snail species**<br>• These snails are so small in size that an adult measures less than 2 millimetres in length. |

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| | • It has been discovered after 170 years.<br>• It was in 1851 that Georissa saritta, a member of the same genus as the latest find, was collected and described from the Musmai (Mawsmai today) valley near Cherrapunjee.<br>• The members of the Georissa genus are widely distributed across and reported from Africa, Asia, and the Pacific.<br>• However, they are confined to microhabitats consisting of limestone caves or karst landscapes formed by the dissolution of limestone.<br>• Georissa is found in soil or subterranean habitats in lowland tropical forest as well as high altitude evergreen forests or on rock surfaces rich in calcium.<br>• The new species is different in its shell morphology, starting from shell size variation to the presence of four very prominent spiral striations on body whorls of the shell.<br>• Until now, five snail species have been found from the caves of Meghalaya.<br>**Mawsmai cave**<br>• It is situated in the small village of Mawsmai, around four km from Cherrapunjee (Sohra) in the East Khasi Hills, Meghalaya.<br>• The term 'Mawsmai' means 'Oath Stone' in the Khasi language.<br>• The Khasi people use the local term 'Krem' for the cave.<br>• Mawsmai cave indirectly influenced by the streams of the Kynshi river originating from the East Khasi Hills. |
| **CO2 emissions in 2020 above decadal average** | **Context** A report from the World Meteorological Organisation (WMO) said the increase in CO2 from 2019 to 2020 was slightly lower than that observed from 2018 to 2019.<br>However, it is higher than the average annual growth rate over the past decade.<br>Updated data shows that the pandemic disruption in 2020 didn't significantly dent overall greenhouse gas emissions.<br>Key Findings<br>• The National Oceanic and Atmospheric Administration (NOAA) Annual Greenhouse Gas Index (AGGI) shows that from 1990 to 2020, radiative forcing (warming effect) by long-lived greenhouse gases (LLGHGs) increased by 47%, with CO2 accounting for about 80% of this increase.<br>• Methane: The increase from 2019 to 2020 was higher than that observed from 2018 to 2019 and also higher than the average annual growth rate over the past decade.<br>• Nitrous oxides: The increase was higher and also than the average annual growth rate over the past 10 years.**Carbon dioxide (CO2):** It reached 413.2 parts per million in 2020 and is **149%** of the pre-industrial level.<br>• Roughly half of the CO2 emitted by human activities today remains in the atmosphere. The other half is taken up by oceans and land ecosystems.<br>**Concerns raised**<br>• WMO has flagged concern that the ability of land ecosystems and oceans to act as 'sinks' may become less effective in future, thus reducing their ability to absorb CO2 and act as a buffer against larger temperature increases.<br>• It has also pointed out that At the current rate of increase in greenhouse gas concentrations, we will see a temperature increase by the end of this century far in excess of the Paris Agreement targets of 1.5 to 2 degrees Celsius above pre-industrial levels. |
| **International Snow Leopard Day** | **Context** Oct 23 is recognised as International Snow Leopard Day.<br>The day came into being with the adoption of the Bishkek Declaration by 12 countries on the conservation of snow leopards.<br>**About Snow Leopard**<br>• **Habitat**: Snow leopards live in the mountains of Central Asia.<br>• There are only between 3,920 and 6,390 snow leopards left in the wild. |

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| | ● **Range extends through twelve countries:** Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan.<br>● **Conservation Status**: Snow leopards were considered endangered species until 2017 but the status was changed to vulnerable later in the year.<br>● India is home to about 450-500 snow leopards which can be spotted in the upper Himalayan regions of the country.<br>**Conservation efforts by India**<br>● India has been conserving snow leopards and their habitats through the Project Snow Leopard (PSL).<br>● India has also been part of the Global Snow Leopard and Ecosystem Protection (GSLEP) Programme since 2013.<br>● India has identified three large landscapes, namely, **Hemis-Spiti** across Ladakh and Himachal Pradesh; **Nanda Devi – Gangotri** in Uttarakhand; and **Khangchendzonga – Tawang** across Sikkim and Arunachal Pradesh.<br>● Snow Leopard is in the list of 22 critically endangered species for the recovery programme of the Ministry of Environment Forest & Climate Change.<br>● **SECURE Himalaya**: F unded by Global Environment Facility (GEF)-UNDP for conservation of high-altitude biodiversity.<br>● This project is now operational in four snow leopard range states - J&K, Himachal Pradesh, Uttarakhand, and Sikkim.<br>● Community volunteer programme "HimalSanrakshak" to protect snow leopards.<br>Global Conservation efforts<br>● In 2013, the Bishkek Declaration set a goal of protecting at least 20 snow leopard landscapes with viable snow leopard populations by 2020.<br>● It led to the formation of the Global Snow Leopard and Ecosystem Protection Program (GSLEP).<br>Challenges to their conservation<br>● Increased habitat loss and degradation<br>● poaching<br>● conflict with communities. |
| **Mudumalai Tiger Reserve** | **Context** Steps will be taken to open a wildlife rescue and rehabilitation centre in the Mudumalai Tiger Reserve.<br>● Reason for the step: Animals, captured or rescued recently in the Nilgiris, needed to be taken to the Arignar Anna Zoological Park in Chennai or the Mysore Zoo for treatment.<br>**Mudumalai Tiger Reserve**<br>● Mudumalai Tiger Reserve is located in the Nilgiris District of Tamil Nadu state at the tri-junction of three states, viz, Karnataka, Kerala and Tamil Nadu.<br>● It is a part of Nilgiri Biosphere Reserve (1st Biosphere Reserve in India) along with Wayanad Wildlife Sanctuary (Kerala) in the West, Bandipur National Park (Karnataka) in the North, Mukurthi National Park and Silent Valley in the South.<br>● **Flora**:<br>○ The Reserve has tall grasses, commonly referred to as 'Elephant Grass'.<br>○ Bamboo of the giant variety, valuable timber species like Teak, Rosewood, etc.<br>○ There are several species of endemic flora.<br>● **Fauna**: Flagship Species: Tiger and Asian Elephant.<br>**Other Tiger Reserves in Tamil Nadu**<br>● Anamalai Tiger Reserve (ATR)<br>● Kalakad Mundanthurai Tiger Reserve (KMTR)<br>● Sathyamangalam Tiger Reserve (STR) |

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| **Sale of toxic crackers** | **Context** The Supreme Court on Friday said Chief Secretaries and top administrative and police officials will be held personally liable if banned varieties of firecrackers are found to be used in any of the States.<br>**Key takeaways**<br>● SC said that Nobody can be permitted to play with the life of others, more particularly that of senior citizens and children.<br>○ Only those firecrackers are banned which are found to be injurious to health and affecting the health of citizens.<br>● Any lapse on the part of the State Governments/ State Agencies and Union Territories shall be viewed very seriously.<br>● If it is found that any banned firecrackers are manufactured, sold and used in any particular area, the Chief Secretary of the State(s), the Secretary (Home) of the State(s) and the Commissioner of Police of the area, District Superintendent of Police of the area and the SHO/police officer in-charge of the police station shall be held personally liable.<br>● The court had allowed the use of 'green' or environment-friendly crackers made without toxic ingredients.<br>**Do you know?**<br>● Firecrackers use fuel and oxidisers to produce a combustion reaction, and the resulting explosion spreads the material in a superheated state. The metal salts in the explosive mix get 'excited' and emit light.<br>● Many studies show, the burning of firecrackers is an unusual and peak source of pollution, made up of particles and gases.<br>● Pollution from firecrackers affects the health of people and animals, and aggravates the already poor ambient air quality in Indian cities.<br>● This has resulted in court cases calling for a total ban on firecrackers, and court finally deciding to restrict the type of chemicals used as well as their volume. |
| **China submits new climate plan to UN** | **Context** China, by far the world's largest polluter, has renewed its emissions cutting plan with a promise to peak carbon pollution before 2030.<br>Key takeaways<br>● China's new submission to the UN also confirmed its goal to achieve carbon neutrality before 2060 and slash its emissions intensity by more than 65%.<br>○ China is responsible for more than a quarter of all man-made emissions. It had previously promised, under a process set in motion by the 2015 Paris climate deal, to reach net-zero by 2060.<br>○ Under the Paris climate deal, nations are required to submit renewed emissions-cutting pledges — known as Nationally Determined Contributions, or NDCs — every five years.<br>● China had been reluctant in renewing its plans to curb emissions, and it was hoped its new submission could build momentum ahead of the delayed COP26 summit in Glasgow, which begins on Sunday.<br>**China's renewed Nationally Determined Contributions (NDCs)**<br>● According to its renewed NDC, it will increase its share of non-fossil fuels in primary energy consumption to 25%, up from the 20% previously pledged.<br>● It also plans to increase its forest stock by six billion cubic metres compared with 2005 levels.<br>● Bring its total installed capacity of wind and solar power to over 1.2 billion kilowatts by 2030. |
| **Converting CO2 to Methane** | **Context** Recently, Indian Scientists have designed a photochemical method (Photocatalyst) to convert Carbon Dioxide (CO2) to Methane (CH4).<br>● A photochemical method is a chemical reaction initiated by the absorption of energy in the form of light.<br>**Key Points** |

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| | • A polymer has been designed to absorb visible light and catalyse the reaction which reduces CO2.<br>• Most catalysts contain toxic and expensive metal counterparts. Therefore, scientists designed a metal-free porous organic polymer to overcome this drawback.<br>• The method uses solar light as a renewable source of energy.<br>• **Significance**:<br>  ○ Methane can be one of the value-added products with significant uses as the cleanest burning fossil fuel and can directly be used in fuel cells as a hydrogen carrier.<br>  ○ It is also the main component of natural gas and has the potential to replace coal for electricity generation and furnishing flexible supply to reinforce intermittent renewable generators.<br>**What is Methane?**<br>• Methane is gas that is found in small quantities in Earth's atmosphere.<br>• It is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms (CH4).<br>• Methane is a powerful greenhouse gas. It is flammable, and is used as a fuel worldwide.<br>• Methane is produced by the breakdown or decay of organic material and can be introduced into the atmosphere by either natural processes (decay of plant material in wetlands, the seepage of gas from underground deposits or the digestion of food by cattle) or human activities (oil and gas production, rice farming or waste management).<br>• Methane is called marsh gas because it is found at the surface of marshy places |

## *GEOGRAPHY AND PLACE IN NEWS*

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| **Landslide and Flood Early Warning System** | **Context** CSIR-National Geophysical Research Institute (NGRI) has launched an 'Environmental Seismology' group to develop a 'Landslide and Flood Early Warning System' for the Himalayan region based on real-time monitoring with dense seismological networks, coupled with satellite data, numerical modelling and geomorphic analysis.<br>• This would enable a crucial warning several hours prior, which will save precious human lives and property in future during such events.<br>**Climate change - Cause of landslides and floods**<br>• Landslides are common in India's northern Himalayan region, particularly in the current monsoon season when heavy rains lead to subsidence of earth and rocks.<br>• The situation is exacerbated by climate change making the monsoon more erratic and melting glaciers higher in the mountains.<br>• Roads in the region are also often poorly maintained.<br>**About landslide and flood**<br>• A landslide is defined as the movement of a mass of rock, debris, or earth down a slope.<br>• A high water level that overflows the natural banks along any portion of a stream is called a flood. Thus, Floods are commonly associated with a stream or river.<br>**Do you know?**<br>• The National Geophysical Research Institute (NGRI) is a constituent research laboratory of the Council of Scientific and Industrial Research (CSIR).<br>• It was established in 1961 with the mission to carry out research in multidisciplinary areas of the highly complex structure and processes of the Earth system and its extensively interlinked subsystems. |

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| **PM Poshan Shakti Nirman Scheme** | **Context** The existing Mid-Day Meal scheme, which provides hot meals to students, has been renamed as the National Scheme for PM Poshan Shakti Nirman.<br>**Key propositions in the PM POSHAN Scheme**<br>● **Supplementary nutrition**: Supplementary nutrition for children in aspirational districts and those with high prevalence of anaemia.<br>● **States to decide diet**: It essentially does away with the restriction on the part of the Centre to provide funds only for wheat, rice, pulses and vegetables. Currently, if a state decides to add any component like milk or eggs to the menu, the Centre does not bear the additional cost. Now that restriction has been lifted.<br>● **Nutri-gardens**: They will be developed in schools to give children "firsthand experience with nature and gardening".<br>● **Women and FPOs:** To promote vocals for local, women self-help groups and farmer producer organisations will be encouraged to provide a fillip to locally grown traditional food items.<br>● **Social Audit**: "Inspection" by students of colleges and universities for ground-level execution.<br>● **Tithi-Bhojan**: Communities would also be encouraged to provide the children food at festivals etc.<br>● **DBTs to school**: States will be asked to do direct benefit cash transfers of cooking costs to individual school accounts, and allowances to the bank accounts of cooks and helpers.<br>● Holistic nutrition: Use of locally grown traditional foods will be encouraged, along with school nutrition gardens.<br>About the Mid-Day meal scheme<br>● The National Programme of Nutritional Support to Primary Education (NP-NSPE) was launched as a Centrally Sponsored Scheme in 1995.<br>● Objective: To enhance enrolment, retention and attendance and simultaneously improve nutritional levels among children.<br>● In 2001 it became a cooked Mid Day Meal Scheme.<br>● The Scheme covers children of classes I-VIII studying in government, government-aided schools, special training centres (STC) and madarsas/ maqtabs supported under Sarva Shiksha Abhiyan (SSA).<br>● It is the largest school feeding programme in the world.<br>● It is covered by the National Food Security Act, 2013. |
| **National Disaster Management Authority (NDMA) & COVID Compensation** | **Context** The Supreme Court has said that State Governments should not deny the ex gratia compensation of Rs. 50,000 to the families of persons who died of COVID-19 merely on the grounds that their death certificates did not show the virus as the cause of death.<br>● The Bench approved the guidelines proposed by the National Disaster Management Authority (NDMA) under the Disaster Management Act for grant of ex gratia to the kin of people who died of COVID-19.<br>**What is The National Disaster Management Authority (NDMA)?**<br>● NDMA is the apex statutory body for disaster management in India.<br>● The NDMA was formally constituted on 27th September 2006, in accordance with the Disaster Management Act, 2005<br>● Composition: Prime Minister as its Chairperson and nine other members, and one such member to be designated as Vice-Chairperson.<br>● Mandate: Its primary purpose is to coordinate response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response.<br>● It is also the apex body to lay down policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.<br>● Vision: To build a safer and disaster resilient India by a holistic, proactive, technology driven and sustainable development strategy that involves all stakeholders and fosters a culture of prevention, preparedness and mitigation. |

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| **IIT-M study finds contaminants in Cauvery** | **Context** A study done by researchers of the Indian Institute of Technology-Madras(IIT-M) has found that contaminants, including pharmaceutically active compounds, personal care products, plastics, flame retardants, heavy metals and pesticides, pollute the Cauvery.<br>**Key takeaways**<br>● This highlights the need to regularly monitor the river and its tributaries for pharmaceutical contamination.<br>● The contamination is particularly serious because India is the second largest pharmaceutical manufacturer.<br>● **Harmful effects:** Drug compounds, when released into water bodies even in minuscule amounts, can harm human beings and the ecosystem in the long term.<br>● The study also highlighted the need to assess the long-term impact of such contamination on human health and the ecosystem.<br>**About Cauvery River**<br>● The Cauvery River (Kaveri) is designated as the 'Dakshin Bharat ki Ganga' or 'the Ganga of the South'.<br>● The Cauvery River rises at Talakaveri on the Brahmagiri range near Cherangala village, Kodagu (Coorg), Karnataka.<br>● It flows through the states of Karnataka and Tamil Nadu and descends the Eastern Ghats in a series of great falls.<br>● Before emptying into the Bay of Bengal south of Cuddalore, Tamil Nadu the river breaks into a large number of distributaries forming a wide delta called the "garden of southern India"<br>● It is bounded by the Western Ghats on the west, by the Eastern Ghats on the east and the south, and by the ridges separating it from the Krishna basin and Pennar basin on the north.<br> <br> |
| **Palk Bay scheme** | **Context** The Union Government is considering increasing the unit cost of deep-sea fishing vessels under the Palk Bay scheme to make it more attractive to fisherfolk.<br>● The original unit cost of Rs. 80 lakh was "inadequate" [to meet the requirements of the fisherfolk].<br>**About Palk Bay scheme**<br>● It was Launched by the Prime Minister in July 2017.<br>● It is being financed by the Union and the State Governments with beneficiary participation.<br>● It envisages the provision of 2,000 vessels in three years to the fishermen of the State to motivate them to abandon bottom trawling.<br>**What is bottom trawling?**<br>● Bottom trawling, an ecologically destructive practice, involves trawlers dragging weighted nets along the sea-floor, causing great depletion of aquatic resources. |

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| **Geospatial Energy Map of India** | **In News:** NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) has developed a comprehensive Geographic Information System (GIS) Energy Map of India with the support of Energy Ministries of Government of India.<br>*Provides a holistic picture of all energy resources of the country which enables visualisation of energy installations through 27 thematic layers*<br>• Attempts to identify and locate all primary and secondary sources of energy and their transportation/transmission networks to provide a comprehensive view of energy production and distribution in a country<br>• A unique effort aimed at integrating energy data scattered across multiple organizations and to present it in a consolidated, visually appealing graphical manner<br>• Leverages latest advancements in web-GIS technology and open-source software to make it interactive and user friendly.<br>• Will be useful in planning and making investment decisions.<br>• Will also aid in disaster management using available energy assets. |

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| **Lal Bahadur Shastri** | **In News:** PM paid tributes to Lal Bahadur Shastri on his Jayanti<br>• The 2nd Prime Minister of India<br>• Deeply impressed and influenced by Mahatma Gandhi<br>• Joined the Indian independence movement in the 1920s<br>• Led the country during the Indo-Pakistan War of 1965<br>**The man of integrity**<br>• Like millions of Indians, Shastri drew inspiration from the Mahatma and plunged into the freedom struggle when he was in his teens.<br>• More than 60 years ago, Shastri showed what probity and integrity in public life are all about.<br>• Following a train accident at Ariyalur in Tamil Nadu, in which more than 140 people were killed, he resigned as railway minister taking moral responsibility for the incident.<br>• Lauding him for his integrity, the then Prime Minister Jawaharlal Nehru said that he was accepting his resignation because it would set an example in constitutional propriety, although Shastri was in no way responsible for it.<br>• When he married in 1928, at the insistence of his in-laws to accept dowry, he took a charkha (spinning wheel) and some khadi cloth. Even when he passed away, he reportedly had no property in his name and left behind a few books and a dhoti-kurta. As a child, Shastri is known to have swum across the river to reach school to save his impoverished family money to pay for a boat ride.<br>• Since the children were rarely allowed to use the official car to go to school when their father was Prime Minister, the family decided to buy a Fiat car for Rs. 12,000. A bank loan for Rs. 5,000 was taken, which Shastri's widow had to clear after his sudden death, from his pension. On a visit to a textile mill as Prime Minister, when the owner offered to gift him expensive sarees, Shastri insisted on buying and paying for only those he could afford. He also had an undue promotion for his son overturned.<br>**A rational and moral personality**<br>• He displayed a broad outlook at a very young age and dropped his caste-based surname when he was in the seventh standard.<br>• His progressive attitude came to the fore when he asked for khadi cloth and a spinning wheel as dowry.<br>• His maiden Independence Day speech in 1964 is as relevant today as it was then.<br>• Shastri observed: "We can win respect in the world only if we are strong internally and can banish poverty and unemployment from our country. Above all, we need national unity. Communal, provincial and linguistic conflicts weaken the country. Therefore, we have to forge national unity. I appeal to all to work for national sunity and usher in a social revolution to make our country strong. In the ultimate analysis, the strength of the country does not lie in its material wealth alone. It requires people like Mahatma Gandhi, Jawaharlal Nehru and Rabindranath Tagore. It requires the force of character and moral strength. I appeal to our young men to inculcate discipline in themselves discipline and work for the unity and advancement of the nation".<br>• His stress on character and moral strength acquire special significance today, when we see all-round degeneration of values in various fields.<br>**Jai Jawan, Jai Kisan**<br>• During the Indo-Pakistan war in 1965, Shastri gave the immortal slogan, "Jai Jawan, Jai Kisan," which continues to inspire every Indian even today. |

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| | • During his prime ministerial tenure, which unfortunately was cut short by his untimely death, Shastri boosted the morale of the nation by leading India to victory over Pakistan.<br>• His vision for self-sufficiency in foodgrains led to sowing the seeds of the Green Revolution, and promotion of the White Revolution.<br>• The country owes it to him in no small measure that we are self-sufficient in foodgrains production today.<br>• During his speech at death anniversary of Swami Dayanand Saraswati he said : "The nation cannot afford to relax. It is difficult to say what the future holds for us. Pakistan had not yet given up her policy of aggression. The duty of the nation is therefore clear. The country's defences have to be strengthened. The people should spare no efforts to strengthen the defences. Side-by-side, food production has to be increased. Food self-sufficiency is as important as a strong defence system. It was for this reason that I raised the slogan, 'Jai Jawan, Jai Kisan'. The kisan is as much a soldier as the jawan".<br>• Many years later, former Prime Minister A B Vajpayee added "Jai Vigyan" to Shastri's slogan in order to hail achievements of Indian scientists.<br>**Country's Interests first**<br>• Shastri placed the country's interests above everything else.<br>• Although he was wedded to the principles of peace, Shastri showed that he was made of sterner mettle when it came to protecting India's unity and integrity.<br>• His response was swift and decisive in ordering the Indian armed forces to retaliate against Pakistan's unprovoked aggression.<br>• Shastri's love for the motherland was evident when he responded to Mahatma Gandhi's call to join the Non-Cooperation Movement at the young age of 16.<br>• An incident from his life shows that he was a man of deeds. Before appealing to the countrymen to skip one meal a week in the wake of the foodgrain shortage, he implemented the measure at his house.<br>• His appeal had an electrifying impact and many households across the country responded positively to his call.<br>**A visionary man**<br>• His humane quality was reflected in another instance. As Uttar Pradesh's Minister of Police and Transport, he ordered that the police should use water jets instead of lathis to control unruly crowds.<br>• The fact that Shastri was the first transport minister to open the post of bus conductors to women showed how forward-looking he was.<br>• His visionary outlook is reflected in the observations he had made at a rural projects meet in Delhi in 1964.<br>• "We must inject new elements in the services. Let us introduce professors, economists, teachers, engineers and others, even outsiders, so that there is some freshness, a real exchange of views, a meeting of different approaches," he said.<br>• Perhaps, the government's decision to open 10 senior civil services positions for lateral entry is in line with this philosophy.<br>• Since he didn't believe in the caste system (he was a Kayastha from birth), he gave up his surname as a young schoolboy. The title "Shastri" was bestowed on him upon graduating from Kashi Vidyapeeth, as a mark of scholarly achievement.<br>**Can you answer the following question?**<br>1. What are the contributions of Lal Bahadur Shastri to post-Independent India's polity and economy? Do you think he is relevant in today's time? Discuss. |
| **Langa-Manganiyar heritage** | **Context** The ballads, folklore and songs of the Langa-Manganiyar artistes are being preserved through an initiative for documentation and digitisation.<br>• The project is aimed at saving the rapidly disappearing narrative traditions of these communities. |

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| | • The Jodhpur-based Rupayan Sansthan has extended support to the initiatives taken by the Archives and Research Centre for Ethnomusicology at the American Institute of Indian Studies (AIIS) in the research project.<br>**Who are Langas and Manganiyars?**<br>• The Langas and Manganiyars are hereditary communities of Muslim musicians residing mostly in **western Rajasthan's Jaisalmer** and Barmer districts and in Pakistan's Tharparkar and Sanghar districts in Sindh.<br>• The iconic and internationally acclaimed folk artistes have, been hit hard by the COVID-19 pandemic.<br>• Apart from the pandemic, this vital heritage is also facing a threat from changes in patronage and increased urbanisation in these districts.<br>• The music of the two marginalised communities, who were supported by wealthy landlords and merchants before Independence, forms a vital part of Thar desert's cultural landscape. |
| **Brahmaputra heritage centre** | • The Brahmaputra River Heritage Centre has been set up in a nearly 150-year-old bungalow in Guwahati, Assam.<br>• The bungalow used to be the 17th century military office of the Ahom rulers.<br>• It was called Barphukanar Tila, meaning Barphukan's Hillock.<br>• Barpukhan was a post equivalent to Governor General created by Ahom king Pratap Simha or Susengpha (1603-1641).<br>• The hillock by the Brahmaputra, mentioned in ancient scriptures as Mandrachal, was from where Ahom General Lachit Barpukhan launched the Battle of Saraighat in March 1671 to inflict the most crushing defeat on the Mughals.<br>• Saraighat is regarded as the "greatest naval battle ever fought in a river". |
| **Shyamji Krishna Varma** | **In News:** The Prime Minister, Shri Narendra Modi has paid tributes to Shyamji Krishna Varma on his Jayanti.<br>An Indian revolutionary fighter, lawyer and journalist, who led India's freedom struggle from London<br>• Founded the famous **India House** in London in 1904 which became the nerve centre and nucleus for India's revolutionaries like Veer Savarkar, Madame Cama, Sardar Singh Rana, V V S Iyer, Lala Hardayal and Virendranath Chattopadhaya and Madhanlal Dhingra – was the political guru of Veer Savarkar, V V S Iyer and many other freedom fighters in this period<br>• He started the publication of a monthly journal called **'Indian Sociologist'** which became a vehicle of revolutionary ideas. In February 1905, he established the **Indian Home Rule Society** to raise his voice against British domination in India. The monthly Indian Sociologist became an outlet for nationalist ideas and through the Indian Home Rule Society, he criticised the British rule in India.<br>• Later in 1905, Shyamji attended the United Congress of Democrats held at Holborn Town Hall as a delegate of the India Home Rule Society.<br>• His resolution on India received an enthusiastic ovation from the entire conference. Shyamji's activities in England aroused the concern of the British government:<br>• He was disbarred from Inner Temple and removed from the membership list on 30 April 1909 for writing anti-British articles in The Indian Sociologist.<br>• Most of the British press were anti–Shyamji and carried outrageous allegations against him and his newspaper. He defended them boldly.<br>• The Times referred to him as the "Notorious Krishnavarma". Many newspapers criticised the British progressives who supported Shyamji and his view.<br>• His movements were closely watched by British Secret Services, so he decided to shift his headquarters to Paris, leaving India House in charge of Vir Savarkar. Shyamji left Britain secretly before the government tried to arrest him. |

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| | • It was Shyamji who first advocated non-violent means of getting rid of the British and using withdrawal of cooperation with the colonial administration as the most effective weapon for this purpose. Gandhiji built on this and evolved Satyagraha as a tool to oust the British much later.<br>• Narendra Modi dedicated a memorial 'Kranti Tirth', to Shyamji Krishna Verma at the revolutionary's ancestral town Mandvi in Kutch district |
| **Ram Van Gaman Tourism Circuit** | **Context** Chhattisgarh Chief Minister inaugurated the redeveloped ancient Mata Kaushalya temple, part of the "Ram Van Gaman" Tourism Circuit.<br>● He inaugurated the first phase of the project in Chandrakhuri village of Raipur district. Chandkhuri is believed to be the maternal home of Lord Ram.<br>**About Ram Van Gaman Tourism Circuit**<br>● The State government is developing the tourism circuit at a cost of Rs. 137.45 crore.<br>● Nine sites are being developed to attract tourists to the circuit,<br>● The circuit shall cover the route believed to be taken by Lord Ram during his 14-year exile.<br>● ● The nine sites are Sitamarhi-Harchaika (Koriya), Ramgarh (Ambikapur), Shivrinarayan (Janjgir-Champa), Turturiya (Baloda Bazaar), Chandkhuri, Rajim (Gariaband), Sihawa-Saptarishi Ashram (Dhamtari), Jagdalpur (Bastar) and Ramaram (Sukma).<br>About Mata Kaushalya temple<br>● Mata Kaushalya temple is a Hindu temple dedicated to Mata Kaushalya, mother of Lord Ram.<br>● It is the only temple in the world dedicated to Mata Kaushalya.<br>● It is located on Chandkhuri village 27 km away from the Raipur in Chhattisgarh<br>● The temple is believed to have been constructed in the 8th century |
| **Abhidhamma Day** | **In News:** Abhidhamma Day is being celebrated on 20th October 2021. The day marks the end of three month rainy retreat – Varshavaas or Vassa- for the Buddhist Monks and Nuns during which time they stay at one place in vihara and monastery and pray.<br>• Exposition of Holy Buddha Relic being brought from Waskaduwa Sri Subuddhi Rajvihara Temple, Sri Lanka will take place at Kushinagar, UP.<br>• These relics are accepted as real relics (Bone fragments, ashes, pieces of Jewels of the Buddha).<br>• Paintings of Ajanta Frescos, Buddhist Sutra Calligraphy, Buddhist artefacts excavated from Vadnagar and other sites in Gujarat will also be exhibited.<br>• The ancient city of Kushinagar, in the state of Uttar Pradesh is the final resting place of Gautama Buddha, where he attained Mahaparinirvana after his death. It is among the most important pilgrim spots for the Buddhists since the ancient times.<br>• The period after three month long Varshavas, observed as retreat by monks and nuns by staying in vihara during rainy season, is a time of giving, for the laity to express gratitude to Sangha. Lay Buddhists bring donations to temples, especially new robes for the monks and nuns. |
| **Anniversary of the formation of Azad Hind Government** | **In News:** As part of Amrit Mahotsav celebrations, events have been organized in the run up to and on 21st October in India and South East Asia to commemorate the Anniversary of the formation of Azad Hind Government by Netaji Subhas Chandra Bose.<br>• The existence of the Azad Hind Government gave a greater legitimacy to the independence struggle against the British. Pertinently, the role of Azad Hind Fauj or the Indian National Army (INA) had been crucial in bequeathing a much needed impetus to India's struggle for Independence.<br>• **Founded on:** 21st October, 1943 |

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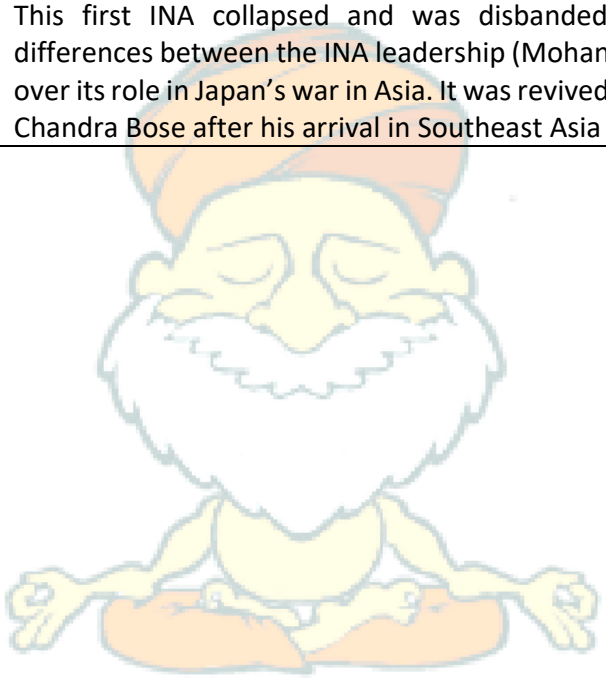
| | • **Constituted in:** The Provisional Government of Free India, or, more simply, Free India (Azad Hind), was an Indian provisional government established in occupied Singapore in 1943 and supported by the Imperial Japan, Nazi Germany, Fascist Italy, and their allies.<br>• Known as ***Arzi Hukumat-e-Azad Hind***, it was supported by the Axis powers of Imperial Japan, Nazi Germany, the Italian Social Republic, and their allies.<br>**Events leading to the formation of the Fauj:**<br>An important development in the struggle for freedom **during the Second World War** was the formation and activities of the Azad Hind Fauj, also known as the Indian National Army, or INA.<br>• **Rash Behari Bose** (supreme advisor), an Indian revolutionary who had escaped from India and had been living in Japan for many years, set up the Indian independence league with the support of Indians living in the countries of south-east Asia.<br>• When Japan defeated the British armies and occupied almost all the countries of south-East Asia, the league formed the Indian National Army from among the Indian prisoners of war with the aim of liberating India from the British rule.<br>• This first INA collapsed and was disbanded in December that year after differences between the INA leadership (Mohan Singh) and the Japanese military over its role in Japan's war in Asia. It was revived under the leadership of Subhash Chandra Bose after his arrival in Southeast Asia in 1943. |



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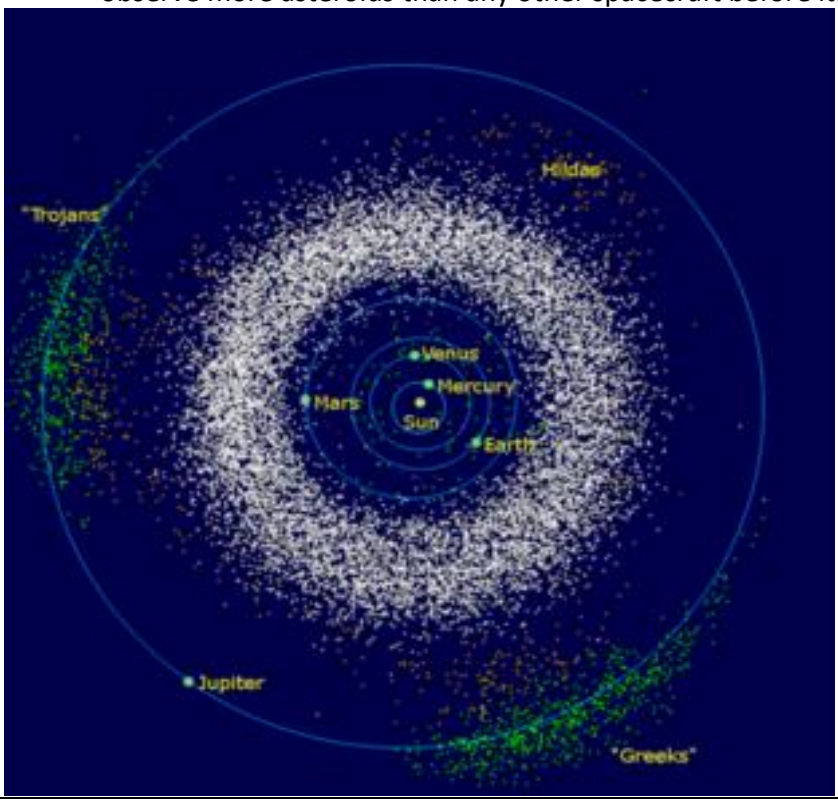
| **NASA's Lucy mission to probe Jupiter's mysterious Trojan asteroids** | **Context** NASA is poised to send its first spacecraft to study Jupiter's Trojan asteroids to glean new insights into the solar system's formation 4.5 billion years ago.<br>• The Jupiter trojans, commonly called Trojan asteroids or simply Trojans, are a large group of asteroids that share the planet Jupiter's orbit around the Sun.<br>**Key takeaways**<br>• The probe, called Lucy after an ancient fossil that provided insights into the evolution of human species, will launch on October 16 from Cape Canaveral Space Force Station in Florida.<br>• **Mission:** To investigate the group of rocky bodies circling the Sun in two swarms, one preceding Jupiter in its orbital path and the other trailing behind it.<br>• After receiving boosts from Earth's gravity, Lucy will embark on a 12-year journey to eight different asteroids -- one in the Main Belt between Mars and Jupiter and then seven Trojans.<br>• Trojans are present in a very small region of space and are very physically different from one another. The differences indicate how far away from the Sun they might have formed before assuming their present trajectory.<br>• Trojan asteroids number more than 7,000 in total.<br>• It will be the first solar-powered spaceship to venture this far from the Sun, and will observe more asteroids than any other spacecraft before it.<br>  |
| **Launch of DigiSaksham** | **Context:** DigiSaksham is a digital skills programme to enhance the employability of youth by imparting digital skills that are required in an increasingly technology driven era.<br>• This joint initiative with Microsoft India is an extension of the Government's ongoing programs to support the youth from rural and semi-urban areas.<br>• Through DigiSaksham initiative, free of cost training in digital skills including basic skills as well as advance computing, will be provided to more than 3 lakh youths in the first year.<br>• There will be basically three types of training viz. Digital Skills – Self paced learning, VILT mode training (Virtual Instructor led) and ILT mode training (Instructor led). |

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| **Diabetes** | **Context** A first-of-its kind report of long-term survivors of Type 1 Diabetes (T1D) from India, a multi-centric study was published in the peer-reviewed journal Diabetes Technology and Therapeutics.<br>**What is diabetes?**<br>● Diabetes is a Non-Communicable Disease (NCD) that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood sugar, or glucose), or when the body cannot effectively use the insulin it produces.<br>● **Type I diabetes**: It mostly affects children of age 14-16 years. This type occurs when the body fails to produce sufficient insulin. They must take artificial insulin daily to stay alive.<br>● **Type 2 diabetes**: While the body still makes insulin, unlike in type I, the cells in the body do not respond to it as effectively as they once did. The population with 45 and above age group is the most affected with it.<br>○ This is the most common type of diabetes and it has strong links with obesity.<br>● Diabetes affects the five major organs - Kidney, Heart, Blood vessels, Nervous System, and Eyes (retina).<br>● **Responsible factors**: Unhealthy diet, lack of physical activity, harmful use of alcohol, overweight/obesity, tobacco use, etc.<br>Do you know?<br>● Individuals with T1D have increased morbidity and excess premature mortality compared to those without diabetes<br>● Their life expectancy is reduced by an estimated 15-20 years, even with the life-saving insulin to their assistance.<br>● India is home to more than 95,000 children with T1D, reported to be the highest in the world, according to the 9th International Diabetes Federation Atlas. |
| **Meningitis** | **Context** The Global Roadmap to Defeat Meningitis by 2030 was recently released by the World Health Organization (WHO) and its partners.<br>● This is the first-ever global strategy to defeat meningitis.<br>● It aims to eliminate epidemics of bacterial meningitis and to reduce deaths by 70 per cent and halve the number of cases.<br>● Significance: The strategy could save more than 200,000 lives annually and significantly reduce disability caused by the disease.<br>About Meningitis<br>● Meningitis is an inflammation of the membranes that surround the brain and spinal cord.<br>● It is predominantly caused by bacterial and viral infection..<br>● Meningitis caused by bacterial infection causes around 250,000 deaths a year and can lead to fast-spreading epidemics.<br>● It kills a tenth of those infected — mostly children and young people — and leaves a fifth with long-lasting disability. |

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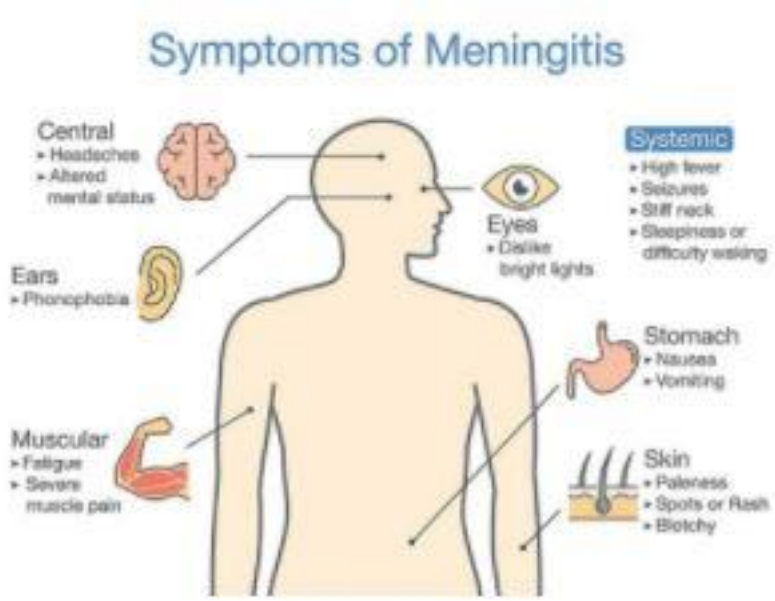
| |  |
| **Vikrant to sail out for Phase 2 trials** | **Context** The maiden sea trials of the indigenous aircraft carrier (IAC) Vikrant have progressed very well and the second phase of trials are expected to begin by October-end, with the third phase planned in December.<br>• Vikrant is expected to be delivered to the Navy in April and likely to be commissioned in August 2022<br>About Vikrant<br>• Vikrant is India's most complex warship (aircraft carrier) to have been indigenously built by Cochin Shipyard for the Indian Navy.<br>• Cochin Shipyard Limited is the largest public sector shipyard and the only shipyard under the Ministry of Ports, Shipping and Waterways.<br>• Vikrant has more than 76% indigenous content.<br>• It is the first time in the country that a ship the size of an Aircraft Carrier is completely modeled in 3D and production drawings extracted from the 3D model.<br>• The IAC is the largest warship built in the country having a displacement of about 40,000 tonnes.<br>• The Aircraft Carrier is a mini floating city, with a flight deck area covering the size of two football fields.<br>• The vessel is named Vikrant after the decommissioned maiden carrier of the Navy.<br>• It will have an air component of 30 aircraft, comprising MiG-29K fighter jets, Kamov-31 airborne early warning helicopters and the soon-to-be-inducted MH-60R multi-role helicopter, besides the indigenous Advanced Light Helicopters.<br>• The shipborne weapons include Barak LR SAM and AK-630, while it has MFSTAR and RAN-40L 3D radars as sensors.<br>• At present, India has only one aircraft carrier, the **Russian-origin INS Vikramaditya**.<br>**Significance**<br>• The combat capability, reach and versatility of the aircraft carrier will add formidable capabilities in the defence and help secure India's interests in the maritime domain.<br>• It would offer an incomparable military instrument with its ability to project air power over long distances. |
| **Nobel Medicine Prize for work on Temperature and Touch** | **Context** U.S. scientists David Julius and Ardem Patapoutian have won the Nobel Medicine Prize for discoveries on receptors for temperature and touch.<br>• The groundbreaking discoveries have allowed us to understand how heat, cold and mechanical force can initiate the nerve impulses that allow us to perceive and adapt to the world. |

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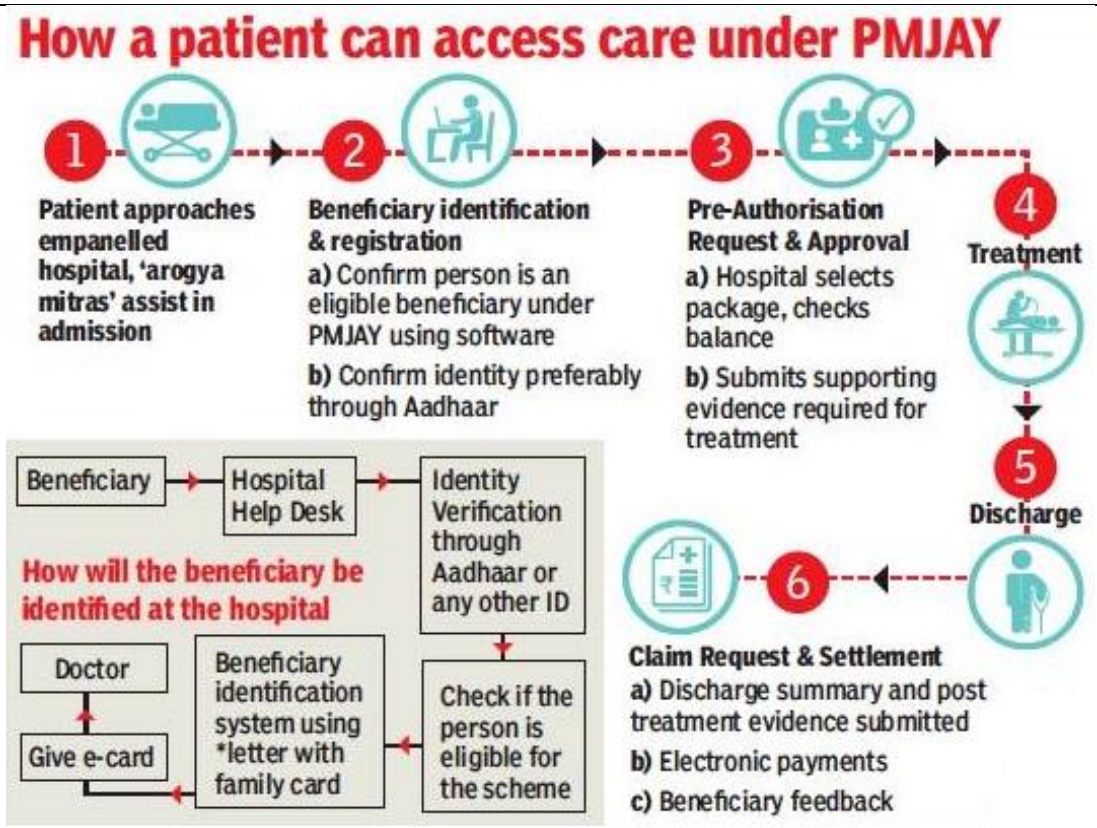
| | • The pair's research is being used to develop treatments for a wide range of diseases and conditions, including chronic pain.<br>**Do you know?**<br>• Mr. Julius was recognised for his research using capsaicin — a compound from chili peppers that induces a burning sensation — to identify which nerve sensors in the skin respond to heat. |
| **Ex Milan: Indian Navy's largest exercise** | **Context** India is set to host its largest naval exercise, Ex Milan, early next year for which 46 countries have been invited.<br>• The exercise will see the participation of all Quad countries with the U.S. being invited for the first time.<br>• Milan, which began in 1995, is held biennially and brings together Navies of all the countries in the region. It has so far been held at Port Blair but is now being shifted to Visakhapatnam which offers more space and infrastructure<br>• The invitees include all Indian Ocean littoral states and countries from South East Asia |
| **i-Drone** | **In News:** Health Minister launched ICMR's Drone Response and Outreach in North East (i-Drone). The delivery model is aimed at ensuring that life-saving vaccines reach everyone.<br>• This is for the first time that a "Make in India' drone has been used in South Asia to transport COVID vaccine over an aerial distance of 15 kms in 12-15 mins from the Bishnupur district hospital to Loktak lake, Karang island in Manipur for administration at the PHC.<br>• This is a delivery model to make sure that life-saving vaccines reach everyone.<br>• This technology may prove a game changer in addressing the challenges in health care delivery, particularly health supplies in difficult areas.<br>• It epitomises the Government's commitment to 'Antyodaya' in health; making healthcare accessible to the last citizen of the country. |
| **Ayushman Bharat Revised** | **Context** The National Health Authority (NHA) has revised the Health Benefit Package (HBP) Master under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) scheme.<br>• Health Benefit Package (HBP 2.2)<br>• Rates of some packages have been increased by 20% to 400%.<br>• Rates of around 400 procedures have been revised<br>• Oone new additional medical management package related to black fungus has also been added.<br>• The revised packages for oncology will enhance cancer care for the beneficiaries in the country.<br>Benefit: The rationalised HBP will further improve the uptake of schemes in private hospitals leading to reduced out-of-pocket expenditure.**What is National Health Authority (NHA)?**<br>• NHA has been set-up to implement PM-JAY.<br>• **Ministry:** Ministry of Health and Family Welfare<br>• It has full functional autonomy.<br>• NHA is governed by a Governing Board chaired by the Union Minister for Health and Family Welfare.<br>• It is headed by a Chief Executive Officer (CEO), an officer of the rank of Secretary to the Government of India, who manages its affairs.<br>• The CEO is the Ex-Office Member Secretary of the Governing Board.<br>**About Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)**<br>• This scheme is a Centrally sponsored scheme with some Central sector components.<br>• PMJAY offers a sum insured of 5 lakh per family for secondary care (which doesn't involve a super specialist) as well as tertiary care. For the beneficiaries, this is a free scheme.<br>• It is an entitlement-based scheme that targets the beneficiaries as identified by latest Socio-Economic Caste Census (SECC) data<br>• The insurance cost is shared by the centre and the state mostly in the ratio of 60:40. |




**Interpol launches online Cybersecurity campaign**

**Context** The Interpol has launched an online campaign to inform people of major cyberthreats to help them protect their computer systems, networks and personal information from cybercriminals.

- The three-week campaign, from October 4 to 22, would be run primarily through social media.

**What is Interpol?**

- INTERPOL Notices are international requests for cooperation or alerts allowing police in member countries to share critical crime-related information.
- The International Criminal Police Organization (INTERPOL) is an intergovernmental organization that helps coordinate the police force of 194 member countries.
- Each of the member countries hosts an INTERPOL National Central Bureau (NCB).
- The Central Bureau of Investigation (CBI) is designated as the National Central Bureau of India.
- It is headquartered in Lyon, France

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| **Physics Nobel Prize 2021** | **Context** U.S.-Japanese scientist Syukuro Manabe, Klaus Hasselmann of Germany, and Giorgio Parisi of Italy won the Nobel Physics Prize for climate models and the understanding of physical systems.<br>**Commendable work of the scientists**<br>● Working in the 1960s, **Dr. Manabe** showed how levels of carbon dioxide in the atmosphere corresponded to increased earth surface temperatures.<br>○ He was influential in developing the physical models of earth's climate and worked on how exactly the heat energy received by earth from the sun radiates back into the atmosphere.<br>● Dr. Hasselmann was credited for working out how climate models can remain reliable despite sometimes chaotic variation in weather trends.<br>○ The Committee praised his identification of climate "fingerprints" caused by both natural and human activities and how much climate change can be attributed solely to man-made emissions.<br>● Dr. Parisi was honoured for his work in the 1980s that was said by the committee to be "among the most important contributions" to the theory of complex systems.<br>○ His work made it possible for physicists to understand apparently entirely random materials, with wide-ranging applications including mathematics, biology, and machine learning. |
| **WHO recommends first anti-malarial vaccine** | **Context** The World Health Organization (WHO) has recommended the widespread rollout of the first malaria vaccine.<br>● This could save tens of thousands of children's lives each year across Africa.<br>Key takeaways<br>● After a successful pilot programme in three African countries the RTS,S vaccine will be made available more widely.<br>● The RTS,S vaccine, also known as Mosquirix, was developed by the British pharmaceutical company GlaxoSmithKline (GSK), and has been administered to more than 800,000 children in Ghana, Kenya and Malawi since the pilot programme began in 2019.<br>● A study has also found that when young children were given both the RTS,S and antimalarial drugs there was a 70% reduction in hospitalisation or death.<br>**About Malaria**<br>● Malaria is a life threatening mosquito borne blood disease caused by plasmodium parasites.<br>● It is predominantly found in the tropical and subtropical areas of Africa, South America as well as Asia.The parasites spread through the bites of infected female **Anopheles mosquitoes.**<br>● There are 5 parasite species that cause malaria in humans. 2 of these species – Plasmodium falciparum and Plasmodium vivax – pose the greatest threat.<br>● **Symptoms**: Fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness.<br>● It is preventable as well as curable.<br>● This disease causes hundreds of millions of infections each year, risking lives and livelihoods, trapping people in poverty.<br>**Status of India**<br>● India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.<br>● India's **National Strategic Plan for Malaria Elimination** shifted focus from Malaria control to elimination and provided a roadmap to end malaria in 571 districts out of India's 678 districts by 2022.<br>● Indian Council of Medical Research (ICMR) has recently established **'Malaria Elimination Research Alliance-India (MERA-India)** which is a conglomeration of partners working on malaria control. |

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| **Nobel Prize for Chemistry 2021** | **Context** Germany's Benjamin List and U.S.-based David MacMillan won the Nobel Chemistry Prize for developing a tool to build molecules which has helped make chemistry more environmentally friendly.<br>**Key takeaways**<br>● Their tool, which they developed independently of each other in 2000, can be used to control and accelerate chemical reactions, exerting a big impact on drug research.<br>● Prior to their work, scientists believed there were only two types of catalysts — metals and enzymes.<br>○ Catalysts are substances that control and accelerate chemical reactions, without becoming part of the final product.<br>● The new technique relies on small organic molecules and is called "asymmetric organocatalysis".<br>● It is widely used in pharmaceuticals, allowing drug makers to streamline the production of medicines for depression and respiratory infections, among others.<br>● Organocatalysts allow several steps in a production process to be performed in an unbroken sequence, considerably reducing waste in chemical manufacturing. |
| **Hara Bhara campaign** | **Context** The Telangana government recently launched the drone-based afforestation project named 'Hara Bhara'.<br>About the campaign<br>● India's first aerial seeding campaign by a Seedcopter drone at the KBR Park in Hyderabad was launched by Actor Rana Daggubati, who is the brand ambassador of the project.<br>● Aerial seeding is a technique of plantation wherein seed balls — seeds covered with a mixture of clay, compost, char and other components, are sprayed on the ground using aerial devices, including planes, helicopters or drones.<br>● These pellets will then sprout when there is enough rain, with the nutrients present within them helping in the initial growth.<br>● The state Department of Information technology, and Department of Forest have partnered with Marut Drones, a Hyderabad-based drone technology startup, for the first-of-its-kind project in India.<br>● This project uses drones to disperse seed balls prepared by the local women and welfare communities, over thin, barren and empty forest lands to turn them into lush green abodes of trees.<br>● Under rapid reforestation by drones, 50 lakh trees will be planted in about 12,000 hectares of land in forests across all the 33 districts in the state.<br>● The campaign is expected to accelerate the mission of Green Telangana under the 'Haritha Haram' programme.The process begins with a field survey and mapping of the terrain area to understand the ecosystem and demarcate the areas needing urgent attention. |
| **Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)** | **In News:** Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) has completed the target of opening of 8,300 Mantri Bhartiya Jan Aushadhi Kendras (PMBJKs), thus achieving the target of FY 2021-22 in just 6 months.<br>• All the districts of the country have been covered under Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP).<br>• Effective IT-enabled logistics and supply-chain systems for ensuring real-time distribution of medicines at all outlets have also been introduced.<br>• Product basket of PMBJP presently comprises 1,451 drugs and 240 surgical instruments. Further, new medicines and nutraceutical products like glucometer, protein powder, malt-based food supplements, protein bar, immunity bar, etc. have been launched.<br>**Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)**<br>• It is being run by the Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Government of India |

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| | • **Vision:** To bring down the healthcare budget of every citizen of India through providing "Quality generic Medicines at Affordable Prices".<br>• Pradhan Mantri Janaushadhi Kendra is a medical outlet opened under the scheme which makes quality medicines available at affordable prices for all.<br>• **Janaushadhi Sugam** a mobile application for Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) facilitates the public by providing a digital platform at the tip of their fingers. |
| **Indian forces to carry out exercise with U.K.** | **Context** India's armed forces are scheduled to carry out an exercise with the U.K.'s Queen Elizabeth carrier strike group later this month (October).<br>• As part of training, both the Armies would familiarise with each other's weapons, equipment, tactics, techniques and procedures for carrying out joint military operations.<br>**Other developments between India and UK**<br>• The second meeting of the India-U.K. Joint Working Group (JWG) on cyber capacity-building was held recently through videoconferencing.<br>• The Army also said that the sixth edition of the India-U.K. joint company-level military training, Exercise Ajeya Warrior, had commenced at Chaubatia, Uttarakhand, and would culminate on October 20.<br>• India and the U.K. are also in talks for a bilateral logistics support agreement.<br>**Do you know?**<br>• In July, India and the U.K. participated in a two-day bilateral Passage Exercise (PASSEX) with the Royal Navy Carrier Strike Group (CSG-21), led by HMS Queen Elizabeth, in the Bay of Bengal as the carrier was passing through. |
| **India, Croatia to collaborate: Traditional medicine systems** | **In News:** Paving the way for academic collaboration in India's traditional medicine systems, especially in the field of Ayurveda, between the two countries, the Ministry of Ayush has entered into an agreement with Croatia.<br>• The two sides will undertake academic activities in the field of Ayurveda in collaboration with the identified institutions.<br>• There will be close cooperation and collaboration on research, including study design and execution, developing evidence-based guidelines for integrating Ayurvedic principles and practices with modern medicine, conducting lectures, workshops, seminars and conferences, and other such activities on Ayurveda.<br>• Both sides will also develop academic standards and courses in accordance with the needs of the institution, end users and stakeholders and develop Ayurvedic medical education guidelines for Ayurveda education in Croatia.<br>• This will promote academic research, clinical and educational activities, medical education, training, and competency building |
| **Aryabhata Award** | **In News:** Conferred to Secretary DDR&D and Chairman DRDO, Dr G Satheesh Reddy<br>• A pioneer in the area of R&D of advanced avionics, navigation and missile technologies<br>• Dr Reddy is an institution builder and has set up mechanisms to establish robust defence development and production ecosystem. |
| **Indian Space Association** | **In News:** Prime Minister Shri Narendra Modi will launch Indian Space Association (ISpA) on 11th October, 2021<br>• ISpA is the Premier Industry Association of Space and Satellite companies, which aspires to be the collective voice of the Indian Space industry.<br>• It will undertake policy advocacy and engage with all stakeholders in the Indian Space domain, including the Government and its agencies.<br>• ISpA will help in making India self-reliant, technologically advanced and a leading player in the space arena.<br>• ISpA is represented by leading home grown and global corporations with advanced capabilities in space and satellite technologies. |

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| **One Health Consortium** | **Context** The Department of Biotechnology (DBT), Ministry of Science and Technology, supported a mega consortium on 'One Health' and launched the First 'One Health' project of DBT.<br>**Key takeaways**<br>● This Consortium consists of 27 organisations led by DBT-National Institute of Animal Biotechnology, Hyderabad.<br>● It is one of the biggest one health programs launched by Govt of India in post-COVID times.<br>● This programme envisages carrying out surveillance of important bacterial, viral and parasitic infections of zoonotic as well as transboundary pathogens in India.<br>● Use of existing diagnostic tests and the development of additional methodologies when required are mandated for the surveillance and for understanding the spread of emerging diseases. |
| **UFill** | **Context** Bharat Petroleum Corporation Limited (BPCL) - a PSU under the Ministry of Petroleum and Natural Gas has announced the launch of "UFill".<br>● It is a digital customer experience which ensures that their customers have complete control over Time, Technology and Transparency as part of their fuelling experience.<br>**Key takeaways**<br>● The UFill proposition has been launched in 65 cities across India and will soon be launched across the country.<br>● The technology provides the customer with control of fuel as well as touch less pre-payment solution.<br>● The dispensing unit can be automatically preset for the value of fuel paid for by him/her in advance and eliminates any manual intervention at the point of sale. |
| **Exercise Yudh Abhyas 2021** | **Context** As part of the ongoing Indo-US Defence Cooperation, the Joint Military Training Exercise "Ex Yudh Abhyas 2021" will be conducted at Joint Base Elmendorf Richardson, Alaska (USA) from 15 to 29 October 2021.<br>● Exercise YudhAbhyas is the largest running joint military training and defence cooperation endeavor between India and USA.<br>● This will be the 17th Edition of the joint exercise which is hosted alternately between both countries.<br>● The previous version of this exercise was held at Mahajan Field Firing Ranges in Bikaner, Rajasthan in February 2021. |
| **Battery Energy Storage System (BESS) for 1000 MWhourproject** | **In News:** Government has given go ahead for inviting the expression of interest for installation of 1000 MWh Battery Energy Storage System (BESS) as a pilot project.<br>• A joint effort of both Ministry of New and renewable energy and Ministry of Power - to provide a road map for the installation of the energy storage system in the country.<br>• Why: To support the ambitious goal of achieving 450 GW renewable energy target by 2030<br>**India plans to use energy storage system under following business cases:**<br>• Renewable energy along with the energy storage system<br>• Energy storage system as grid element to maximize the use of transmission system and strengthening grid stability and also to save investment in the augmentation of transmission infrastructure.<br>• Storage as an asset for balancing services and flexible operation. The system operator i.e. load dispatchers (RLDCs and SLDCs) may use storage system for frequency control and balancing services to manage the inherent uncertainty/variations in the load due to un-generation.<br>• Storage for distribution system i.e. it may be placed at the load centre to manage its peak load and other obligations.<br>• As a merchant capacity by the energy storage system developer and sell in the power market |

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| | • Any other future business models as a combination of the above. |
| **2021 Global TB report: WHO** | **Context** According to the 2021 Global TB report released recently by the World Health Organization (WHO), for the first time in over a decade, Tuberculosis (TB) deaths have increased globally.<br>• WHO modelling projections suggest that the number of people developing TB and dying from the disease could be much higher in 2021 and 2022.<br>**Key findings of the report**<br>• **Reduced notifications:** India (41%) was among the top countries which contributed most to the global reduction in **TB notifications** between 2019 and 2020 which is not a good sign.<br>  ○ India, along with Indonesia (14%), the Philippines (12%), China (8%) and 12 other countries, accounted for 93% of the total global drop in notifications.<br>• **Increase in cases**: The WHO estimated that some 4.1 million people currently suffer from TB but had not been diagnosed with it or had not officially reported to the national authorities. This figure is up from 2.9 million in 2019.<br>• Reduced provision: There was also a reduction in the provision of TB preventive treatment. Some 2.8 million people accessed this in 2020, a 21% reduction since 2019.<br>• Drug-resistant TB: The number of people treated for drug-resistant TB fell by 15%.<br>• Increased deaths: In 2020, more people died of TB.<br>Reasons for increase in deaths:<br>• Reallocation of Human, financial and other resources from tackling TB to COVID-19, limiting the availability of essential services.<br>• People struggled to seek care during lockdowns.<br>What is Tuberculosis (TB)?<br>• TB is caused by bacteria (Mycobacterium tuberculosis) that most often affect the lungs.<br>• Transmission: TB is spread from person to person through the air. When people with TB cough, sneeze or spit, they propel the TB germs into the air.<br>• Symptoms: Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.<br>• TB is a treatable and curable disease.<br>• Multidrug-resistant tuberculosis (MDR-TB) is a form of TB caused by bacteria that do not respond to isoniazid and rifampicin, the 2 most powerful, first-line anti-TB drugs. It is treatable and curable by using second-line drugs.<br>• Extensively drug-resistant TB (XDR-TB) is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.**Initiatives by India**<br>• **Eliminating TB by 2025**: India is committed to eliminating tuberculosis by 2025, five years ahead of the global target of 2030.<br>• **National Tuberculosis Elimination Programme**: To align with the ambitious goal, the programme has been renamed from the Revised National Tuberculosis Control Programme (RNTCP) to National Tuberculosis Elimination Programme (NTEP). |
| **Arecanut** | **Context** A book titled Arecanut has said that arecoline hydrobromide, a major active principle of arecanut, is found to **arrest the growth of cancer cells.**<br>• The book has quoted this from a recent study at the Winship Cancer Institute of Emory University, Atlanta, the U.S.<br>**Key takeaways**<br>• In a recent study at the Winship Cancer Institute, arecoline hydrobromide is found to arrest the growth of cancer cells.<br>• It was reported that arecoline hydrobromide inhibited the activity of the enzyme ACAT1 (acetyl-C0A acetyltransferase) which leads to reduction of cancer cell proliferation and tumour growth in mice.<br>• The antioxidant activity of arecanut might play an active role in repairing DNA damage in cancer cells. |

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| | • According to the book, Arecanut in its pure form is not dangerous but has got a plethora of medicinal properties, including curing ulcers, wounds and even cancer.<br>**What is Arecanut?**<br>• The arecanut palm is the source of common chewing nut, popularly known as betel nut or Supari.<br>• In India it is extensively used by large sections of people and is very much linked with religious practices.<br>• India is the largest producer of arecanut and largest consumer also.<br>• Major states cultivating this crop are Karnataka (40%), Kerala (25%), Assam (20%), Tamil Nadu, Meghalaya and West Bengal.<br>**Do you know?**<br>• Arecanut has been allegedly associated with ill-effects of human health. It is regarded as carcinogenic (one which causes cancer). |
| **eSanjeevani** | **In News:** eSanjeevani, India's leading telemedicine service, under the Union Ministry of Health and Family Welfare, clocked 1.4 crore consultations.<br>Operating in two variants i.e., eSanjeevaniAB-HWC and eSanjeevaniOPD, this initiative has over the time gained immense popularity in being able to deliver healthcare services through digital platforms.<br>**eSanjeevani AB-HWC, a Doctor-to-Doctor teleconsultation system**<br>• Launched with an intent to alleviate the Urban-Rural divide in terms of health services<br>• Works on Hub-and-Spoke Model<br>• The 'Ayushman Bharat-Health and Wellness Centres' (HWCs) set up at State Level, act as Spokes, which are mapped with the HUB (comprising MBBS/ Specialty/Super-Specialty doctors) at Zonal level. This enables a patient residing in rural areas to avail quality health services.<br>**eSanjeevani OPD**<br>• Launched in 2021<br>• Aims to provide safe Doctor-to-Patient consultations<br>• Has continued to grow in demand as it allows citizens to consult doctors from the comfort and in the confines of their homes, bypassing wait time, travel, risks of infection etc.<br>**Significance**<br>• Addressing the shortage of doctors and specialists at the ground levels<br>• Reducing the burden on secondary and tertiary level hospitals<br>• Aims to constantly improve the digital health infrastructure of the country |
| **Pig kidney transplant in human patient** | **Context** For the first time, a pig kidney has been transplanted into a human without triggering immediate rejection by the recipient's immune system.<br>• This is a potentially major advance that could eventually help alleviate a dire shortage of human organs for transplant.<br>**Key takeaways**<br>• The procedure was done at NYU Langone Health in New York City.<br>• It involved use of a pig whose genes had been altered so that its tissues no longer contained a molecule known to trigger almost immediate rejection.<br>  ○ The genetically altered pig, dubbed GalSafe, was used as the donor.<br>• The recipient was a brain-dead patient with signs of kidney dysfunction whose family consented to the experiment before she was due to be taken off of life support.<br>• **Finding:** The team theorized that removing out the pig gene for a carbohydrate that triggers rejection – a sugar molecule, or glycan, called alpha-gal – would prevent the problem.<br>• **Future possibility:** The NYU kidney transplant experiment should pave the way for trials in patients with end-stage kidney failure, possibly in the next year or two. |

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| **Web Based Project Monitoring Portal (WBPMP) of MES** | **Context** Recently, the Defence Minister launched the Web Based Project Monitoring Portal (WBPMP) for Military Engineer Services (MES).<br>**About the portal**<br>● The portal was conceptualized in accordance with the Digital India Mission of the Union Government.<br>● It has been developed by Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-G).<br>● The newly launched unified portal is the first project management e-Governance to be implemented by the MES.<br>● It will enable real time monitoring of projects from its inception to completion.<br>● All stakeholders not only from MES but also Armed Forces users can gain access to the project information. |
| **Mastitis disease** | **Context** Utilising indigenous knowledge systems shared by a farmer from Gujarat, a poly-herbal and cost-effective medicine has been developed to treat Mastitis disease.<br>**Mastirak Gel**<br>● National Innovation Foundation (NIF) has identified unique herbal composition shared by a farmer from Gujarat for control of mastitis among farm animals.<br>● A gel preparation has been developed for topical application over the affected udder surface, and a patent has been filed for this composition It was found that the medication improve the udder health.<br>● It reduced inflammation which is detrimental to the udder.<br>● Dairy owners in eight states of the country — Gujarat, Rajasthan, Haryana, Madhya Pradesh, Kerala, Karnataka, Maharashtra, and Chhattisgarh - have benefited by adopting Masirak-anti mastitis herbal medication.<br>● It has reduced the use of antibiotics and helped in the cost-effective management of the disease.<br>**About Mastitis disease**<br>● ● It is an infectious disease of dairy cattle.<br>● ● Bovine mastitis is a condition typified by the persistent and inflammatory reaction of the udder tissue due to either physical trauma or infections caused by microorganisms.<br>● ● The most obvious symptoms of clinical mastitis are abnormalities in: The udder such as swelling, heat, hardness, redness, or pain.<br>● ● The milk has a watery appearance, flakes, clots, or pus. |
| **Atal Innovation Mission Digi-Book Innovations for You** | **In News:** NITI Aayog's Atal Innovation Mission (AIM) has launched – "Innovations for You" an attempt to showcase the success stories of Atal Innovation Mission's Startups in different domains.<br>● These startups have worked to create new, disruptive and innovative products, services, and solutions that can pave a path for a sustainable future.<br>● The first edition of this book is focused on innovations in **Health Care** - are leveraging frontier technologies such as AI, IoT, ICT and others to provide socially relevant solutions to problems likeAnemia, Malaria, dental care, mental health, neonatal and child care and monitoring human vitals, among others. |
| **Pinaka and Smerch rocket systems** | **Context** The Indian Army has deployed Pinaka and Smerch long-range, multi-barrel rocket launch systems as well as BrahMos supersonic cruise missiles in the Tawang sector of Arunachal Pradesh closer to the Line of Actual Control (LAC).<br>**Key takeaways**<br>● Smerch, procured from Russia, is the longest range conventional rocket system in the Army's inventory with a maximum range of 90 km.<br>● Pinaka, indigenously designed and developed by the Defence Research and Development Organisation, has a range of 38 km.<br>**About BrahMos supersonic cruise missiles** |

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| | • **Carried out by**: Defence Research and Development Organisation (DRDO) from Balasore in Odisha.<br>• BrahMos surface-to-surface supersonic cruise missile features indigenous Booster and Airframe Section along with many other 'Made in India' sub-systems.<br>• The BrahMos Land-Attack Cruise Missile was cruising at a top speed of Mach 2.8. |
| **India Internet Governance Forum (IIGF)** | **Context** India Internet Governance Forum (IIGF) event will be conducted jointly by the Ministry of Electronics and IT, NIXI and Multistakeholder Group from 8th to 11th of November, 2021.<br>**Key takeaways**<br>• The **theme of IIGF 2021** is 'Empower India through Power of Internet'. The event will witness discussions on the road to Digitization in India.<br>• It is an initiative associated with the UN Internet Governance Forum (UN-IGF).<br>• It has been constituted in conformance to IGF-Paragraph 72 of the **Tunis Agenda** of the UN-based Internet Governance forum (IGF).<br>• It is a multi-stakeholder platform bringing representatives together from various groups to discuss public policy issues related to the Internet.<br>• Through an open and inclusive process, IIGF brings together all stakeholders in the Global Internet governance ecosystem, including government, industry, civil society, academia - as equal participants of the larger Internet Governance discourse. |
| **Amended Technology Up-gradation Fund Scheme (ATUFS)** | **Context** Union Minister of Textiles reviewed the Amended Technology Up-gradation Fund Scheme (ATUFS) to boost the Indian textile industry by enabling the ease of doing business, bolstering exports and fuelling employment.<br>Key takeaways<br>• The Ministry of Textiles had introduced Technology Upgradation Fund Scheme (TUFS) in 1999 as a credit linked subsidy scheme.<br>**Objective:**<br>• modernization and technology up-gradation of the Indian textile industry,<br>• promoting ease of doing business,<br>• generating employment and promoting exports.<br>• Since then, the scheme has been implemented in different versions.<br>• The ongoing ATUFS has been approved in 2016 and implemented through the web based iTUFS platform.<br>• Capital Investment Subsidy is provided to benchmarked machinery installed by the industry after physical verification.<br>• ATUFS was approved for a period from 2015-16 to 2021-22 with an allocation of Rs. 17,822 crore<br>• The scheme is administered with a two stage monitoring mechanism by Technical Advisory-cum-Monitoring Committee (TAMC) and Inter-Ministerial Steering Committee (IMSC). In 2019, IMSC decided to introduce physical verification of machinery and computation of subsidy before releasing committed liability under previous versions of the scheme |
| **Pulsating White Dwarf** | **Context** A team of astronomers, using NASA's Transiting Exoplanet Survey Satellite (TESS) have reported a unique phenomenon in a white dwarf about 1,400 light years from Earth.<br>• They saw the white dwarf lose its brightness in 30 minutes.<br>**About white dwarf**<br>• A white dwarf is what stars like the Sun become after they have exhausted their nuclear fuel.<br>• Near the end of its nuclear burning stage, this type of star expels most of its outer material, creating a planetary nebula.<br>• Only the hot core of the star remains.<br>• This core becomes a very hot white dwarf, with a temperature exceeding 100,000 Kelvin.<br>• The white dwarf cools down over the next billion years or so. |

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| | • A pulsating white dwarf is a white dwarf star whose luminosity varies due to non-radial gravity wave pulsations within itself.<br>**It's switch on and off mode**<br>• As per scientists,in this system the donor star in orbit around the white dwarf keeps feeding the accretion disk.<br>  ○ An accretion disk is a structure formed by diffuse material in orbital motion around a massive central body. The central body is typically a star.<br>• As the accretion disk material slowly sinks closer towards the white dwarf it generally becomes brighter(on mode).<br>• During the 'on' mode, the white dwarf feeds off the accretion disk as it normally would.<br>• Suddenly and abruptly the system turns 'off' and its brightness plummets.<br>• When this happens the magnetic field is spinning so rapidly that a centrifugal barrier stops the fuel from the accretion disk constantly falling on to the white dwarf.<br>• The new discovery will help the astronomers understand the physics behind accretion – how black holes and neutron stars feed material from their nearby stars.<br>**About Transiting Exoplanet Survey Satellite (TESS)**<br>• TESS is a space telescope for NASA's Explorers program, designed to search for exoplanets using the transit method in an area 400 times larger than that covered by the Kepler mission.<br>• It was launched in 2018 by Falcon rocket system.<br>• Using the Hubble Space telescope and TESS, astronomers have identified several white dwarfs over the years. |
| **NIPUN Bharat Mission** | **In News:** Government sets up National Steering Committee for implementation of the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) Bharat Mission<br>• **By:** The Department of School Education and Literacy<br>• **Aim:** To achieve the goal of universal proficiency in foundational literacy and numeracy for every child by grade 3, as envisaged by National Education Policy 2020.<br>*Responsibilities-*<br>• To oversee the progress of National Mission on Foundational Literacy and Numeracy and provide guidance on policy issues.<br>• To arrive at the target to be achieved nationally in 2026-27.<br>• To disseminate tools for measurement of yearly progress in the form of guidelines.<br>• To prepare and approve a National Action Plan (based on the State's Action Plans) with KRAs for every State/UT vis-à-vis factors attributable for the gaps (i.e., lack of Fund, Vacancies, Teachers, Demography, Local issues, Need of Training for teachers, Curriculum & pedagogy related).<br>• To review programmatic and financial norms periodically to ensure they are synchronised with targets to be achieved.<br>• To develop methodology of assessment to analyse the progress and provide feedback to States/UTs. |
| **Mobile hospitals under PM Ayushman Bharat Health Infrastructure Mission** | **Context** Recently it was highlighted by the Union Health minister that under recently launched PM Ayushman Bharat Health Infrastructure Mission, various tests would be done for free at the district level, which will reduce expenses and unnecessary travel for the poor.<br>**Key takeaways**<br>• For the first time in Asia, two container-based hospitals, equipped with comprehensive medical facilities, will be stationed in Chennai and Delhi and kept at the ready to be swiftly mobilised by rail or air to respond to any calamity or disaster in the country.<br>• **Objective**: To fill critical gaps in public health infrastructure, especially in critical care facilities and primary care in both the urban and rural areas.<br>• Strengthening of points of entry will ring-fence India's borders against the import of new infectious diseases and pathogens.<br>• Development of critical care hospital blocks in districts shall make the districts self-sufficient in providing comprehensive treatment for infectious diseases |

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| | • Every district shall have at least one medical college as well. |
| **India's TB Elimination Programme** | **In News:** WHO South-East Asia Region (SEAR) High-Level Meeting held for renewed TB response co-chaired by India.<br>*India's contribution towards eliminating TB*<br>• **Eliminating TB by 2025:** India is committed to eliminating tuberculosis by 2025, five years ahead of the global target of 2030.<br>• **National Tuberculosis Elimination Programme:** To align with the ambitious goal, the programme has been renamed from the Revised National Tuberculosis Control Programme (RNTCP) to National Tuberculosis Elimination Programme (NTEP<br>o Addressing all co-morbidities and goes beyond medical interventions to tackle the social determinants of TB while minimizing access barriers to diagnosis and treatment.<br>o Through the Nikshay Poshan Yojana, nutritional support is extended to all TB patients for the entire duration of their treatment.<br>o Rigorously working towards Airborne Infection Control in hospital wards and outpatient waiting areas.<br>o Has the provision of chemoprophylaxis against TB disease in pediatric contacts of TB patients and PLHIV patients.<br>o The process is ongoing for expanding TB preventive treatment for the adult contacts too.<br>• **'TB Mukt Bharat Abhiyaan'** has been launched as a people's movement for TB elimination in India.<br>• India remains committed to supporting countries in its neighbourhood with possible technical support and assistance.<br>Indi appreciated the South-East Asia Region (SEAR) for demonstrating the highest-level political commitment towards ending tuberculosis and increasing investments towards ending TB.<br>**Tuberculosis (TB)**<br>Tuberculosis (TB) is a disease caused by bacteria called Mycobacterium tuberculosis.<br>• **Transmission**: TB is spread from person to person through the air. When people with TB cough, sneeze or spit, they propel the TB germs into the air.<br>• **Symptoms**: Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.<br>• TB is a treatable and curable disease.<br>• **Multidrug-resistant tuberculosis (MDR-TB)** is a form of TB caused by bacteria that do not respond to **isoniazid** and **rifampicin**, the 2 most powerful, first-line anti-TB drugs. It is treatable and curable by using second-line drugs.<br>• **Extensively drug-resistant TB (XDR-TB)** is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.<br>*Reports say*<br>• According to the India TB report, in 2020, there were 18.05 tuberculosis notifications, which was a fall of 24% from 2019 due to the disruptions caused by the pandemic.<br>• According to the 2021 Global TB report released recently by the World Health Organization (WHO), for the first time in over a decade, Tuberculosis (TB) deaths have increased globally. WHO modelling projections suggest that the number of people developing TB and dying from the disease could be much higher in 2021 and 2022. |
| **AY4.2 'infrequent' in India: INSACOG** | **Context** The latest mutation of the coronavirus variant, AY4.2, which has been linked to a rise in cases in the United Kingdom, is "very infrequent" in India, according to a weekly report by the India SARS-CoV-2 Genome Consortium (INSACOG).<br>**What is AY4.2?**<br>• AY.4.2 is a descendant of the Delta variant of COVID-19. The Delta variant, also known as B.1.617.2, was first identified in India in October 2020. |

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| | • The AY.4.2 sub-lineage contains 2 mutations in its spike protein — A222V and Y145H.<br>• It is dubbed "Delta Plus" and now named VUI-21OCT-01 by the UK Health Security Agency (UKHSA)).<br>**What is Indian SARS-CoV-2 Genomic Consortia (INSACOG)?**<br>• **Coordinated by**: Department of Biotechnology (DBT) along with MoH&FW, ICMR, and CSIR<br>• The consortium will ascertain the status of new variant of SARS-CoV-2 in the country.<br>• INSACOG will have a high level Inter-Ministerial Steering Committee.<br>• It will have a Scientific Advisory Group for scientific and technical guidance.<br>• **Aim**: To monitor the genomic variations in the SARS-CoV-2 on a regular basis through a multi-laboratory network.<br>• This vital research consortium will also assist in developing potential vaccines in the future.<br>• The consortium will also establish a sentinel surveillance for early detection of genomic variants with public health implication, and determine the genomic variants in the unusual events/trends (super-spreader events, high mortality/morbidity trend areas etc.). |
| **India seeks vaccine loans from ADB, AIIB** | **Context** The Government of India has applied for loans from the ADB and the Asian Infrastructure Investment Bank (AIIB) to procure as many as 667 million doses of COVID-19 vaccines.<br>Key takeaways<br>• The ADB is expected to lend $1.5 billion and the AIIB around $500 million.<br>• The 667 million doses will have to be vaccines qualified by the World Health Organization (WHO).<br>• AIIB will co-finance the vaccine procurement.<br>• The vaccine purchase by the Government of India has been made under the ADB's Asia Pacific Vaccine Access Facility (APVAX) initiative.<br>What is APVAX initiative?<br>• It was Launched in December 2020.<br>• It offers "rapid and equitable support to its developing member countries as they procure and deliver effective and safe COVID-19 vaccines".<br>Asian Development Bank (ADB)<br>• It is a regional development bank.<br>• It was established on 19 December 1966.<br>• Headquarters: Mandaluyong, Philippines. It was established to promote social and economic development in Asia.<br>• **Motto**: ADB is committed to achieving a prosperous, inclusive, resilient and sustainable Asia & the Pacific, while sustaining its efforts to eradicate extreme poverty.<br>• Five largest borrowing countries are China, India, Pakistan, Indonesia and Bangladesh.<br>**The Asian Infrastructure Investment Bank (AIIB)**<br>• It is a multilateral development bank with headquarters in Beijing, China.<br>• It is a development bank with a mission to improve the economic and social outcomes in Asia.<br>• It has 103 approved members.<br>• It focuses on investment in sustainable infrastructure and developmental projects.<br>• Membership to the bank is open to all members of the Asian Development Bank or the World Bank. |
| **Agni-5** | **In News:** Agni-5, surface to surface ballistic missile has been launched successfully.<br>• Capable of striking targets at ranges up to 5,000 kilometres with very high degree of accuracy<br>• Uses a three-stage solid fuelled engine<br>• Successful launch in line with India's policy to have 'credible minimum deterrence' that underpins the commitment to 'No First Use' |

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| **Pneumococcal 13-valent Conjugate Vaccine (PCV) drive launched** | **Context** Union Health Minister launched a nationwide expansion of Pneumococcal 13-valent Conjugate Vaccine (PCV) under the Universal Immunisation Programme (UIP) as a part of 'Azadi ka Amrit Mahotsav'.<br>● It was for the first time in the country that PCV would be available for universal use.<br>● Pneumonia was a leading cause of death among children under five, globally and in India.<br>**About Pneumonia**<br>● A variety of organisms, including bacteria, viruses and fungi, can cause pneumonia.<br>● Pneumonia caused by pneumococcus is the most common cause of severe pneumonia in children.<br>● Around 16% of deaths in children occur due to pneumonia in India.<br>● The nationwide roll-out of PCV will reduce child mortality by around 60%<br>● **symptoms of pneumonia**: Chest pain when you breathe or cough, changes in mental awareness, Cough, which may produce phlegm, Fatigue, Fever, chills, etc.<br>● Treatments include antibiotics, antivirals and anti fungal medications.<br>● Healthy diet, hygiene, vaccinations are some of the ways to prevent pneumonia. |

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| **China can join Quad initiatives** | **Context** Recently Australian Prime Minister said that China is welcome to contribute to the objective of ensuring a free and open Indo-Pacific through QUAD initiatives.<br>**QUAD**<br>• **Full form**: Quadrilateral Security Dialogue<br>• **Countries**: USA, Japan, Australia and India<br>• **Location/Headquarter**: –<br>• **Aims**: The main aim is to enable a regional security architecture for the maintenance of a rules- based order. It seeks to contain a 'rising China' and work against its predatory trade and economic policiesThe main |
| **Extension of CPEC to Afghanistan** | **Context** Recently, Pakistan has discussed Taliban-led Afghanistan joining the multibillion-dollar China-Pakistan Economic Corridor (CPEC) infrastructure project.<br>• China has proposed construction of the Peshawar-Kabul motorway as an extension of CPEC in Afghanistan.<br>**China-Pakistan Economic Corridor**<br>• The CPEC is a bilateral project between Pakistan and China.<br>• It is intended to promote connectivity across Pakistan with a network of highways, railways, and pipelines accompanied by energy, industrial, and other infrastructure development projects.<br>• It aims to link the Western part of China (Xinjiang province) to the Gwadar Port in Balochistan, Pakistan via Khunjerab Pass in the Northern Parts of Pakistan.<br>• It will pave the way for China to access the Middle East and Africa from Gwadar Port, enabling China to access the Indian Ocean.<br>• CPEC is a part of the Belt and Road Initiative. The BRI, launched in 2013, aims to link Southeast Asia, Central Asia, the Gulf region, Africa and Europe with a network of land and sea routes.<br>• India has been severely critical of the CPEC, as it passes through Pakistan-occupied Kashmir, which is a disputed territory between India and Pakistan.<br> <br> |

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| **India extends support for protecting the Antarctic environment** | **In News:** India has extended support for protecting the Antarctic environment and for co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as **Marine Protected Areas (MPAs)**.<br>• Essential to regulate illegal unreported and unregulated fishing<br>• India's decision to consider extending support and co-sponsoring the MPA proposals is driven by conservation and sustainable utilization principles and adhering to the global cooperation frameworks (such as Sustainable Development Goals, UN Decade of Oceans, Convention on Biodiversity, etc.) to which India is a signatory.<br>India had embarked on Antarctic expedition in 1981, through the Southern Indian Ocean sector. Till date, India had completed 40 expeditions with plans for the 41st expedition in 2021-22. India has solidified its interests in upholding its Antarctic vision.<br>**About Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)**<br>• CCAMLR is an international treaty to manage Antarctic fisheries to preserve species diversity and stability of the entire Antarctic marine ecosystem.<br>• CCAMLR came into force in April 1982.<br>• India has been a **permanent member** of the CCAMLR since 1986.<br>**About Marine Protected Areas (MPAs)**<br>• An MPA is a marine protected area that provides protection for all or part of its natural resources.<br>• Certain activities within an MPA are limited or prohibited to meet specific conservation, habitat protection, ecosystem monitoring, or fisheries management objectives.<br>**About Weddell Sea:** Part of the Southern Ocean and contains the Weddell Gyre. Its land boundaries are defined by the bay formed from the coasts of Coats Land and the Antarctic Peninsula<br>**Do you know?**<br>• The Indian Antarctic expeditions began in 1981.<br>• The Indian Antarctic programme has now been credited to have built three permanent research base stations in Antarctica—named Dakshin Gangotri, Maitri, and Bharati.<br>• As of today, India has two operational research stations in Antarctica named Maitri and Bharati.<br>• The National Centre for Polar and Ocean Research (NCPOR), Goa, manages the entire Indian Antarctic program. |
| **Indo-US Defence Industrial Security** | **Context:** The Industrial Security Agreement (ISA) summit between India and the United States was organised to develop protocol for the exchange of classified information between the defence industries of both the nations.<br><br>The ISA was signed in December 2019 to<br>• Facilitate the exchange of classified information between the defence industries of both the countries<br>• Create a roadmap for the implementation of the ISA<br>• In-principle agreement to establish Indo-US Industrial Security Joint Working Group<br>• Group to meet regularly to align policies for defence industries to collaborate on critical defence technologies |
| **State of the World's Children Report: UNICEF** | **Context:** The UNICEF report 'The State of the World's Children 2021; On My Mind: promoting, protecting and caring for children's mental health' details the significant impact of COVID-19 pandemic on children's mental health.<br>• Around 14 percent of 15 to 24-year-olds in India, or 1 in 7, reported often feeling depressed or having little interest in doing things.<br>• Almost 46,000 adolescents die from suicide each year, among the top five causes of death for their age group.<br>• More than 1.6 billion children have suffered some loss of education. |

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| | • Meanwhile, wide gaps persist between mental health needs and mental health funding. The report finds that about 2 per cent of government health budgets are allocated to mental health spending globally.<br>**Way Forward:** It calls for commitment, communication and action as part of a comprehensive approach to promote good mental health for every child, protect vulnerable children and care for children facing the greatest challenges.<br>• Urgent investment in child and adolescent mental health across sectors, not just in health, to support a whole-of-society approach to prevention, promotion and care.<br>• Integrating and scaling up evidence-based interventions across health, education and social protection sectors - including parenting programmes that promote responsive, nurturing caregiving and support parent and caregiver mental health; and ensuring schools support mental health through quality services and positive relationships.<br>• Breaking the silence surrounding mental illness, through addressing stigma and promoting better understanding of mental health and taking seriously the experiences of children and young people. |
| **India Joins High Ambition Coalition (HAC) for Nature and People** | **In News:** India has joined the High Ambition Coalition for Nature and People, a group of more than 70 countries encouraging the adoption of the global goal to protect 30x30.<br>• Initiated at the "One Planet Summit" in Paris in January 2021, this coalition aims to promote an international agreement to protect at least 30 % the of world's land and ocean by 2030.<br>• HAC members currently include a mix of countries in the global north and south; European, Latin American, Africa and Asia countries are among the members.<br>• India is the first of the BRICS bloc of major emerging economies (Brazil, Russia, India, China and South Africa) to join the HAC. |
| **MOU: Ministry of Textiles and GIZ** | **In News:** An MOU was signed between Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ) and the Ministry of Textiles Govt. of India on Implementation Agreement of Indo German Technical Cooperation Project on 'Sustainability and Value Added in the Cotton Economy'.<br>• The objective of the project is `to increase the value addition from sustainable cotton production in India by focusing on sustainable cotton, and strengthening of downstream processing'.<br>• It is focussing on 4 majorly cotton producing states- Maharashtra, Gujarat, Madhya Pradesh and Tamil Nadu<br>• Follows "From shelf to field" approach, with the strategy to link consumers to the cotton growers in India and work along the entire supply chain.<br>• To create the "pull" factor for improved market access by the farmers for their sustainably grown cotton – promotion of sustainable cotton cultivation methods emphasizing on implementation of good agriculture practices.<br>• Focusing on creation and promotion of transparency about the prevalence and application of internationally recognized/accepted sustainability standards and promoting measures that reduce the water footprint in cotton production. This will help reduce vulnerability of cotton sector to ever-increasing water-stress worsened by climate vagaries.<br>*GIZ project is aimed at*<br>• Increasing volume of cotton production at least on 90,000 hac<br>• Participation of 1.50 lakh cotton farmers with yield increase by 10%<br>• This will enable capacity building of the 1.50 lakh farmers& entrepreneurs of which about 30% will be women beneficiaries.<br>India is the **largest cotton producer** in the world and also the **2nd largest consumer** of cotton in the world with estimated consumption of 303 lakh bales (5.15 Million Metric Tones i.e. **20% of world cotton** consumption of 1505 lakh bales (25.59 Million Metric Tones). It plays a major |

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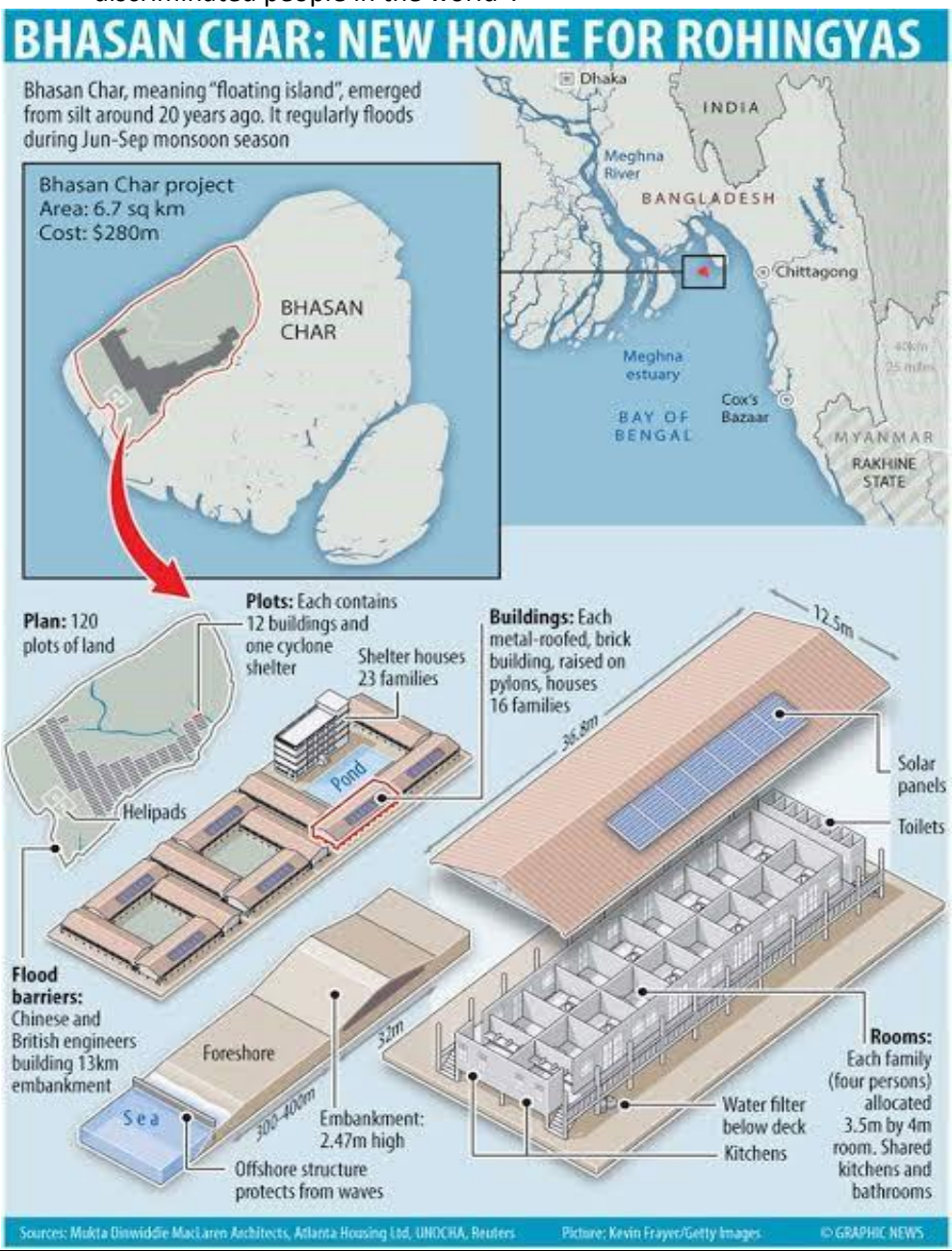
| | role in sustaining the livelihood of an estimated 6 Million cotton farmers and about 50 Million people engaged in related activity such as cotton processing & trade. |
| **Countering America's Adversaries through Sanctions Act (CAATSA)** | **Context** In the first such signal to New Delhi, visiting US Deputy Secretary of State has indicated that Washington might reconsider slapping sanctions on the Indian government when India takes delivery of five Russian-built S-400 Triumf anti-aircraft missile systems in a US$5.5 billion deal later this year.<br>**What is CAATSA?**<br>● Countering America's Adversaries through Sanctions Act (CAATSA)'s core objective is to counter Iran, Russia and North Korea through punitive measures.<br>● Enacted in 2017.<br>● Includes sanctions against countries that engage in significant transactions with Russia's defence and intelligence sectors.<br>**What is S-400 Triumf anti-aircraft missile systems?**<br>1. The S-400 Triumf is a mobile, surface-to-air missile system (SAM) designed by Russia.<br>2. It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed Terminal High Altitude Area Defense system (THAAD). |
| **Nuclear Regulatory Commission (NRC)** | **Context** Nuclear Regulatory Commission (NRC) recently upheld the Linear No-Threshold (LNT) model to prescribe radiation safety standards, ending the protracted controversy on the topic.<br>Background<br>● Over six years ago, during February 2015, petitions were filed requesting the NRC, "to amend its regulations based on their evidence that contradicts the linear no-threshold (LNT) dose-effect model.<br>● The petitioners support "radiation hormesis," a concept that proposes that low doses of ionising radiation protect against the deleterious effects of high doses of radiation and result in beneficial effects to humans. This was denied by the NRC.<br>About LNT model<br>● The linear no-threshold model (LNT) is a dose-response model used in radiation protection to estimate probable health effects such as radiation-induced cancer, genetic mutations on the human body due to exposure to ionizing radiation.<br>● The LNT model helps the agencies to regulate radiation exposures to diverse categories of licensees, from commercial nuclear power plants to individual industrial radiographers and nuclear medical practices.<br>What is Nuclear Regulatory Commission (NRC)?<br>● It is an independent agency of the USA government tasked with protecting public health and safety related to nuclear energy.<br>● It was established by the Energy Reorganization Act of 1974.<br>Functions: Overseeing reactor safety and security<br>● administering reactor licensing and renewal<br>● licensing radioactive materials managing the storage, security, recycling, and disposal of spent fuel. |
| **Rohingya Crisis** | **Context** Bangladesh is planning to send more than 80,000 Rohingya refugees to a remote island- Bhasan Char- in the Bay of Bengal after sealing an agreement for the United Nations to provide help.<br>● Some 19,000 of the Muslim refugees from Myanmar have already relocated to the island, despite doubts raised by aid groups.<br>**Background**<br>● Bhasan Char is an island specifically developed to accommodate 1,00,000 of the 1 million Rohingya who have fled from neighbouring Myanmar.<br>● Human rights groups have criticised the move.<br>**Who are Rohingyas?**<br>● They are an Ethnic group, mostly Muslims. They were not granted full citizenship by Myanmar. |

- They were classified as “resident foreigners or associate citizens”.
- Ethnically they are much closer to Indo-Aryan people of India and Bangladesh than to the Sino-Tibetans of Myanmar.
- Described by UN Secretary-General Antonio Guterres as “one of, if not the, most discriminated people in the world”.




**OECD/G20 Inclusive Framework tax deal**

**Context** The two-pillar solution under the OECD/G20 Inclusive framework will be delivered to the G20 Finance Ministers meeting in Washington DC on 13 October, then to the G20 Leaders Summit in Rome at the end of the month.

- Countries are aiming to sign a multilateral convention during 2022, with effective implementation in 2023.
- India has already joined the G20–OECD inclusive framework deal.
- It seeks to reform international tax rules and ensure that multinational enterprises pay their fair share wherever they operate.
- 130 countries and jurisdictions, representing more than 90% of global GDP, have signed the deal.

**Two pillars of framework**

- **Dealing with transnational and digital companies**: It ensures that large multinational enterprises, including digital companies, pay tax where they operate and earn profits.

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| | • **Dealing with low-tax jurisdictions to address cross-border profit shifting and treaty shopping**: It seeks to put a floor under competition among countries through a global minimum corporate tax rate, currently proposed at 15%. |
| **3rd India – UK Energy for Growth Partnership – Ministerial Energy Dialogue** | **In News:** Energy Transition was a major area of discussion in the dialogue and the Energy Ministers spoke in detail on the ongoing Energy Transition activities in their respective countries with focus on renewables, including solar, offshore wind, storage, EVs, alternative fuels, etc.<br>• The UK side presented a detailed summary of the significant ongoing work and thepast work done in the last two years under the umbrella of bilateral cooperation<br>• Welcomed the Roadmap 2030 for India-UK future relations launched by both the Prime Ministers during India-UK Virtual Summit in May and identified various future areas of collaboration in line with the Roadmap 2030.<br>• Deliberated and agreed on a Forward Action Plan on Power and Clean Transport, Renewables, Green Finance and Clean Energy Researchas part of the roadmap 2030, covering a range of topics including smart grids, energy storage, green hydrogen, charging infrastructure, battery storage and need of mobilizing investments in renewable energy along with other proposals under multilateral collaboration.<br>• The dialogue concluded with both sides underlining the importance of international cooperation insecuring affordable and sustainable energy for the worldwhile setting in motion, concrete action plans for driving the clean energy transition in Power Sector |
| **Northwest Europe Cooperative Event** | **In News:** India participated in the Ministerial session of the Green Grids Initiative-One Sun One World One Grid (GGI-OSOWOG) Northwest Europe Cooperative Event, which saw a multi-layered dialogue for developing cross-border trading of renewable electricity.<br>**India**<br>• Affirmed its commitment to the environment and the cause of clean energy and energy transition<br>• Highlighted India's target of achieving 450 GW of installed renewable energy capacity by 2030<br>• Underlined that India is well on its way to achieving its Nationally Determined Contributions (NDCs) relating clean energy and emission reduction well ahead of the target date.<br>• Presented the GGI-OSOWOG initiative as a possible solution for driving down the need for storage and in effect reduce the costs of the energy transition.<br>• Sustainable development and climate change mitigation are at the heart of the GGI-OSOWOG initiative, and that the scale of the project could very well make it the next biggest modern engineering marvel.<br>**Background**<br>• The idea for the One Sun One World One Grid (OSOWOG) initiative was put forth by the Prime Minister of India Shri Narendra Modi, at the First Assembly of the International Solar Alliance (ISA) in October 2018. He had called for connecting solar energy supply across borders.<br>• In May 2021, the United Kingdom and India agreed to combine forces of the Green Grids Initiative and the One Sun One World One Grid initiative and jointly launch GGI-OSOWOG at the COP26 summit being hosted by the UK at Glasgow in November 2021. |
| **Global Hunger Index ranks India at 101 out of 116 countries** | **Context** The Global Hunger Index ranked India at 101st out of a total 116 countries.<br>• India is also among the 31 countries where hunger has been identified as serious.<br>• India ranked 94 among 107 countries in the Global Hunger Index (GHI) released last year.<br>**Key takeaways**<br>• Only 15 countries fare worse than India which includes countries like Papua New Guinea (102), Afghanistan (103), Nigeria (103), Congo (105), Mozambique (106), Sierra Leone (106), Timor-Leste (108), etc. |

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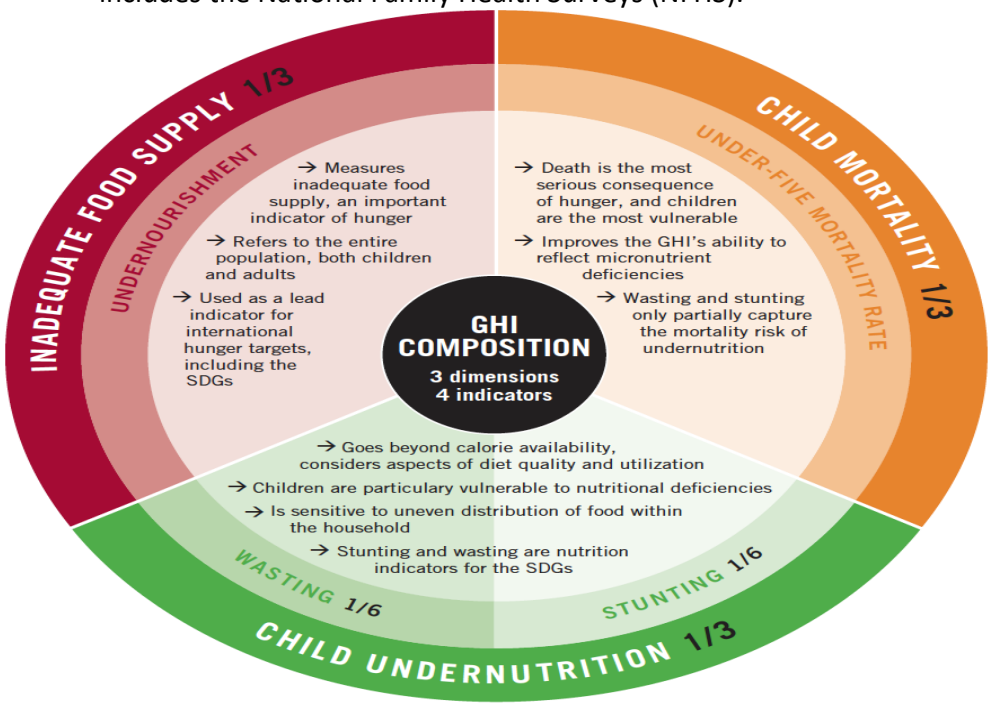
| | • India is also behind most of the neighbouring countries. Pakistan was placed at 92 rank, Nepal at 76 and Bangladesh also at 76.<br>• Somalia has the highest level of hunger according to the 2021 GHI ranking<br>• Current projections based on the Global Hunger Index (GHI) show that the world as a whole — and 47 countries in particular — will fail to achieve even low hunger by 2030.<br>• After decades of decline, the global prevalence of undernourishment is increasing. This shift may be an indication of reversals in other measures of hunger.<br>**What is the Global Hunger Index?**<br>• The GHI is an annual peer-reviewed publication by Concern Worldwide and Welthungerhilfe.<br>• It aims to track hunger at global, regional and national levels.<br>• It uses four parameters to calculate its scores –<br>  ○ Undernourishment<br>  ○ child wasting<br>  ○ child stunting and<br>  ○ child mortality.<br>• Information from the World Health Organization, the World Bank and the United Nations are taken to calculate these parameters.<br>• All these international organisations draw from national data, which, in India's case, includes the National Family Health Surveys (NFHS).<br>  <br> |
| **Bhutan, China sign MoU to expedite boundary talks** | **Context** In a step towards resolving their boundary disputes, Bhutan and China signed an agreement on a three-step roadmap to help speed up talks, at a meeting of Foreign Ministers held via videoconference.<br>**Key takeaways**<br>• The roadmap had been finalised during the 10th expert group meeting in Kunming in April 2021, and presented for approval to their Governments in Thimphu and Beijing respectively.<br>• The roadmap "for Expediting the Bhutan-China Boundary Negotiations", is expected to kickstart the progress on the boundary talks process that has been delayed for five years, first due to the Doklam standoff in 2017 and then by the pandemic. |

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| | ● The timing of the agreement is particularly significant for India, given the border talks on their 17-month old standoff at the Line of Actual Control appear to have hit an impasse (no progress) this week.<br>● The [Bhutan-China] Memorandum of Understanding on the three-step roadmap will provide a fresh impetus to the boundary talks.<br>● It is expected that the implementation of this roadmap in a spirit of goodwill, understanding and accommodation will bring the boundary negotiations to a successful conclusion that is acceptable to both sides. |
| **Trade talks between India, Israel to resume** | **Context** India and Israel agreed to resume long-pending negotiations on a free trade agreement.<br>● The FTA talks would begin in November and concluded by June 2022<br>**Key takeaways**<br>● During the last round of talks, both sides had explored the possibility of a limited trade deal or a Preferential Trade Agreement for about 200 goods, which could not be concluded.<br>● The Indian government is also working to resume a number of trade negotiations.<br>○ The government has thus far committed to resumed talks with the U.K., Australia and the European Union.<br>● India and Israel also agreed to mutually recognise each other's vaccination process "in principle".<br>● Israel also announced it would join the India-France led International Solar Alliance (ISA), ahead of the next U.N. Climate Change COP26 summit in Glasgow in November 2021.<br>Do you know?<br>● Both also joined a virtual quadrilateral meeting with U.S. Secretary of State and UAE Foreign Minister.<br>● The quadrilateral meeting can be seen as an outcome of last year's Abraham Accords brokered by the U.S. that saw the UAE and Israel establish diplomatic relations. |
| **Like Minded Developing Countries (LMDC)** | **Context:** Recently, the Union Minister for Environment Forest and Climate Change virtually participated in the Like Minded Developing Countries (LMDC) Ministerial meeting titled 'Preparations for COP 26 on Climate Change – Expectations and Challenges'.<br>This meeting has been hosted by Bolivia ahead of the 26th climate change conference to be held in Glasgow.<br>● A ministerial statement was endorsed by the LMDC Ministers during the meeting, expressing their full support for the COP26 Presidency.<br>**What is Like-Minded Developing Countries(LMDC) group?**<br>● LMDC comprises around 25 developing countries from Asia and other regions.<br>● It organises themselves as a block of negotiators in international organizations such as the United Nations.<br>● They represent more than 50% of the world's population.<br>● **Member countries:** Algeria, Bangladesh, Belarus, Bhutan, China, Cuba, Egypt, India, Indonesia, Iran, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Sudan, Syria, Vietnam, and Zimbabwe.<br>**What is the 26th Conference of Parties (COP26)?**<br>● The COP26 is the 26th United Nations Climate Change conference.<br>● It is scheduled to be held in Glasgow, Scotland, between 31 October and 12 November 2021, under the presidency of the United Kingdom.<br>● The conference comes months after the Intergovernmental Panel on Climate Change (IPCC) published its assessment report on Earth's climate, highlighting heat waves, droughts, extreme rainfall and sea-level rise in the coming decades.<br>● The CoP comes under the United Nations Climate Change Framework Convention (UNFCCC) which was formed in 1994. |

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| | ○ The UNFCCC was established to work towards "stabilisation of greenhouse gas concentrations in the atmosphere."<br>**Four Goals of COP26**<br>● Secure global net-zero by mid-century and keep 1.5 degrees within reach.<br>● Adapt to protect communities and natural habitats.<br>● Mobilise finance.<br>● Work together to deliver. |
| **Pakistan retained on FATF's 'greylist' again** | **Context:** The Financial Action Task Force (FATF) on Thursday retained Pakistan in the 'greylist' yet again.<br>● FATF observed that Pakistan needed to further demonstrate that investigations and prosecutions were being pursued against the senior leadership of UN-designated terror groups, which include the Lashkar-e-Taiba, Jaish-e-Mohammed, al-Qaeda and the Taliban.<br>**What is Financial Action Task Force (FATF)?**<br>● The FATF is an inter-governmental body set up in 1989.<br>● **Objective**: To combat money laundering, terror financing and other related threats to the international financial system.<br>● Currently, it has 39 members.<br>● Pakistan has been on the grey list since June 2018. |
| **Global Food Security Index, 2021** | **Context** India is ranked at 71st position in the Global Food Security Index which was released recently.<br>Top ranking countries<br>● Ireland, Australia, the UK, Finland, Switzerland, the Netherlands, Canada, Japan, France and the US shared the top rank with the overall GFS score in the range of 77.8 and 80 points on the index.<br>Bottom five countries are<br>● Malawi(109th), Sudan(110), Mozambique(111), Yemen(112) and Burundi(113).<br>● Performance of India and its neighbours<br>● India held 71st position with an overall score of 57.2 points on the GFS Index.<br>● It fared better than Pakistan (75th), Sri Lanka (77th), Nepal (79th) and Bangladesh (84th).<br>● But the country is way behind China (34th position).<br>● Pakistan (52.6 points) and Sri Lanka (62.9 points) scored better than India (50.2 points) in the category of food affordability.<br>● Over the past 10 years, India's incremental gains in overall food security score were lagging behind that of Pakistan, Nepal and Bangladesh.<br>**About Global Food Security (GFS) Index**<br>● The GFS Index was designed and constructed by London-based Economist Impact and is sponsored by Corteva Agriscience.<br>● It measures the underlying drivers of food security in 113 countries, based on the factors of affordability, availability, quality and safety, and natural resources and resilience. |
| **UN Fund for 'People's Economy' in Afghanistan** | **Context** The United Nations has set up a special trust fund to provide urgently-needed cash directly to Afghans through a system tapping into donor funds frozen since the Taliban takeover last August.<br>**Key takeaways**<br>● With the local economy "imploding", the aim is to inject liquidity into Afghan households to permit them to survive this winter and remain in their homeland despite turmoil.<br>● Cash will be provided to Afghan workers in public works programmes, such as drought and flood control programmes, and grants given to micro-enterprises.<br>● Temporary basic income would be paid to the vulnerable elderly and disabled.<br>● Germany, a first contributor, had pledged €50 million ($58 million) to the fund. |

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| | **What is the Need of this Fund?**<br>• The International Monetary Fund said that Afghanistan's economy is set to contract up to 30% this year and this is likely to further fuel a refugee crisis that will affect its neighbouring countries, Turkey and Europe.<br>• The Islamists' takeover saw billions in central bank assets frozen and international financial institutions suspended access to funds, although humanitarian aid has continued.<br>• Banks are running out of money, civil servants have not been paid and food prices have soared.<br>• The challenge is to repurpose donor funds already earmarked for Afghanistan.<br>• The UNDP had cost activities to be covered over the first 12 months at approximately $667 million. |
| **Indo-Pacific Regional Dialogue (IPRD)** | **Context:** First conducted in 2018, the Indo-Pacific Regional Dialogue (IPRD) is the apex international annual conference of the Indian Navy, and is the principal manifestation of the navy's engagement at the strategic-level.<br>**Aim:** To review both opportunities and challenges that arises within the Indo-Pacific.<br>**Theme:** Evolution in Maritime Strategy during the 21st Century: Imperatives, Challenges, and, Way Ahead –<br>• Evolving Maritime Strategies within the Indo-Pacific: Convergences, Divergences, Expectations and Apprehensions.<br>• Adaptive Strategies to Address the Impact of Climate Change upon Maritime Security.<br>• Port-led Regional Maritime Connectivity and Development Strategies.<br>• Cooperative Maritime Domain Awareness Strategies.<br>• Impact of the Increasing Recourse to Lawfare upon a Rules-based Indo-Pacific Maritime Order.<br>• Strategies to Promote Regional Public-Private Maritime Partnerships.<br>• Energy-Insecurity and Mitigating Strategies.<br>• Strategies to Address the Manned-Unmanned Conundrum at Sea. |
| **African Union** | **Context** The African Union has suspended Sudan until civilian rule in the country was restored, saying it rejected the military takeover in Sudan as an "unconstitutional" seizure of power. Also, the World Bank has suspended aid to Sudan following the military coup.<br>**About African Union**<br>• It is a continental union consisting of 55 countries of Africa.<br>• In 2017, the AU admitted Morocco as a member state.The AU was announced in the Sirte Declaration in Sirte, Libya in 1999.<br>• It was founded in 2001 in Addis Ababa, Ethiopia.<br>• It was launched in 2002 in Durban, South Africa.<br>• The AU's secretariat, the African Union Commission, is based in Addis Ababa |
| **Indo-Pacific Regional Dialogue 2021** | **Theme of IPRD 2021:** 'Evolution in Maritime Strategy during the 21st Century: Imperatives, Challenges and Way Ahead'<br>• India is fully determined to protect its maritime interests, while it supports the maintenance of rule-based maritime systems, as mandated under UN Convention on the Law of Seas (UNCLOS), 1982.<br>• Emphasized on the need for an efficient, cooperative and collaborative harnessing of the region's maritime potential for sustaining a steady path to prosperity.<br>• While the seas offer abundant opportunities for sustenance and growth of the mankind, they pose challenges such as terrorism, piracy, drug trafficking and climate change. There is a need to find convergence of interests and commonality of purpose on maritime issues.<br>**About Indo-Pacific Regional Dialogue 2021** |

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| | • First conducted in 2018, the IPRD is the apex international annual conference of the Indian Navy and is the principal manifestation of the Navy's engagement at the strategic-level.<br>• The National Maritime Foundation is the Navy's knowledge partner and chief organiser of each edition of this annual event.<br>• The aim of each successive edition is to review both opportunities and challenges that arise within the Indo-Pacific. |
| **Data Disclosure Framework** | **Context** The UN Office on Drugs and Crime and the Security Council Counter-Terrorism Committee Executive Directorate have launched Data Disclosure Framework.<br>• It is a tool that outlines the practices developed for responding to data requests from foreign criminal justice authorities for counter-terrorism investigations.<br>**About United Nations Office on Drugs and Crime**<br>• It was established in 1997 and was named as a United Nations Office on Drugs and Crime (UNODC) in 2002.<br>• It acts as the Office for Drug Control and Crime Prevention by combining the United Nations International Drug Control Program (UNDCP) and the Crime Prevention and Criminal Justice Division of the United Nations Office at Vienna. |
| **15th India-Israel Joint Working Group** | **Context**: India-Israel Joint Working Group (JWG) on Bilateral Defence Cooperation has agreed to form a Task Force to formulate a comprehensive Ten-Year Roadmap to identify new areas of cooperation.<br>• Reviewed the progress made in Military to Military engagements including exercises and industry cooperation.<br>• Appraised on the progress made by the Sub Working Groups (SWG) on Defence Procurement & Production and Research & Development.<br>• It was also decided to form a SWG on Defence Industry Cooperation - would enable efficient utilisation of bilateral resources, effective flow of technologies and sharing industrial capabilities<br>**About India-Israel Joint Working Group (JWG):** The JWG is the apex body between the Ministry of Defence of India and Israel's Ministry of Defence to comprehensively review and guide all aspects of Bilateral Defence Cooperation. |
| **China to build military base in Tajikistan** | **Context** China will take full control of a military base in Tajikistan near the Afghan border that it has been quietly operating and will also build a new base for the Tajik Government.<br>**Key takeaways**<br>• Tajikistan granted approval for the construction of a new base, following an agreement between Tajikistan and China.<br>• The agreement was signed by the China's Public Security Ministry, and not the Chinese military which suggests a focus on counterterrorism amid rising concerns over instability in neighbouring Afghanistan.<br>• The new base would be owned by Tajikistan's Rapid Reaction Group and financed by China for a cost of $10 million.<br>• It will be located in the eastern **Gorno-Badakhshan** autonomous province near the **Pamir mountains**, and Chinese troops will not be stationed there.<br>• Tajikistan Government has also agreed to transfer full control a former Soviet base near the China-Tajikistan-Afghanistan tri-junction and the Wakhan Corridor, where China shares a less than 100 km border with Afghanistan.<br>• The base, once full control has been transferred, will become only the second known overseas Chinese security facility, after Djibouti near the Horn of Africa .<br>**Do you know?**<br>• Russia and India are among countries that already have a military presence in bases in Tajikistan. |
| **18th India-ASEAN Summit** | **Context**: Prime Minister Shri Narendra Modi participated in the 18th India-ASEAN Summit at the invitation of His Majesty Sultan Haji Hassanal Bolkiah of Brunei, the current Chair of ASEAN.<br>***India –*** |

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| | ● Underlined the centrality of ASEAN in India's Act East Policy and in India's Vision for the wider Indo-Pacific Vision.<br>● On COVID-19, highlighted India's efforts in the fight against the pandemic in the region and also reiterated support for ASEAN's initiatives in this regard. India has contributed medical supplies worth USD 200,000 to ASEAN's humanitarian initiative for Myanmar and USD 1 million for ASEAN's Covid-19 Response Fund.<br>● To further strengthen India-ASEAN cultural connectivity: India will support establishing the ASEAN Cultural Heritage List.<br>● On trade and investment, underlined the importance of diversification and resilience of supply chains for post-COVID economic recovery and in this regard, the need to revamp the India-ASEAN FTA.<br>***India and ASEAN***<br>● Highlighting the milestone of 30th anniversary of India-ASEAN Partnership, the leaders announced the Year 2022 as India-ASEAN Friendship Year.<br>● Building upon the synergies between the ASEAN Outlook for the Indo-Pacific (AOIP) and India's Indo-Pacific Oceans Initiative (IPOI), PM and ASEAN leaders welcomed the adoption of the India-ASEAN Joint Statement on cooperation for peace, stability and prosperity in the region.<br>● Exchanged views on enhancing India-ASEAN connectivity in broadest terms including physical, digital and people to people.<br>● Appreciated India's role as a trusted partner in the region especially during the current Covid-19 Pandemic with its supply of vaccine.<br>● Welcomed India's support to ASEAN centrality in the Indo-Pacific and looked forward to greater India-ASEAN cooperation in the region through the Joint Statement.<br>***Other discussion points***<br>● Covered regional and international issues of common interest and concern, including South China Sea and terrorism.<br>● Noted the importance of promoting a rules-based order in the region including through upholding adherence to international law, especially the UNCLOS.<br>● Affirmed the importance of maintaining and promoting peace, stability, safety and security in the South China Sea, and ensuring freedom of navigation and overflight. |

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## *MISCELLANEOUS*

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| **International Day of Older Persons: 1st October** | **By:** Ministry of Social Justice and Empowerment<br>• Dedicate the Elderly Line 14567 to the Nation<br>• Launch the Senior Able Citizens Reemployment in Dignity (SACRED) portal<br>• Launch the Senior Care Ageing Growth Engine (SAGE) Portal<br>**About the Senior Able Citizens Reemployment in Dignity (SACRED) portal**<br>• An IT portal to be developed to bring the employment seeker senior citizens and employment providers on one platform<br>• The aim is to devise ways to ensure Senior Citizens live healthy, happy, empowered, dignified and self-reliant life<br>**About the Senior Care Ageing Growth Engine (SAGE) Portal**<br>• Aimed at promoting private enterprises to bring out innovation in products to benefit elders<br>• Shaped on the recommendations of the empowered expert committee (EEC) report on startups for the elderly<br>• SAGE to select, support and create a 'one-stop access' of elderly care products and services |
| **The State Nutrition Profiles** | **In News:** NITI Aayog, in a joint effort with International Food Policy Research Institute (IFPRI), Indian Institute of Population Sciences (IIPS), UNICEF and Institute of Economic Growth (IEG) has launched 'The State Nutrition Profiles" for 19 States and Union Territories.<br>• Give insights on nutrition outcomes, immediate and underlying determinants and interventions based on NFHS-rounds 3, 4 and 5.<br>• The SNPs include a comprehensive compilation of crucial data that can positively affect policy decisions and facilitate research in the area. The trend analysis of key indicators such as wasting, stunting, anemia, underweight and overweight and NCDs (Diabetes and High blood pressure) showcase the variability of performance across districts.<br>• The reports highlight the best and worst performing districts, highest burden districts and top coverage districts of the country.<br>• The SNPs are based on the headcount-based analyses and use of data from NFHS-5 to provide evidence that helps identify priority districts and number of districts in the state with public health concern as per WHO guidelines. Each SNP has incorporated key takeaways for children, women and men and identifies areas where the state has the potential to improve further. |
| **Vayoshreshtha Samman National Award** | **Context**: Vice-President M. Venkaiah Naidu presented the **Vayoshreshtha Samman National Award** to senior geriatrician V.S. Natarajan.<br>• The recipient of the award has been taking various initiatives through his enterprise (Dr. V S Natarajan Geriatric Foundation) for the healthy welfare of the elders.<br>• Vayoshreshtha Samman is a Scheme of awards instituted by the **Ministry of Social Justice & Empowerment**<br>• It gradually upgraded to the status of **National Awards,** for institutions involved in rendering distinguished service for the cause of **elderly persons** especially indigent senior citizens and to eminent citizens in recognition of their service/achievements. |
| **Gaming Disorder & International Classification of Diseases (ICD)** | • Gaming disorder has now been defined in the 11th Revision of the International Classification of Diseases (ICD-11)<br>• It is defined as a pattern of gaming behaviour ("digital-gaming" or "video-gaming") characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences. |

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| | • The **International Classification of Diseases (ICD)** released by **World Health Organisation (WHO)** is the basis for identification of health trends and statistics globally and the international standard for reporting diseases and health conditions.<br>• It is used by medical practitioners around the world to diagnose conditions and by researchers to categorize conditions.<br>• The inclusion of a disorder in ICD is a consideration which countries take into account when planning public health strategies and monitoring trends of disorders. |
| **Mihidana** | **In News:** In an effort to promote indigenous & Geographical Identification (GI) tagged products, first consignment of GI tagged sweet dish **Mihidana** sourced from Bardhaman, **West Bengal** has been exported to the Kingdom of Bahrain**.**<br>• **Jaynagarer Moa:** A century old sweet delicacy & GI certified - Jaynagarer Moa, prepared from popped-rice ball & fresh date-palm jaggery, in found in Jaynagar, West Bengal too.<br>• West Bengal's **Bardhaman** got the GI tag for the century-old sweetmeats in 2017.<br>**What is GI tag?**<br>• A GI tag is a sign denoting a specific geographical origin and possess qualities or a reputation that are due to that origin.<br>• GI, a form of intellectual property right (IPR), is distinct from other forms of IPR, as it ascribes the exclusivity to the community in a defined geography, rather than to an individual, as is in the case of trademarks and patents. |
| **Guduchi** | **Context** The Ministry of Ayush's advisory on the use of Guduchi, also known as Giloy, confirms that Guduchi (Tinospora cordifolia) is safe to use but some similar looking plants like Tinospora crispa may be harmful.<br>What is Guduchi?<br>● Guduchi is a popularly known herb and has been used in therapeutics since long in AYUSH systems.<br>● It is a large, glabrous, perennial, deciduous, climbing shrub of weak and fleshy stem found throughout India.<br>● It is a widely used plant in folk and Ayurvedic systems of medicine.<br>● Potential medicinal properties include anti-diabetic, anti-inflammatory, anti-arthritic, antioxidant, anti-allergic, anti-stress, antimalarial, etc.<br> |
| **Nobel Prize in Literature** | • Tanzanian novelist Abdulrazak Gurnah, 72, won the 2021 Nobel Prize in Literature "for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee.<br>• Mr. Gurnah is the first African writer to win the award since the Zimbabwean Doris Lessing in 2007, and only the second writer of colour from sub-Saharan Africa, after Nigeria's Wole Soyinka, who won in 1986. |

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| | • His novels include Paradise, which is set in colonial East Africa during the First World War and was shortlisted for the Booker Prize for Fiction, and Desertion. |
| **PM Cares For Children Scheme** | **In News:** The Ministry of Women and Child Development has issued the detailed guidelines for PM CARES for Children Scheme.<br>**Corpus of Rs. 10 Lakh**:<br>• A corpus of Rs. 10 lakh will be allocated to each of these children from the **PM CARES fund**.<br>• It will provide monthly stipend from 18 years of age.<br>• On attaining 23 years, he/she will get the corpus amount.<br>**Education to the Children (under 10 years)**:<br>• Ensure admission to Kendriya Vidyalayas/ private schools.<br>• PM CARES will pay for the uniform text books and notebooks<br>• If the child is admitted in a private school the fees as per the RTE norms will be provided<br>**Education to the Children (11-18 years):**<br>• The child will be given admission in any Central Government Residential School<br>• In case the child is to be continued under the care of **guardian**, he/she will be given admission in the nearest Kendriya Vidyalaya/private school<br>**Higher education:**<br>• Provision of either a scholarship equivalent to the tuition fees/ educational loans.<br>• Interest on the loan will be paid by the PM-CARES fund.<br>**Health Insurance**:<br>• All children will be enrolled as a beneficiary under **Ayushman Bharat Scheme**<br>• The premium amount will be paid by PM-CARES till a child turns 18. |
| **Nobel peace prize 2021** | • Journalists Maria Ressa of the Philippines and Dmitry Muratov of Russia won the 2021 Nobel Peace Prize on Friday for their fight for freedom of expression in countries where reporters have faced persistent attacks, harassment and even murder.<br>• Ms. Ressa in 2012 co-founded Rappler , a news website that has focused critical attention on President Rodrigo Duterte's "controversial, murderous anti-drug campaign" in the Philippines.<br>• Mr. Muratov was one of the founders in 1993 of the independent Russian newspaper Novaya Gazeta , which the Nobel committee called "the most independent newspaper in Russia today, with a fundamentally critical attitude towards power". |
| **Dr. Teejan Bai at GOAL program** | • A Padma Shri, Padma Bhushan and Padma Vibhushan awardee<br>• A celebrated Pandavani folk singer<br>**About Going Online as Leaders (GOAL) Program**<br>• By the Ministry of Tribal Affairs (MoTA) and Facebook India<br>• Aims to provide skilling for tribal youth with a focus on enabling digital presence in addition to strengthening core skills to drive their professional-economical upliftment.<br>• The program intends to upskill and empower 5,000 tribal youths over the course of next five years to harness the full potential of digital platforms and tools to learn new ways of doing business, explore and connect with domestic and international markets.<br>• It is designed to provide mentorship to tribal youth through digital mode and envisages to act as a catalyst to explore hidden talents of the tribal youth, which will help in their personal development as well as contribute to all-round upliftment of their society. |
| **GI tag for 177 potential tribal products** | **In News:** In addition to marketing 56 GI products, TRIFED is working to get GI tag for the 177 potential products that have been identified from the states under operational areas across the country.<br>TRIFED's GI intervention and setting up of Atmanirbhar corner in Indian Missions abroad aims at:<br>• To safeguard the interests of the original producers as well as that of the product and ensure that the producer avails optimum cost for their premium goods even in the highly competitive market scenario. |

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| | • To ensure recognition of indigenous products both in India and global market.<br>• To revive diminishing art and craft from a Tribal specific geographical location.<br>**Tribal Cooperative Marketing Development Federation of India (TRIFED)**<br>• A national-level apex organization, came into existence in 1987<br>• Objective: To provide good price of the 'Minor Forest Produce (MFP) collected by the tribes of the country.<br>• It functions under Ministry of Tribal Affairs, Govt. of India.<br>• TRIFED has its Head Office at New Delhi and has a network of 13 Regional Offices located at various places in the country. |
| **Dr APJ Abdul Kalam** | • Born on 15 October 1931 at Rameswaram on Pamban Island, then in the Madras Presidency. He graduated from the Madras Institute of Technology in 1960.<br>• Dr. Kalam was the project head of the Satellite Launch Vehicle (SLV-3). This was India's first experimental Satellite Launch Vehicle which put the satellite Rohini into orbit.<br>• As a director of DRDO, he steared the Integrated Guided Missile Development Programme (IGMDP), and five projects viz. Prithvi, Trishul, Akash,Nag and Agni were developed under him.<br>• APJ Abdul Kalam is known as the "Missile Man of India" for his contributions on the development of ballistic missile and launch vehicle technology.<br>**'KAPILA' (Kalam Program for Intellectual Property Literacy and Awareness) campaign**<br>• Under this campaign, students pursuing education in higher educational institutions will get information about the correct system of application process for patenting their invention and they will be aware of their rights.<br>• October 15th to 23rd: Intellectual Property Literacy Week<br>**K family of missiles**<br>• Codenamed after late Dr APJ Abdul Kalam<br>• The K family of missiles are primarily Submarine Launched Ballistic Missiles (SLBMs).<br>• These missiles are fired from submarines from India's Arihant class nuclear powered platforms.<br>• Indigenously developed by: Defence Research and Development Organisation (DRDO).<br>• The development of these naval platform launched missiles began in the late 1990s as a step towards completing India's nuclear triad — the capability of launching nuclear weapons from land, sea and air based assets.<br>• These missiles are lighter, smaller and stealthier than their land-based counterparts.<br>• The Agni series of missiles are land-based which are medium and intercontinental range nuclear capable ballistic missiles.<br>*"If a country is to be corruption free and become a nation of beautiful minds, I strongly feel there are three key societal members who can make a difference. They are the father, the mother and the teacher." - Dr APJ Abdul Kalam* |
| **Keravan Kerala project** | **Context** Kerala has recently launched its tourism project on Caravans - Keravan Kerala.<br>• It is an unique initiative to promote stakeholder-friendly Caravan Tourism.<br>**Features of the project**<br>• The caravan parks will be located in natural settings.<br>• Emphasis on the safety and security of tourists.<br>• Sustainable use of local resources in creating caravan parks.<br>• Each caravan park will have a sewage treatment plant.<br>• The **basic theme** of the project is to club the luxury of caravan with the natural look of the park.<br>• Attractive incentives, including investment subsidy for purchase of caravan vehicles.<br>• Caravan parks can be developed in the private, public or joint sector.<br>• Operational 24x7 during the tourist season.<br>• Connected with fair-weather roads from the main road. |

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| **India crosses 100 crore COVID-19 vaccine doses** | **Context** India completed 100 crore doses of COVID-19 vaccines on Thursday, in about nine months since the drive began.<br>● It has fully vaccinated about 30% (291 million) of the eligible population and 707 million have had the first dose.<br>● India aims to fully vaccinate about a billion people by the end of 2021 but experts say the drive needs to pick up pace further to meet the target.<br>● This milestone makes India the second country to reach the one billion mark - China crossed it in June.problems.<br><br>Initial challenges to the vaccination drive in india<br>● Logistical problems<br>● supply bottlenecks<br>● vaccine hesitancy<br>● a devastating second wave of Covid-19<br>Which vaccines is India using?<br>● India is using three vaccines - the Oxford-AstraZeneca jab, known locally as Covishield; Covaxin by Indian firm Bharat Biotech; and Russian-made Sputnik V.<br>● India has also approved its first vaccine for those under 18. The three-dose ZyCoV-D vaccine is the world's first DNA vaccine against Covid-19. It is expected to roll out in few weeks. ZyCov-D has been developed with the support of Department of Biotechnology and the Indian Council of Medical Research (ICMR).<br>● The government has also authorised Indian pharma company Cipla to import Moderna's vaccine, which has shown nearly 95% efficacy against Covid-19. But it's not clear yet how many doses will be made available to India.<br>● Several more vaccines are in various stages of approval.<br>100 monuments illuminated<br>● The Archaeological Survey of India (ASI) also illuminated 100 monuments in the tricolour to celebrate the milestone of 100 crore COVID-19 vaccine doses.<br>● These monuments include:<br>● Delhi: Red Fort, Humayun's Tomb and Qutub Minar<br>● Uttar Pradesh: Agra Fort and Fatehpur Sikri<br>● Tamil Nadu: Konark Temple in Odisha and Mamallapuram Rath temples |
| **SAKSHAM Centres** | **Context**: As part of Azadi ka Amrit Mahotsav, a total of 152 Centre for Financial Literacy & Service Delivery (SAKSHAM Centres) across 77 districts of 13 states launched under Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) of the Ministry of Rural Development during 4-8th October, 2021.<br>● Centre for Financial Literacy & Service Delivery (CFL&SD) would act as **one stop solution/single window system** for basic financial needs of Self-Help Group (SHG) households in rural areas.<br>● The main objective of the center is **to provide financial literacy** & facilitate delivery of financial services (savings, credit, insurance, pensions etc.) to SHG members and rural poor.<br>● These Centers **will be managed by SHG network,** largely at the level of the Cluster Level Federations (CLFs), with the help of trained Community Resource Persons (CRPs).<br>● These trained CRPs are provided six days residential training at Rural Self Employment Training Institutes (RSETIs) established by the Lead Bank of the district.<br>● All of these resources persons, popularly known as **Financial Literacy Community Resource person** (FL CRPs) also provided a training tool kit in vernacular languages.<br>● Ministry of Rural Development (MoRD) has also developed a mobile & web-based application called "**SAKSHAM**".<br>○ This will be used by the community resource person of the Centre to know the penetration of various financial services for each SHG & village, identify major |

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| | gaps and accordingly provide training and deliver the required financial services.<br>○ This application will also measure the impact of the programme on regular interval for mid-course correction in strategy, if any. |
| **Dhole** | ● A recent study has identified 114 priority talukas / tehsils where habitats can be consolidated to enhance population connectivity for the dhole or Asiatic Wild Dog (Cuon alpinus).<br>● Dhole is an apex social carnivore in the tropical forests of South and South East Asia.<br>● India perhaps supports the largest number of dholes, with key populations found in three landscapes — Western Ghats, Central India and Northeast India.<br>● IUCN - Endangered<br>● Dholes play an important role as apex predators in forest ecosystems.Besides the tiger, the dhole is the only large carnivore in India that is under IUCN's 'endangered' category.<br>● CITES – Appendix II.<br>● Schedule II of wildlife act.<br>● Factors contributing to this decline: habitat loss, loss of prey, competition with other species, persecution due to livestock predation and disease transfer from domestic dogs.<br>● In 2014, the Indian government sanctioned its first dhole conservation breeding centre at the Indira Gandhi Zoological Park (IGZP) in Visakhapatnam.<br> |

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# Making Parties constitutional

**What is a Political Party?**

- A political party is an organised group of citizens who hold common views on governance. They act as a political unit that seeks to obtain control of government with a view to further the agenda and policy they profess.
- They are indispensable links between the people and the representative machinery of government.
- Political parties maintain a continuous connection between the people and those who represent them either in government or in the opposition.

**Do You Know?**

- The Indian Constitution, one of the longest Constitutions in the world, elaborately deals with the co-operative societies but not on Political Parties.
- The right to form co-operative societies is a fundamental right under Article 19 (1)(c), but the right to form political parties is not.

**What is the legal status of Political Parties?**

- Political parties have extralegal growth in almost every democratic country.
- The American Constitution does not presume the existence of political parties. In Britain too, political parties are still unknown to the law.
- Similarly, political parties in India are extra-constitutional, but they are the breathing air of the political system.
- Section 29A(5) of the Representation of the People Act, 1951 is the only major statutory provision dealing with political parties in India.
    - It orders that a political party shall bear true faith and allegiance to the Constitution of India as by law established, and to the principles of socialism, secularism and democracy, and would uphold the sovereignty, unity and integrity of India.

**What is German Model?**

- The Basic Law of the Federal Republic of Germany (1949) gives **constitutional status** to political parties.
- Article 21 of the Basic Law of Germany deals with their status, rights, duties and functions. It provides:
    - Political parties shall participate in the formation of the political will of the people. They may be freely established. Their internal organisation must conform to democratic principles. They must publicly account for their assets and for the sources and use of their funds.
    - Parties that seek to undermine or abolish the free democratic basic order or to endanger the existence of the Federal Republic of Germany shall be unconstitutional. The Federal Constitutional Court shall rule on the question of unconstitutionality
    - Details of regulation of Political Parties shall be regulated by federal laws.
- The German model of constitutionalising political parties is more desirable for India than the U.S. and the U.K. models.

**What are the problems facing Indian Political Parties?**

- Political parties in developed nations maintain high levels of internal democracy but this is lacking in India.
    - There are no periodical in-party elections in majority of Indian parties.
    - Majority of political parties are family fiefdoms, where internal Democracy is lacking.
- Most of the parties are openly caste- or religious-based.
- The finances of almost all political parties are dubious and opaque.

**What is the way ahead?**

- Political parties are the agents of democracy and safety valves in the political system. They desperately need reform.
- Hence, it is high time to constitutionalise political parties to ensure in-party democracy, to impart transparency in their finances, and to de-communalise them.

## Gandhi as a Philosopher

**Philosophy & Ethics**

- Philosophy was initially practised only in three civilisations — Chinese, Greek and Indian.
- In these civilisations, philosophy functioned as a way of life distinct from other ways of life that were rooted in a belief in supernatural powers.
- But even the philosophical ways of life practised in those ancient times could be divided into two categories — a metaphysics-led philosophical way of life and an **ethics-led philosophical way of life.**
- Except the philosophies given by the Buddha, Socrates and Confucius all other philosophies propagated metaphysics-led ways of life.
- In ethics-led philosophy, the attempt is to transform the person from his/her state of being to an **ethically higher state of existence** and in the process making him/her **psychologically self-sufficient**.
- In the metaphysics-led philosophical way of life, instead of a higher ethical state of being, the philosopher tries to achieve a **higher state of understanding (insight)** as well as a communion with the "ultimate". Here, ethics has only a secondary role to play.
- Once Christianity banned all non-Christian ways of life in Europe in 529CE, philosophy re-emerged in 17th century Europe as a **purely theoretical discipline** without advocating life practices. With that, the idea of "philosophical ways of life" became extinct in Europe.
- This shift from philosophy as a way of life to philosophy as a theoretical discipline is celebrated as the birth of modern Western philosophy.

**Gandhi & Philosophy**

- Gandhi was spiritual, if spirituality means reduction of self-centredness. His shift from "**God is Truth" to "Truth is God" in 1929**, was aimed at making ethics the "first principle" of his philosophy.
- Gandhi' stated way back in 1907 that "**morality should be observed as a religion".**
- Gandhi, like the Buddha, was an **ethical consequentialist** in that the purpose of his ethical way was to reduce self-centredness and to promote a concern for the well-being of all (sarvodaya).
- What makes Gandhi different from the Buddha is that Gandhi, apart from individual moksha (Buddha called it as Nirvana), wanted **development of freedoms** (through his constructive programmes) for humanity as a whole. Only through political action, according to Gandhian ethics, can we implement this constructive programme.
- Therefore, Gandhi's philosophical way of life is an explicit **desire for a socialist society** — since an ethics based on the reduction of selfishness can only approve a socialist way of life, for logical reasons.
- Even though socialist themes like the idea of a "simple life" were part of all philosophical schools of the Subcontinent, it was only in Gandhi that they **achieved an explicit political/ideological dimension** — Gandhi's ashrams were such socialist communes.
- On numerous occasions Gandhi had said that he aspired to "reduce to zero", that is, totally eliminate selfishness/self-centeredness. For the Buddha, too, the reduction of self-centeredness through the cultivation of virtues like satya, ahimsa, aparigraha, brahmacharya, etc., was crucial for fostering sarvodaya.

**Conclusion**

The politically charged, non-violent and ethical style of philosophy propagated by Gandhi is intended to make one spiritual — a practitioner is encouraged to gravitate and work for the welfare of all other beings.

## Dismantling the Ordnance Factory Board

**Context**: The Ordnance Factory Board (OFB), the first of whose industrial establishments was set up in 1801, will cease to exist from October 1, and the assets, staff, and operations of its 41 ordnance factories will be transferred to seven defence public sector units (DPSUs).

- OFB also includes nine training institutes, three regional marketing centres, and five regional controllers of safety.
- A large chunk of the weapons, ammunition, and supplies used by the armed forces, and paramilitary and police forces, come from OFB-run factories.

**Argument for & against corporatisation**

- It has been argued that **OFB's monopoly** has led to innovation drying up, apart from low productivity, high costs of production, and lack of flexibility at the higher managerial levels.
- Corporatisation of OFB: The **restructuring of OFB into corporate entities** (owned by the government i.e Public Sector Company) was recommended in one or the other form by at least three expert committees on defence reforms set up in the last two decades —
    - TKS Nair Committee (2000)
    - Vijay Kelkar Committee (2005)
    - Vice Admiral Raman Puri Committee (2015).
    - A fourth committee, constituted by former Defence Minister Manohar Parrikar and chaired by Lt Gen D B Shekatkar, did not suggest corporatisation, but recommended regular audits of all ordnance units considering past performance.
- The central argument has been that corporatisation, which will bring these entities under the **purview of The Companies Act,** would lead to
    - Improvements in efficiency
    - Make products cost-competitive
    - Enhance their quality
- Employees argued that corporatisation was a "move towards privatisation". They expressed **fears of job losses**, and said a corporate entity would not be able to survive the unique market environment of defence products with its unstable demand-supply dynamics.

**What has been the progress of Corporatisation of OFB?**

- In May 2020, during fourth round of Atmanirbhar Bharat initiative, Finance Minister announced the decision to corporatise OFB for "improving autonomy, accountability and efficiency in ordnance suppliers".
- An Empowered Group of Ministers (EGoM) for Corporatisation was formed with Defence Minister Rajnath Singh as chairman "to oversee and guide the entire process, including transition support and redeployment plan of employees while safeguarding their wages and retirement benefits".
- In October 2020, the government declared a proposed strike by workers' federations "invalid and illegal".
- As no reconciliation could be reached between government and protesting workers, the government announced this June that the OFB would be split into seven DPSUs - Munitions India Ltd, Armoured Vehicles Nigam Ltd, Advanced Weapons and Equipment India Ltd, Troop Comforts Ltd, Yantra India Ltd, India Optel Ltd, and Gliders India Ltd.
- Each of these PSUs will run clusters of ordnance factories involved in manufacturing similar categories of products. Training and marketing establishments that have been part of the OFB will also be divided among the seven PSUs

## MSP Demand & Possible Solution

**Context:** Farmers camping at Delhi's borders for the past 10 months have clear cut demands:
The cancellation of three farm laws
Legal assurance on Minimum Support Price (MSP) for all crops
Continuation of the ongoing MSP scheme for wheat and paddy.

**What is the government's position?**

There are indications that the government was leaning towards the withdrawal or cancellation of the three farm laws.
However, the government is not willing to take direct responsibility of ensuring legal guarantee of MSP for all crops

**What is Minimum Support Price (MSP)?**

MSP is the price set by the government to purchase crops from the farmers, whatever may be the market price for the crops.

MSP is declared by Cabinet Committee on Economic Affairs before the sowing time on the basis of the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**
CACP is not any statutory body but is an attached office of the Ministry of Agriculture and Farmers Welfare. It can recommend MSPs, but the decision on fixing (or even not fixing) and enforcement rests finally with the government.
Support prices generally affect farmers' decisions indirectly, regarding land allocation to crops, quantity of the crops to be produced etc
MSP assures farmers agricultural income besides providing a clear price signal to the market
The major objectives are to support the farmers from distress sales and to procure food grains for public distribution.
The government declares MSPs for crops, but **there's no law mandating their implementation**
MSP is **devoid of any legal backing**. Access to MSP isn't an entitlement for farmers. They cannot demand it as a matter of right.
The Centre currently fixes MSPs for 23 farm commodities based on the CACP's recommendations —
**7 cereals** – paddy, wheat, maize, bajra, jowar, ragi and barley
**5 pulses** – chana, arhar/tur, urad, moong and masur
**7 oilseeds** – rapeseed-mustard, groundnut, soyabean, sunflower, sesamum, safflower and nigerseed
**4 commercial crops** – cotton, sugarcane, copra and raw jute

**What is the issue with MSP?**
Most of the 23 crops, for which MSP is announced, are purchased by private players and there is high fluctuation in the prices.
Sometimes these crops are sold much below the MSP and sometimes they fetch a little more than the MSP.
The farmers, therefore, want a legal guarantee that crops can be sold only at MSP or above it.
But the government is not ready to give legal guarantees at the moment, except reiterated verbally several times that it will continue its current MSP regime, which mostly covers wheat and Paddy in Punjab, Haryana, MP and parts of UP. The farmers, however, have refused to budge.

**Can state-level policies assure that the farmers get MSP for their crops?**
Some states have stepped in and started compensating farmers for crops selling below the MSP rates under their own state-level policies.
In the past years, some states like Madhya Pradesh (MP) under Bhavantar Bhugtan Yojna (price difference payment scheme), Haryana under floor prices regime, Kerala under its Bhavantar Bharpayi Yojna, set the floor price or state price and **if the covered crops are sold below that price then the state government pays the difference** to the registered farmers on their respective portals.
While the MP government has covered some cereals, pulses, oilseed and horticulture crops under its scheme, Haryana and Kerala have covered only horticulture crops. Haryana has recently added millet to its scheme.
These schemes are good but the state governments do not have resources to sustain such policies and to cover all the crops in long run.

**Is there a solution then?**
Along with the current MSP regime, **corporations, like Cotton Corporation of India (CCI)**, should be formed by the centre government for cereals, some of which are not covered under centres' current MSP regime.
CCI enters the market when the price of 'Kapas' (unginned raw cotton) goes below the MSP fixed by CACP. The CCI then purchases Kapas at MSP, which in turn forces the private players also to offer prices at par with the MSP so as to stop the CCI from purchasing all the cotton from the market.
In the case of Basmati last year, farmers got much less because of their dependence on the private players. That is where a **corporation like CCI** could step in and play the role of a deterrent to stop farmers from being exploited.
Just like wheat and paddy MSP, which the government purchases through Food Corporation of India (FCI) by taking cash credit limit (CCL) from RBI, such corporations too can follow the same policy because there is a huge market of oilseeds and pulses in our country.
Some farmer leaders suggested that even a **state-Centre joint "Bhavantar scheme"** can be launched to compensate farmers in case their crop price goes below the fixed rate.

# Supreme Court Clamp Down on Firecracker Manufacturers

**Context**: Recently, the Supreme Court said a preliminary enquiry by the CBI into the firecracker industry, including in Tamil Nadu, revealed rampant violation of its ban on use of toxic ingredients like barium and its salts.

**What did the Supreme Court rule three years ago?**

Three years ago, the court ruled out a full ban on firecrackers and issued orders stipulating that **only reduced emission and green crackers be allowed**, with tight restrictions on timings when they could be burst.

SC also **prohibited chemicals** such as Barium salts and to label the firecrackers in compliance with the law.

The orders relate to a petition — ***Arjun Gopal and Others vs Union of India*** and Others — filed on behalf of three children in 2015, seeking measures to mitigate air pollution and asserting **their right to clean air under Article 21** of the Constitution.

**What is the controversy?**

Firecrackers use **fuel and oxidisers to produce a combustion reaction**, and the resulting explosion, releasing energy, spreads the material in a superheated state. The metal salts in the explosive mix get 'excited' and emit light.

Metals in the mix, which have a varying arrangement of electrons in shells outside their nucleus (different mass number), produce different wavelengths of light in this reaction, generating spectacular colours.

Barium compounds, for example, produce green light and Strontium and Lithium salts, red.

But as many studies show, the burning of firecrackers is an unusual and peak source of pollution, made up of particles and gases.

The Central Pollution Control Board conducted a study in Delhi in 2016, and found that the levels of Aluminium, Barium, Potassium, Sulphur, Iron and Strontium rose sharply on Deepavali night, from low to extremely high.

For instance, Barium rose from 0.268 microgrammes per cubic metre to 95.954 mcg/m3.

Pollution from firecrackers affects the health of people and animals, and aggravates the already poor ambient air quality in Indian cities.

This has resulted in court cases calling for a total ban on firecrackers, and court finally deciding to restrict the type of chemicals used as well as their volume.

Evidently, the new cracker formulations by SC is followed by majority of firecracker manufacturers.

Firecrackers are not labelled with information on the person responsible for legal compliance, as ordered by the court.

The petitioners argue that out of about 2,000 manufacturers, only 120 had the capacity and inclination to work with the court to green the crackers. The industry is therefore seeking light regulation as many jobs are dependent on it.

**Can green crackers make a difference?**

The Central government says through its National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, has come out with firecrackers that have "reduced emission light and sound" and 30% less particulate matter using **Potassium Nitrate as oxidant.**

These crackers are named

**Safe Water Releaser,** which minimises Potassium Nitrate and Sulphur use, but matches the sound intensity of conventional crackers

Safe Minimal Aluminium , where Aluminium use is low

Safe Thermite Crackers with low Sulphur and Potassium Nitrate.

These crackers are to be identified using unique QR codes to guide consumers.

The Supreme Court had also previously ordered that the Petroleum and Explosives Safety Organisation should certify the composition of fireworks only after being assured that they were not made of banned chemicals.

**Conclusion**

At the recent hearing, the Supreme Court noted that there had been a "flagrant violation" of previous orders. It took note of the large volume of crackers burnt almost every day and felt inclined to fix responsibility. "If liability is fixed on the Commissioner of Police, only then can this happen," it remarked.

## Climate Action by Cities

**Context:** Recently, Maharashtra's Environment Minister announced that 43 cities across the State will join the UN-backed 'Race to Zero' global campaign, which aims to create jobs while meeting goals of climate change and sustainable development.

**Are cities doing enough?**

Out of 53 Indian cities with a population of over one million, approximately half of these cities have a climate resilience plan in place. Of these, 18 cities have moved towards implementation.

These numbers highlight an encouraging first step, signalling that recurrent experiences of floods, water scarcity, cyclones and storm surges are being taken up into **urban development policy.**

Ahmedabad has had a **Heat Action Plan (HAP)** since 2010 and its success evident from reduced heat mortality.

Combining infrastructural interventions (for example, painting roofs white) and behavioural aspects (building public awareness on managing heat), the model has now been scaled up to 17 cities across the country.

Other successful projects include **nature-based solutions** such as **mangrove restoration** in coastal Tamil Nadu and **urban wetland management (**regulate urban floods) in Bengaluru.

**Bottlenecks and ways forward**

However, a lot of interventions are being **implemented through sectoral projects** focusing on particular, isolated risks. This narrow focus tends to overlook how multiple risks converge and reinforce each other — for example, seasonal cycles of flooding and water scarcity in Chennai.

**Coastal flooding, sea-level rise**, and cyclones are discussed less often despite India's long coastline and highly vulnerable coastal cities and infrastructure.

**Inadequate finances and political will** at city scales constrain developing sustainable Indian cities.

**Inadequate institutional capacity** in existing government departments to reorient ways of working.

**Way Ahead**

Moving away from looking at risks in isolation and **planning for multiple, intersecting risks.**

Government needs to **undertake long-term planning** with resilience planners in every line department as well as communication channels across departments to enable vertical and horizontal knowledge sharing.

Focusing on changing behaviours and lifestyles.

One emerging example behavioural change **is bottom-up sustainable practices** such as urban farming where citizens are interpreting sustainability at a local and personal scale. This can mean

Growing one's own food on terraces and simultaneously enhancing local biodiversity;

Composting organic waste and reducing landfill pressure;

Sharing farm produce with a neighbour,

Bringing communities closer and creating awareness about food growing.

## Coal Crisis

**Context**: India's thermal power plants are facing a severe coal shortage, with coal stocks having come down to an average of four days of fuel across an increasing number of thermal stations.

On October 4, 16 thermal power plants with a power generation capacity of 17,475 MW (mega watts) had zero days of coal stock.

An additional 45 thermal power plants with a power generation capacity of 59,790 MW had coal stock only sufficient for up to two days of generation.

In total, plants with a power generation capacity of 132 Gigawatts (1GW is 1,000 MW) of the 165 GW of capacity monitored daily, had critical or super critical levels of coal stock.

The shortage of coal is more acute in non-pithead plants or plants which are not located close to coal mines with such plants accounting for 98 of the 108 plants seen to have critical levels of stock i.e under eight days.

India's coal fired thermal power plants account for **208.8 GW or 54 per cent of India's 388 GW installed generation capacity**.

Government has said that while the supply crunch has not yet led to any power cuts in the country, the coal supply situation is likely to be "uncomfortable" for up to six months.

**What is the reason behind India's coal shortage?**

**A sharp uptick in power demand** as the economy recovers from the Covid-19 pandemic coupled with supply issues have led to the current coal shortage.

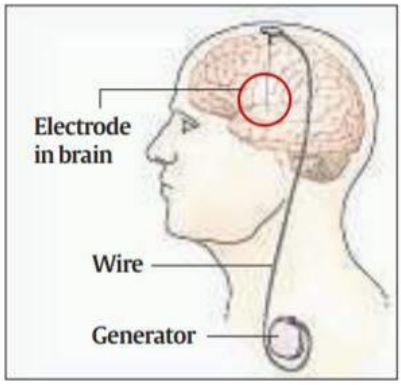
India consumed 124 billion units of power in August 2021 compared to 106 billion units of power in August 2019 which was not impacted by the pandemic.
Coal fired thermal power plants have also supplied a higher proportion of the increase in demand leading the share of thermal power in India's power mix increasing to 66.4% from 61.9% in 2019.
The government has **connected an additional 28.2 million households** and these households are buying lights, fans and television sets leading to an increase in power demand.
Other key reasons for the supply crunch include **continuous rainfall in coal bearing areas** in August and September led to **lower production** and fewer despatches of coal from coal mines.
A **consistent move to lower imports** coupled with high international prices of coal have also led to plants cutting imports.

**What measures is the government taking to address the situation?**
An **inter-ministerial team,** including representatives of the Power and Railway Ministries, Coal India Ltd, the Central Electricity Authority and Power System Operation Corporation, is monitoring the supply of coal to thermal power plants.
The government is pressing thermal plants with **captive coal mines to boost their coal output** so that they can meet more of their own demand
Government is also **prioritising coal supplies** for thermal power plants with low levels of stock.
The Power Ministry is also trying to increase the supply of coal by **expediting the start of production** from a number of mines that already have all requisite clearances in place.
The government has also boosted the number of rakes of coal being transported to thermal power plants daily with 263 rakes of coal dispatched from coal mines up from 248 rakes.

## Deep Brain Stimulation

**Context**: Physicians at the University of California, San Francisco (UCSF) have successfully treated a patient with severe depression by recognising and tapping into the brain circuits linked with depressive brain patterns.
The physicians have tried to reset these patterns, which they have said is the equivalent of using a pacemaker for the heart.
The doctors used an existing technique called deep brain stimulation (DBS), customising it for this patient's case.

**What is deep brain stimulation (DBS)?**
DBS is a surgical procedure in which electrodes are implanted into certain brain areas.
These electrodes, or leads, generate electrical impulses that control abnormal brain activity.
The electrical impulses can also adjust for the chemical imbalances within the brain that cause various conditions




Traditional DBS has three components (refer above figure):
**The electrode, or lead**. This is a thin, insulated wire inserted through a small opening in the skull and implanted into a specific brain area.
**The extension wire.** This too is insulated, and is passed under the skin of the head, neck and shoulder, connecting the electrode to the third component of the system.
The **internal pulse generator (IPG)** is the third component. It is usually implanted under the skin in the upper chest.

**What diseases can be treated with DBS?**
Conditions that are traditionally treated using DBS include dystonia, epilepsy, essential tumour, obsessive-compulsive disorder and Parkinson's disease.
In treating depression, however, previous clinical trials with DBS has shown limited success because most devices are only able to deliver constant electrical stimulation to one area of the brain.
During the latest research & treatment, scientists customised a new DBS device, which would stimulate the brain whenever it recognised the depressive pattern.
Additionally, scientists had also found a neural biomarker that indicated the onset of symptoms.

Using the customised DBS device, they were able to stimulate a different area of the brain, which in turn created **immediate therapy for the brain.**

## Data Revolution in Indian agriculture

**Context:** Recently, a document on "Indian Agriculture: Ripe for Disruption" was released by a private organisation Bain and Company.

**Key Takeaways of the report**

The Bain report is a data-based prediction on agri-business scenarios

It includes targeting the production of alternative proteins, and food cell-based food/ingredients and initiating ocean farming, etc.

The agriculture sector (currently worth $370 billion), is estimated to receive an additional $35 billion investment.

The two enabling conditions for such investment opportunities are

Changes in the regulatory framework, especially recent changes in the Farm Acts

Digital disruption through government initiative of **IDEA – 'India Digital Ecosystem for Agriculture'.**

The Indian agriculture sector in future will encompass farm to fork and pave the way for a **single national market with a national platform** with better connection between producer and consumers.

The report has convincingly demonstrated the **business opportunity available in supply chains** between farm to Agricultural Produce Market Committee (APMC) *mandi* and *mandi* to the customer, which can be realised with the support of digital disruption and the latest agriculture reforms.

The report argues that benefiting from the huge investments into the agri-ecosystem, doubling farmers' income targets can be achieved in near future.

**Concerns or Challenges**

The IT industry has opposition to IDEA mainly due to the ethics of creating a Unique Farmer ID based on one's Aadhaar number and also the **potential for data misuse.**

There is a general assumption that more investments into the agriculture sector will benefit farmers; 'but how' has not been convincingly answered in the report.

Majority of small and marginal farmers are under-educated and not technology-savvy. However, **capacity building of farmers** is ignored amidst these ambitious developments.

**Protest of farmers** against the reforms can act as a barrier or risk factor resulting in a repealing of these new farm laws.

**Way Forward**

While agreeing on the fact that a **data revolution is inevitable** in the agriculture sector, given its socio-political complexities, we cannot just count on technology fixes and agri-business investments for improving farmers' livelihoods.

There need to be immense efforts to **improve the capacities of the farmers**, by establishing support systems, through FPOs and other farmers associations.

Considering the size of the agriculture sector of the country this is not going to be an easy task but would need a **separate programme across the country** with considerable investment.

## PRIs and Disaster Management

**Context**: The Panchayati Raj, first adopted by Nagaur in Rajasthan on October 2, 1959, has expanded vastly. There are now 2,60,512 Panchayati Raj Institutions (PRIs) represented by about 31 lakh elected members across India.

The People's Plan Campaign and Vibrant Gram Sabha Dashboard, rolled out this year, aspire to strengthen the Panchayati Raj system by making gram sabhas more vibrant.

People Plan campaign or **"Sabki Yojana Sabka Vikas"** aims to draw up Gram Panchayat Development Plans (GPDPs) in the country and place them on a website where anyone can see the status of the various government's flagship schemes.

Vibrant Gram Sabha Dashboard will help in increasing maximum participation from Panchayats through the meeting of Gram Sabha, the Standing Committee meeting of Gram Panchayat, meeting of elected Panchayat public representatives throughout the year.

**Crucial role played by Panchayat Raj Institutions(PRI) during Pandemic**

When the traditional **top-down disaster response system was compromised** during the bad months of the pandemic, it was PRIs that played a remarkable role.

They helped **reduce risks,** responded swiftly and thus helped people recover quickly. The PRIs provided essential leadership at the local level.

They **performed both regulatory and welfare functions**.

For instance, during the nationwide lockdown, PRIs set up containment zones, arranged transport, identified buildings for quarantining people and provisioned food for the incoming migrants.

Moreover, effective implementation of welfare schemes like MGNREGA quickened the pace of recovery while ensuring support to the vulnerable population.

Regular engagement with frontline workers like ASHA workers and Anganwadi workers through committees **bridged the trust gap** between the community and the officials.

More recently, PRI's role in mobilising citizens for COVID-19 vaccination is exemplary helping India move towards universal vaccination by end of the year.

**What measures can be taken to further improve PRIs role during disasters (like Pandemic)?**

The Yokohama strategy,1994 emphasised that it is important to focus on disaster prevention, mitigation and preparedness rather than disaster response alone, to reduce vulnerability. In this respect, certain initiatives can be taken to build the capacity of PRIs.

**Legal Recognition**: It is crucial to include disaster management chapters in Panchayat Raj Acts and make disaster planning and spending part of Panchayati Raj development plans and local-level committees. This will ensure citizen-centric mapping and planning of resources.

**Strengthening Capacities:** Conducting regular location-specific training programmes for the community will strengthen individual and institutional capacities. Sharing of best practices, assigning roles to individual members and providing them with the necessary skills can make such programmes more meaningful.

**Disaster Management Plans:** Since the community is usually the first responder in case of a disaster**,** community-based disaster management plans would help.

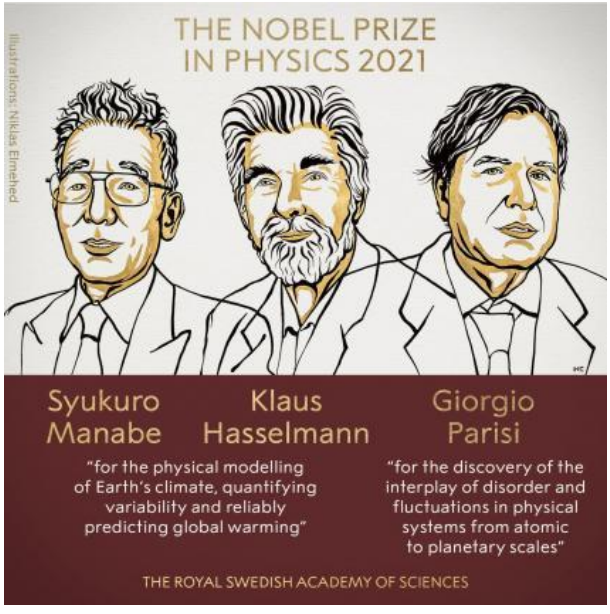
These would provide a strategy for resource utilisation and maintenance during a disaster. Such plans should tap the traditional wisdom of local communities which will complement modern practices.

**Mobilising Funds**: Financial contributions from the community should be encouraged through the establishment of community disaster funds in all gram panchayats.

**Conclusion**

It is imperative to make disaster resilience an inherent part of the community culture now more than ever.

## First Nobel for Climate Science



**Context:** Syukuro Manabe and Richard Wetherald way back in 1967, for the first time, in their published papers had described the impact of carbon dioxide and water vapour on global warming.
Manabe, now 90, was awarded the Nobel Prize for Physics. He shared one half of the prize with Klaus Hasselmann, another climate scientist, while the other half went to Georgio Parisi for his contributions in advancing the understanding of complex systems .

**First recognition**
This is the first time climate scientists have been awarded the Physics Nobel.
The IPCC had won the Peace Nobel in 2007, an acknowledgement of its efforts in creating awareness for the fight against climate change, while a Chemistry Nobel to Paul Crutzen in 1995, for his work on the ozone layer, is considered the only other time someone from atmospheric sciences has won this honour.
The recognition of Manabe and Hasselmann, therefore, is being seen as an acknowledgment of the **importance that climate science** holds in today's world.

**Manabe's Work**
The **sophisticated climate models** that we run today, which are so crucial to climate science, trace their ancestry to that model created by Manabe.
Manabe was also instrumental in developing the **first coupled model, in** which ocean and atmospheric interactions are modelled together, in the 1970s.

**Hasselmann's Work**
Hasselmann, a German, who is now 90, is an oceanographer who ventured into climate science.
He is best known for his work on identifying **specific signatures in the climate phenomena** that enabled scientists to ascertain whether these were caused by natural processes or human activities.
In the 1990s, and even in the early 2000s, there was a lot of debate over the cause of global warming – whether these were being driven by human activities, or were part of natural variability.
Hasselmann's work on identifying these fingerprints has all but closed that debate now.
IPCC's sixth assessment report which came out in 2021 is unequivocal in saying that climate change is occurring because of human activities.
Manabe and Hasselmann too have been authors of previous IPCC reports. Both of them contributed to the first and third assessment reports, while Hasselmann was an author in the second assessment report as well.

**Significance of this Nobel Prize**
Several scientists said that the delayed recognition to climate science couldn't have come at a more appropriate time.
This Nobel Prize will, hopefully, also help in more people believing in climate science
Until very recently, climate science was not considered important even in scientific circles.
Perhaps that was because the weather forecasts were not very accurate. Not everyone appreciated the fact that this science itself was uncertain and chaotic.
But that perception is changing now. Weather forecasts have become far more accurate, the evidence on climate change have been compelling, due to the works of various scientists like Manabe and Hasselmann.
This Nobel Prize would probably help in **further mainstreaming of climate science.**

## Refugee Law

**Context**: According to the UN, over 82.4 million people were forced to leave their homes in 2020 and more than 20 million of them are refugees. Over 200,000 of these refugees are currently in India.

**India and Refugees**
Through its history, India has hosted people fleeing war, conflict and persecution many times — Zoroastrians from Iran, Bengalis during 1971 Bangladesh liberation, Sri Lankans in the 1980s or Afghans during varied waves of displacement.
Welcoming refugees lies at the core of India's secular, spiritual and cultural values.
India has taken part in 49 peacekeeping missions, in which more than 195,000 troops and a significant number of police personnel assisted the UN and international NGOs in conflict-ridden lands.
Whatever be the considerations of refugees seeking a sanctuary — economic, demographic, security, or political — India has been adept in managing complications that result from such situations.
**Issues**

**Lacks Refugee Framework:** Despite being a welcoming country, India does not have a national refugee framework.
**Ad-Hoc Measures**: Interventions on refugee assistance in India have largely depended on interim policies and administrative decisions. As a result, some groups of refugees have benefitted from holistic support and solutions, others have fallen behind.
**Missing on Soft Power:** India has not codified our interventions in asylum management, so that they can be showcased globally.
**Not a bureaucratic Exercise:** Treatment of refugees is an important national security consideration that cannot be relegated to a bureaucratic exercise as it is currently.

**Need for Refugee Law**
A sustainable refugee policy is a necessary step to **intelligently manage population movements** and ensure transparency and predictability in our administrative actions.
A national refugee management law will be in keeping with **India's leadership role in the region** and amongst developing nations.
The legislation will **clarify the roles of different agencies** — governmental, judicial, UN — involved in refugee protection and lay down the procedures of coordination amongst them.
It would also **help avoid friction** between the host country and the country of origin.
Other states would recognise the move **to grant asylum** as a peaceful, humanitarian and legal act, and not an arbitrary political gesture.
It will also provide a **platform for dialogue on sharing responsibility** and aid the search for durable solutions to the root causes of a refugee problem.
Some countries provide initial help to refugees, after which they are expected to fend for themselves. A few countries have treated refugees like charity cases. Finding the right **balance between the two** is what a national refugee law can help achieve.

**Way Forward**
Progressive states and economic powerhouses like India, with traditional experience and values, can serve as catalysts for global humanitarian action and asylum management.
The current global refugee and economic crises present an opportunity for India to better calibrate its asylum management by enacting a national refugee law

## Reflections on the 'quasi-federal' democracy

**Context:** The federal structure of India's Constitution is a **democratic need of multi-cultural India,** where the constituent units (states) are based on language, against competing identities such as caste, tribe or religion.
The democratic structure and national integrity are therefore intrinsically interlinked.
However, operational faults of Democracy are increasingly hurting liberal institutions, undermining the federal democratic structure as recent events have underscored.

**Some fault lines**
In Parliament session, the **Rajya Sabha Chairperson broke down** (in August 2021), unable to conduct proceedings; yet, the House passed a record number of Bills amidst a record number of adjournments.
Recently, **cross-border police firing** by one constituent State against another, inflicting fatalities & putting strain on federalism.
Greater criminalisation in India's democracy, which includes over 30% legislators with criminal records,
Democratic federalism presupposes institutions to ensure **equality between and among the units and the Centre** so that they coordinate with each other, subordinate to the Constitution and their disputes adjudicated by an independent judiciary with impeccable professional and moral credibility. But India's federal structure is constitutionally impacted by deficits on all these counts.
There is also issue of popular voting behaviour, institutional preferences are based either on ethnic or kinship network, which emerge as fault lines in India's Federal Structure.
With 'nation-building" as priority, the constitutional division of power and resources remains heavily **skewed in favour of the Centre.**
India's Constitution has **nothing about States' rights,** not even their territorial boundaries. This has enabled the Centre to unilaterally alter State boundaries and create new States.
The judiciary is empowered to adjudicate on the conflicts between Federal Units, however with **higher judicial appointments** (an estimated 41% lying vacant), promotion and transfers becoming a

central right, their operations are becoming increasingly controversial.
The "all India services" and the role of Governors is distorted - transforming these constitutional authorities of a federal "link" to one of a **central "agent" in the States.**
The Rajya Sabha indirectly represents the States whose legislators elect it, but is **overpowered by priorities of political parties** at the cost of the state's interests.
Thus, the critical instruments of national governance have been either assigned or appropriated by the Centre, with the States left with politically controversial subjects such as law and order and land reforms.
Thus, **most of India's federal conflicts are structural**, reinforced by operational abuses.

**Conclusion**

India's national security deserves a functional democratic federal alternative to its dysfunctional "quasi-federal" structure, which is neither federal nor democratic but a constitutional "basic structure".

## A 'Taiwan flashpoint' in the Indo-Pacific

**Context:** In a new incident last week, a U.S. nuclear-powered submarine reportedly ran into an "unidentified object" while in the South China Sea. China has objected to these U.S. actions vociferously.

The rising confrontation between the United States and China erupts into a clash of arms, the likely arena may well be the Taiwan Strait.

**Brief Background of Taiwan:**

Taiwan is the unfinished business of China's liberation under the Chinese Communist Party (CCP) in 1949.
The Guomindang (KMT) forces under **Chiang Kai-shek lost the 1945-49 civil war** to the CCP forces under Mao Zedong.
**Chiang retreated to the island of Taiwan** and set up a regime that claimed authority over the whole of China and pledged to recover the mainland eventually.
The **CCP in turn pledged to reclaim** what it regarded as a "renegade" province and achieve the final reunification of China.
Taiwan could not be occupied militarily by the newly established People's Republic of China (PRC) as it became a military ally of the United States during the Korean War of 1950-53.
It was described as an "**unsinkable aircraft carrier"** underscoring its strategic significance.
This phase came to an end with the U.S. recognising **the PRC as the legitimate government of China in 1979**, ending its official relationship with Taiwan and abrogating its mutual defence treaty with the island.

**Strategic ambiguity of US & China vis-à-vis Taiwan**

U.S. has declared that it will "maintain the ability to come to Taiwan's defence" while not committing itself to do so. This is the policy of **"strategic ambiguity" of USA**
China, on the other hand, is committed to pursuing peaceful unification but retains the right to use force to achieve the objective. This is its **China's version of strategic ambiguity.**

**What has been the policy of China towards Taiwan?**

China has pursued a typical carrot and stick policy to achieve the reunification of Taiwan with the mainland.
It has held out the prospect, indeed preference for **peaceful reunification**, through promising a **high degree of autonomy** to the island under the "**one country two systems"** formula first applied to

Hong Kong after its reversion to Chinese sovereignty in 1997.
According to this formula, Hong Kong would retain its free market system and its political and judicial institutions and processes for a period of 50 years, thus enabling an extended and gradual transition.
The **same was promised to Taiwan,** but with the added assurance that it could also retain its armed forces during the transition period.

**Economic Links between China and Taiwan**
With China itself adopting market-oriented reforms since 1978 and becoming a significant economic and commercial opportunity globally, Taiwan business entities have invested heavily in mainland China and the two **economies have become increasingly integrated.**
Between 1991 and 2020, the stock of **Taiwanese capital invested in China** reached U.S. $188.5 billion and bilateral trade in 2019 was U.S. $150 billion, about 15% of Taiwan's GDP.
By contrast the stock of Chinese capital invested in Taiwan is barely U.S. $2.4 billion
China hopes that burgeoning economic relationship with Taiwan would **weaken opposition to unification.**
At the same time, China is **capable of inflicting severe economic pain** on Taiwan through coercive economic policies if Taiwan is seen to move towards an independent status.

**Hong Kong & impact on Taiwan**
Recently, China adopted a series of hardline policies in Hong Kong, abandoning the 'One Country Two Systems' formula.
As a result, Public opinion in Taiwan swung in **favour of The Democratic Progressive Party (DPP)**, who is more representative of the indigenous population of the island, and **favours independence.**
One important implication of this development is that **prospects for peaceful unification have diminished.**

**Is China prepared to carry out military operations to invade and occupy Taiwan?**
In March 2021, the U.S. Pacific Commander, warned that China could invade Taiwan within the next six years as part of its strategy of displacing U.S. power in Asia. He suggested that Chinese military capabilities had been developed in order to achieve this objective.
The recent initiatives of the Quad and AUKUS may act as a deterrent against Chinese moves on Taiwan. But they may equally propel China to advance the unification agenda before the balance changes against it in the Indo-Pacific.
For these reasons, Taiwan is emerging as a potential trigger point for a clash of arms between the U.S. and China.

**Conclusion**
In pursuing its Indo-Pacific strategy, India would do well to keep these possible scenarios in mind.

## Forest Conservation Act & Proposed Amendments

**Context**: The **Forest (Conservation) Act, 1980**, came into force to address deforestation.
Though the Indian Forest Act has been in force since 1927, it was geared to allow the colonial British administration to control the extraction of timber and not aimed at preserving forests or addressing deforestation.
While States had already notified forest land, the FCA made it necessary to get the Centre's permission for using such forest land for "non forestry purposes" and the creation of an advisory committee to recommend such re-classification.

**Has the FCA ever been amended?**
There have been at least two major amendments to the FCA — in 1988 and 1996.
Till 1996, State, UT & Union Government used to apply the provisions of the Act only to the **forests notified under the Indian Forest Act, 1927** or any other local law.
However, what constituted a "forest" was dramatically expanded following a Supreme Court judgment in a petition filed by **Godavarman Thirumulpad.**
Now, "forest" also included
All areas recorded as "forest" in any government record, irrespective of ownership, recognition and classification;
all areas that conformed to the "dictionary" meaning of "forest"
all areas which are identified as "forest" by an expert committee constituted by the Supreme Court following the 1996 order.
This judgment also paved the way for **calculating the net present value**, or the economic value of the portion of forest being razed for

development work that had to be paid by project proponents;
The creation of **a compensatory afforestation fund**;
Providing non-forestry land in lieu of the diverted forest.

**Why is the FCA again being amended?**
The essential tension in the FCA is that the state is committed to a principle of increasing forest cover, and this makes it **harder to access land for infrastructure** projects by States and private entities.
India's aim is to have **at least 33% of India's geographical area under forest** and tree cover, and increasing the latter is a major thrust.
So far, forest cover is around 22% and because increasing core forest land is increasingly hard, the mode of expansion **includes expanding the notion of what constitutes forest land**.
Thus, even degraded lands, if they have been recorded anywhere as "forest" in land records count, and even commercial plantations or regions with trees of a certain canopy cover and density count as "forest".
On the other hand, with more land coming under the definition of "forest", it's becoming harder for State Governments or private industry to use land that falls under the definition of "forest" for non-forestry purposes.
Through the years, this has given rise to multiple instances of **litigation**, as well questions on the **legal definition of "forest**".

States have been told to provide a definition of what constitutes a forest, but several haven't given them because this has political consequences. All of this has led to **conflicting interpretations of the FCA through** the years.

**What is the latest amendment about?**
Recently, the Environment Ministry has released a "consultative paper" that spells out proposed changes. This is open to public comment.
Broadly, it proposes to **exempt certain categories of infrastructure project** developers from approaching the Centre for permission to use forest land for non-forestry purposes.
For instance, it has proposed exempting agencies involved in national security projects, border infrastructure projects, land owned by the Railways or the Road Transport Ministry that was acquired before 1980 or when the Act came into force.
India, as part of its climate change action plan, has committed to create a carbon sink to lock in 2.5 to 3 billion tonnes of CO2 by 2030. This can be achieved only through planting trees on private land and the current laws pose an impediment to **encouraging private landowners to grow more trees.**
The Ministry has proposed some provisions where the penalties of non-compliance could include jail terms, but the overall tenor of the **proposal is to make it a little easier to use forest land for non-forestry purposes.** However, this still requires approval by the Cabinet and possibly the Parliament.

## Loknayak Jaiprakash Narayan

**In News:** PM paid tributes to Loknayak Jayaprakash Narayan on his Jayanti.
Lok Nayak Jay Prakash Narayan's birthday (11th October, 1902) is celebrated as **"Save Democracy Day"** for his invaluable contribution to anti-emergency agitation during 1975-76.
His entire life is one of supreme sacrifice and commitment to the nation
In 1921 he joined the Non-cooperation movement and was influenced by ***Gandhian Ideology***
Later he went to US, where he was deeply influenced by ***Marxist ideology***. However, he rejected the ultimate solution of "revolution" to bring down the capitalism as being advocated by the Marxists. On the contrary, he advocated ***Socialism*.**
In 1929 he joined the INC at the invitation of Jwaharlal Nehru
In 1934 he formed Congress Socialist Party with the following members
General Secretary: JP Narayan
Ideology: *Democratic Socialism*
He also participated in Quit India Movement in 1942. He advocated *non-rebellion & non-violence*
During the period of emergency starting from 1975, he gave a call for "Total Revolution" or "Sampoorna Kranti" to completely transform the society. He advocated
Party-less democracy

Sarvodaya
Rejection of Parliamentary Democracy
After the death of J Nehru, JP had increasingly involved in national politics
During the second half of 1960s, he involved in resolving disputes in Kashmir
He also played a pivotal role in the Nagaland issue in 1960s
During the Bangladesh crisis, it was JP who became India's ambassador to persuade about the rightness of India's cause
The voice of JP favouring human rights found relevance in Hungarian crisis, Czech crisis, and Tibetan crisis during his times
In 1999, he was posthumously awarded Bharat Ratna

**Part of the All India Kisan Sabha (AIKS)**
Jayaprakash Narayan (JP), whose 117th birth anniversary falls on October 11, was among the twelve apostles of the Mahatma and had been a front-soldier during the Indian freedom struggle. In this fight, JP imbibed a combination of ahimsa and aggression.
His call for **'sampoorna kranti'** or total revolution to fight against rampant corruption, unemployment and systematic weakening of democratic institutions back in 1974, and the subsequent events, led to the imposition of the infamous Emergency. It eventually paved the way for a realignment of political forces in the country and gave a new direction to the politics of the country, with far-reaching ramifications.
He firmly believed that youngsters should be in the forefront of changing the system. Those entrenched in power, the status quoists, would naturally resist any change, but only the energy and force of youth can bring about revolutionary transformation – this was his firm belief.
And that's precisely what happened in the seventies. After blessing the Nav Nirman Andolan in Gujarat, where people had risen against the corrupt state government, JP mobilised students in Bihar to fight against authoritarianism and corruption. He had such a mesmerising influence on the political scene that under his mentorship a host of splinter parties of the Congress, like Congress (O), Jana Sangh and Swatantra Party, and other socialists came together to form the Janata Party.
He could have easily occupied the top post during the Janata regime. Although people clamoured for his leadership, he said that power was not his aim.
He participated in the freedom struggle and led the Quit India movement in 1942 in the absence of senior leaders. He remained detached from electoral politics after Independence, but as such was not indifferent to politics. He also took active part in **Vinoba**

**Bhave's Bhoodan movement.**
The legacy of JP is akin to that of the Mahatma and echoes him on issues that have cropped up in the post-Gandhi era.

***Freedom***
"Freedom became one of the beacon lights of my life and it has remained so ever since… Above all it meant freedom of the human personality, freedom of the mind, freedom of the spirit. This freedom has become a passion of my life and I shall not see it compromised for food, for security, for prosperity, for the glory of the state or for anything else."

***Democracy***
"India's democracy is to rise storey by storey from the foundation, consisting of self-governing, self-sufficient, agro-industrial, urbo-rural local communities — gram sabha, panchayat samiti and zilla parishad—that would form the base of Vidhan Sabhas and the Lok Sabha. These politico-economic institutions will regulate the use of natural resources for the good of the community and the nation."

***Development***
"Idea of development envisages independent India as sui generis, a society unlike any other, in a class of its own that would not follow the western pattern of mega industrialisation, urbanisation and individuation. India's would be agro-based people's economy that would chart out a distinct course in economic growth, which would be need-based, human-scale and balanced while conserving nature and livelihoods.
Such a 'development' process would be democratic and decentralised. The best development model for India is diversified, democratic decentralised and value-added agriculture as the root, manufacturing small/medium industries as trunk and branches and widespread service sector as a canopy. The almost universal tendency for a centralised political, economic model, and social system that is associated with both of them should be abandoned."

***Communalism***
"Although almost every religious community had its own brand of communalism, Hindu communalism was more pernicious than the others

because Hindu communalism can easily masquerade as Indian nationalism and denounce all opposition to it as being anti-national."

## Tackling the Climate Crisis

**Context**: The recently published Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report from Working Group I makes a clarion call for climate action.
According to the report, the past decade (2011-2020) was warmer by 1.09°C than the period from 1850 to 1900, and the 1.5°C global warming threshold is likely to be breached soon

**Do You Know?**
The Global Climate Risk Index (2021) ranked India the seventh-most affected country by weather extremes.
The IPCC report warns India against more intense heat waves, heavy monsoons and rise in weather extremes in the future.

**Importance of Adaptation**
Responses to climate change vary from place to place as there are differences in production systems, agro-climatic and socio-economic conditions across the country. Hence, there is an urgency to adopt country specific adaptation strategies.
India has some **dedicated initiatives** towards adaptation, such as the National Action Plan on Climate Change and the National Adaptation Fund. However, **adaptation planning** needs to go beyond a business-as-usual approach.
A **development-centric approach** that aligns climate change, food security, and livelihood perspectives and takes into consideration regional specificities is crucial for reducing poverty and distress migrations.
Moreover, adaptation planning requires **governance at different levels** to understand, plan, coordinate, integrate and act to reduce vulnerability and exposure.

**To strengthen adaptation and resilience, India can do the following.**

**Improvised Prediction Models:** First, it can be more prepared for climate change with high-quality meteorological data. With improved early warning systems and forecasting, we can tackle the crisis better. Premier research institutes can be roped in to develop regional climate projections for robust risk assessments.
**Promoting Environmentally Friendly Products**: Second, for sustainable production systems, it is necessary to develop well-functioning markets for environmentally friendly products and disseminate them for the desired behavioural change.
**Involve Private Sector:** Third, it is important to encourage private sector participation for investment in adaptation technologies and for designing and implementing innovative climate services and solutions in areas such as agriculture, health, infrastructure, insurance and risk management.
**Tapping into traditional knowledge:** Fourth, we need to protect mangroves and forests to address climate-related risks by blending traditional knowledge with scientific evidence and encourage local and non-state actors to actively participate.
**Establish Feedback Mechanisms**: Fifth, for continuous monitoring and evaluation, effective feedback mechanisms must be developed for mid-course correction. Periodic fine-tuning of State Action Plans on Climate Change is needed to design appropriate responses & proper resource allocation.

**Conclusion**
Proactive and timely need-based adaptation is important. Without it, there will be a huge fiscal burden in the future.
A more collaborative approach towards climate change adaptation is crucial.
Next-generation reforms will promote new business and climate service opportunities across several sectors and thus create a sustainable economy.

# Controversy over Ease of Doing Business Rankings

**Context:** Recently, there were allegations of data tampering by **Kristalina Georgieva** (Former WB Chief & currently MD of IMF) in the World Bank's Ease of Doing Business rankings in favour of China.

**What is the controversy around Georgieva?**

Georgieva is a Bulgarian economist who held several high-profile positions in European politics.
In January 2017, she was appointed the chief executive of the World Bank group.
In January 2019, she took over as the interim president of the WB group.
In October 2019, she took over as Managing Director of the IMF.
The trouble started when in January 2018, Paul Romer, then the chief economist of the World Bank told *The Wall Street Journal* that the World Bank's Ease of Doing Business **(EoDB) rankings were tweaked for political reasons.**
Soon Romer resigned. Incidentally, Romer was awarded the Nobel Prize in Economics later that year for showing how knowledge can function as a driver of long-term growth.
Romer's comments and resignation **kick-started a series of queries** both inside and outside the World Bank **about the integrity of EoDB rankings.**
In particular, it was alleged that the EoDB rankings were tweaked to inflate the ranks for China (in EoDB 2018) and Saudi Arabia, UAE and Azerbaijan (EoDB 2020).

**What has happened since the controversy broke out?**

In August 2020, the World Bank suspended its EoDB rankings after finding some **"data irregularities".**
The World Bank initiated a full review and an **independent investigation**. One such effort was to engage WilmerHale, a law firm, in January 2021.
In its report, submitted September 2021, Wilmerhale's investigations found that the **World Bank staff did indeed manipulate data to help China's ranking** and they did so under pressure from Georgieva.
The WilmerHale report states that at one point, when Georgieva took direct control of China's ranking and was looking for ways to raise it, it was suggested to just take the average of the two best performing cities — Beijing and Shanghai — as they do for several other countries (such as India) instead of taking a weighted average of several cities. By **cherry-picking the top two cities**, China's ranking would go up.
These findings are particularly damning because **China is the third-largest shareholder in the World Bank** after the US and Japan, and it is being seen as manipulating its way to higher rankings.
The investigation report did not find any evidence of wrongdoing with respect to the rankings of Saudi Arabia, UAE and Azerbaijan.

**What are the EoDB rankings, and why do they matter?**

The EoDB rankings were started in 2002 to rank countries on a number of parameters to indicate **how easy or difficult it is for anyone to do business** in a country.
Given the apparently extensive nature of rankings and that the World Bank was doing it, the EoDB

soon became the **go-to metric for international investors** to assess risk and opportunity across the globe.
Billions of dollars of **investments started becoming predicated** on where a country stands on EoDB and whether it is improving or worsening.
It also acquired **massive political significance** as leaders in different countries started using EoDB rankings to either claim success for their policies.

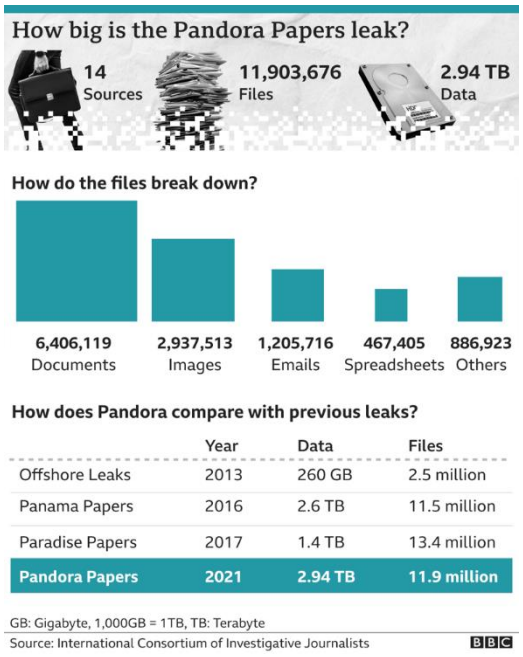
**How can the ranking methodology be improved?**
On September 1, the World Bank also published the findings of an external panel review of its EoDB methodology. It stated that "the current methodology should be significantly modified, implying a major overhaul of the project.
Some of the key recommendations are:
Any ranking based on such a small sample ignored the ease of doing business in other cities & regions of the country. Thus, there is a need for **broad basing the data collection** from a larger representative samples of "actual" business owners and operators.
**Not to ignore the government functions** that provide essential public goods to the private sector: transport and communications infrastructure, a skilled workforce, law and order, etc.
Do not rank countries on their **tax rates**. From a societal standpoint, collecting taxes is necessary, and thus lower tax rates are not necessarily better.
Eliminate the indicators "Protecting Minority Shareholders" and "Resolving Insolvency."
Make the "**Contracting with Government"** indicator more relevant.
Restore and improve the "Employing Workers" indicator, but do not rank countries based on this information.
**Improve the transparency** and oversight of Doing Business.

**Is this the first time the head of the IMF and/or World Bank has been in a controversy?**
No. In recent years, several heads of the World Bank and IMF have been found guilty of some wrongdoing or the other.
In **2011, Dominique-Strauss Kahn**, then the MD of IMF, had to resign after he was arrested in the US following **allegations of sexual assault.**
Rodrigo Rato, IMF's MD between 2004 and 2007, was jailed in Spain for a credit card scandal in 2017.
**Christine Lagarde,** who was IMF MD between 2011 and 2017, has been found guilty of negligence in allowing the **misuse of public funds in 2016** for a case dating back to 2011.
Paul Wolfowitz, president of the World Bank between 2005 and 2007, had to resign following ethical violations and his romantic links with a World Bank employee.
The role of Jim Yong Kim, who was World Bank president until 2019, is also being questioned in the rankings controversy.

## Pandora Papers

**What is Pandora Papers?**
The Pandora Papers is a leak of almost 12 million documents and files that reveals hidden wealth, tax avoidance and, in some cases, money laundering by some of the world's rich and powerful.
The data was obtained by the **International Consortium of Investigative Journalists** in Washington DC, which has been working with more than 140 media organisations and more than 600 journalists from 117 countries on its biggest ever global investigation.
The ICIJ has also said that the "data trove covers more than 330 politicians and 130 Forbes billionaires, as well as celebrities, drug dealers, royal family members and leaders of religious groups around the world".

**Is this the first time that such financial papers have been leaked?**
Since at least 2008, files indicating the manipulations by the rich have been stolen from financial institutions.
In 2008, a former employee of the **LGT Bank of Liechtenstein** offered information to tax authorities.
Again in 2008, Hervé Falciani obtained **confidential data on HSBC bank accounts** from remote servers and gave the data to then French Finance Minister Christine Lagarde, who then passed it on to the various governments, including India.
In 2017, the **Paradise Papers** were leaked out mostly from the more than 100-year-old offshore law firm, Appleby, which operates globally.
In 2016, the **Panama Papers** were obtained by hacking the server of the Panamanian financial firm, Mossack Fonseca.
The leaked documents from Luxembourg, the **"Luxembourg Leaks",** appeared in 2014.




**The modus operandi**

The leaked papers now and even earlier have exposed the international financial architecture and illicit financial flows.

For instance, Panama Papers highlighted the template used in other tax havens. The Pandora Papers once again confirm this pattern.

Tax havens enable the rich to hide the true ownership of assets by using: trusts, shell companies and the **process of 'layering'.**

The process of layering involves moving funds from one shell-company in one tax haven to another in another tax haven and liquidating the previous company. This way, money is moved through several tax havens to the ultimate destination.

Since the **trail is erased at each step**, it becomes difficult for authorities to track the flow of funds.

**Financial firms offer their services** to work this out for the rich. They provide ready-made shell companies with directors, create trusts and 'layer' the movement of funds. Only the moneyed can afford these services.

It appears that most of the **rich in the world use such manipulations to** lower their tax liability even if their income is legally earned. Even citizens of countries with low tax rates use tax havens.

**Implications**

**Rise of Tax Havens:** Over the three decades, tax havens have enabled capital to become highly mobile, forcing nations to lower tax rates to attract capital. This has led to the 'race to the bottom',

**Impairs Welfare Provision of Government:** Layering of money through tax havens results in a shortage of resources with governments to provide public goods, etc., in turn adversely impacting the poor.

**Legally correct but morally wrong:** Strictly speaking, not all the activity being exposed by the Pandora Papers may be illegal, however, it is morally wrong for the rich to evade taxes which could have otherwise the poor people.

**Complex Legal Process**: The authorities will have to prove if the law of the land has been violated in each of these revelations. Each country will have to conduct its investigations and prove what part of the activity broke any of their laws.

In the United Kingdom, the laws regarding financial dealings are very favourable to the rich and their manipulations.

**Misplaced Focus on Unorganised Sector:** Indian Government's focus on the unorganised sector as the source of black income generation is also misplaced since data indicate that it is the organised sector that has been the real culprit and also spirits out a part of its black incomes through Tax Havens & layering.

**Conclusion**

An interesting recent development (October 8) has been the agreement among almost 140 countries to levy a 15% minimum tax rate on corporates.

Though it is a long shot, this may dent the international financial architecture.

Other steps needed to tackle the curse of illicit financial flows are ending banking secrecy and a Tobin tax on transactions.

## Gati Shakti

**Context**: In his Independence-day speech, the PM has announced a ₹100 lakh crore "Gati Shakti" infrastructure plan.

**What is Gati Shakti Master Plan?**

It is a Rs. 100 lakh-crore project for developing 'holistic infrastructure'.

The plan is aimed at easier interconnectivity between road, rail, air and waterways to reduce travel time, improve industrial productivity and developing synergies towards building a more harmonised infrastructure.

The push for infrastructure is in line with the government's efforts to step up capital expenditure in infrastructure to promote economic growth.

**Significance**

**Logistics Grid**: With Gati Shakti, India will be able to build an integrated, harmonised transportation and logistics grid**.** Such a grid will help bring down logistics & supply cost of India.

**Enhances Supply Chain Efficiency:** It helps build new supply-side capacities & enhances supply chain efficiency that can set the wheels of growth in motion and move towards the ambitious mission of a $5-trillion economy

**Coordinated Governance**: To have all utility and infrastructure planning under an umbrella framework will ensures coordinated planning, cut down ministerial delays, and leads to faster decision making.

**Attracts FDI:** Having an umbrella framework under Gati Shakti provides clarity & stability to investors thereby attracting Foreign Direct investment into infrastructure sector.

**Scope for New Economic Corridors**: Increased investment by domestic & foreign investors for new infrastructure creations open the doors for new future economic zones

**Improves Connectivity**: It will ensure last-mile connectivity to economic zones in a definite timeframe.

**Increased Competitiveness of exports:** Supply chain inefficiencies add to product costs, and thus, run the risk of making our exports uncompetitive vis-à-vis other international export players. Dedicated infrastructure development under Gati Shakti, therefore, improves India's infrastructure capacity and global export competitiveness with regard to manufacturing in India.

**Data for Policy Making:** The geographic information system (GIS)-enabled digital platform under Gati Shakti will provide useful data — including a region's topography, satellite images, physical features, maps of existing facilities and so on — for ministries, thus, helping them save on funds and time for approvals.

**Enhances India's share in cargo business**: India's share in the international cargo business was worth ₹1,686 crore in 2019-20, which rose to ₹2,644 crore in 2020-21 (a 57% increase). Having a harmonised & integrated logistics hub will help increase this share.

**Conclusion**

Thus, Gati Shakti could pave the way for a culture of multimodality, where sea, road, rail and air transport modes do not compete with each other, but rather, complement each other**.**

## Rising Natural Gas Prices

**Context:** The is supposed to be an off season. Winter is yet to set in. But natural gas prices soared over the past few months, especially in Europe. The price of natural gas in Europe is now six times higher than what it was last year. Across the continent, natural gas inventories are falling.

**What's driving up the prices?**

**1. Supply Constraints**

Global energy demand fell in 2020 when economies slipped into COVID-induced lockdowns.

When growth returned this year, especially to Asian economies, demand shot up and energy producers struggled to meet the growing demand, pushing up prices.

Even in the **U.S., the world's largest natural gas producer**, prices rose from $1.7 per million British thermal units on March 31 to $6.3 per mBtu on October 5.

Europe, which is heavily dependent on imports to meet its energy demand, was particularly hit hard. As part of Europe's shift towards cleaner energy, many countries had moved away from coal to gas to produce electricity. This increased **Europe's reliance on gas.**

On the other side, the Europe's natural gas production has shrunk over the years, as many countries **shut down production fields over environmental concerns.**

If Europe's natural gas production (excluding Russia) was about 300 billion cubic metres in 2005, it fell to less than 200 bcm in 2021. Europe's main producer of natural gas, has seen its production shrink from 117.6 bcm in 2015 to 105.3 bcm in 2021. This has left **Europe largely dependent on Russia.**

**2. Energy Geopolitics**

As prices shot up amid growing worldwide demand and falling production in Europe, **supplies from Russia via a pipeline** that passes through Ukraine and Poland also reduced, which made the situation worse.

Russia has built another gas pipeline, **Nord Stream 2,** which will take Russian gas directly to Germany bypassing Ukraine and Poland (who are critical of Putin). But **supplies to Europe through Nord**

**Stream 2 are yet to start** as the pipeline is awaiting approval from European authorities.
US & several countries in Europe remain critical of Nord Stream-2 pipeline, because they believe that the pipeline will enhance Russia's leverage over Europe and would also allow Russia to economically punish Ukraine and Poland.
In the past when Europe's energy demand shot up, Russia had stepped up supplies. However, Russian exports to Europe this year were lower than they were in 2019.
This has fuelled speculation that Mr. Putin is using the energy crunch in Europe to get approval from the EU for the Nord Stream 2 pipeline. Russia has dismissed such criticism, saying Russia has no role in the energy crunch.

**What lies ahead?**

The situation has calmed after Russian President Vladimir Putin assured Europe of increasing the supplies.
But Mr. Putin didn't say how Russia was going to increase it supplies — through the existing pipeline or Nord Stream 2?
It is to be seen if additional supplies would be tied to a quick approval for the Nord Stream- 2 pipeline.
Furthermore, the Russian domestic gas market also remains tight. **Inventories are running low,** and winter is coming, which would shoot up demand constraining Russia's export capacity.
And demand is rising not only in Europe and the Americas, but also in Asia. **Coal shortages in India** and China could drive up prices of natural gas further.

## India-Sri Lanka: Colombo Port

**Context**: On September 30, 2021, the Gujarat-headquartered Adani Group signed a Build Operate Transfer (BOT) agreement with Sri Lankan company John Keells Holdings and the Sri Lanka Ports Authority (SLPA) to jointly develop the **Colombo West International Container Terminal (CWICT)** at the strategically advantaged Colombo Port.
As per the 35 year-long BOT agreement inked by the three parties, the Adani Group will have majority, 51%, stakes, while John Keells would hold 34%, and the SLPA, 15%.
The more than $700-million investment is said to be the largest foreign investment in the island nation's port sector.
Colombo Port is located amidst one of the busiest shipping routes in the world.
Primarily a container port, the Colombo Port has handled over 5 million TEU of containerised cargo.
It has five functional terminals.

**What is the backstory?**
Sri Lanka, led by different governments, has been keen to further develop its port and emerge a formidable regional hub, but roping in private foreign investor Adani Group directly was not Colombo's first choice.
In May **2019**, the Maithripala Sirisena-Ranil Wickremesinghe government signed a tripartite agreement with the governments of **India and Japan**, to jointly develop the partially-functional **East Container Terminal (ECT)** at the same port.

For India, the deal meant a potential advantage, both commercially and strategically, especially next to the **China-backed Colombo International Container Terminal** (CICT), where China holds 85% stakes in a BOT agreement spanning 35 years.
Those making a case for an Indian presence at the port argue that **over 70% of the transshipment business at the Colombo Port is linked to India.**

**What happened to the 2019 agreement?**
In a cabinet decision on February 1, 2021, **Sri Lanka unilaterally removed India** and Japan out of the agreement, instead opting to develop the ECT with its own investment, citing persisting protests by port workers unions, nationalist groups and Buddhist monks vehemently opposing any foreign role in a strategic national asset.
Sri Lankan government's move took New Delhi by shock, as there was no prior indication of Colombo backtracking on the deal.
The cancellation of the ECT deal caused considerable diplomatic strain between all three countries

**How did the WCT deal come to be?**
Shortly thereafter, early in March 2021, a cabinet decision was taken to develop the West Container Terminal (WCT) at the Colombo Port along with India and Japan.
India had "nominated" Adani Ports and the **deal was pitched as a "compromise".**

Recently, Adani Group signed an agreement with John Keells and SLPA to commence development work.
**Japan is yet to decide** on its involvement in the WCT project, according to diplomatic sources.
Whether it was the former ECT deal or the current WCT agreement, it remains unclear how the Adani Group became the chosen investor from India.
Until now, there is **no indication of a competitive bidding process** or of the selection process. or the rationale used to select the investor.
Colombo has repeatedly referred to the **Adani Group as a "nominee" of the Indian government,** although India sought to deny it had nominated anyone for the project.

**Is there opposition?**
While some political commentators and social media users have questioned the deal, the opposition to the WCT is not comparable to that against the ECT.
Curiously so, because **Adani Group now holds majority stakes** with its local partner John Keells, while SLPA holds just 15% in the WCT project, unlike in the ECT deal when SLPA had 51% controlling stakes.

**Analysis of the development**
Colombo's number 1 customer is the Indian shippers and the carriers who give connectivity to the region and the world via Colombo. A partner from India is, therefore, a welcome development to Sri Lanka to build new relationships in the maritime and logistics sector with India
The presence of multiple global players in Sri Lankan ports would also help balance different geopolitical actors and ease current tensions.
However, there has been questions on whether Sri Lankan government followed due process in selecting the contractor — whether it is Chinese, American or Indian. There are allegations on the "deviations" from a competitive bidding process, lack of transparency and lack of sound data-driven decision-making.

## COP26 Climate Conference

**Context**: The UK will host the COP 26 UN Climate Change Conference from October 31 to November 12.
The event will see leaders from more than 190 countries, thousands of negotiators, researchers and citizens coming together to strengthen a global response to the threat of climate change.
The conference comes months after the Intergovernmental Panel on Climate Change (IPCC) published its assessment report on Earth's climate, highlighting heat waves, droughts, extreme rainfall and sea-level rise in the coming decades.

**What is COP26?**
The Conference of Parties (COP) comes under the United Nations Climate Change Framework Convention (UNFCCC) which was formed in 1994.
2021 marks the 26th Conference of Parties (thus the name COP26) and will be held in the Scottish Event Campus in Glasgow.
The UNFCCC was established to work towards "stabilisation of greenhouse gas concentrations in the atmosphere."
It laid out a list of responsibilities for the member states which included:
Formulating measures to mitigate climate change
Cooperating in preparing for adaptation to the impact of climate change
Promoting education, training and public awareness related to climate change
**India hosted the eighth COP** from October 23 to November 1, 2002 in New Delhi. The conference laid out seven measures including, 'strengthening of technology transfer… in all relevant sectors, including energy, transport…and the promotion of technological advances through research and development…and the strengthening of institutions for sustainable development.'
One of the most important conferences, **COP21 took place in 2015, at Paris, France**. Member countries agreed to work together to 'limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.'

**What are COP26 goals?**
According to the UNFCCC, COP26 will work towards four goals:

**Secure global net-zero** by mid-century and keep 1.5 degrees within reach
**Adapt to protect** communities and natural habitats
**Mobilise finance***:* To deliver on our first two goals, developed countries must make good on their promise to mobilise at least $100bn in climate finance per year.

**Work together to deliver:** Another important task at the COP26 is to 'finalise the Paris Rulebook'. Leaders will work together to frame a list of detailed rules that will help fulfil the Paris Agreement.

**what India could do to reach its targets?**
It is time for India to update its Nationally Determined Contributions or NDCs. (NDCs detail the various efforts taken by each country to reduce the national emissions)
Sector by sector plans are needed to bring about development. We need to decarbonise the electricity, transport sector and start looking at carbon per passenger mile.
Aggressively figure out how to transition our coal sector
India also needs to ramp up the legal and institutional framework of climate change

## Building Water Security

**Context**: PM Narendra Modi spoke of the need to focus on long-term water security at the recent launch of the Jal Jeevan Mission app.

**Water Crisis in India**
As per the Groundwater Resource Estimation Committee's report (from 2015), 1,071 out of 6,607 blocks in the country are **over-exploited**; this is likely to have worsened over the years.
More than a third of the country's population lives in **water-stressed areas,** and this number is expected to shoot up.
Per capita water availability in the country had fallen to just under a third of 1950 levels by 2011, both because of rising population and increasing unsustainable use.
82% of rural households in India do not have individual piped water supply and 163 million live without access to clean water close to their homes.

**Reasons for Water Crisis in India**
**Agriculture:**
Agriculture accounts for 78% of all freshwater used annually in the country, with 64% of this chunk being from groundwater
The rapid rise in tubewell-irrigation and the acreage under water-guzzling crops like sugarcane and paddy has left India under acute groundwater distress.
Over half of India's cultivated land is under water-intensive crops. Fifty-four percent of India's 141.4 million hectares of cultivable land is under water-intensive crops—rice, wheat, sugarcane, and cotton.
Poor Water efficiency: India uses at least twice the amount of water to grow one unit of food versus comparable countries
**Growing Population**:
By 2030, India's water demand will exceed supply by two times, indicating severe water scarcity in the country.
In fact, 820 million Indians living in 12 river basins have a per capita water availability close to or lower than 1,000 cubic metres—the official threshold for water scarcity.
The average all-India per capita water availability is expected to be 1,341 cubic metres by 2025, and touch a low of 1,140 cubic metres by 2050, close to the official water scarcity threshold.
**Slow Implementation of Schemes:**
The Atal Bahujal Yojana (ABY) dashboard shows that the expenditure against the targets set under various heads, as also the release of funds, has been alarmingly low for the past as well as the present year.
Other factors include wastage of water due to lack of awareness, lack of water conservation methods in Industries, poor water recycling & inadequate usage of rainwater.

**Way Forward**
National Water Policy 2020 gives the "highest priority to groundwater governance and management" through a "Participatory Groundwater Management (PGWM)" approach. All stakeholders have to implement this policy in right spirit.
Government needs to stop encouraging (via MSP-led procurement, SAP/FRPs) cultivation of water-intensive crops; crop diversification is a crucial step towards this.
2018 PM-AASHA (Annadata Aay Sanrakshan Abhiyan) proposes up to 40% procurement of crops that are not as water-intensive (millets, nutricereals)
Pricing of water, timely data on usage/availability/depletion, etc, also need policy attention.

# Hunger: Analysis of GHI

**Context**: In the recently released Global Hunger Index (GHI) ranking, India ranked at 101st out of a total 116 countries (India's 2020 rank was 94).
This year's slide in the rank assumes significance especially in the context of COVID-19.
India is also behind most of the neighbouring countries. Pakistan was placed at 92 rank, Nepal at 76 and Bangladesh also at 76.

The government has questioned the methodology and claimed that the ranking does not represent the ground reality.
This calls for careful scrutiny of the methodology, especially of the GHI's components.

**What are the components of GHI?**
The GHI has four components.

| | Components | Applicability | Weightage | Data Sourced from |
|---|---|---|---|---|
| 1. | **Undernourishment** (Insufficient Calorie Intake) | All age groups | 33.3% | Food and Agriculture Organization's Suite of Food Security Indicators (2021) |
| 2. | **Wasting** (low weight for height) | Children under five years | 16.6% | WHO, UNICEF and World Bank, complemented with the latest data from the Demographic and Health Surveys. |
| 3. | **Stunting** (low height for age) | Children under five years | 16.6% | WHO, UNICEF and World Bank, complemented with the latest data from the Demographic and Health Surveys. |
| 4. | **Mortality** | Children under five years | 33.3% | UN Inter-Agency Group for Child Mortality Estimation. |

India's wasting prevalence (17.3%) is one among the highest in the world.
Child stunting in India declined from 54.2% in 1998–2002 to 34.7% in 2016-2020,
Child wasting remains around 17% throughout the two decades of the 21st century.
Had the GHI been estimated using the latest data on calorie intake, usually provided by the National Sample Survey Office, things might have looked even worse given that the leaked report of 2019 indicated that consumption expenditure in India declined between 2011-12 and 2017-18 by 4% (rural India by 10%)

**Issues with GHI**
Conceptually, the **GHI is largely children-oriented** with a higher emphasis on undernutrition than on hunger and its hidden forms, including micronutrient deficiencies.
The first component — calorie insufficiency — is problematic for many reasons.
The lower calorie intake, which does not necessarily mean deficiency, may also stem from reduced physical activity, better social infrastructure (road, transport and healthcare) and access to energy-saving appliances at home, among others.
For a vast and diverse country like India, using a **uniform calorie norm** to arrive at deficiency prevalence means failing to recognise **regional factors**.
For instance: Larger proportion of population in developed states like Kerala & Tamil Nadu may require less calorie due to high levels of

mechanisation of economy. Hence, they can be wrongly counted as undernourished.

**Relation between Stunting & Wasting**

Stunting is a chronic, long-term measure of undernutrition, while wasting is an acute, short-term measure.

Child wasting can result due to immediate lack of nutritional intake and sudden exposure to an infectious atmosphere.

Quite possibly, several episodes of wasting without much time to recover can translate into stunting.

A higher order of priority should be accorded to **stunting as it is a stable indicator** and does not oscillate with minor changes in circumstances, while wasting does.

If India can tackle wasting by effectively monitoring regions that are more vulnerable to socioeconomic and environmental crises, it can possibly improve wasting and stunting simultaneously.

There seems to be no short-cut way of improving stunting without addressing wasting.

**India's better tackling of Child Mortality**

Studies suggest that child undernutrition and mortality are usually closely related, as child undernutrition plays an important facilitating role in child mortality.

India's relatively better performance in child mortality merits a mention.

India's child mortality rate has been lower despite it having higher levels of stunting

This implies that though India was not able to ensure better nutritional security for all children under five years, it was able to save many lives due to the **availability of and access to better health facilities.**

**Conclusion**

This ranking should prompt us to look at our policy focus and interventions and ensure that they can effectively address the concerns raised by the GHI, especially against pandemic-induced nutrition insecurity.

## Unusual Heavy Rains in October

**Context**: The monsoon is over but several parts of the country are still receiving rainfall. Delhi, Kerala, Madhya Pradesh and Uttarakhand, for example, have received very high rainfall, resulting in loss of life and property in some places.

Scientists say a combination of factors — delayed monsoon and development of low-pressure areas at multiple places — have resulted in these rainfall events at several places.

**Are October rains unusual?**

Rain in October is not unusual.

October is considered a month for transition, during which the **southwest monsoon withdraws** and gives way to the northeast monsoon that largely affects southern peninsular India, mainly on the eastern side.

**Western disturbances,** which begin to have significant interference in local weather over the extreme northern parts of India, commonly cause either rain or snowfall.

Since second week of October, Ladakh, the higher reaches of Kashmir and Uttarakhand have reported the season's first snowfall.

However, **two low-pressure systems were active simultaneously**, one each over the Arabian Sea and the Bay of Bengal regions. Collectively, these triggered severe weather events over Kerala, Tamil Nadu, Andhra Pradesh, Telangana, Delhi, Madhya Pradesh, Uttarakhand, Odisha and West Bengal.

**Delayed monsoon withdrawal**

The four-month southwest monsoon season normally **withdraws completely by early October.** During the withdrawal phase, it causes thunderstorms and localised heavy rainfall.

This year, however, the **withdrawal began only on October 6 against a normal of September 17.**

So far, the monsoon has withdrawn completely from the Western, Northern, Central and Eastern India regions. But it **remains active over the southern peninsula.** Thus, Kerala, Tamil Nadu, Telangana, Karnataka and Andhra Pradesh have had significant rainfall during the last 10 days.

Normally, by mid-October, the monsoon winds reverse their direction of flow from the southwest to the northeast.

"Even though the easterlies are beginning to replace the westerlies, the former is yet strengthen and fully establish. The easterly winds indicate the arrival of the northeast monsoon.

This year, conditions for the onset of the northeast monsoon are expected to develop around October 25.

**Due to climate change**, there is definitely a rising frequency in the extreme weather events round the year. But these specific occurrences of heavy to very heavy rains that we are seeing right now can be attributed to the formation of low-pressure systems.

Whenever there is a low-pressure system, depending on its strength, it results in heavy to very heavy rainfall activity. In addition, when a low-pressure system interacts with western disturbance, further intense rainfall occurs

## The Other Quad

**Context**: Recently, the Foreign Ministers of India, the U.S., Israel and the UAE virtual met to discuss on exploring areas of cooperation.

Significance of the new quadrilateral meeting (India, Israel, UAE & USA)
It is a strong manifestation of the changes in West Asian geopolitics.
If Israel and the UAE did not even have formal diplomatic relations a year ago, their growing economic and strategic cooperation since Abraham Accords is opening up opportunities for other powers, including India.
The four-nation meeting also points to **India's strategic desire to adopt a regional foreign policy** strategy towards West Asia, moving beyond its bilateralist approach.
Over the years, India has built vibrant bilateral ties with all the countries in the grouping. So India adopting regional approach is natural evolution of this vibrancy given that there is **moderation of Israel's policy** towards Arab states.
Israel is one of India's top defence suppliers.
The UAE is vital for India's energy security and hosts millions of Indian workers.
India has deepened its relationship with US as was seen by signing foundational defence agreements and being part of another QUAD grouping.

While it is too early to speak of the strategic significance of such a grouping, there are areas where it can deepen its engagement — trade, energy ties, fighting climate change and enhancing maritime security.

**Challenges Ahead**
The U.S. is clearly seeking to lessen its footprint here as part of its pivot to East Asia to tackle China's rise, which is redrawing West Asia's traditional equations. India should be careful **not to get sucked into the many conflicts of West Asia**
While the Abraham Accords made it easier for India to find common ground with the Israelis and UAE, the **contradiction between this Israel and Iran remains** as intense as ever. India should be mindful of this.
With US withdrawing from Afghanistan, India will have to work closely with countries such as **Iran** to deal with the challenges emanating from a reduced American presence in the region.
So the challenge before New Delhi is to retain a healthy relationship with Iran even as it seeks to build a stronger regional partnership with the U.S.-Israel-UAE bloc.

## Carbon Markets Conundrum at COP26

**Context**: The success of COP26 at Glasgow, that will take place from 31 October to 12 November 2021, depends to a great extent on the conclusion of carbon markets discussions
Article 6 of the Paris Agreement introduces provisions for using international carbon markets to facilitate fulfilment of Nationally Determined Contributions (NDCs) by countries.

**Why Carbon Markets in significant for India?**
Developing countries, particularly India, China and Brazil, gained significantly from the carbon market under the **Clean Development Mechanism (CDM) of the Kyoto Protocol.**

India registered 1,703 projects under the CDM which is the **second highest** in the world. Total carbon credits known as Certified Emission Reductions (CERs) issued for these projects are around 255 million amounting to **U.S.$2.55 billion.**
Therefore, logically, India has a lot to gain from a thriving carbon market. However, with the ratification of the Paris Agreement, the rules of the game have changed.
Unlike the Kyoto Protocol, now **even developing countries are required to have mitigation targets**.
Developing countries are faced with **a dilemma of either selling** their carbon credits in return for

lucrative foreign investment flows or use these credits to achieve their own mitigation targets.
This has made Article 6 a highly sensitive issue that requires careful balancing of interests and expectations.
While over 50% of the countries have communicated their intention of using market mechanisms to achieve NDC targets, India is not one of them as it aims to rely on domestic mitigation efforts to meet its NDC goals.
It is the developed countries that would rely more on market mechanisms for achieving their climate targets as they would be comparatively low-cost options.

**What are the critical issues with Article 6 of Paris Agreement?**
The three critical issues that would be hotly debated in Article 6 negotiating rooms are Clean Development Mechanism (CDM) Transition, Accounting rules and Share of Proceeds to the Adaptation Fund. Let us examine them one by one.

**CDM transition:**
The Clean Development Mechanism (CDM) projects have gone through due diligence and **credits have been issued under UNFCCC oversight**. Therefore, the Article 6 mechanism should honour the previous decisions
However, some countries have cast doubts on the **environmental integrity of these credits** and while there is greater acceptance for transition of projects/activities, the same is not the case for transition of credits.
If the decision regarding transition of CDM is not favourable, it could lead to a loss of billions of dollars worth of potential revenue to India alone.
This can result in the formation of the new supervisory body under the Paris Agreement that can re-examine the validity and rigour of such credits.

**Accounting rules:**
Article 6.4 mechanism is meant to incentivise the private sector and public entities to undertake mitigation activities for sustainable development.
Under this mechanism, a country can purchase emission reductions from public and private entities of the host country and use it to meet its NDC targets.
However, this **does not automatically imply that emission reductions transferred from a host country** be adjusted against its NDC targets.
It must be appreciated that **these reductions represent additional efforts of the private sector or public entities** to mitigate greenhouse gas emissions, and in fact raise global climate ambition.
This is also in line with the provision of Article 6.5 of the Paris Agreement wherein the host country is not required to undertake corresponding adjustment for the projects outside its NDC.
Therefore, such efforts will be additional to what have been committed in the NDC.
Robust accounting will ensure that there will be no double-counting of emission reductions.

**Share of Proceeds (SOP) to the Adaptation Fund:**
For developing countries, adaptation is a necessity. However, it remains severely underfunded compared to financing for mitigation activities.
While developing countries emphasise that the SOP must be uniformly applied to Articles 6.2 and 6.4 to fund adaptation, developed countries want to restrict its application to Article 6.4.
This would disincentivise the Article 6.4 mechanism and limit voluntary cooperation to the cooperative approaches under Article 6.2 favoured by developed countries.

**Conclusion**
In a way, carbon markets allow developed countries to keep emitting greenhouse gases while developing countries benefit from the revenue generated from the sale of their carbon credits.
Central to the discussions on Article 6 is equitable sharing of carbon and developmental space.
Climate justice demands that developing countries get access to their fair share of global carbon space.
As developing countries are nudged to take greater mitigation responsibilities, a facilitative carbon market mechanism that respects the principles enshrined in UNFCCC would greatly help accelerate their transition to low carbon development pathway.

## India's race to secure Lithium

**Context**: First traces of Lithium in India were discovered in Karnataka's Mandya district recently.
The discovery is being given importance at the highest levels of government. This also shows the

amount of effort and investment that lithium is likely to garner in the years ahead.

**Why is Lithium so significant for India?**

**Climate change mitigation**: Technologies such as lithium-ion batteries are slated to play a key role in India's plan to reduce its carbon footprint by 33-35% from its 2005 levels by 2030.

**Energy Transition:** The transition from an internal combustion engine (ICE) vehicle to an electric vehicle involves the battery, which accounts for at least 30% of the vehicle's cost.

**Electric mobility**: By 2030, nearly three-fourth of Indian two-wheelers and all new cars are expected to be EVs and a bulk of them will be powered by lithium-based (battery packs) in the near term.

**Energy security:** According to the Central Electricity Authority, the country will need 27 GW of grid-scale battery energy storage systems by 2030. This will require massive amounts of lithium.

**What are the issues and challenges faced by India with respect to Lithium?**

**Negligible lithium resource base In India**: Chile, Australia, Argentina, Bolivia and China have almost all the lithium reserves which have been explored so far globally.

**India's high import dependence**: Almost all EVs in the country run on imported batteries, mostly from China. Between 2016 and 2019, the amount of foreign exchange spent on importing lithium batteries tripled, according to the Union science and technology ministry.

**Geo-political rivalry with China**: China is known to house large lithium reserves and has also secured many lithium mines across multiple countries in order to ensure steady sources of supply for both lithium and cobalt. Hence, India's quest for energy security could be easily derailed by a hostile neighbour.

**What steps have been taken by govt to secure Lithium?**

India had recently unveiled its strategy for developing a battery storage ecosystem. It involves setting up at least 50-gigawatt hour manufacturing capacity for advanced chemistry cell batteries.

**₹18,100-crore Production-linked incentive (PLI) scheme** to manufacture lithium-ion cells within the country has been introduced. With the government's PLI scheme, demand for lithium is bound to increase and it opens new opportunities for domestic exploration.

Government formed **Khanij Bidesh India Ltd (KABIL)**— a joint venture comprising National Aluminium Co. Ltd, Hindustan Copper Ltd and Mineral Exploration Co. Ltd. it is looking to acquire cobalt and lithium mines overseas. KABIL is also exploring the direct purchase of cobalt and lithium.

The government is also trying to secure **government-to-government (G2G) deals**. For instance, India's bilateral agreement with Argentina for securing strategic minerals.

**Lithium exploration**: The Geological Survey of India has taken up seven other lithium exploration projects in Arunachal Pradesh, Andhra Pradesh, Chhattisgarh, Jharkhand, Jammu and Kashmir and Rajasthan.

**Role of the private sector**: Several automobile majors are planning to jointly develop a manufacturing facility in Gujarat, which could eventually morph into a global export hub for lithium-ion cells.

India is working on the **world's largest grid-scale battery storage programme**, which includes a 13 gigawatt-hour (GWh) facility in Ladakh and a 14 GWh system in Kutch.

**Way forward**

**Concentrate on other advanced battery technologies**: As China dominates the space of lithium-ion cell manufacturing, India has to take alternative steps to avoid a repeat of how things played out with solar equipment manufacturing.

A section of experts and policymakers believe that one way to avoid a lithium conundrum and a possible Chinese trap is to concentrate on other advanced battery technologies.

**Aluminium-based battery technology:**

Aluminium-based battery technology holds great promise. India has huge bauxite reserves, which gives it access to aluminium at a cheap price. This technology, as and when it matures commercially, will insulate India from dependence on global import.

**Early adoption of other battery technologies:**

Further, India should strive to be an early adopter of other battery technologies such as **hydrogen fuel cells and solid-state batteries** as well.

Solid-state batteries are being explored using metals such as aluminium. India holds an upper hand with respect to the availability of different materials. Thus, the country may witness faster adoption of these alternate technologies as compared to lithium.

India should also try to intensify exploration within as well and exploit the opportunity to repurpose and recycle used lithium-ion batteries.

# India's Central Asian outreach

**Context**: External Affairs Minister (EAM) S. Jaishankar was on three-nation Eurasian tour - Kyrgyzstan, Kazakhstan and Armenia with an aim to further expand bilateral ties in the backdrop of Taliban taking over Afghanistan after US withdrawal.

**Do You Know?**
Kyrgyzstan, Kazakhstan and Armenia are all members of Russia-led Eurasian security alliance CSTO that has held numerous drills in recent months to deter any spillover of terrorism from Afghanistan.

**Key Takeaways from the visit**
In **Kyrgyzstan**, India extended a credit line of $200 million for the support of development projects and signed an memorandum of understanding (MoU) on High-Impact Community Development Projects (HICDP).
In **Kazakhstan**, India's EAM attended the 6th Foreign Ministers' Conference on Interaction and Confidence-Building Measures in Asia (CICA).
At CICA, India targeted China's Belt and Road Initiative (BRI). India said while greater connectivity was essential for the promotion of regional stability, it must not be pursued for parochial interests.
India also confronted Pakistan for its support towards cross-border terrorism.
The CICA meet among other issues discussed the possibilities of providing humanitarian assistance for Afghanistan.
Mr. Jaishankar has become the first Indian External Affairs Minister to visit Armenia
India and Armenia agreed to enhance trade and cultural exchanges to boost bilateral relations.
During the visit, Mr. Jaishankar also supported efforts for a peaceful solution of the Nagorno-Karabakh conflict between Azerbaijan and Armenia under the Organization for Security and Cooperation in Europe's (OSCE) Minsk group.

**India's Evolution of Relationship with Central Asia**
After the **breakup of the Soviet Union** and the formation of the independent republics in Central Asia, India reset its ties with the strategically critical region.
**India provided financial aid** to the region and established diplomatic relations.
India signed the **Strategic Partnership Agreements** (SPA) with Kazakhstan, Tajikistan and Uzbekistan to stimulate defence cooperation and deepen trade relations.
In 2012, India's **'Connect Central Asia' policy** aimed at furthering India's political, economic, historical and cultural connections with the region.
However, India's efforts were stonewalled by Pakistan's lack of willingness to allow India passage through its territory. China took advantage of the situation and unveiled the much-hyped BRI in Kazakhstan.

**China, India and Central Asia**
The growing geostrategic and security concerns regarding the BRI's China-Pakistan Economic Corridor (CPEC) and its violation of India's sovereignty forced India to step up its game in the region.
Soon after assuming office, Prime Minister Narendra Modi visited all the Central Asian countries in July 2015.
Eventually, Central Asia became the link that placed Eurasia in India's zone of interest.
India signed MoUs with **Iran in 2015 to develop the Chabahar port** that was in plans from 2003.
Most of the Central Asian leaders view India's Chabahar port as an opportunity to diversify their export markets and **control China's ambitions.**
China's ill-treatment of their Uyghur Muslims in Xinjiang province of China has created social discontent among Central Asian Leaders (Muslim majority countries)
Central Asian countries have been keen to have India as a partner as they have sought to **diversify their strategic ties.**
They have admitted New Delhi into the **Ashgabat Agreement,** allowing India access to connectivity networks to facilitate trade and commercial interactions with both Central Asia and Eurasia, and also access the natural resources of the region.

**Conclusion**
Rising anti-Chinese sentiments within the region and security threats from the Taliban allow India and Central Asia to reimagine their engagement. India should not lose any time to recalibrate its engagement with Central Asia.

## Why India shouldn't sign on to net zero?

**Context**: The top three emitters of the world — China, the U.S. and the European Union — even after taking account of their net zero commitments and their enhanced emission reduction commitments for 2030, will emit more than 500 billion tonnes of carbon dioxide before net zero. With these committed emissions, there is no hope of "keeping 1.5°C alive." The target is dead-on-arrival.

**Why India shouldn't sign on Net Zero?**

**Not part of any Protocols**: Neither the Paris Agreement nor climate science requires that net zero be reached individually by countries by 2050. Paris accord requires only global achievement of this goal "in the second half of the century"

**Net Zero Ignores Equity:** Claims that the world "must" reach specific goals by 2030 or 2050 are the product of specific economic models for climate action. These are designed to achieve the Paris goals by the "lowest cost" methods, foregoing equity and climate justice.

**Against Historical Responsibility:** Less than a fifth of the world has been responsible for three-fifths of all past cumulative emissions, the U.S. and the EU alone having contributed a whopping 45%. For India to declare net zero now is to accede to the further over-appropriation of the global carbon budget by a few.

**India's Commitment won't alter much:** India's contribution to global emissions, in both stock and flow, is so disproportionately low that any sacrifice on its part can do nothing to save the world.

**Bad Precedence of West:** The failure of the developed world to meet its pre-2020 obligations along with its refusal to acknowledge this provides little confidence for India with regard to commitments announced by West.

**What India must do**

India's emissions story cannot be bracketed with the top three. India is responsible for no more than 4.37% cumulative emissions of carbon dioxide since the pre-industrial era, even though it is home to more than a sixth of humanity.

**India's per capita emissions** are less than half the world average, less than one-eighth of the U.S.'s, and have shown no dramatic increase like China's post 2000.

The allocation of property rights (Carbon Budget), without grandfathering, is essential to ensure equitable access to any global commons. The global carbon budget has been subject to no such restriction allowing the developed countries to exploit it fully, in the past and the present.

India, in enlightened self-interest, must now stake its **claim to a fair share of the global carbon budget.** The absence of such a claim only eases the way for the continued over-exploitation of the global commons by a few.

Such a claim by India provides it greater, and much-needed long-term options. It **enables the responsible use of coal, oil and gas**, to develop, eradicate poverty, hunger and malnutrition for good.

Even if India were to enhance its short-term Nationally Determined Contributions under the Paris Agreement, it should do so while staking a claim to its share of the global commons.

## China's new land border law and Indian concerns

**Context**: On October 23, China passed a new land law for the "protection and exploitation of the country's land border areas" which will come into effect from January 1.

The law is not meant specifically for the border with India; however, the 3,488-km boundary remains disputed, and some experts feel it could create further hurdles in the resolution of the 17-month-long military standoff.

**Do You Know?**

China shares its 22,457-km land boundary with 14 countries including India, the third longest after the borders with Mongolia and Russia.

Unlike the Indian border, however, China's borders with these two countries are not disputed.

The only other country with which China has disputed land borders is Bhutan (477 km).

**The Chinese law**

It states that "the sovereignty and territorial integrity of China are sacred and **inviolable**", and asks the state to "take measures to safeguard

territorial integrity and land boundaries and guard against and combat any act that undermines it".
The state can take measures "to strengthen border defence, support economic and social development as well as opening-up in border areas, **encourage and support people's life and work there** and promote coordination between border defence and social, economic development in border areas".
In effect, this suggests a push to **settle civilians in the border areas.**
However, the law also asks the state to follow the principles of "equality, mutual trust, and friendly consultation, handle land **border related-affairs with neighbouring countries through negotiations** to properly resolve disputes and longstanding border issues"

**Implications on India**

The announcement of a law that makes China's borders "sacred and inviolable" at a time of prolonged ongoing discussions to resolve the standoff in eastern Ladakh, may create further hurdles in arriving at lasting solution.
The PLA is now "bound to protect the integrity, sovereignty of the border", and saying "that PLA is going to pull out from A, B, C, D areas, will make this much more difficult".
Overall, it will make **negotiations a little more difficult,** a pullout from balance areas less likely.
China has been building "well-off" border defence villages across the LAC in all sectors. China is trying to change the facts on the ground not only through military but also civilian presence. The "**dual civil and military use" of border villages** is a concern for India.
Some experts think the law is just words — what has impacted the ties is not domestic Chinese legislation, but their actions on the ground.

## Procurement Reforms

**Context**: Food Corporation of India (FCI) website shows that in October FCI was holding 86 million tonnes of grains (including unmilled paddy) against a buffer requirement (October 1) of 30 million tonnes.
Last year's procurement led to FCI holding a record quantity of grains in June-July thus year.
During pandemic year, government raised the offtake of foodgrains from 65 million tonnes annually to 93 million tonnes (increased provision under PM Garib Kalyan Yojana)

**What are the issues with FCI procurement?**

Against a 65 million tonne annual requirement of foodgrains for distribution under the National Food Security Act, such massive procurement, is not only wasteful (given the **lack of storage capacity)** but also risks making India's procurement for food security seem **market-distortionary.**
Even though the FCI has been conducting open market auctions for part of its excess holdings, this is hardly enough to take care of the problem of excess.
**Export is obviously no route** to liquidate the excess stock since WTO norms against market-distortion would kick in.
**Paddy/rice seems the main culprit**—especially procurement from Punjab—with severe economic and environmental consequences.
Short of giving the grains away, there seems to be little that can be done—unless, of course, a policy correction is made.

**What policy correction is required?**

The government can keep procuring to keep a handful of farmers in two/three states happy and perhaps **donate surpluses to food programmes** locally and overseas.
Or Government can dilute the MSP's appeal and **move to end open procurement.**
A "**micro-analysis of state-wise requirements** and buffer norms" being done by the FCI should be expedited
Another way to minimise the pain would be to **limit open-ended procurement**, say, by capping procurement as per size of individual land-holding.
Government can also move to a **pure cost-support regime** but this will need significant political will, given rich and influential farmers' addiction to price-support.
Centre and Punjab must work together to incentivise the state's **farmers to switch from paddy to maize** and even fruit and vegetables.

**Conclusion**

Without the above mentioned reforms, FCI's burden will only grow.

# Ayushman Bharat Health Infrastructure Mission

**Context**: COVID-19 exposed several weaknesses in India's underfunded health system.

**What are the major issues with India' s Health System?**

Rural primary care is underfunded and has shortages of staff, equipment, drugs and infrastructure in many parts of the country.
Urban primary healthcare has still not emerged as an active programme in many States.
District and medical college hospitals suffer shortages of specialist doctors and support staff.
The private sector ranges from advanced tertiary care hospitals in big cities to informal and often unqualified care providers in villages.
During the pandemic, Private sector could not effectively provide affordable care or deliver vaccines in large parts of India.
There is a disconnect between the various levels of care within the public system, and the private system operated in a separate universe.
Most government-funded healthcare insurance programmes did not cover outpatient care.

**Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (ABHIM)**

It will support infrastructure development of **17,788 rural health and wellness centres (HWCs**) in seven high-focus States and three north-eastern States.
In addition, **11,044 urban HWCs** will be established in close collaboration with Urban Local Bodies.
To provide a continuum of care at different levels, HWCs will be linked with the Pradhan Mantri Jan Arogya Yojana, for all entitled beneficiaries. T**he hub-and-spoke model** of block, district, regional and national public health laboratories will enable effective microbial surveillance.
Simultaneously, the network of centres will **build a trained public health workforce** that can perform routine public health functions while responding to a public health emergency.
Support for 3,382 block public health units (BPHUs) in 11 high-focus States
It will provide for establishment of **integrated district public health laboratories** in all 730 districts that will strengthen capacity for information technology-enabled disease surveillance.
To enhance the capabilities for microbial surveillance, a **National Platform for One Health** will be established.
Four Regional National Institutes of Virology will be established. Laboratory capacity under the National Centre for Disease Control, ICMR and national research institutions will be strengthened.
**Critical care hospital blocks,** with 50-100 beds, will be established in 602 districts, to enable care for those with serious infectious diseases without disrupting other services.
For enhancing the level of disaster response readiness, **15 health emergency operation centres** and two container-based mobile hospitals will be created.
Private sector participation in service delivery may be invited by States, as per need and availability.
The government will **spend Rs 64,180 crore on the scheme** from the financial year 2021-22 to 2025-26.
It can **enable data-driven decentralised decision-making** and people-partnered primary care at the block level while strengthening national connectivity for delivering universal healthcare.

Therefore, the scheme aims at establishing
comprehensive surveillance of infectious diseases.
comprehensive diagnostics and treatment facilities.
comprehensive pandemic research

**Way Ahead**

There is a need to train and deploy a larger and better **skilled health workforce.** Upgraded district hospitals offer the best opportunity for creating new training centres.
Public health expertise will be needed for programme design, delivery, implementation and monitoring in many sectors that impact health.
Many independently functioning programmes will have to work with a common purpose and this requires a need for a **change of bureaucratic mindsets** and a cultural shift in **Centre-State relations.**

# Freebie Culture

**Context**: The line between welfarism and populism has blurred.

Welfare initiatives include a targeted Public Distribution System, providing social security for labourers, quality education, fair employment,

affordable healthcare, decent housing, and protection from exploitation and violence.

Freebies, on the other hand, are provided to attract voters to cast their vote in a particular election. They create limited private benefit for the receiver and do not contribute towards strengthening public goods/facilities.

**How did the freebie culture originate?**

The culture of freebies in Tamil Nadu was started during the 1967 Assembly elections. The then DMK chief C.N. Annadurai offered three measures of rice for ₹1.

The practice of providing freebies was followed by subsequent Chief Ministers who promised free TV sets, free laptops to students, free rides for women in buses, free gas cylinders and stoves, a goat and a cow for poor farmers, and so on.

Political leaders have justified freebies citing **social justice** as it aids those at the bottom of the pyramid.

**What are the criticisms of Freebie Culture?**

**Creates Private Benefits:** Freebies violate the constitutional mandate of extending benefits for public purpose and instead create private benefits. The main beneficiaries of the freebies provided by government were the ruling party's core supporters and swing voters who could be influenced easily.

**Depoliticises Poor:** Freebies will not only depoliticise the poor and marginalised communities but also indirectly deny them their due share of state resources.

**Erases Rational Thinking**: Freebie encourage personality cults in a democratic polity. Populism encourages mediocre political critics and erases critical and rational thinking, which are important to raise questions to people in power.

**Patron-Client Syndrome:** Unsolicited freebies cultivate a patron-client syndrome. Providing freebies is to treat people like subjects, whereas citizens are entitled to constitutional guarantees. Clientelism is a political or social system based on the relation of client to patron with the client giving political support to a patron (as in the form of votes) in exchange for some special privilege or benefit (freebies).

**Against Welfare Politics**: Welfare initiatives are an embodiment of civil rights, whereas unsolicited freebies show benevolence at best and apathy at worst towards the poor by the ruling parties.

**Doesn't enhance Productivity:** It was observed that distributing free laptops does not serve the purpose of increasing the quality of education. Also, free electricity, free water, farm loan waivers, etc. have not contributed to increased productivity.

**Fiscal Burden**: Freebies imposes burden on the state's financial status contributing to huge fiscal debt.

**Vulnerable to Corruption**: Freebies culture paves way to corrupt practice because of the involvement of middle man.

**Not Sustainable in Long Run:** The social, political and economic consequences of freebies are very short-lived in nature. Also, they cannot be provided free forever, at some point these goods have to be rationalised.

**What was the judicary's view on the freebie culture?**

The Supreme Court gave a ruling in favour of offering of freebies stating that freebies are not corrupt practice as it is mentioned in election manifesto.

*In S. Subramaniam Balaji v. Govt. of Tamil Nadu* (2013), the court said that "Although, promises in the election manifesto cannot be construed as 'corrupt practice' under Section 123 of Representation of People Act, the distribution of freebies influences the people shaking the root of free and fair elections."

In 2021, The Madras High Court expressed its strong displeasure over the way in which political parties were competing with each other to garner votes by offering freebies.

## Pegasus Case

**Context**: A batch of 12 petitions were filed in SC that sought an independent probe into the alleged illegal use of the Israeli NSO Group spyware Pegasus

Recently, Supreme Court ordered a "thorough inquiry" into allegations of unauthorised surveillance using the Pegasus spyware.

The inquiry will be conducted by a three-member technical committee comprising

Dr Naveen Kumar Chaudhary, Dean of National Forensic Sciences University in Gandhinagar;

Dr Prabaharan P, Professor at Amrita Vishwa Vidyapeetham in Kerala; and

Dr Ashwin Anil Gumaste of IIT Bombay.

The functioning of the committee will be overseen by **Justice R V Raveendran,** a retired judge of the Supreme Court, who will be assisted by two other experts.

**Observations by Supreme Court**
The Court acknowledged that it is "a settled position of law that in matters pertaining to national security, the scope of judicial review is limited". At the same time, SC also noted this does not mean that the State gets a free pass every time the spectre of 'national security' is raised.
SC observed that "The mere invocation of national security by the State does **not render the Court a mute spectator".**
In a democratic country governed by the rule of law, indiscriminate spying on individuals cannot be allowed except with **sufficient statutory safeguards**, by following the procedure established by law under the Constitution.
SC said that surveillance and the knowledge that one is under the threat of being spied, might **result in self-censorship.**

SC listed the compelling circumstances that made it to pass an order constituting an inquiry committee.
**Right to privacy** and freedom of speech are alleged to be impacted, which needs to be examined.
The entire citizenry is affected by such allegations due to the **potential chilling effect**.
No clear stand taken by the Union of India regarding actions taken by it.
Possibility that some foreign authority, agency or private entity is involved in placing citizens of this country under surveillance.
Allegations that the Union or State Governments are party to the **rights' deprivations of the citizens**.

**The terms of reference of the committee include:**
Whether the Pegasus suite of spyware was used on phones or other devices of the citizens of India to access stored data, eavesdrop on conversations, intercept information?
The details of the victims and/or persons affected by such a spyware attack.
Whether any Pegasus suite of spyware was acquired by Union of India, or any State Government, or any central or state agency for use against the citizens of India?
If any governmental agency has used the Pegasus suite of spyware on the citizens of this country, under what law, rule, guideline, protocol or lawful procedure was such deployment made?

## Myanmar Crisis

**Context**: Recently, ASEAN excluded Myanmar's military junta from its annual summit held on October 26-28.

It is a major setback for the Generals' attempts to gain regional legitimacy for their regime.
**What is happening in Myanmar?**
Ever since it seized power by toppling the democratic government of Aung San Suu Kyi in February, the Military junta has unleashed a reign of terror claiming an estimated 1,000 lives.
Ms. Suu Kyi, who had been the State Councillor for five years from 2015 heading the quasi-democratic government, has been in detention since the coup.

She is facing various charges, including violating the country's official secrets act, possessing illegal walkie-talkies and publishing information that may "cause fear or alarm".

Months after the seizure of power, the Military junta, led by Gen. Min Aung Hlaing, is still struggling to restore order

If in the past the National League for Democracy (NLD), Ms. Suu Kyi's party, had upheld non-violence even in the face of repression, this time**, NLD leaders have called for a "revolution".**

In cities, protests slid into armed fighting between pro-democracy protesters and security personnel, while in the jungles, anti-junta groups joined hands with rebels for military training.

The situation has become so grave that the UN Special Envoy warned this month that **Myanmar had descended into a civil war.**

Most recent reports suggest that the junta has been systematically torturing political prisoners.

Regime violence, political crises and strikes and counter-attacks by protesters have all pushed Myanmar to the brink of collapse.

According to the UN, some three million people are in need of life-saving assistance because of "conflict, food insecurity, natural disasters and COVID-19".

**What role is ASEAN playing in this crisis situation?**

One of the regional groupings with some leverage over the Myanmar's Military junta is ASEAN.

In April, Gen. Min Aung Hlaing was invited to Jakarta for emergency talks with ASEAN members.

The bloc asked him to immediately end violence and start the reconciliation process

ASEAN requested Myanmar Military Junta to allow a regional special envoy to meet with all stakeholders, including Ms. Suu Kyi.

A special envoy was appointed as part of the ASEAN plan, but he was not allowed to meet Ms. Suu Kyi.

Recent decision of ASEAN to not admit Myanmar Junta during its summit is a reminder that continuing violence could cause regional isolation of the regime, which could worsen the crisis.

**Conclusion**

Violence might allow Myanmar Military to hold on to power for now, but that is not sustainable.

The international community should continue to put pressure on the junta and urgently start a reconciliation process.

**Q.1 Which of the following is/are true regarding Foreign Contribution (Regulation) Amendment Act, 2020:**

1. The Act bars public servants from receiving foreign contributions.
2. It is implemented by the Ministry of External Affairs.

**Select the correct statements:**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.2 Single citizenship in India has been taken from which country?**

a. Britain
b. Canada
c. Both 1 & 2
d. USA

**Q.3) Which of the following is/are true regarding Vikrant:**

1. It is the first time in India that a ship the size of an Aircraft Carrier is completely modeled in 3D
2. It is the largest warship built in the country having a displacement of about 40,000 tonnes.

**Select the correct statements:**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.4) Why the eastern slopes of the Western Ghats have low rainfall?**

a. The straight west coast
b. The lack of winter depressions
c. Their leeward location
d. The heights of the Ghats

**Q.5) Who is the head of NDMA?**

a. Cabinet Secretary
b. Home Minister
c. Prime Minister
d. Defence Minister

**Q.6) Consider the following statements regarding Forest Conservation Act:**

1. It was enacted to control the ongoing deforestation of the forests of India.
2. The Act restricts the state government and other authorities to take decisions first without permission from the central government.

**Which of the above is or are correct?**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.7) Nobel Medicine Prize 2021 was awarded recently for which of the following?**

a. discoveries on receptors for temperature and touch
b. genome editing
c. discovery of hepatitis C virus
d. discoveries of how cells sense and adapt to oxygen availability

**Q.8) What does the red notice of Interpol denote?**

a. Missing persons
b. Wanted persons
c. Imminent threat
d. Groups and individuals subject to UNSC sanctions

**Q.9) Consider the following statements regarding National Health Authority (NHA)?**

1. It has full functional autonomy.
2. NHA is governed by a Governing Board chaired by the Union Minister for Health and Family Welfare.

**Which of the above is or are correct?**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.10) This year Nobel Prize Physics 2021 is awarded for which of the following?**

a. discovery of a supermassive compact object at the centre of the Milky Way Galaxy
b. theoretical discoveries of topological phase transitions and topological phases of matter
c. contributions to the field of optics
d. climate models and the understanding of physical systems.

**Q.11) Mosquirix recently seen in news is associated with which of the following?**

a. Vaccine for Dengue
b. Vaccine for Malaria
c. Drug for treating symptoms of Rabies
d. Genetic Engineering technique to change genes of mosquitoes

**Q.12) The PM MITRA Parks scheme is associated with which of the following?**

a. Medicinal equipment
b. Textile
c. Private mandis
d. Foreign education

**Q.13) Hara Bhara campaign has been launched by which of the following states?**

a. Telangana
b. Uttar Pradesh
c. Madhya Pradesh
d. Punjab

**Q.14) Guru Ghasidas National Park was recently in news. Where is it located?**

a. Chhattisgarh
b. Jharkhand
c. Gujarat
d. Madhya Pradesh

**Q.15) Which of the following peninsular rivers is westward flowing?**

a. Mahanadi
b. Godavari
c. Tapi
d. Cauvery

**Q.16) Ram Van Gaman Tourism Circuit is launched by which of the following states?**

a. Karnataka
b. Uttar Pradesh
c. Madhya Pradesh
d. Chhattisgarh

**Q.17) Consider the following statements regarding S-400 Triumf anti-aircraft missile systems:**

1. The S-400 Triumf is a mobile, surface-to-air missile system (SAM)
2. It is designed by Israel.

**Which of the above is or are correct?**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.18) Guduchi, recently seen in news, is associated with which of the following?**

a. Jharkhand Handicraft which recently received GI tag
b. An Ayurveda Herb
c. Painting belonging to Chhattisgarh tribal
d. Gujarat tribal dance

**Q.19) Bashan Char Island, which was seen in the news, is located in which country??**

a. Iran
b. Yemen
c. Bangladesh
d. Sri Lanka

**Q.20) Consider the following statements regarding PM-WANI:**

1. It comes under Ministry of Urban Affairs
2. The scheme envisages setting up of public Wi-Fi networks and access points by local Kirana and neighbourhood shops through public data offices

**Which of the above is or are correct?**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.21) Linear No-Threshold (LNT) model, recently seen in news, is associated with which of the following?**

a. Black holes
b. Radiation
c. Carbon sequestration
d. Ozone hole depletion

**Q.22) Consider the following statements regarding Nationally Determined Contributions (NDC):**

1. These are non-binding national plans highlighting climate actions that governments aim to implement in response to climate change

2. These contributions are part of Nagoya protocol

**Which of the above is or are correct?**

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

**Q.23) Which of the following is India's first indigenous, whole-virion, inactivated vaccine against COVID-19?**

a. Covishield
b. Covaxin
c. Sputnik
d. India has not been able to develop any vaccine so far

**Q.24) consider the following statements regarding International Energy Agency (IEA):**

1. It was established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.
2. It works under United Nations Security Council
3. India is its full-time member

**Which of the above is or are correct**

a. 1 and 2 only
b. 1 only
c. 2 and 3 only
d. 1, 2 and 3

**Q.25) Agriculture Infrastructure and Development Cess (AIDC) is not levied on which of the following?**

a. Imported apple
b. Imported beer
c. Imported pulses
d. Imported palm oil

**Q.26) Hunar Haat is organised under Which of the following Ministries?**

a. Ministry of education
b. Ministry of Skill development
c. Ministry of Minority Affairs
d. Ministry of External Affairs

**Q.27) consider the following statements regarding One Health Consortium?**

1. It is launched under the Ministry of Health and Family welfare
2. It is one of the biggest one health programs launched by the Government of India in post-COVID times.
3. This programme envisages carrying out surveillance of important bacterial, viral and parasitic infections of zoonotic as well as transboundary pathogens in India.

**Which of the above is or are correct**

a. 1 and 2 only
b. 1 only
c. 2 and 3 only
d. 1, 2 and 3

**Q.28) India's campaign of Samman, Samvad and Sahyog is associated with which of the following?**

a. Non performing Assets
b. Human rights
c. Settlement of disputed tax
d. Special economic zone

**Q.29) It is located in the Nilgiri District and shares boundaries with the states of Karnataka and Kerala. It is part of the Nilgiri Biosphere Reserve and was declared a tiger reserve in 2007. Which of the following tiger reserve is being described above?**

a. Periyar Tiger Reserve
b. Nagarhole Tiger Reserve
c. Bhadra Tiger Reserve
d. Mudumalai Tiger Reserve

**Q.30) consider the following statements regarding Arecanut:**

1. India is the largest producer of arecanut and largest consumer also.
2. Major states cultivating this crop are Karnataka (40%), Kerala (25%), Assam (20%), Tamil Nadu, Meghalaya and West Bengal.
3. In a recent study, arecoline hydrobromide is found to arrest the growth of cancer cells

**Which of the above is or are correct ?**

a. 1 and 2 only
b. 1 only
c. 2 and 3 only
d. 1, 2 and 3

**Q.31) Abraham accords is associated with which of the following?**

a. Secret ceasefire agreement between Palestine and Israel
b. Five- point strategy for de-escalating tension in Afghanistan
c. New terrorist strategy to target migrants in J&K
d. Diplomatic relations between UAE and Israel

**Q.32) consider the following statements:**

1. Gautama Buddha is believed to have delivered his last sermon and attained 'Mahaparinirvana' or salvation in Kushinagara
2. Gautama Buddha propounded the philosophy of Ashtangika Marga (eightfold path).
3. Lumbini in Bihar is the birthplace of Gautam Buddha.

**Which of the above is or are correct**

a. 1 and 2 only
b. 2 only
c. 2 and 3 only
d. None of the above

**Q.33) Which of the following is not *true*?**

a. The provision of anticipatory bail under Section 438 was introduced when Criminal Procedure Code (CrPC) was amended in 1973.
b. As opposed to ordinary bail, in anticipatory bail, a person is directed to be released on bail even before arrest is made.
c. The Supreme Court (SC) in Sushila Aggarwal v. State of NCT of Delhi (2020) case ruled that a certain time limit has to be set while granting anticipatory Bail.
d. It is issued only by the Sessions Court and High Court.

**Q.34) Human Development Index is Released by**

a. United Nations Development Programme
b. UNICEF
c. WHO
d. None of the above

**Q.35) Which of the following is not a bordering country of Black Sea?**

a. Russia
b. Ukraine
c. Georgia
d. None of the above

**Q.36) Foreign funding of persons in India is regulated by Which of the following Ministries?**

a. Ministry of Finance
b. Ministry of External affairs
c. Ministry of Home Affairs
d. None of the above

**Q.37) Mastitis disease affects Which of the following?**

a. Poultry
b. Dairy cattle
c. Bengal Tiger
d. Great Indian Bustard

**Q.38) Pinaka and Smerch are associated with Which of the following?**

a. New Islands discovered off Maldives
b. Rocket launch systems
c. Biofuels
d. Indigenous tribes

**Q.39) Consider the following statements regarding Uyghurs:**

1. Uyghurs are a predominantly Muslim minority Turkic ethnic group.
2. China recognises the community only as a regional minority and an indigenous group.
3. They are culturally and ethnically close to Central Asian nations

**Which of the above statements is or are incorrect?**

a. 1 and 2 only
b. 2 only
c. 1, 2, and 3
d. Neither 1 nor 2

**Q.40) Tunis Agenda is associated with Which of the following?**

a. UN-based Internet Governance forum (IGF)
b. Paris Climate 2015
c. Ramsar convention
d. Conservation of Biological diversity

**Q.41) Senki, Barap and Palin are tributaries of Which of the following rivers?**

a. Yamuna
b. Barak
c. Ganga
d. Brahmaputra

**Q.42) Konkan Shakti, the first tri service exercise is conducted between India and which of the following nation?**

a. USA
b. United Kingdom
c. Japan
d. Russia

**Q.43) Where is Mudumalai Tiger Reserve located?**

a. Karnataka
b. Tamil Nadu
c. Kerala
d. Telangana

**Q.44) Consider the following statements regarding PM Ayushman Bharat Health Infrastructure Mission:**

1. For the first time in Asia, two container-based hospitals will be stationed in Mumbai and Delhi and kept at the ready to be swiftly mobilised by rail or air to respond to any calamity or disaster in the country.
2. The Objective of the scheme is to fill critical gaps in public health infrastructure
3. Points of entry shall be strengthened that will ring-fence India's borders against the import of new infectious diseases and pathogens.

**Which of the above is or are correct?**

a. 1 and 2 only
b. 2 only
c. 2 and 3 only
d. 1, 2 and 3

**Q.45) Which of the following nations is not a part of G7?**

a. Italy
b. Japan
c. Russia
d. USA

**Q.46) Asia Pacific Vaccine Access Facility (APVAX) initiative is an initiative of?**

a. Asian Development Bank
b. Asian Infrastructure Investment Bank
c. World Health Organization
d. NITI Aayog

**Q.47) Consider the following statements regarding Mullaperiyar Dam:**

1. It is a masonry gravity dam built at the confluence of Mullayar and Periyar rivers.
2. The dam is located in Tamil Nadu
3. It is operated by Kerala

**Which of the above is or are correct?**

a. 1 and 2 only
b. 1 only
c. 2 and 3 only
d. 1, 2 and l3

**Q.48) What is Pegasus?**

a. Spyware
b. Constellation
c. Missile
d. Both (b) and (c)

**Q.49) Which of the following is incorrect regarding Wakhan corridor:**

1. It is a narrow strip of territory in Afghanistan.
2. It separates Tajikistan from China
3. The corridor was formed by an 1893 agreement between the British Empire (British India) and Afghanistan, creating the Durand Line.

**Select the correct code?**

a. 1 and 2 only
b. 2 only
c. 2 and 3 only
d. 1, 2 and l3

**Q.50) Consider the following statements regarding Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme:**

1. The failure of provision for employment within 15 days of the receipt of a job application will result in the payment of unemployment allowance to the job seekers.
2. Employment is to be provided within 5 km of an applicant's residence
3. Employment under MGNREGA is a legal entitlement

**Which of the above is or are correct?**

a. 1 and 2 only
b. 2 only
c. 2 and 3 only
d. 1, 2 and 3

## ANSWER KEYS

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

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