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Polity & Governance



REPORT ON BEST PRACTICES IN THE PERFORMANCE OF DISTRICT HOSPITALS: NITI AAYOG

Why in News?

- Recently, NITI Aayog released a **performance assessment report** of district hospitals in India, titled '**Best Practices in the Performance of District Hospitals**'.

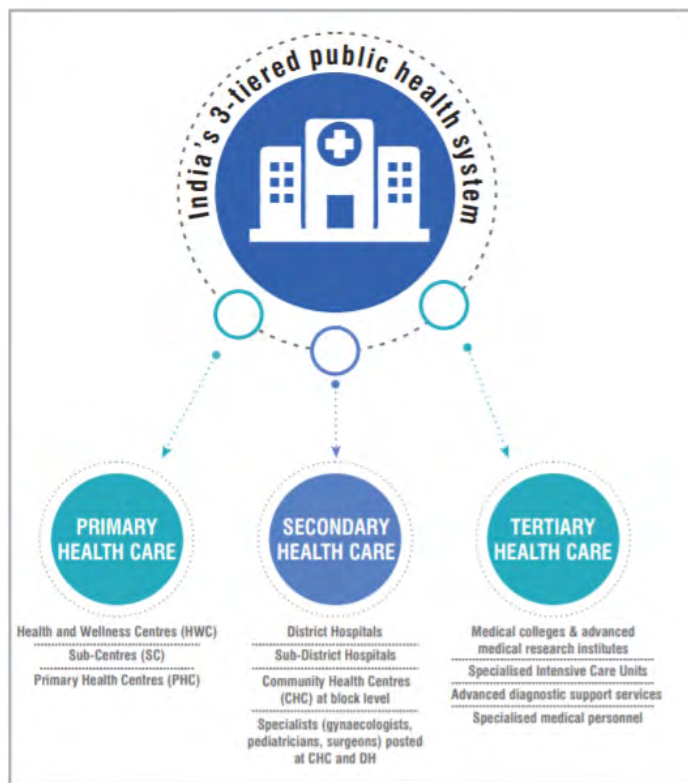


Image Source: NITI Aayog

About the Report:

- The report is an outcome of **collaboration** with the **Ministry of Health and Family Welfare and WHO India**.
- Approach:**
 - The National Accreditation Board for Hospitals and Healthcare Providers conducted the on-ground data validation for the report.
 - The Health Management Information System (HMIS) data for the year 2017-18 has been used as the baseline for this exercise.

Key Findings:

- Role of District Hospitals:** The report notes the vital role played by District Hospitals in providing the advanced secondary care to the population.
 - However, it identifies that there has been a shortage of human resources, capacities, utilization and service uptake in functioning of district hospitals.

- Extent of Coverage:** A total of 707 district hospitals across all States and Union Territories were evaluated on 10 Key Performance Indicators (KPI).
- Doctor-to-bed ratio:** Only 27 per cent of the total 707 districts assessed met the doctor-to-bed ratio of 29 doctors per 100 beds in a hospital.
- Human Resources:** 88 hospitals out of 707 had the required ratio of staff nurses.
 - Only 399 hospitals were found to have a ratio of paramedical staff in position as IPHS norms laid down.
 - On an average, every district hospital in India had 11 support services, compared to the required 14. Only 89 hospitals had all support services.
 - Tamil Nadu had the highest proportion (20.2 per cent) of hospitals with all support services, followed by Rajasthan (11.2 per cent), UP (10.1 per cent).
 - Only 21 hospitals fulfilled the criteria of having all diagnostic testing services available.
 - Karnataka had the highest proportion (28.6 per cent) of hospitals with all support services, followed by Telangana (19 per cent).
- 182 hospitals out of the 707 had bed occupancy of 90 per cent or more.
 - Uttar Pradesh (14.8 per cent) had the highest proportion of hospitals with bed occupancy rate greater than or equal to 90 per cent, followed by Madhya Pradesh (10.9 per cent).
- At an average a doctor in a district hospital attends to 27 OPD patients.
- On an average, a district hospital had 24 beds for 100,000 people. For the assessment, it was set that a hospital should have 22 beds for those many people.
 - According to the assessment, Puducherry had the highest average beds in the country while Bihar had the lowest average of six beds per 100,000 citizens.
- Classification of Hospitals:** District hospitals were categorized according to their bed strength, thereby enabling comparison of similar-sized hospitals.
 - Small Hospitals (less than or equal to 200 beds), Mid-sized Hospitals (between 201-300 beds) and Large Hospitals (more than 300 beds).

Significance:

- The NITI Aayog report marks a major shift in the healthcare delivery system towards **data-driven governance** and takes us even closer to communities and people availing health services.
- It paves the way for a more informed understanding of healthcare services available in different regions.
- This report can serve as a foundation for a roadmap

of action for developing upgraded and improved district hospitals in the country.

- It will provide greater confidence in the quality of data and serve as a tool to track crucial health care indicators more efficiently.

Way Forward:

- The need for strengthening the public health information system cannot be emphasized enough. It involves **better data management, regular data validation and periodic inspections**, such as this performance assessment exercise.
- To ensure quality and timely health information, adequate, trained and dedicated human resources must be provided.

News Source: Press Information Bureau

AMRUT 2.0

Why in News?

- Recently, the second phase of the **Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0** was launched by Prime- Minister.

AMRUT 2.0

- **AMRUT 2.0** includes **upscaling from 500** cities covered under AMRUT with 1 lakh+ population to all 4,372 cities, covering 100% urban India.
- **Ministry:** Ministry of Housing & Urban Affairs.
- **Objective:** To **provide 100% coverage of water supply** to all households in around 4,700 Urban Local Bodies, by providing 2.68 crore urban household tap connections.
- **Promoting Circular Economy of Water:** It will build upon the progress of AMRUT to address water needs, rejuvenate water bodies, better manage aquifers, reuse treated wastewater, thereby promoting circular economy of water.
- **Funding: The total outlay of AMRUT 2.0 is ₹2,97,000 crores**, including central share of ₹76,760 crores.
- Under the Mission, **fresh water bodies will be protected** from getting polluted to make natural resources sustainable.

Significance:

- AMRUT-2.0 Mission will **promote Public-Private Partnership (PPP)**.
- » Cities having a million plus population will take up PPP projects worth a minimum of 10 percent of their total project fund allocation which could be on Annuity/ Hybrid Annuity / BOT Model.

- The Mission **seeks to promote Atma Nirbhar Bharat** through encouraging Startups and Entrepreneurs.
- It will lead to **promotion of the Gig economy** and on-boarding of youth & women.
- Mission has a **reform agenda**, with focus on strengthening urban local bodies and water security of the cities.
- **Digital economy** will be promoted through a **Paperless Mission**.
- » **Pey Jal Survekshan** will be conducted in cities to ascertain equitable distribution of water, reuse of wastewater and mapping of water bodies w.r.t. quantity and quality of water through a challenge process.

Achievements of AMRUT 1.0:

- **1.14 crore water tap connections** have been provided taking total connections to 4.14 crore in AMRUT cities.
- **Credit rating work** has been **completed** in 470 cities. Of which, 164 cities have received Investible Grade Rating (IGR), including 36 cities with rating of A- or above.
- **Online Building Permission System** has been implemented in 2,471 cities including 455 AMRUT cities. This reform has helped **improve India's rank in Ease of Doing Business** in construction permits to 27 in Doing Business Report (DBR) 2020 of World Bank from 181 in 2018.
- 89 lakh **conventional streetlights have been replaced with energy efficient LED lights**, leading to estimated energy savings of 195 crore units per annum & reduction in CO2 emission by 15.6 lakh tons per annum.

AMRUT:

- Launched in 2015, as a **Central Sponsored Scheme**.
- **Aim:** To **provide basic civic amenities** like water supply, sewerage, urban transport, parks as to improve the quality of life for all especially the poor and the disadvantaged.
- **Major Project components:** Water Supply system, Sewerage, Septage, Storm Water Drainage, Urban Transport, Green Space and Parks, Reforms management and support, Capacity building.

Circular Economy:

- A Circular economy entails markets that give incentives to reusing products, rather than

scrapping them and then extracting new resources.

- In such an economy, all forms of waste, such as clothes, scrap metal and obsolete electronics, are returned to the economy or used more efficiently.
- **Utility:** This can provide a way to not only protect the environment, but use natural resources more wisely, develop new sectors, create jobs and develop new capabilities.

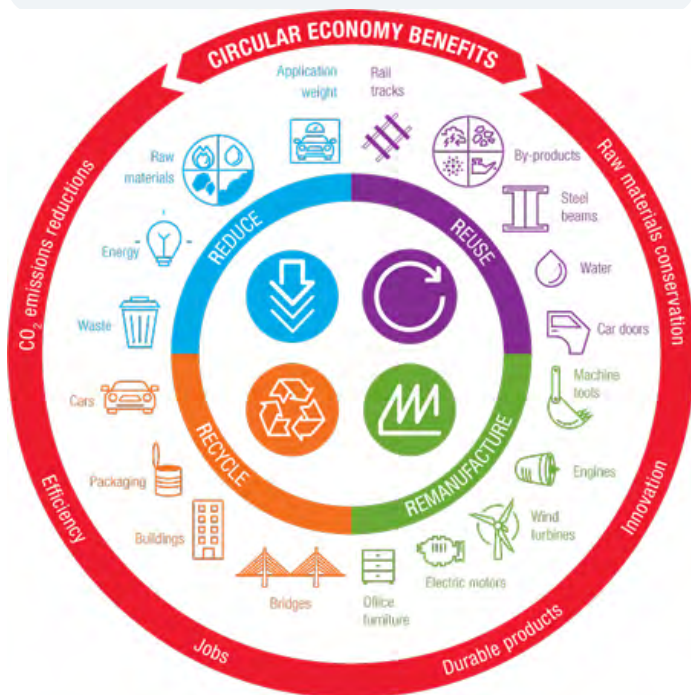


Image Source: UNCTAD

News Source: Press Information Bureau

AIR INDIA DISINVESTMENT

Why in News?

- Recently, the Central government approved the **₹18,000 crore bid** placed by the Tata Sons subsidiary Talace Pvt Ltd for the disinvestment of Air- India.

Reasons of Air India Disinvestment:

- **Debt Ridden:** The Government's efforts to turn around the finances of Air India seem to have failed with the national carrier's **eroding market share** and a **mountain of debts**.
- **Loss Making:** Air India **has not registered profit for over a decade** after the merger of the erstwhile Indian Airlines (domestic operations) with Air India (international operations) in 2007.
- **Burden on Public Exchequer:** Air India's disinvestment has been widely supported as the

airline's large losses are funded out of the Central budget and have proved quite a **burden on the exchequer**.

- **For Example:** The Government pumped in ₹15,520 crore between 2014-15 and 2018-19 to keep it afloat.

Tata in the sky | Tata Sons will be the new owner of debt-laden national carrier Air India. The sale marks the return of Air India to the Tata group, a pioneer in aviation

1932: JRD Tata pilots Tata Airlines' inaugural flight from Karachi to Bombay	2007: Air India merges with Indian Airlines, that operates only domestic routes	Jan, 2020: Govt. launches a second attempt, this time offers 100% stake in Air India
1946: Tata Airlines becomes a public company; renamed Air India Limited	2012: Govt. approves ₹30,000 crore bailout for Air India, which has over ₹67,000 crore in debt	Oct, 2020: Govt. confirms Tata Sons' subsidiary Talace Pvt. Ltd. as the winning bidder
1948: Govt. of India acquires a 49% stake in the carrier	May, 2018: Govt. attempts to sell 76% stake in Air India; attracts no bidders	
1953: Government nationalises Air India		

Image Source: The Hindu

Significance of Air India Disinvestment:

- With the Disinvestment of Air India, it is hoped that its **operations and costs will get streamlined, services on board will improve** and basic services like wi-fi will also be made available.
- A strong international carrier in India will **give a boost to the large airports built in Delhi, Hyderabad, Mumbai and Bengaluru** which along with Air India will be able to win back some of the tourist dollars from Indians travelling abroad who are currently travelling on foreign carriers.
- A successful turnaround of Air India **could also help the Indian economy** as it is a well-established fact that aviation has a **multiplier effect on the economy**.

Disinvestment:

- Disinvestment means sale or liquidation of assets by the government, usually Central and state public sector enterprises, projects, or other fixed assets.

Need of Disinvestment:

- The Government undertakes disinvestment to reduce the fiscal burden on the exchequer, or to raise money for meeting specific needs, such as to bridge the revenue shortfall from other regular sources.

Benefits of Disinvestment:

- Disinvestment can be **helpful in the long-term growth of the country** as it allows the government and even the company to reduce debt.
- It allows a larger share of PSU ownership in the open market, which in turn allows for the **development of a strong capital market** in India.

Disinvestment Policy of Government of India:

- Under the aegis of the Ministry of Finance, the **Department of Investment and Public Asset Management (DIPAM)** is responsible for the disinvestment.
- Disinvestment targets are set under each Union Budget, and every year the targets change.
- **Factors Influencing Disinvestment:** Governments select disinvestment candidates based on various factors, such as its **existing stake in the company, private sector interest in ownership of that enterprise, general market conditions**, expected value realisation.

News Source: The Hindu

CYBER SECURITY GUIDELINES IN POWER SECTOR

Why in News?

- Recently, the Ministry of Power has unveiled its guidelines of cybersecurity in the power sector.

Key Points:

- The guidelines of cybersecurity in the power sector have been framed by the **Central Electricity Authority (CEA)**.
- **Objective:** The guidelines **lay down actions required to ramp up security measures** across various utilities to raise preparedness in the power sector.
- **Coverage:** The norms are **applicable to all responsible entities** as well as system integrators, equipment manufacturers, suppliers/ vendors, service providers, and IT hardware and software OEMs (original equipment manufacturers) engaged in the Indian power supply system.
- **Expertise Involved:** The norms have been prepared after intensive deliberations with stakeholders and inputs from expert agencies in the field of cybersecurity, such as **CERT-In, NCIIPC, NSCS and IIT-Kanpur**.
- **Strengthening the Power Ecosystem:** With the new norms, the Government aims to place mechanisms for security threat early warning, strengthen the protection and resilience of critical information infrastructure, and reduce cyber supply chain risks.
- **ICT Based Procurement:** The guidelines mandate ICT (Information and Communication Technology)-based procurement from identified **“Trusted Sources”** and identified **“Trusted Products”**.

- » In case the procurement is not from a trusted source, the product needs to be tested for Malware/ Hardware Trojan before deployment for use in power supply systems.
- **Significance:** These rules will help **promote cybersecurity research and development**, and create a market for cyber testing infrastructure in both public and private sectors in the country.

News Source: The Indian Express

PM GATI SHAKTI- NATIONAL MASTER PLAN

Why in News?

- Recently, the Prime Minister launched PM Gati Shakti - ‘National Master Plan’ for multi-modal connectivity of economic zones in the country.

PM Gati Shakti - National Master Plan:

- The **PM Gati Shakti plan is a campaign to lend more speed (Gati) and power (Shakti) to projects** by connecting all concerned departments on one platform.
- It **envisages a centralised portal to unite the infrastructural initiatives** planned by central ministries and departments.
- » This way, the infrastructure schemes of various ministries and state governments will be designed and executed with a common vision.
- **Use of Technology:** It seeks to leverage technology by including spatial planning tools with ISRO imagery.

Six pillars of ‘PM GatiShakti - National Master Plan’:

- **Comprehensiveness:** Through one centralized portal, each and every ministry will be able to see each other’s activities providing critical data while planning and executing projects in a comprehensive manner.
- **Prioritisation:** Through this, different departments will be able to prioritise their projects through cross-sectoral interactions.
- **Optimisation:** The National Master Plan will assist different ministries in planning for projects after the identification of critical gaps.
- **Synchronisation:** It is often seen that there is a lack of coordination among ministries in the planning and implementation of the project. PM GatiShakti will help in synchronising the activities of each department, as well as of different layers of governance, in a holistic manner.

- **Analytical:** The plan will provide the entire data at one place with GIS-based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.
- **Dynamic:** All ministries and departments will now be able to visualise, review and monitor the progress of cross-sectoral projects, through the GIS platform which will help in identifying the vital interventions for enhancing and updating the master plan.

Benefits:

- PM GatiShakti **targets to cut logistic costs, increase cargo handling capacity** and reduce the turnaround time.
- It **will make Indian businesses more competitive** by enhancing connectivity between economic zones such as textile clusters, pharmaceutical clusters, defence corridors, electronic parks, and industrial corridors.
- It **sets an example of holistic governance** by bringing together the government process and its various stakeholders.
- It **will provide the business community with information** about upcoming connectivity projects, other business hubs and industrial areas.

Significance:

- PM GatiShakti **will give impetus to ‘Aatmanirbhar Bharat’** (self-dependent India) vision.
- It **will lend more power and speed to projects under the \$1.5-trillion National Infrastructure Pipeline** which in turn will boost the goal of achieving a \$5-trillion economy.

News Source: The Hindu

MAPPING OF ENERGY RESOURCES: NITI AAYOG & ISRO

Why in News?

- Recently, the Geographic Information System (GIS) Energy Map of India was launched by NITI Aayog.

Geographic Information System (GIS) Energy Map of India:

- The map **attempts to identify and locate all primary and secondary sources of energy** and their transmission networks to provide a comprehensive view of energy production and distribution in a country.
- It has been **developed by NITI Aayog in collaboration with Indian Space Research Organisation (ISRO)** with the support of Energy Ministries of Government of India.
- It is **aimed at integrating energy data scattered across multiple organizations** and to present it in a consolidated, visually appealing graphical manner.
- It **leverages the latest advancements in web-GIS technology** and open-source software to make it interactive and user friendly.
- It **enables visualisation of energy installations** such as conventional power plants, oil and gas wells, petroleum refineries, coal fields and coal blocks, district-wise data on renewable energy power plants and renewable energy resource potential, etc through 27 thematic layers.

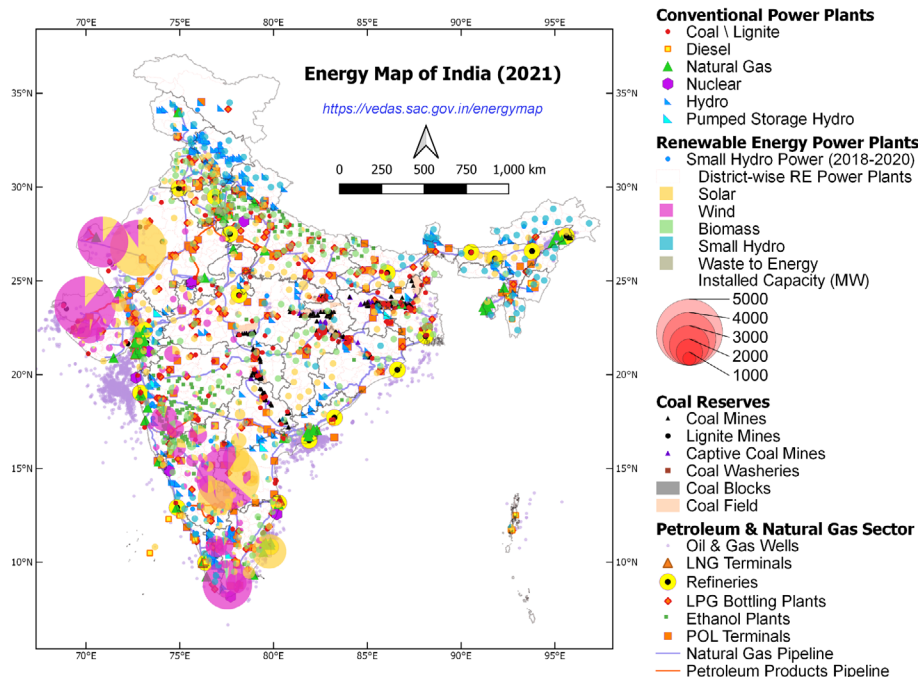


Image Source: NITI Aayog & ISRO

Benefits:

- The Geospatial Energy Map of India will be **useful in planning and making investment** decisions.
- The GIS map **provides a holistic picture of all energy resources** of the country.
- It will also **aid in disaster management** using available energy assets.

News Source: Press Information Bureau

AYUSHMAN BHARAT HEALTH INFRASTRUCTURE MISSION

Why in News?

- Recently, the Ayushman Bharat Health Infrastructure Mission was launched by the Prime Minister.

Ayushman Bharat Health Infrastructure Mission:

- **Objective:** Its objective is to fill gaps in public health infrastructure, especially in critical care facilities and primary care in both urban and rural areas.
- **Focus on Health and Wellness Centres:** It will provide support for 17,788 rural health and wellness centres in 10 high-focus states.
 - » Further, 11,024 urban health and wellness centres will be established in all the States.
- **Providing Critical Care Services:** Critical care services will be available in all the districts of the country with more than five lakh population through 'exclusive critical care hospital blocks', while the remaining districts will be covered through referral services.
- **Provision of Diagnostic Services:** People will have access to a full range of diagnostic services in the public healthcare system through a network of laboratories across the country, and **integrated public health labs** will be set up in all the districts.
- **Building Human Resources:** Frontline and healthcare workers will also be trained well in advance to respond to public health emergencies effectively.
- **Setting up of New Institutions:** Under the scheme, a national institution for one health, four new national institutes for virology, a regional research platform for WHO South East Asia Region, nine biosafety level-III laboratories, and five new regional national centres for disease control will be set up.

Significance:

- India has been in need of a ubiquitous healthcare system for a very long time. A study ('State of Democracy in South Asia (SDSA)-Round 3') by

Lokniti-CSDS in 2019 highlighted how access to public health care remained elusive to those living on the margins.

- The study highlighted that 70 per cent of the locations have public healthcare services. The availability was, however, seen less in rural areas (65 per cent) compared to urban areas (87 per cent).
- In 45 per cent of the surveyed locations, people could use healthcare services by walking and 43 per cent of the locations could be reached via transport.
- In this backdrop of crunch health infrastructure, the Ayushman Bharat Health Infrastructure Mission will prove a milestone to deliver last mile health services.

News Source: The Hindu

AYUSHMAN BHARAT DIGITAL MISSION

Why in News?

- Recently, the Prime Minister launched the Ayushman Bharat Digital Mission via video conferencing.

Ayushman Bharat Digital Mission

- **Aim:** It aims to develop the backbone necessary to support the integrated digital health infrastructure of the country.
- **Digital Health ID:** Every citizen will get a unique health ID – a randomly generated 14-digit identification number.
 - » The Health ID will give the user unique identification, authentication and will be a repository of all health records of a person.
- **Personal Health Records (PHR) address:** The beneficiary will also set up a Personal Health Records (PHR) address for the issue of consent, and for future sharing of health records.
- **Easy Access to Health History:** Under the mission, users can access and link personal records with their unique ID to create a longitudinal health history.
- **Creation of Digital Ecosystem:** The Mission will create a Digital Ecosystem which will provide a host of facilities like digital consultation, consent of patients in letting medical practitioners access their records.
- **Concerns:**
 - » Personalised data collected at multiple levels are a **"sitting gold mine"** for insurance companies, international researchers, and pharma companies.
 - » The Implementation of Mission has to ensure that privacy of individuals remains sacrosanct, given the amount of data collected from citizens.

Significance:

- It will **bridge the existing gap amongst different stakeholders** of the Healthcare ecosystem through digital highways.
- It will enable individuals to discover hospitals, laboratories and pharmacies across the country.
- It will **“increase the ease of living”** along with “simplifying the procedures in hospitals”.

News Source: The Hindu

CHANGES TO FOREST CONSERVATION ACT

Why in News?

- Recently, the union government has proposed certain amendments to the Forest **Conservation Act 1980** to liberalise forest laws.

Key points:

- The proposed amendment is part of a large rationalising of existing forest laws, particularly for accelerated integration of conservation and development.
- » FCA was enacted for providing a higher level of protection to the forests and to regulate diversion of forest lands for non-forestry purposes
- » The **FCA came in 1980 and was amended in 1988.**

Provision	Present Mechanism	Proposed Amendment
Development of infrastructure along the international border areas.	Approval is needed for non-forestry use of forest land.	Absolving agencies involved in national security projects and border infrastructure projects from obtaining prior forest clearance from the centre.
Penal provisions for offences under the Act	Punishable with simple imprisonment for a period, which may extend to fifteen days.	Adding a clause to make offences punishable with simple imprisonment for a period which may extend to one year and make it cognisable and non-bailable.
Applicability of the Act over the right of way (RoW) of railways, highways, etc	A landholding agency (Rail, NHAI, PWD, etc) is required to take approval under the act as well as pay stipulated compensatory levies such as Net Present Value, Compensatory afforestation, etc. for use of such land.	To exempt such lands acquired before 1980 from the purview of the Act.
Restriction on the de-reservation of forests or use of forest land for non-forest purposes.	Limited scope for non-forest purposes such as for cultivation of tea, coffee, spices, rubber, palms, horticultural crops etc.	Proposes removing zoos, safaris, forest training infrastructures from the definition of “non-forestry” activities.

Forest in India:

- According to the **India State of Forest Report for 2019**, total forest and tree cover covers **24.56 per cent** of the country's geographical area.
- » **Forest cover (area-wise):** Madhya Pradesh> Arunachal Pradesh> Chhattisgarh> Odisha> Maharashtra.
- **Constitutional Provisions:**
- » **Article 48 A** in the Directive Principles of State policy, mandates that the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.
- » According to **Article 51 A (g)** of the Constitution, every citizen has a fundamental duty to protect and improve the natural environment, including forests and wildlife.
- » Through the **42nd Amendment Act, 1976** Forests and Protection of Wild Animals and Birds were transferred from State to Concurrent List along with Education, Weights & Measures and Administration of Justice.

DEPUTY SPEAKER OF LOK SABHA

Why in News?

- Recently, Delhi High Court asked the Central government to explain its stand on a petition for keeping the post of Deputy Speaker of the Lok Sabha vacant.

Key Points:

- The petition claimed that it is a violation of **Article 93** of the Constitution.
 - » Under **Article 93**, “The House of the People shall, as soon as may be, choose two members of the House to be respectively Speaker and Deputy Speaker.
- The position had been vacant for the **last 830 days** since the formation of the 17th Lok Sabha in 2019.
- The longest time that this post had remained vacant was in 12th Lok Sabha and even then on the 59th sitting of Parliament, election to the post was held.
- By convention, this post went to the Opposition

Advantage:

- **It Ensures continuity of Speaker’s office:** A Deputy Speaker enjoys the same legislative and administrative powers as the Speaker in absence of the Speaker because of death, illness, resignation or any other reason.
- When a resolution for removal of the Speaker is up for discussion, Deputy Speaker presides over the proceedings of the House.
- A Deputy Speaker is also **ex-officio chairman of some committees** by virtue of his position.

Issue:

- **No specific timeline for Deputy Speaker’s appointment:** Article 93 for Lok Sabha and Article 178 for state Assemblies state that these Houses “**shall, as soon as may be**” choose two of its members to be Speaker and Deputy Speaker.
- It would be unrealistic to expect complete neutrality while functioning.

Arguments For Not Filling The Position:

- Soon after 2019 general election, the government approached the YSR Congress, who turned down the offer since it would have been difficult to align their protest against the government for not according **special status to Andhra Pradesh** while occupying the post.
- As the **combined Opposition didn’t have the**

strength to elect a member of their choice, the choice fell on government. There was no recognized leader of Opposition, which hampered the process.

Rules of Procedure and Conduct of Business in Lok Sabha and the Deputy Speaker:

- Being a **constitutional post** with important functions to perform, electing a Deputy Speaker will only strengthen Indian Democracy. **Rule 8** of the Rules of Procedure and Conduct of Business in Lok Sabha leaves it to the speaker to fix the date for holding the election of the Deputy Speaker.
- Though the **Rule 9** of it provides for up to 10-member **Panel of Chairpersons**, nominated by Speaker, to preside over the House in the absence of the Speaker and the Deputy Speaker, they are not equipped/empowered to handle all duties of the Deputy Speaker.

Source: the hindu

CJI STRESS ON JUDICIAL INFRASTRUCTURE

Why in News?

- Recently, the Chief Justice of India (CJI) urged the Union Minister of Law and Justice to ensure that the proposal to create **National Judicial Infrastructure Authority of India (NIJAI)** with statutory backing is taken up in the winter session of Parliament.

Key Points:

- **Background:** The idea for such authority was first proposed by CJI Ramana in March this year.
- **Judicial infrastructure**
 - » It is important-
 - To improve access to justice
 - To Meet the growing demands of the public that is more aware of its rights and is developing economically, socially and culturally.
- The total sanctioned strength of judicial officers in the country is 24,280 and the number of court halls available is 20,143 (including 620 rented halls)
 - » **Toilets-**
 - 26% of court complexes do not have separate ladies toilets
 - 16% do not have gents’ toilets
- **Court complexes in India:**

- 54% have purified drinking water facilities
- 5% have basic medical facilities
- 32% court rooms have separate record rooms
- 51% have a library
- 27% have computer placed on the Judge's dais with video-conferencing facility
- According to international research published in 2018, failure to deliver timely justice cost the country as much as 9% of its annual GDP.

Conclusion:

- An effective judiciary can aid in economic growth and courts are essential for any society which is governed by the rule of law.

The development of physical infrastructure of the High Courts and the lower courts primarily comes under the domain of State governments.

Constitutional Provisions:

- **Article 124(2)** of the Indian Constitution provides that the Judges of the Supreme Court are appointed by the President after consultation with such a number of the Judges of the Supreme Court and of the High Courts in the States as the President may deem necessary for the purpose.
- **Article 217** of the Indian Constitution states that the Judge of a High Court shall be appointed by the President consultation with the Chief Justice of India, the Governor of the State, and, in the case of appointment of a Judge other than the Chief Justice, the Chief Justice of the High Court.

Source: the Hindu

PM'S 60 POINT ACTION PLAN

Why in News?

- Recently the centre has prepared a comprehensive 60 points action plan.
- Although the action plan is directed at specific ministries and departments, a closer examination reveals that they are divided into three categories:
 - » **Leveraging IT and technology for governance,**
 - » **Improving the business climate, and**
 - » **Upgrading the civil service.**

Key Points:

Significance:

- The action plan to attract business include:
 - » Doing away completely with certain permission,
 - » It will reduce the cost of starting a business in 10 sectors and bring it on par with Vietnam and Indonesia.
 - » Automatic notification of clearances, single-point access to all government services.
- **Leveraging IT and Technology for Governance:**
 - » **Digitising all land records by 2023** under the central database called '**Matribhumi.**' Integration with e-Courts system will provide transparency on title/possession related issues.
 - » There are several actionable inputs for the Ministry of Electronics and Information Technology from streamlining the disbursement of scholarships to bridging digital divide for underprivileged students by developing indigenous tablets and laptops.
 - » Through technology, citizenship could be linked to birth certificates and mainstreamed.
- **Improving Business Climate:**
 - It includes doing away completely with certain permissions, reducing the cost of starting a business in 10 sectors and bringing it on a par with Vietnam and Indonesia, automatic notification of clearances, single-point access to all government services.
 - Incentives to states for timely land acquisition and forest clearances, one comprehensive Environment Management Act that subsumes various laws in the sector.
 - Mentoring platform for start-ups and skilling programmes for emerging sectors.
 - Using **Geographic Information System (GIS)** mapping for decision making to increase the country's **GDP (Gross Domestic Product).**
- **Upgrading the Civil Services:**
 - » **Capacity building (Mission Karmayogi)** - training of officers on various aspects of infrastructure in both the Centre and states, infusion of expertise and exposure to latest technologies for higher civil services.
 - » **Performance-based working, clear and specific targets** for ministries and departments just like that for public sector undertakings, institutional mechanisms for addressing issues of states given their limited capacities and restructuring of departments through Government Process Re-engineering (GPR) every 10 years.
 - GPR is undertaken to address 'problems' or 'needs' of the organization or its customers with

an objective to improve the overall quality of the services.

- » **Appointment of more Chief Information Officers (CIOs)** and Chief Technology Officers (CTOs) as data is not being used efficiently. All government data should be made accessible to all ministries.
- **Other Agendas:**
- **NITI Aayog** has also been asked to target poverty eradication within five years.
- Asks the **Ministry of Housing and Urban Affairs** to ab initio plan residential facilities for service staff engaged in construction to prevent formation of slums.

- Using Aadhaar for **“bringing together beneficiary oriented schemes of different ministries”** and also adds that a ‘family database design’ has been developed by the Ministry of Social Justice and Empowerment and “may be promoted like Aadhaar.”
- Directs the culture and tourism ministries to identify and develop 100-200 iconic structures and sites.
- “Centres of excellence” may be set up in rural areas through PPP (Public-Private Partnership), taking a cue from such centres in Singapore.

Source: indian express



International Developments

INDIA AT 76TH UNITED NATIONS GENERAL ASSEMBLY (UNGA)

Why in News?

- PM Narendra Modi addressed the General Debate of the High-Level Segment of 76th Session of UN General Assembly (UNGA).

Key Points of PM's address:

- **Global impact of India:** Today every sixth person in the world is Indian. Thereby when India makes progress, it accelerates the development of the world.
- **On Vaccine:** India has developed the world's first DNA vaccine for Covid-19 which can be administered to everyone above the age of 12.
- **On Terrorism:** He outlined the danger posed by Regressive thinking and extremism to the world. It is very important to ensure that the territory of Afghanistan is not used to spread terrorism and for terror attacks.
- **On China:** In a veiled attack on China, he urged the world to raise its collective voice against China's expansion efforts in the South China sea. He said that resources available in the oceans are meant to be used and not abused.
- **On UN Reforms:** If the UN has to keep itself relevant, it has to improve its effectiveness and increase its reliability.
- **Governance Model:** He spelt the philosophy of "integral humanism" of Deen Dayal Upadhyay, as a governance model for integrated equitable development in which no one is left behind.

UN General Assembly (UNGA):

- UNGA is the **main policy-making organ** of the UN.
- Each of the 193 Member States of the United Nations has an equal vote in it.
- It makes key decisions for the UN, such as:
 - » appointing the Secretary-General on the recommendation of the Security Council.
 - » electing the non-permanent members of the Security Council.
- Each year, in September, the full UN membership meets in the General Assembly Hall in New York for the annual General Assembly session, and general debate, which many heads of state attend and address.
- **Decision Making:** Decisions on important questions, such as those on peace and security, admission of new members and budgetary

matters, require a two-thirds majority of the General Assembly.

- » Decisions on other questions are by simple majority.
- The General Assembly, each year, elects a General Assembly President to serve a one-year term of office.

News Source: Hindustan Times

INDIA-NEPAL: RAILWAY LINK

Why in News?

- The rail link between Nepal and India is ready to resume on the neighbouring country's **first-ever broad gauge passenger service**.

Background:

- The rail link between India and Nepal has been popular since the early 20th century.
- In 1937, the British had built a narrow-gauge line to ferry cargo, mainly logs, from Nepal to India. However, over time it became a popular passenger service before it was stopped in 2014 for conversion to broad gauge.

Jayanagar – Kurtha Railway link:

- The 34.50 km-long rail section is the first section of the rail line links between India and Nepal. It **connects Jayanagar (Bihar, India) and Nepal's Kurtha**, with the Hindu pilgrimage city of **Janakpur Dham** in between.
- The cost of this rail section is 619 crore.
- It has been set up by IRCON under **India – Nepal friendship rail project** with finance granted by the Indian government.
- Indian Railways has delivered two modern DEMU trains to Nepal for Jayanagar-Kurtha railway link.

Significance:

- The Railway line is being seen as a small link to a larger plan of deepening India's ties with Nepal through the Railways, bypassing the influence of other neighbouring countries in this strategically vital region.

Other Connectivity Project between India - Nepal:

Kathmandu-Raxaul railway link:

- In October 2021, the **India-Nepal Joint Working Group** signed an agreement for a final location

survey for a broad gauge line between Bihar's Raxaul and Kathmandu, Nepal.

- When done, it will be a hill railway that will direct rail connectivity between Nepal's capital city and the Indian network, opening multiple avenues for cross-border movement.

News Source: The Indian Express

CONFERENCE OF INTERACTION AND CONFIDENCE BUILDING MEASURES IN ASIA (CICA)

Why in News?

- Recently, the 6th meeting of the Foreign Ministers of the **Conference of Interaction and Confidence Building Measures in Asia (CICA)** was addressed by the Indian Foreign Minister Dr. S. Jaishankar in Kazakhstan.



Image Source: Embassy of Kazakhstan

Key Highlights of Foreign Minister's address on Various issues:

- **Terrorism:** He urged the international community to get united over scourge of terrorism, the way countries get united over climate change and pandemics.
- **Connectivity:** He asserted that connectivity projects must respect the most basic principle of international relations-respect for sovereignty and territorial integrity, in an apparent criticism of the China-Pakistan Economic Corridor.
- **Afghanistan:** Outlined the importance of the Taliban regime meeting the expectations of the international community as elaborated in the UN Security Council Resolution 2593.
- **Vaccine Maitri:** India's internationalism (**Vasudhaiva Kutumbakam**) drives the Vaccine Maitri programme.

- **Role of CICA:** Voice of CICA can be a positive factor in shaping a global response on developments in Afghanistan.

Conference on Interaction and Confidence Building Measures in Asia (CICA)

- CICA is a **multi-national forum** for enhancing cooperation towards promoting peace, security and stability in Asia.
- It is a forum based on the recognition that there is a close link between peace, security and stability in Asia and in the rest of the world.
- The **idea of convening CICA** was first proposed by the **First President of the Republic of Kazakhstan - Elbasy H.E. Mr. Nursultan Nazarbayev** in 1992.
- **Secretariat:** Nur-Sultan, Kazakhstan.
- All **decisions within CICA framework** are taken by **consensus**.
- **Membership:** For becoming a member of CICA, a state must have at least a part of its territory in Asia.
 - » **Total Member States:** 27
 - » **Observer States:** 9
- The **CICA Summit** is convened **every four years** with representation of CICA Heads of State and Government.
- **Every Year, October 5** is recognised as CICA Day.

News Source: The Hindu

UN HUMAN RIGHTS COUNCIL

Why in News?

Recently, India was re-elected to the UN Human Rights Council for the 2022-24 term with an overwhelming majority in the General Assembly.

- India got **184 votes in the 193-member** assembly, while the required majority was 97.

The Human Rights Council:

- The Human Rights Council is an **inter-governmental body** within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe.
- The Council is made of 47 Member States, which are elected by the majority of members of the General Assembly of the United Nations through direct and secret ballot.
- The Council was created by the United Nations General Assembly on 15 March 2006 by **resolution**

60/251.

- The Council's Membership is based on equitable geographical distribution. Seats are distributed as follows:
 - » African States: 13 seats
 - » Asia-Pacific States: 13 seats
 - » Latin American and Caribbean States: 8 seats
 - » Western European and other States: 7 seats
 - » Eastern European States: 6 seats
- **Members of the Council** serve for a period of three years and are not eligible for immediate re-election after serving two consecutive terms.
- It meets at the UN Office in Geneva.

News Source: The Hindu

CHINA'S HYPERSONIC GLIDE VEHICLE TEST

Why in News?

According to a report in London-based Financial times, China has tested a **nuclear capable hypersonic glide vehicle** that circled the globe before speeding towards its target.

- Hypersonic speeds are 5 or more times the speed of sound.

Implication of China's test for World:

- As per reports, the tested weapon could fly over the South Pole. That would pose a big challenge for the US military because its missile defence systems are focused on the northern polar route.
- In the background of the India- China border standoff, this test assumes much significance as it could pose a threat to India's space assets along with the surface assets.

India's hypersonic Missile Programme:

- In 2020, the Defence Research and Development Organisation (DRDO) had test fired the **Hypersonic Technology Demonstration Vehicle (HSTDV)** from the Abdul Kalam Island off the coast of Odisha.
 - » It will lead to the development of hypersonic cruise missiles and vehicles in future.
- Hypersonic Vehicles use scramjet technology.

News Source: The Economic Times

FATF RETAINS PAKISTAN ON IT'S 'GREY LIST'

Why in News?

Recently, the plenary session of the Financial Action Task Force (FATF) was convened in Paris which retained Pakistan in its grey list.

- Pakistan was placed on the grey list by the FATF in June 2018.

Key Highlights of Plenary Meet of FATF:

- FATF **reviewed the progress of the 34-point action plan** given by it to Pakistan.
 - » Pakistan has failed to comply with four of the action points out of it.
- **New Entrants to Grey List: Turkey, Mali and Jordan** have been added to the FATF Grey List because of serious issues in their regimes to counter money laundering and terror financing.
- **Removal:** Mauritius has been removed from FATF.
- **Concern over Afghanistan:** FATF also expressed concern over the current evolving money laundering and terrorist financing risk environment in Afghanistan after Taliban took control of the nation.
- As per 2018 action plan, FATF asked Pakistan to carry out its investigations and prosecutions targeting senior leaders and commanders of UN-designated groups.

Financial Action Task Force:

- The FATF is an **inter-governmental body** established in **1989**.
- **Headquarters:** Paris
- **Membership:** The FATF currently has 39 members including two regional organisations — the European Commission and Gulf Cooperation Council.
 - » India is a member of the FATF consultations and its Asia Pacific Group.
- It **aimed to combat money-laundering, terrorist financing** and other related threats to the integrity of the international financial system.
- It **lays down international standards** with an objective **to prevent money laundering** and terror financing.
- The **plenary is the highest decision-making body** of it, and meets three times a year — in February, June and October.
- FATF depends on voluntary implementation of its reports by member countries.
- India became an observer in the grouping in 2006, and was inducted as a full member in 2010.

Implications of Grey List for Pakistan:

- By remaining on the “Grey List”, it would be difficult for Pakistan to get financial aid from the IMF, World Bank and European Union, making its financial condition more precarious.

News Source: The Hindu

BLACK SEA SECURITY TIES

Why in News?

- U.S. Defence Secretary urged more defence cooperation among Black Sea allies amid Russia “militarisation” of the region ahead of a NATO Ministers summit.

Black Sea:

- The Black Sea **lies between the continents of Asia and Europe**. It is bound to the west by the Balkan

Peninsula in Southeastern Europe, to the east by the Caucasus, north by East European Plains, and south by Anatolia of Western Asia.

- The **largest island in the Black Sea** is **Dzharylhach** Island in Ukraine.
- In 1992, the six countries bordering the Black Sea ratified a convention on Black Sea protection, known as the **Bucharest Convention**.
- » The convention sought to reduce the risk of extinction of marine species and conserve marine and coastal habitat.
- It is **near oval in shape** and is linked to the Atlantic Ocean through the Bosphorus Strait.
- The Strait of Kerch connects Black Sea with the Sea of Azov.
- **Bordering countries** of Black Sea: **Russia, Ukraine, Georgia, Turkey, Bulgaria and Romania**.
- It is known for anoxic Waters (Depleting Oxygen levels).



Image Source: World Atlas

Strategic Importance of Black Sea:

- The Black Sea, which Russia uses to project its power in the Mediterranean, has for centuries been

a flashpoint between Russia and its competitors such as Turkey, France, U.S. and the U.K.

North Atlantic Treaty Organization (NATO)

- NATO is an **alliance of 30 countries** from North America and Europe committed to fulfilling the goals of the North Atlantic Treaty signed on 4 April 1949.
- **Membership:** Any European country in a position to further the principles of the Washington Treaty and contribute to security in the Euro-Atlantic area can become a member of the Alliance at the invitation of the North Atlantic Council.
- **Role of NATO:** It safeguards the freedom and security of its member countries by political and military means.
- **Official languages of NATO:** English and French.

News Source: The Hindu

G7 DIGITAL TRADE PRINCIPLES

Why in News?

- Recently, the Group of Seven (G-7) nations agreed on a joint set of principles to govern cross-border data use and digital trade.

G-7 Digital Trade Principles:

- **Open Digital Markets:** Digital and telecommunications markets should be competitive, transparent, fair, and accessible to international trade and investment.
- **Free Open Internet:** As the bedrock of a thriving and innovative digital economy, the internet must be open, free, and secure.
- **Boosting Entrepreneurialism:** Digital trade should support entrepreneurialism and empower a full range of businesses to participate in the global economy, notably women entrepreneurs and micro, small, and medium-sized enterprises (MSMEs).
- **Data Flow with Trust:** To harness the opportunities of the digital economy, data should be able to flow freely across borders with trust, including the trust of individuals and businesses.
- **Labour protections:** Labour Protections must be in place for workers who are directly engaged in or support digital trade, providing decent conditions of work.
- **Secure Digital Environment:** Businesses must have a secure digital trading environment, with the highest standards of cybersecurity and resilience against illicit or malign activity.
- **Streamlining Processes:** Single trade windows should be developed to streamline stakeholder interactions with border agencies.

- **Common rules for Digital trade:** Common rules for digital trade should be agreed and upheld at the World Trade Organization.
- **Bridging Digital Divide:** To drive growth in an inclusive way, efforts should be intensified to tackle the digital divides between and within countries, taking account of the specific needs of low-income countries.

Digital Trade:

- Digital trade is not just about buying and selling goods and services online; it also involves the transmission of information and data across borders.
- It relies on the use of digital technologies to facilitate trade and improve productivity.

The Group of Seven (G-7):

- G-7 is an **intergovernmental organization** that meets periodically to address international economic and monetary issues.
- G-7 countries consist of the U.S., U.K., France, Germany, Italy, Canada, and Japan.
- The G-7 was formerly referred to as the G-8 until **Russia was suspended** from the group **in 2014** after illegally annexing Crimea.
- The **G-7 is not an official, formal entity** and, therefore, has no legislative or authoritative power to enforce the recommended policies and plans it compiles.
- G-7 members take over the presidency on a rotating basis.
 - » The 47th G7 summit was held in June 2021 in Cornwall, England during the United Kingdom's tenure of the presidency.

News Source: The Hindu

IEA INVITED INDIA TO BECOME FULL TIME MEMBER

Why in News

- Recently, the International Energy Agency (IEA) has invited India, the world's third-largest energy consumer, to become its full-time member.

Key Points

- This invitation is natural; corollary to the 'India-IAE strategic partnership' which was inked in January 2021 to strengthen mutual cooperation in global

energy security, stability and sustainability.

- In order to become a member of IAE, a country needs to be a member of the **Organisation for Economic Co-operation and Development (OECD)** and also fulfil **5 further criteria**:
 - » crude oil and/ or product reserves equivalent to 90 days of the previous year's net imports to which the government has immediate access.
 - India's current strategic oil reserves equal 9.5 days of its requirement.
 - » A demand restraint programme to reduce national oil consumption by up to 10%.
 - » Legislation and organisation to operate the coordinated emergency response measures (CERM) on a national issues.
 - » Legislation and measures to ensure that all companies under its jurisdiction report information upon request.
 - » Measures in place to ensure the capability of contributing its share of an IEA collective action.
- **Reason for Offering Membership to India:**
 - » India is becoming increasingly influential in global energy trends. Its in-depth report on India's energy policies, which was released in January 2020, states that the country's demand for energy is set to grow rapidly in the coming decades, with electricity use set to increase particularly fast.
 - » The country's reliance on fuel imports makes further improving energy security a key priority for the Indian economy.
- **Benefits of full membership:**
 - It will allow **maximizing strategic depth of India's crude oil reserves**, technical assistance especially in the clean energy sector, provide a geopolitical platform to take lead in climate and energy issues, etc.
 - India's entry will **boost the global energy security** apparatus and add heft to its dealings with organization of the Petroleum Exporting Countries (OPEC) plus grouping.

About IEA:

- Paris- based IEA was created as a response to the oil crisis of 1973-74.
- » It is at the heart of global dialogue on energy, providing analysis, recommendations, to help countries provide secure and sustainable energy for all.
- **Objectives of IEA:**
 - » Currently, IEA acts as a **policy adviser to its member states**, as well as major emerging economies to

support energy security and advance the clean energy transition worldwide.

- » The IEA mandate has broadened to focus **on providing analysis, data, policy recommendations** and solutions to help countries ensure secure, affordable and sustainable energy for all.
- » It mainly focuses on its **energy policies** which include Economic Development, Energy Security and Environmental Protection. These policies are also known as the 3 E'S of IEA.
- **IEA's Membership:**
 - The IEA is made up of **30 member countries**.
 - » It also includes eight association countries. Four countries are seeking accession to full membership, Chile, Colombia, Israel and Lithuania. **In 2017 India joined the IEA as an association member.**
 - » A candidate country to the IEA must be a member country of the **Organisation for Economic Co-operation and Development (OECD)**.
- **Reports:** IEA publishes the following 5 reports
 - » World Energy Outlook
 - » World Energy Statistics
 - » World Energy Balances
 - » Global Energy and CO2 Status Report
 - » Energy Technology Perspectives

INDIA-US DEFENCE INDUSTRIAL SECURITY

Why in News?

- Recently, the **Industrial Security Agreement (ISA)** summit between India and the United States was held.

Key Highlights of the summit:

- The summit was held to develop protocol for exchange of classified information between defence industries of both countries.
- The **in-principle agreement** was to establish the Indo-US Industrial Security Joint Working Group.
- This group **will meet periodically** to align the policies and procedures expeditiously that will allow the **defence industries to collaborate on cutting edge defence technologies**.

About Industrial Security Dialogue (ISA):

- The ISA was signed in **December 2019** to facilitate the exchange of classified information between the defence industries of both the countries.

- It was held to create a roadmap for the implementation of the ISA. During the summit, both the sides agreed in-principle to establish the **Indo-US Industrial Security Joint Working Group**.

Source: PIB

CHINA PASSES NEW BORDER LAWS

Why in News?

- Recently, China's legislature has adopted a new border law, to take effect on **January 1 2022**, that calls on the state and military to safeguard the territory and **"combat any acts"** that undermine China's territorial claims.

Key Points:

- The new law would formalise some of China's recent actions in disputed territories with India and Bhutan.

About the New Law:

- The law was **first proposed in March this year**, a year into tensions that erupted along the Line of Actual Control (LAC) with India.
- China has unresolved border disputes with India and Bhutan.
- » The new law would formalise some of China's recent actions in disputed territories with both India and Bhutan, including the PLA's massing of troops in forward areas along the India border, multiple transgressions across the LAC, and the construction of new "frontier villages" along the border with Bhutan.
- **Sovereignty and Territorial Integrity:** The law "stipulates that the sovereignty and territorial integrity of the People's Republic of China are sacred and inviolable".
- » The state shall take measures to safeguard territorial integrity and land boundaries and guard against and combat any act that undermines territorial sovereignty and land boundaries.
- It also calls on the state to **"take measures to strengthen border defence, support economic and social development"** as well as opening-up in border areas, improve public services and infrastructure in such areas, encourage and support people's life and work there.

Concerns for India:

- It would **formalise some of China's recent actions** in disputed territories with both India and Bhutan. The passing of the law coincides with stepped-up Chinese activity along the land borders, which have mirrored actions in disputed waters in the East and

South China Sea.

- It includes the PLA's massing of troops in forward areas along the India border and multiple transgressions across the Line of Actual Control (LAC).
- The construction of new "frontier villages" along the border with Bhutan.

China's border disputes:

- India-China border disputes cover **3,488-km** along the Line of Actual Control and **China-Bhutan dispute covers about 400 km**.
- India and Bhutan are the two countries with which China is yet to finalise the border agreements, while China resolved the boundary disputes with 12 other neighbours.

Source: the hindu

NEW QUADRILATERAL ECONOMIC FORUM

Why in News?

- Recently, **India, Israel, the United Arab Emirates and the United States** have decided to launch a new **quadrilateral economic forum**.

Key Points:

- Indian foreign minister has been on a five-day visit to Israel. He and the Israeli counterpart joined the meeting from Jerusalem.
- **Aim:** The aim of the forum is to establish an **international forum for economic cooperation**, and specifically discuss **"possibilities for joint infrastructure projects"** in transportation and technology.
- **Focus area:** The new quadrilateral group will **"expand economic and political cooperation in the Middle East and Asia**, including through **trade, combating climate change, energy cooperation, and increasing maritime security,"** as well as ways **to counter the COVID19 pandemic**.
- The four nations meeting also points to India's strategic desire to adopt a regional foreign policy towards West Asia.

Factors Responsible for New Grouping:

- The new multilateral suggests India is now ready to move from bilateral relations conducted in separate silos towards an integrated regional policy. As in the Indo-Pacific, so in the Middle East, regional coalitions are bound to widen Delhi's reach and deepen its impact.

Benefits of the new Quad:

- **India west policy: India's westward shift** much in the manner that the "Indo-Pacific" has transformed the way India thinks about the east, the notion of "greater middle east" can provide a huge fillip to India's engagement with the extended neighbourhood to the west.
- **Shift Towards a Regional Approach:** There is potential for India, UAE and Israel to collaborate on many areas, from semiconductor design and fabrication to space technology.
 - » Success on the trilateral front will open the door for extending the collaboration with other common regional partners like Egypt, who will lend great strategic depth to the Indo-Abrahamic accords.
- The forum will focus on **non-military issues like trade**, energy, and environment and promoting public goods.
- It will give more political and diplomatic space for the balancing act amidst the various fissures of the region over the decades.

Conclusion:

- 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**.

Source: the hindu

CHINA-TAIWAN ISSUE

Why in news?

- Recently, China's air force sent a record 56 aircraft towards **Taiwan's Air Defence Identification Zone**, Taiwan described relations across the straits as the most strained in 40 years.
- Taiwan had said a large incursion of Chinese military jets flew into its air defence zone.

China – Taiwan Relation:

Background:

- China and Taiwan were divided during a civil war in 1949. Taiwan has its own constitution, democratically elected leaders and about 300,000 active troops in its armed forces. However, China considers Taiwan to be a province of China under what it calls the "**one China principle**". It has not ruled out the use of force to reunite it.

China's Concerns:

One china policy challenged:

- » Any country wishing to establish diplomatic relations with China must acknowledge there is only "One China" and sever all formal ties with Taiwan.
 - » The **One China Policy** is also different from the "**One China principle**", which is the principle that insists both Taiwan and mainland China are inalienable parts of a single "China".
 - » This means that countries seeking diplomatic relations with the people's Republic of China (PRC, Mainland China) must break official relations with the Republic of China (ROC, Taiwan) and vice versa.
- **Countering China:**
 - » The new trilateral security partnership for the Indo-Pacific, between Australia, the UK and the US (**AUKUS**), is also seen as an effort to counter China.
 - » **Malabar exercise** is also a major step in addressing the massive strategic imbalances by an economically and militarily powerful China.

India's Stand:

- India has a growing relationship with Taiwan but a much larger relationship with China.
- Traditionally India supports **One-China policy** and considers Taiwan a part of China.
- India and Taiwan do not have formal diplomatic relations but since 1995, both sides have maintained representative offices in each other's capitals that function as de facto embassies.
- India has always been sensitive to China's concerns, but after a number of Chinese aggression at the Line of Actual Control in 2010, comments on Arunachal Pradesh, as well visa issues on Jammu Kashmir, **India stopped the use of the "One China Policy"**

Way Forward:

- **Trade:** India and Taiwan are laying the groundwork to discuss a comprehensive trade deal covering goods, services and investments.
- **Investment in Semiconductor:** India has sought to lure high-technology investments as it seeks to become more self-reliant on chips, while Taiwan wants to strengthen its diplomatic presence around the globe as it pushes back against the pressure from China.
- **Health Relations:** Especially in the wake of the Coronavirus pandemic, both Delhi and Taipei can step up health and science research.

What Is An Air Defence Identification Zone (ADIZ)?

- ADIZ is a defined area of airspace within which

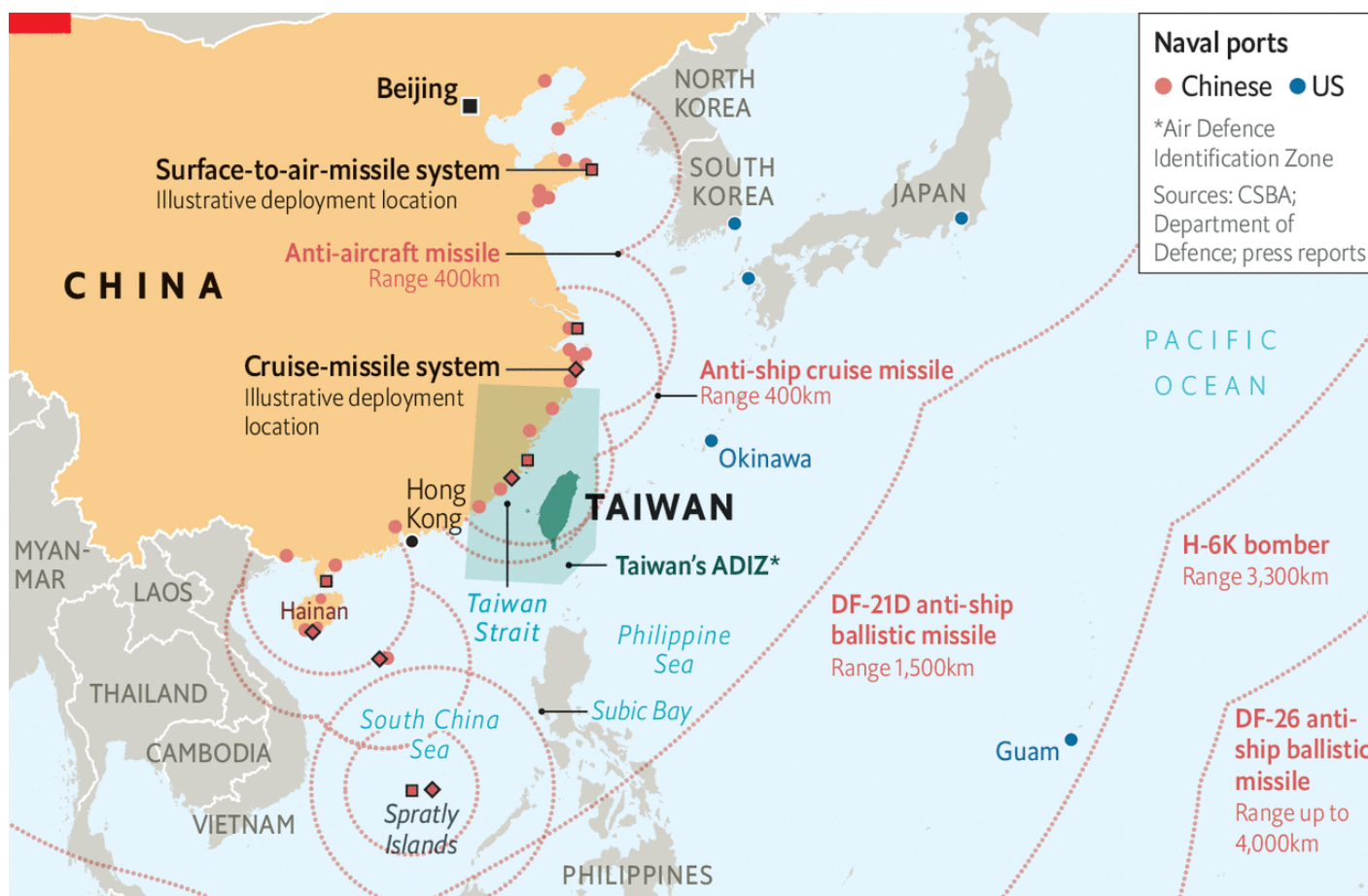
civil aircraft are required to identify themselves.

- These zones are established above the exclusive economic zone (EEZ) or high seas adjacent to the coast, and over the territorial sea, internal waters, and land territory.
- The legal basis for such zones is the right of States under the Convention on International Civil Aviation of 1944.
- It should be noted that ADIZs are not directly covered by international treaties. Hence, they are not binding legal agreements.

ADIZ in India: India has demarcated 6 ADIZ near its territory. These zones have been declared over:

- The international border with Pakistan
- The international border with Nepal
- Line of Actual Control with China
- Along the eastern borders with Bangladesh
- Borders of Bhutan and Myanmar
- Two in the southern region of India

Source: the hindu



The Economist

Image source: the economist

be taken with a majority of 85%.

REVIEW OF IMF ROLE

Why in News?

In the backdrop of the 2021 annual meetings of the **World Bank Group** and the **International Monetary Fund (IMF)**, leading experts have suggested the need to review the role of IMF due to changing economic weight of emerging countries.

- Currently, India Quota is 2.75% and the USA has 16.5% quota which gives it a veto as decisions are to

Key Points:

Reforms in Quota:

- An individual member country's quota broadly reflects its relative position in the world economy.
- Each member's quota determines its voting power as well as its borrowing capacity.
- » This leads to the problem where countries that grow economically have tended to become under-represented as their voting power lags behind.
- Quotas are denominated in Special Drawing Rights (SDR)

- China surpasses the United States in its share of global GDP at market rates
- The share of the European Union countries, including that of the UK, will have to reduce significantly, and
- The quota share of BRICS countries would have to increase significantly.
- IMF should focus on lower-income countries and support other developing countries' market funds raising activities.

Reforms in Management system:

Reforms in Article IV:

- under this, IMF holds bilateral discussions with its members usually every year and its staff prepares a report.
- Article IV consultation reports are utilised by credit rating agencies, impacting the fund raising capacity of countries like India.
- The larger issue is that the head of the management system in the IMF should be modified, that this forever informal arrangement, that the **head of the IMF should be a European** and the **head of World Bank should be American**.
- » Time has come to reconsider this, and the IMF probably should really rethink on it.
- Restructure country-specific consultation being done by multilateral institutions.

Schemes, Acts & Bills



PALK BAY SCHEME

Why in News?

- 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.

Key Points:

- Palk Bay Scheme is also known as **diversification of trawl fishing boats from Palk Straits into Deep Sea Fishing Boats.**
- **Aim:** It aims to **replace all trawler boats and introduce over 2,000 deep sea fishing boats** in a course of five years with a cost of Rs 1,600 crore.
- **Launch Year:** 2017
- **Funding:** The scheme, under the aegis of Blue Revolution scheme - is funded by the Centre - 50 per cent and state government - 20 per cent for a boat costing Rs 80 lakh.
 - » Of the balance 30 per cent, 10 per cent is contributed by the beneficiary (fisherman), and the remaining 20 per cent is funded by banks.
- **Another objective of the scheme is to “reduce fishing pressure” around the proximity of the International Maritime Boundary Line (IMBL)** so that Tamil Nadu fishermen did not cross the IMBL and fish in Sri Lankan waters.

What is Bottom trawling?

- Bottom trawling, **an ecologically destructive practice**, involves trawlers dragging weighted nets along the sea-floor, causing great depletion of aquatic resources.
- The net is spread along the sea-floor to catch shrimp and fish like halibut and sole; however, bottom trawling also captures juvenile fish, thus exhausting the ocean's resources and affecting marine conservation efforts.

What is Deep-Sea Fishing?

- The **activity of catching fish that live in the deep parts of the sea/ocean** is called deep-sea fishing.
- The boats are designed in such a way that fishermen get access to the deeper parts of the ocean and fish species.
- It is practiced worldwide, especially in the coastal areas with no ecological damage.

News Source: The Hindu

PM MITRA SCHEME

Why in News?

- Recently, the Cabinet approved the **PM MITRA (Mega Integrated Textile Region and Apparel)** scheme to set up 7 integrated textile parks as announced in the Union Budget for 2021-22.

PM MITRA SCHEME:

- Under the scheme, MITRA parks will be developed by Special Purpose Vehicles (SPVs), owned by the State government and Centre, in **Public-Private Partnership mode.**
 - » SPVs will be set up with 49% Central government stake and 51% holding by the respective State which would own the mega parks.
- **Funding:** The scheme will have a total outlay of **Rs 4,445 crore** over a period of **five years.**
- MITRA parks will have **50% area for pure manufacturing activity, 20% for utilities, and 10% for commercial development.**
- PM MITRA is **inspired by the 5F vision. "The '5F' Vision encompasses:**
 - » farm to fibre; fibre to factory; factory to fashion; fashion to foreign.
- **PM MITRA parks will have following:**
 - » **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.
 - » **Support Infrastructure:** Workers' hostels & housing, logistics park, warehousing, medical, training & skill development facilities.
- **Centre's Support:**
 - » The Centre will provide support of up to Rs 500 crore each to greenfield parks and up to Rs 200 crore each for brownfield parks for development of common infrastructure.
 - » Besides, Rs 300 crore will also be provided as Competitiveness Incentive Support (CIS) to each PM MITRA park for early establishment of textile manufacturing units.
- **Significance:**
 - » The Parks will offer **an opportunity to create an integrated textile value chain**, right from spinning, weaving, processing/ dyeing and printing to garment manufacturing, at one location.
 - » An integrated textile value chain at one location will **reduce logistics cost** of the industry.
 - » The scheme will **help Indian companies to emerge**

as **global champions** in the textile sector.

News Source: Press Information Bureau

JAL JEEVAN MISSION

Why in News?

Recently, the Prime Minister has asserted that five crore households had been provided with water connections since the launch of the **Jal Jeevan Mission in 2019**.

- He added that tap water was now reaching every household in about 1.25 lakh villages.

Key Points:

- The mission was village-driven and its vision was not just to make water accessible, but it was also a big movement towards decentralisation.
- The Prime Minister also launched the **Jal Jeevan Mission app** for improving awareness among stakeholders and for greater transparency and accountability of schemes under the mission.
- He also **launched the Rashtriya Jal Jeevan Kosh**, where any individual, institution or philanthropist, be it in India or abroad, could contribute to help provide tap water connections.

About Jal Jeevan Mission:

- Announced in August 2019, the chief objective of the Mission is to provide **pipled water supply** to all rural and urban households (Har Ghar Jal) by 2024.
- It also aims to create local infrastructure for rainwater harvesting, groundwater recharge and management of household wastewater for reuse in agriculture.
- The Jal Jeevan Mission is set to be based on **various water conservation** efforts like
 - » point recharge,
 - » desilting of minor irrigation tanks,
 - » use of greywater for agriculture and source sustainability

Significance of the mission:

- **Depleting water resources:** Depleting groundwater level, overexploitation and deteriorating water quality, climate change, etc. are major challenges to provide potable drinking water. The situation becomes worse as India has 16% of the world population, but only 4% of

freshwater resources.

- **Need of the hour:** It is an urgent requirement of water conservation in the country because of the decreasing amount of groundwater level. • The Jal Jeevan Mission will focus on integrated demand and supply management of water at the local level.

Source: the hindu

HARA BHARA: AERIAL SEEDING CAMPAIGN IN TELANGANA

Why in News?

- Recently, **Marut Drones (a Telangana based technology startup)** has come up with an innovative idea of aerial seeding campaign as solution for the re-forestation challenge through its Hara Bhara initiative
- **Hara Bhara**, India's first aerial seeding campaign using the **Seedcopter drone** was launched.
- Drones is being used for greening large swathes of denuded forest lands through its 'Hara Bhara' initiative.

Key Points:

- The idea of the campaign is to accelerate the mission of reforestation through the **planting of 1 billion trees using drones by 2030 in the country**.
- As part of the campaign, **1.5 lakh seeds** were planted using the seedcopter in Kasu Brahmananda Reddy (KBR) park.
- The technology has been developed by **Marut Drones**, which had earlier deployed drones successfully in agricultural operations and for delivery of vaccines.

Reasons for using drone technology:

- **Loss of vegetation** occurs in vast tracts of forest areas every year, due to fire and other causes.

Aim:

- The aim of the initiative is to accelerate the target of **33% green cover throughout** the country by dispersal of seed balls in inaccessible forest areas, using drones.
- The balls, after being dispersed in a barren area, are expected to dissolve when it rains and result in the germination of the seeds.

Similar Initiative:

- Earlier, **Haryana forest department** has employed aerial seeding technique in 2020 to improve green cover in the **Aravali area of Faridabad**.
- **In 2015, Andhra Pradesh** had launched an aerial seeding programme using Indian Navy helicopters.

About Aerial Seeding:

- 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.
 - » Seed balls after being dispersed in a barren area are expected to dissolve when it rains, and result in germination of the seeds.

Advantage of Aerial Seeding:

- Easy plantation: Areas that are inaccessible have steep slopes, are fragmented or disconnected with no forest routes, making conventional plantation difficult, can be targeted with aerial seeding.
- The process of the seed's germination and growth is such that it requires no attention after it is dispersed. That is why the seed pellets are known as the "fire and forget" way of plantation.

The species selected have to be native to the area, higher survival percentage.

News source: the Hindu

TAMIL NADU URBAN EMPLOYMENT SCHEME

Why in News?

Recently the **Tamil Nadu** government has issued orders to implement the Tamil Nadu Urban Employment Scheme.

- The scheme is based on the recommendations made by a committee led by former **RBI Governor C.Rangarajan**.
- An initial allocation of 100 crore has been made during 2021-22 for the scheme.

Key Points:

- **Objective:**
 - » The scheme is aimed at providing livelihood and

social security by increasing job opportunities and through creation and maintenance of public assets.

Key Feature of the Scheme:

- » The scheme will have an allocation of Rs 100 crore for the pilot stage implementation. It mandates that 50% of the total person-days be earmarked for women besides ensuring equal wages for women and men for the unskilled and semiskilled workers.

Need for Such Scheme:

- » **Tamil Nadu** has a high rate of rural to urban migration of the working-class population.
- » The city's population in Tamil Nadu is growing rapidly, reaching **60% of the total population by 2036**. A total of 4 crore people are living in urban areas which is 53% of the total population.
- » So, an intervention in the urban job sector, something similar to **Mahatma Gandhi National Rural Employment Guarantee programme (MNREGA)** is crucial to ensure a basic income for the urban poor.

Beneficiary:

- » The onus of identifying the beneficiaries of this project would be on the local bodies, using the same devices that identify MNREGA beneficiaries.
- » Women will receive at least 50 per cent of total person-days under the Tamil Nadu Urban Employment Scheme.

Similar projects in other states:

- A similar project was implemented in **Kerala in 2010, named Ayyankali Urban Employment Guarantee Scheme**, which aimed to provide at least **100 days** of employment in a financial year to the elderly of each family willing to be a part of the unskilled labour in urban areas.

About MGNREGA:

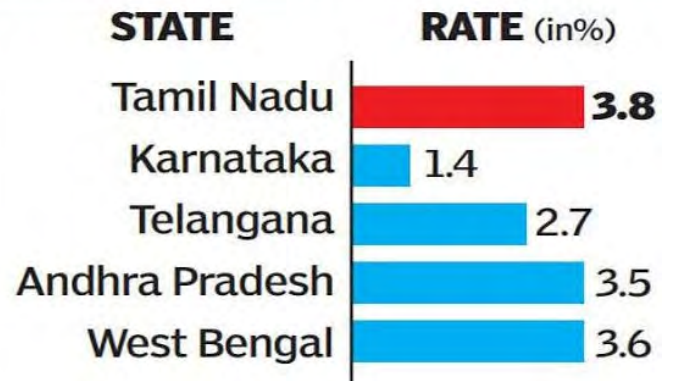
- The Mahatma Gandhi National Rural Employment Guarantee Act (**MGNREGA**), also known as Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGA) is Indian legislation **enacted on August 25, 2005**.
- The MGNREGA provides a legal guarantee for **one hundred days** of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage.
- The **Ministry of Rural Development (MRD)**, Govt of India is monitoring the entire implementation of this scheme in association with state governments.
- Roughly one-third of the stipulated work force must be women.

Objectives:

- The act was introduced with an aim of improving the purchasing power of the rural people, primarily semi or unskilled workers to people living below poverty line in rural India.
- It attempts to bridge the gap between the rich and poor in the country.

NOT HIRING

Unemployment rate in Tamil Nadu during 2015-16 compared to other states



Source: E&U Surveys of Labour Bureau

source: the hindu

Source: indian express



Social Justice & Development

PM CARES FUND

Why in News?

- The Union Government has informed the Delhi High Court that the **Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM CARES) Fund** is “**not a fund of the Government of India** and the amount does not go in the Consolidated Fund of India”.
- » The Centre's response came to a petition filed before the High court seeking to declare PM CARES as a 'public authority' under the Right to Information (RTI) **Act for ensuring transparency.**

Government's Stand:

- The Centre said that the PM CARES Fund is a charitable trust not created by or under the Constitution of India or by any law made by the Parliament or by any State legislature.
- The trust functions with transparency, and its funds are audited by an auditor who is a chartered accountant drawn from the panel prepared by the Comptroller and Auditor General of India.
- Further, the audited report is put on the official website of the Trust along with the details of utilisation of funds received by the Trust.

PM CARES Fund

- PM CARES Fund is a **Public charitable trust**. The trust deed of PM CARES Fund has been registered under the Registration Act, 1908.
- Composition: The Prime Minister is Chairperson (ex-officio) of the PM CARES Fund and Minister of Defence, Minister of Home Affairs and Minister of Finance, Government of India are ex-officio Trustees of the Fund.
 - » All the Trustees of the PM CARES Fund act in a pro bono capacity.
- **Head Office of the Fund:** New Delhi
- **Need of Fund:** It has been set up to deal with any kind of emergency or distress situation, like posed by the COVID-19 pandemic, and to provide relief to the affected.
- **Administration of PM CARES Fund:** The fund is **administered on an honorary basis** by a Joint Secretary (Administration) in the PMO as Secretary to the fund, who is assisted on honorary basis by an Officer of the rank of Director/Deputy Secretary (Administration) in the Prime Minister's Office.
- PM CARES Fund **accepts voluntary contributions** by individuals/organizations as well as contributions as part of CSR from Companies/Public Sector Undertakings (PSUs). However, contributions flowing out of budgetary sources of the PSUs are not

accepted.

- **All contributions** towards the **PM CARES Fund are 100% exempt from Income Tax** under Section 80(G) of the Income Tax Act, 1961 for those who opt for the old tax slabs.
- **Corporate Social Responsibility:** Any contribution made to the PM CARES Fund by any Company or a PSU shall qualify as Corporate Social Responsibility (CSR) expenditure as provided under the Companies Act, 2013.
- **Transparency:** PM CARES Fund is audited by an independent auditor.
 - » M/s SARC & Associates, Chartered Accountants, New Delhi has been appointed as the auditors of PM CARES Fund for 3 years.
- There is **no statutory period prescribed for audit of the PM CARES** under Income Tax Act. However, an audit will be conducted at the end of the Financial Year

News Source: The Economic Times

DIGISAKSHAM

Why in News?

- Recently, the Minister for Labour and Employment in collaboration with Microsoft India launched the DigiSaksham initiative.

Digi Saksham Initiative:

- **Aim:** It aims to **enhance the employability of youth** by imparting digital skills that are required in an increasingly technology-driven era.
- **Implementation:** DigiSaksham will be implemented in the field by **Aga Khan Rural Support Programme India (AKRSP-I)**.
- **Free Training:** Under it, Free of cost training in digital skills including basic skills as well as advanced computing, will be **provided through National Career Service (NCS) Portal** to more than 3 lakh youths in the first year.
 - » 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).
- **Target Group:** The initiative gives priority to the job-seekers of semi-urban areas belonging to disadvantaged communities, including those who have lost their jobs due to Covid-19 pandemic.
- **Need:** The job market is more competitive and employers are now looking for employability skills along with expertise in subject matter as essential

traits in their potential employees.

National Career Service (NCS) Portal:

- The NCS Portal links job-seekers, employers, counsellors and training providers, all through Aadhaar-based authentication.
- It is under the aegis of the **Ministry of Labour & Employment**.
- Registration is online and free of charge.
- The portal provides information on over 3000 career options from 53 key industry Sectors - from IT to Textiles, Construction to Automobiles, Pharma. Job-seekers also have access to industry trends in a user-friendly way.

News Source: Press Information Bureau

SACRED PORTAL

Why in News?

- Vice President Venkaiah Naidu launched the Senior Able Citizens for Re-Employment in Dignity (SACRED) portal to connect senior citizens with job providers in the private sector.

Sacred Portal:

- **Aim:** To bring the employment-seeking senior citizens and employment providers on one platform.
- **Ministry:** Ministry of Social Justice and Empowerment
- **Funding:** An amount of Rs. 10 Cr would be provided for funding for the platform development along with a maintenance grant of @ Rs. 2 Cr per year for 5 years.
- **Need:**
 - » According to the **Longitudinal Ageing Study in India (LASI) report-2020**, more than 50 per cent of senior citizens are active and therefore, it is very important to provide gainful employment opportunities to them for a happy, healthy, empowered and self-reliant life.
 - » According to the Census of 2011, India has an **elderly population** of 10.38 crore. This constitutes about **8.6% of the total population**. Based on the rate of growth, the population of the elderly in India is projected to reach about 14.9% of the total population, by 2036.

International Day of Older Persons:

- The United Nations General Assembly has

designated October 1 as the International Day of Older Persons.

- The 2021 theme of International Day of Older Persons is “Digital Equity for All Ages”.

Government's Initiatives to Empower Elderly People:

- Launch of the **National Helpline in collaboration with Tata trust by the Government of India** at 14567 for the senior citizens.
- **Vayoshreshtha Samman-2021:** It is conferred on eminent senior citizens in recognition of their services.
- **Integrated Programme for Older Persons (1992):** It is a Central Sector Scheme with the objective of improving the quality of life of senior citizens by providing basic amenities like shelter, food, medical care and entertainment opportunities.
- **Indira Gandhi Old Age Pension Scheme:** Under it, central assistance of Rs. 200/- per month is provided to persons in the age group of 60-79 years and Rs. 500/- per month to persons of 80 years and above and belonging to below poverty line (BPL) households.

News Source: Hindustan Times

UNESCO 2021 STATE OF THE EDUCATION REPORT FOR INDIA: NO TEACHERS, NO CLASS

Why in News?

- On the occasion of World Teacher's Day, the United Nations Educational, Scientific and Cultural Organization (UNESCO) launched its **2021 State of the Education Report (SOER) for India: “No Teacher, No Class”**.

Key Findings:

- **Rurban Divide:** Analysing data from Unified District Information System for Education, the report states **there is a marked rural-urban disparity** and a need to improve availability and deployment of qualified teachers in the northeast.
- **Increased Gross Enrolment Ratio:** The gross enrolment ratio (GER) for elementary schools has increased from 81.6 in 2001 to 93.03 in 2018-19 and stands at 102.1 in 2019-2020.
- **Retention Rate:** The report notes that overall retention is 74.6 percent for elementary education and 59.6 percent for secondary education in 2019-20.

- **Impact of COVID 19 Pandemic:** Since March 2020, schools in India have not been functioning physically which has impacted foundational learning of students.
- **Rise in number of Teachers:** The total number of teachers in the system **grew by 17 per cent** from 8.9 million teachers in 2013-14 to 9.4 million in 2018-19.
 - » The overall **pupil-teacher ratio (PTR)** – reflecting the effort of the state to meet the RTE Act teacher-requirement guidelines – changed from 31:1 in 2013-14 to 26:1 in 2018-19.
- **Digital Infrastructure:** The overall availability of computing devices (desktops or laptops) in school is 22 per cent for all India, with rural areas seeing much lower provisioning (18 per cent) than urban areas (43 per cent).
- **Internet accessibility:** Access to the internet in schools is 19 per cent all over India – only 14 per cent in rural areas compared to 42 per cent in urban areas.
- **Ill-equipped Human Resources:** Lack of preparedness of teachers in the use of technology, and lack of resources in Indian languages have emerged as a major concern.
- **Status of Single-teacher schools:** The total number of Single-teacher schools stands at 1,10,971 i.e 7.15 per cent.
 - » About 89 per cent of these single-teacher schools are in rural areas.
 - » **Top three States with a high percentage of single-teacher schools are:**
 - » Arunachal Pradesh (18.22 per cent)
 - » Goa (16.08 per cent)
 - » Telangana (15.71 per cent)

Key Recommendations:

- Improve the terms of employment of teachers in both public and private schools.
- Increase the number of teachers and improve working conditions in North Eastern states, rural areas and 'aspirational districts'.
- Value the professional autonomy of teachers.
- Restructure pre-service professional development and strengthen curricular and pedagogical reform.
- Support communities of practice.
- Provide teachers with meaningful ICT training.
- Develop teaching governance through consultative processes, based on mutual accountability.

Significance:

- The **UNESCO State of the Education report for India 2021** aims to **serve as a reference for enhancing the implementation of the National Education Policy** and towards the realization of the SDG.4 target 4c on teachers.

NO TEACHER, NO CLASS: STATE OF THE EDUCATION REPORT FOR INDIA 2021


States categorised as poor and below average in terms of single teacher schools, schools with vacancies and teacher requirement (total number and percentage share of rural areas)

	Total schools	Single-teacher schools		Schools with vacancies		Teacher requirement	
		Number	% of total	% of rural	%	Number	% of rural
Andhra	63,621	9,160	14	91		27,398	41
Arunachal	2,793	691	18	99	–	–	–
Bihar	89,224	–	–	–	56	2,22,316	89
Delhi	5,703	–	–	–	22	–	–
Goa	1,486	239	16	93	–	–	–
Gujarat	54,581				–	30,869	39
Jharkhand	45,908	6,200	14	97	–	59,896	79
Karnataka	78,233	–	–	–	–	43,383	38
MP	1,54,064	21,077	14	93	22	87,630	54
Maharashtra	1,09,942	–	–	–	–	74,445	33
Odisha	68,717	–	–	–	–	28,816	67
Rajasthan	1,05,883	–	–	–	–	21,789	69
Telangana	42,355	6,678	16	72	–	37,204	25
UP	–	–	–	–	33	3,23,577	80
Uttarakhand	23,559	3,216	14	97	–	–	–
West Bengal	97,828	–	–	–	–	1,16,846	69
All India	15,51,000	1,10,971	7	89	19	11,16,846	69

Image Source: The Times of India

MOST TEACHER VACANCIES IN UP

- UP (3.3L), Bihar (2.2L) & Bengal (1.1L) have the most vacancies in teaching positions in schools
- Of the 11L vacant posts in the country, 69% are in rural areas, according to a Unesco study
- At 21k, MP has the highest number of single-teacher schools
- 7.7% pre-primary, 4.6% primary, 3.3% upper-primary & 0.8% secondary teachers in India are underqualified



Pupil-teacher ratios are adverse in secondary schools. Also, there's no info on availability of special education, music, arts and physical education teachers. The need (for teachers) is likely to grow, given the shortages in certain education levels and subjects (and because) about 30% of the current workforce will need to be replaced

—Unesco state of education report

About UNESCO:

- UNESCO is the **United Nations Educational, Scientific and Cultural Organization.**

Image Source: The Times of India

- It **seeks to build peace through international cooperation in Education**, the Sciences and Culture.
- UNESCO's programmes **contribute to the achievement of the Sustainable Development Goals** defined in Agenda 2030, adopted by the UN General Assembly in 2015.
- UNESCO **fosters scientific programmes** and policies as platforms for development and cooperation.

News Source: The Times of India

MID DAY MEAL SCHEME IS NOW PM-POSHAN

Why in News?

- Recently the cabinet committee on economic affairs has approved to change the name of the **Mid-Day Meal Scheme as PM-POSHAN**.
- The centre has announced that around 24 lakh students receiving pre-primary education at government and government-aided schools will also be brought under the ambit of the scheme from next year.

Key Points:

- Under the mid-day meal scheme, hot cooked food is provided currently to students from Classes **1 to 8**.
- Around **11.80 crore children in 11.20 lakh government** and government-aided schools are covered under Mid Day Meal Scheme.
- Under the previous scheme, the focus was on providing a meal to students but now, under PM POSHAN, the focus is to ensure the nutritional aspects as well.
- Under **PM Poshan Shakti Nirman or PM POSHAN scheme, 24 lakh** more children in pre-primary classes, currently covered under the Integrated Child Development Scheme
- (ICDS), will also be brought in. Last year, the government had opened pre-schools called **Balvatikas attached to Anganwadi**.
- PM POSHAN has been launched for an initial period of five years (2021-22 to 2025-26) with a budget of Rs 1,30,794.90 crore.
- » The Centre bears the entire cost of food grains and their transportation, management, monitoring and evaluation under the scheme, components such as cooking costs, payments to cooks and workers are split in a 60:40 ratio with states.

Significance:

- It will provide a new shape to the policy **“to enhance the nutrition levels of schoolchildren”**.
- “The National Education Policy (NEP) has also recommended that pre-school education should be formalised.
- This is a step towards that. Also, it will help prevent leakages and bring more transparency. We will become more hands-on and nudge states to pay schools through the direct benefit transfer (DBT) mode.
- While the NEP also proposes breakfast in schools, the government has not taken any decision on that yet.

GLOBAL TB REPORT 2021

Why In News?

Recently, the Global TB report 2021 has been released by the **World Health Organization (WHO)**.

- According to the report, for the first time in over a decade, Tuberculosis (TB) deaths have increased globally.

Key Findings of the report:

- The WHO estimated that some **4.1 million people currently suffer from TB**. This figure is up from **2.9 million in 2019**.
- The report stated that there was also a **reduction in provision of TB preventive treatment**.
 - » 2.8 million people accessed this in 2020, a 21 % reduction since 2019.
- The increase in the number of TB deaths occurred mainly in the 30 countries with the highest burden of TB.
- In the year 2020, more people died from TB and very few people being diagnosed and treated or provided with TB preventive treatment compared to 2019.
- A reduction has been seen in overall spending on essential TB services.
- **India's position: India (41%)** was on the list of countries which topped those that contributed most to the global reduction in TB notifications between 2019 and 2020. India along with Indonesia, Philippines, China and 12 other countries accounted for 93% of the total global drop in notification.

Challenges:

- Funding in the low-and middle-income countries that account for 98% of TB cases remained a challenge.

- Of the total funding available in 2020, 81% came from domestic sources, with the BRICS countries (Brazil, Russian Federation, India, China and South Africa) accounting for 65% of the total domestic funding.
- » Three pillars of the campaign are- clinical approach, public health component, and active community participation.

World Health Organisation (WHO)-

- It was established on **7 April, 1948** and is a specialized agency of the **UN** that looks into the matters of public health
- Its headquarter is **located in Geneva**, Switzerland. **WHO has 194** member countries and full membership of the WHO is only guaranteed with the ratification of treaty called- the Constitution of the World Health Organisation.
- WHO celebrates World Health Day on 7 April every year. **Theme for 2021-“build a fairer, healthier World.”**

Schemes and Initiatives in India in the fight against TB:

- **National Tuberculosis Elimination Programme (NTEP)**
 - » NTEP is the public health initiative of the Government of India that organizes its Anti Tuberculosis efforts.
 - » The program has a vision of achieving a "TB free India", and aims to provide universal access to TB-control services.
 - » 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).
- **The Nikshay Ecosystem**
 - » It is the National TB information system which is a one-stop solution to manage information of patients and monitor program activity and performance throughout the country.
 - » It includes-
 - NIKSHAY Poshan Yojana- This scheme is aimed at providing financial support to TB patients for their nutrition.
 - Incentive to private providers
 - Transport incentives to the patients in tribal areas
 - Incentive to treatment supporters
- **“TB Harega Desh Jeetega” Campaign**
 - » Launched In September 2019, the campaign aims to improve and expand the reach of TB care services across the country by 2022.

- **The Saksham Project**
 - » It is a project of the Tata Institute of Social Sciences (TISS) to support the Ministry of Health and Family Welfare in its fight against HIV and TB.
 - » It has been providing psycho-social counselling to DR-TB patients.
- **JEET (Joint Effort for Elimination of TB)**
 - » Joint Effort for Elimination of Tuberculosis (JEET) is the largest private health sector engagement initiative for tuberculosis (TB) ever to be carried out in India.
 - » It connects private hospitals, clinics, laboratories and practitioners with the national public health programme to facilitate better access to affordable TB diagnostics, help patients stay on treatment while reducing treatment cost, and improve notification of TB cases.
- **Eliminating TB by 2025**
 - » India is committed to eliminating tuberculosis from the country by 2025.
 - » This is five years earlier than the global target by the World Health Organisation (WHO) that is by the year 2030.

About Tuberculosis (TB):

- **Cause:** It is an infectious disease usually caused by Mycobacterium tuberculosis (MTB) bacteria.
- **Symptoms:** Chronic cough with blood-containing mucus, fever, night sweats, and weight loss.
- **Prevention:** Screening those at high risk, early detection and treatment of cases, and vaccination with the bacillus Calmette Guérin (BCG) vaccine.
- **Treatment:** Treatment of TB requires the use of multiple antibiotics over a long period of time.
- **Complexities:** Antibiotic resistance is a growing problem with increasing rates of multiple drug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB).

COUNTRY'S FIRST ONE HEALTH CONSORTIUM

Why in News

- Recently, the Department of Biotechnology (DBT) under the Ministry of Science and Technology has launched the country's first One Health consortium.

Key Points

About the project:

- This Consortium consisting of 27 organisations is one of the biggest one health programs launched by India in post-Covid times.
- It envisages carrying out surveillance of important bacterial, viral and parasitic infections of zoonotic and transboundary pathogens in India.
- It also looks into the use of existing diagnostic tests and the development of additional methodologies for the surveillance and understanding the spread of emerging diseases.

Need and Significance:

- Covid-19 pandemic showed the relevance of 'One Health' principles in the governance of infectious diseases, especially efforts to prevent and contain zoonotic diseases throughout the world.
- It will provide a **holistic approach to understand the health of human, animals and wildlife** to minimise the damage caused by future pandemics.

One Health Concept

- One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment.
- **One Health' vision** derives its blueprint from the agreement between the **tripartite-plus alliance** comprising the Food and Agriculture Organization of the United Nations (**FAO**), the World Organisation for Animal Health (**OIE**).
- It's purpose is to **encourage collaborations** in research and sharing of knowledge at multiple levels across various disciplines like human health, animal health, plants, soil, environmental and ecosystem health in ways that improve, protect and defend the health of all species.

Related Government Steps

- **National Expert Group on 'One Health:**
 - » A National Expert Group on 'One Health' as a multi-sectoral, transdisciplinary, collaborative group was set up by India in May 2019.
 - » Recently in April 2021, the Group submitted its report with inclusion of Subject Specific Health Action Plans on identified Climate Sensitive Diseases and 'One Health'.
- **Malé Declaration in 2017:**
 - » In the context of Green and Climate Resilient Healthcare Facilities, India became signatory to the Malé Declaration in 2017 and agreed to promote climate-resilient healthcare facilities to be able to withstand any climatic event.

- **Universal Health Coverage:**

- » Its goal as stated in the **UN Sustainable Development Goals (SDGs no. 3)** is one of the most significant commitments to equitable quality healthcare for all.
 - India moved a step closer towards its commitment to the SDGs, when in 2018 the country launched a national health protection scheme, Ayushman Bharat, to achieve UHC.

New source: PIB

GLOBAL FOOD SECURITY INDEX 2021

Why in News?

Recently India is ranked at **71st position in the Global Food Security (GFS) index 2021** of 113 countries.

- The report is released by **London-based Economist impact** and is sponsored by Corteva Agriscience.

About the Index:

- The index measures the underlying drivers of food security in 113 countries.
- It measure the underlying drivers of food security based on the following factors:
 - » **Affordability**
 - » **Availability**
 - » **Quality and safety**
 - » **Natural resources and resilience.**

India's Position:

- India held 71st position with an overall score of 57.2 points on the GFS Index 2021 of 113 countries.
- However, over the past 10 years, India's incremental gains in overall food security score were lagging behind that of Pakistan, Nepal and Bangladesh.

Other:

- **Pakistan (75th position), Sri Lanka (77th Position), Nepal (79th Position) and Bangladesh (84th position).**

Top Rankers:

- 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.

More on news:

- The findings of GFS Index 2021 also showed that global food security has decreased for the second

year in a row after seven years of progress towards the Sustainable Development Goal of achieving zero hunger by 2030.

- The report stated that the Index shows that to meet these present and emerging future challenges requires that investments in food security are sustained from innovation in climate-resilient crop yields to investing in programs to assist the most vulnerable.

Concerns:

- After seven years of progress toward the Sustainable Development Goal of reaching zero hunger by 2030, global food security has declined for the second year in a row.
- Food systems remain vulnerable to economic, climatic, and geopolitical shocks, despite great progress in tackling food insecurity during the last ten years.

Suggestions:

- To meet these current and future challenges, investments in food security must be maintained – from climate-resilient agricultural yields to expenditures in programmes to help the most vulnerable.

Source: indian express

ASER REPORT

Why in news?

This is the first survey to indicate how learning levels have been impacted because of schools being shut during pandemic. The study was conducted in March 2021 among 18,385 children **between the ages of 5 and 16 across 24 districts of Karnataka.**

- Although the original plan was to conduct this exercise in several states, it could successfully be completed in only Karnataka, before the second wave of COVID hit the country.

Key Findings:

- **Drop in skills:**
 - » Reading and numeracy skills among children have taken a big hit, especially among students in primary classes.
- **Recognizing Letters in Kannada**
 - » In Class 4: the percentage of children who can't recognise even a letter in Kannada, went from 5.1% (2018) to 12% (2020).
 - » In Class I: This percentage went from 40.3% (2018) to

56.8% (2020).

- **Text reading**

- » The highest level of text given in the ASER reading assessment is from Class 2.
- » Only 9.8% of children in Class 3 in both government and private schools could read the text, down from 18.3% in 2014.
- » This dip is sharper for private schools from 23.3% in 2014 to 9.9% now.

- **Higher class**

- » The learning loss was less acute in higher classes compared to primary section
- » For Class 8: learning in terms of reading fell from 70.6% (2014) to 66.4% in 2020.

- **Numeracy skills**

- » Percentage of children in Class 1 who cannot recognise digits between 1 and 9 went up from 29.7% in 2014 to 42.6% in 2020.
- » For Class 5: This figure was 2.3% in 2014 and now stands at 4.6%
- » The percentage of Class 4 students who can do simple division went down from 12.1% to 3.6% in the same period.

The findings from the survey offer crucial pointers for a possible roadmap as schools reopen after more than a full academic year.

About Annual Status of Education Report (ASER):

- ASER has been conducted every year since 2005 in all rural districts of India.
- It is also the only annual source of information on children's learning outcomes available in India today.
- Unlike most other large-scale learning assessments, ASER is a household-based rather than school-based survey. All children to be included – those who have never been to school or have dropped out, as well as those who are in government schools, private schools, religious schools or anywhere else.

Testing by ASER:

- Children in the age group 5-16 are tested in basic reading and basic arithmetic.
- The highest level of reading tested corresponds to what is expected in Std 2.
- In 2012, this test was administered in 16 regional languages.

- Every year, some additional tests are also administered.
- In addition, basic household information is collected every year.
- In recent years, this has included household size, parental education, and information on household assets.

Source: The Hindu

Economy



INFRASTRUCTURE PROJECTS: ZOJILA / Z-MORH TUNNEL

Image Source: Indian Express

Why in News?

Recently, the Union Minister Nitin Gadkari reviewed the construction work of strategically important Z-Morh and Zojila tunnels on the Srinagar-Leh highway.

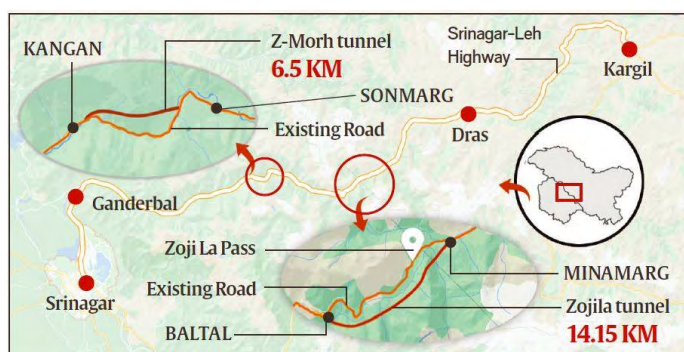
- Both projects are under the National Highways and Infrastructure Development Corporation Limited (NHIDCL).

Z-Morh Tunnel

- The 6.5 km-long **Z-Morh Tunnel between Gagangir and Sonmarg** will provide connectivity in all weather conditions between Srinagar in Jammu and Kashmir and Kargil in Ladakh.
- It is named for the Z-shaped stretch of road between Sonmarg and Gagangir that the tunnel will replace.
- According to officials, the strategically crucial Z-Morh tunnel will ensure that Sonmarg town in Jammu and Kashmir remains connected as well as supplies are maintained all year round.
- Currently, all commercial activity comes to a halt during winter, and due to avalanches, connectivity on Srinagar-Leh highway gets blocked.
- It is being executed in **Design-Build-Finance-Operate-Transfer (DBFOT)** mode.

Zojila Tunnel

- The Zojila tunnel will provide all-weather connectivity between Srinagar valley and Leh (Ladakh plateau).
- The 13.5-km tunnel will be **Asia's longest bi-directional tunnel** and will allow all-weather connectivity between Ladakh and Srinagar, which is disrupted during the winter months.
- It is located at **11,578 feet** above sea level.
- The Zojila Tunnel will provide all-weather safe connectivity between Srinagar, Dras, Kargil and Leh regions.
- The project is expected to lead to integrated development of both Jammu and Kashmir and Ladakh.



Significance:

- These tunnels will provide all weather connectivity to those areas which face connectivity issues during the extreme snowfall season.
- This will improve the strategic capabilities of the Indian Army on the Indo-China and Indo-Pakistan border.
- It will further improve the tourism sector in the area especially in the winter season.
- These projects will ensure an integrated development of both the Jammu and Kashmir and Ladakh region in the coming years.

News Source: The Indian Express

MONETARY POLICY REPORT: RESERVE BANK OF INDIA

Why in News?

Recently, the Monetary Policy Report has been released by the Reserve Bank of India for October 2021.

- Monetary Policy Report is the **publication of the RBI's Monetary Policy Committee.**

Key Points:

- **Policy Rates:**
 - » **Repo Rate:** 4%
 - » **Reverse Repo rate:** 3.35%
 - » **Marginal Standing Facility (MSF):** 4.25%.
 - » **Bank Rate:** 4.25%.
- **Adopting Accommodative Stance:** The Monetary Policy Committee has decided to continue with the accommodative stance as long as necessary to revive and sustain growth on a durable basis and continue to mitigate the impact of Covid-19 on the economy.
- **Accommodative stance means** that the central bank is telling the market **to expect a rate cut anytime.**
- **GDP Growth Projection:** The Reserve Bank of India (RBI) also retained the projection for real GDP growth at 9.5 per cent for the financial year 2021-22.
- **Inflation forecast:** The RBI has slashed the inflation forecast for 2021-22 to 5.3 per cent from 5.7 percent estimated earlier.

What is Monetary Policy?

- Monetary policy is the **macroeconomic policy** laid down by the Central bank.
- It involves management of money supply and interest rate and is the **demand side economic policy** used by the government of a country **to achieve macroeconomic objectives** like inflation, consumption, growth and liquidity.

Key Terms related to Monetary Policy:

Repo Rate:

- Repo rate is the **rate at which the central bank of a country (Reserve Bank of India in case of India) lends money to commercial banks** in the event of any shortfall of funds.
- It is used by monetary authorities to control inflation.

Reverse Repo Rate:

- This is the rate at which the Central bank of a country (**RBI borrows money from commercial banks**).
- It is **generally lower than the repo rate**, at any point of time.
- It is used to control cash flow in the market

Marginal Standing Facility:

- MSF or marginal standing facility is a system of the Reserve Bank of India that **allows scheduled commercial banks to avail funds overnight**.
- The interest rate charged by RBI on such borrowings is called the MSF rate or marginal standing facility rate.
- It **helps scheduled banks when interbank liquidity completely dries up** and they are in urgent need of money.

Bank Rate:

- It is the **rate at which the RBI is ready to buy or rediscount bills of exchange** or other commercial papers.

Cash Reserve Ratio (CRR):

- CRR is the **average daily balance that a bank is required to maintain with the RBI** as a share of such percent of its net demand and time liabilities (NDTL) that the RBI may notify from time to time in the Gazette of India.

Open Market Operations:

- Open Market Operations include both, outright purchase and sale of government securities, for injection and absorption of durable liquidity, respectively.

GLOBAL MULTIDIMENSIONAL POVERTY INDEX 2021

Why in News?

- The **United Nations Development Programme (UNDP)** in collaboration with the **Oxford Poverty and Human Development Initiative** released the **Global Multidimensional Poverty Index (MPI)**.

Key Points:

- **Poverty in Ethnic Groups:** Nine specific ethnic groups were surveyed and it was found that more than 90 per cent of the population is trapped in poverty.
- **Coverage:** The report examines the level and composition of multidimensional poverty across 109 countries covering 5.9 billion people.
- **Wide Range of Disparity:** Disparities in multidimensional poverty across ethnic and racial groups are greater than disparities across geographical subnational regions.
 - » It also shows how, within a country, multidimensional poverty among different ethnic groups can vary immensely.
- **Vulnerable Women's Position:** The report finds that women and girls living in multidimensional poverty are at higher risk of intimate partner violence.
- **The top five countries with the largest number of people living in multidimensional poverty are in:**
 - » India (2015/16) at 381 millions
 - » Nigeria (2018): 93 million
 - » Pakistan (2017/18): 83 million
 - » Ethiopia (2019): 77 million
 - » Democratic Republic of the Congo (2017/18): 56 million

Key Findings:

- Worldwide, across 109 countries and 5.9 billion people:
 - » 1.3 billion people are multidimensionally poor.
 - » About half (644 million) are children under age 18.
 - » Nearly 85 percent live in Sub-Saharan Africa (556 million) or South Asia (532 million).
 - » More than 67 percent live in middle-income countries.

Multidimensional Poverty Index

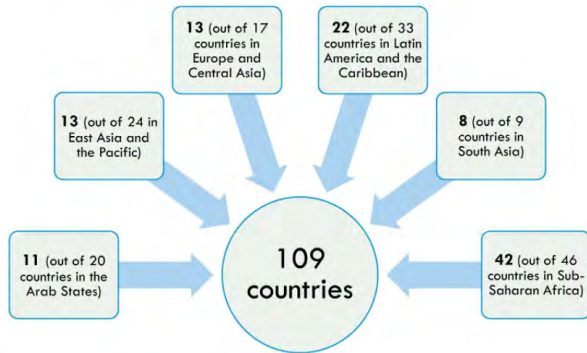


Image Source: United Nations

Multidimensional Poverty in India across various Population Groups:

- Overall, five out of six multidimensionally poor people in India live in households whose head is from a Scheduled Tribe, a Scheduled Caste or Other Backward Class
- **Scheduled Tribes (ST's):** 65 million of the 129 million Scheduled Tribes people (9.4 percent) are living in multidimensional poverty.
- **Scheduled Caste (SC's):** 94 million of 283 million Scheduled Caste people (33.33 percent) are living in multidimensional poverty.
- **Other Backward Class Group:** 27.2 per cent of the Other Backward Class group lives in multidimensional poverty.

Encouraging Signs: Of the 80 nations and five billion

people for which there is data over time, 70 reduced their Multidimensional Poverty Index in at least one period. The fastest changes happened in Sierra Leone and Togo.

Global Multidimensional Poverty Index (MPI):

- Global MPI is an **international measure of multidimensional poverty** developed in 2010 by Oxford Poverty and Human Development Initiative (OPHI) and United Nations Development Programme (UNDP).
- It is **based on three dimensions and 10 indicators** namely:
 - » Health: (Child mortality, Nutrition)
 - » Education: (Years of schooling, Enrollment)
 - » Standard of living: (Water, Sanitation, Electricity, Cooking fuel, Floor, Assets)
- **Significance of MPI:** It is based on the idea that Poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional.

News Source: UNDP

GLOBAL HUNGER INDEX 2021

Why in News?

The Global Hunger Index 2021 ranked India at 101 position out of a total 116 countries.

- In its 2020 edition, India was ranked at 94.



Image Source: The Hindu

Global Hunger Index 2021

India's Position:

- The **Global Hunger Index 2021** report termed the level of hunger in India as **"alarming"**.
- India trails behind neighbours Pakistan (92), Bangladesh (76) and Nepal (76) in GHI 2021.
- Wasting among children in India increased from 17.1% between 1998 and 2002 to 17.3% between 2016 and 2020.
- Though India showed improvement in indicators such as the under-5 mortality rate, prevalence of stunting among children and prevalence of undernourishment owing to inadequate food remained high.

Global Scenario:

- Somalia has the highest level of hunger according to the 2021 GHI ranking — its GHI score of 50.8 is considered extremely alarming.
- Countries with less than five GHI Score are China, Brazil and Kuwait.
- Although GHI scores show that global hunger has been on the decline since 2000, progress is slowing. While the GHI score for the world fell 4.7 points, from 25.1 to 20.4, between 2006 and 2012, it has fallen just 2.5 points since 2012.
- » After decades of decline, the global prevalence of undernourishment — one of the four indicators used to calculate GHI scores — is increasing. This shift may be a harbinger of reversals in other measures of hunger.

Global Hunger Index

- The Global Hunger Index tracks key indicators used to measure progress toward Zero Hunger by 2030 at national, regional, and global levels.
- It was prepared by the Irish aid agency Concern Worldwide and Germany's Welt Hunger Hilfe.
- **The GHI score is based on four indicators:**
 - » Undernourishment, Child wasting, Child stunting and Child mortality.
- The GHI determines hunger on a 100-point scale, where 0 is the best possible score (no hunger) and 100 is the worst.
- Each country's GHI score is classified by severity, from low to extremely alarming.

Government of India's Response:

- Global Hunger Report 2021 suffers from methodological issues and does not reflect the ground reality.

Key Terms:

- **Undernourishment:** It reflects inadequate food availability and is calculated by the share of the population that is undernourished.
- **Child Mortality:** It reflects both inadequate nutrition and unhealthy environment and is calculated by the mortality rate of children under the age of five.
- **Child Wasting:** the share of children under the age of five who have low weight for their height, reflecting acute undernutrition;
- **Child Stunting:** The number of under-5 children who have low height for their age, reflecting chronic undernutrition.

News Source: The Hindu

'MAHARATNA' STATUS TO POWER FINANCE CORPORATION LTD.

Why in News?

- Recently, the State-owned Power Finance Corporation Ltd (PFC) has been accorded 'Maharatna' status by Government of India.

Maharatna Companies:

- The Maharatna dispensation was ushered in by the Union government for mega CPSEs to become global giants.
- "Maharatna" status is granted to a company which has recorded more than ₹ 5,000 crore of net profit for three consecutive years, an average annual turnover of ₹ 25,000 crore for three years or should have an average annual net worth of ₹ 15,000 crore for three years.
- The Company should also have global operations or footprints.

Power Finance Corporation Ltd:

- Incorporated in 1986, Power Finance Corporation is the largest Infrastructure Finance Company, exclusively dedicated to the Power Sector under the administrative control of the Ministry of Power.

Significance of Maharatna Status bestowed upon a Company:

- The conferment of 'Maharatna' status is a **reflection**

of the confidence of the Govt. of India on PFC's strategic role in the overall development of Indian Power Sector.

- This new recognition will enable PFC to offer competitive financing for the power sector, which will go a long way in making available affordable & reliable 'Power For All 24x7'.
- The enhanced powers that come with Maharatna Status will also help PFC in pushing the Government's agenda of funding under the National Infrastructure Pipeline, national commitment of 40% green energy by 2030.
- The grant of '**Maharatna**' status to PFC will impart **enhanced powers to PFC's board** while taking financial decisions.

News Source: Press Information Bureau

IMPACT OF GLOBAL FUEL PRICES ON INDIA

Why in News?

- Recently, the price of Brent Crude breached the \$85 per barrel mark reaching its highest level since 2018.

Reasons for rise in Global Fuel Prices:

- The **rise in prices of Brent crude is attributed to the rise in sharp increase in global demand** as the world economy recovers from the pandemic.
- OPEC+ took to sharp cuts in oil supply in 2020 in response to Covid-19 global travel restrictions.
- » But the organisation has been **slow to boost production** as demand has recovered.

Impact of Global fuel Prices on India:

- **Skyrocketing Fuel Prices:** High crude oil prices have contributed to the prices of petrol and diesel setting new record highs across India in 2021.
- **Inflationary Trends:** Higher Brent crude oil prices are a big concern for the Indian markets because the country imports 80% of its oil from the international market.
- » Higher prices lead to an increase in inflationary risks and reduce economic growth.

OPEC+

- The **Organization of the Petroleum Exporting Countries Plus (OPEC+)** is a loosely affiliated entity consisting of the 13 OPEC members and 10 of the world's major non-OPEC oil-exporting nations.
- OPEC+ aims to regulate the supply of oil in order to set the price on the world market.

- OPEC+ came into existence, in part, to counteract other nations' capacity to produce oil, which could limit OPEC's ability to control supply and price.

Brent Crude Oil:

- Brent Crude originates from oil fields in the North Sea between the Shetland Islands and Norway.
- It is produced near the sea, so transportation costs are significantly lower.
- It is widely used as it is both sweet and light, making it easy to refine into diesel fuel and gasoline.

News Source: The Hindu

GOVERNMENT NOTIFIES NEW RULES TO CLEAR RETRO TAX MESS

Why in News?

- Recently, the government of India notified new rules under the Income Tax Act for specifying the process to be followed by affected taxpayers to settle these long-brewing disputes.

Key Points:

- **Government in August, 2021 amended** the income-tax Act, 1961 to withdraw retro tax demands, for transactions that took place before May 28, 2012.
- **New Income-Tax (31st Amendment) rules, 2021** specify the process to be followed by affected taxpayers to settle their retrospective tax cases.
- » Rules state that affected taxpayers will have to indemnify the Indian government against future claims and withdraw any pending litigation or proceeding before any forum.
- » The government will drop demands or claims raised in these cases and refund amounts collected subject to the companies meeting conditions as specified in the rules.
- Retrospective taxation allows a country to pass a rule on taxing certain products, items or services and deals and charge companies from a time behind the date on which the law is passed.
- » It was introduced in 2012, empowering income tax Department to raise tax demands on capital gains arising from indirect transfer of assets located in India.
- » It was used in 17 matters related to companies like Vodafone, Cairn Energy, etc.

Source: The Hindu

Taxing times | A look at the genesis of the retrospective tax imbroglio:

MAY 2007: Vodafone buys Hutchison Whampoa's controlling stake in Hutchison Essar for \$10.9 billion

SEPT. 2007: I-T Department serves notice to Vodafone for failing to deduct tax at source

JAN. 2012: SC backs Vodafone, ruling that indirect transfer of shares

to a non-Indian company would not attract tax in India

MARCH 2012: Government introduces an amendment that allows it to tax such transactions retrospectively

SEPT. 2020: Vodafone gets a favourable ruling at the Permanent Court of Arbitration at The Hague



- Auto-component manufacturers must have a **minimum revenue of Rs 500 crore** and fixed asset investment of Rs 150 crore
- New non-automotive investors must have a global net worth of Rs 1,000 crore and a clear business plan for investment in advanced automotive technologies.
- Moreover, companies that invest over Rs 80 crore in the drone industry will be eligible for the benefits.

Impact:

- It will lead to fresh investments of over Rs 42,500 crores, incremental production of over Rs 2.3 lakh crore and additional employment opportunities of over 7.5 lakh jobs.
- The scheme will contribute towards reducing carbon emissions and oil imports, by accelerating the country's progress towards green mobility.
- It will make Indian firms self-reliant and help them to be globally competitive in EVs and technology.
- It will also lead to the promotion of next-generation safety technologies to make Indian automobiles and roads safer.
- Boost in drone development will contribute to economic growth due to their reach, versatility, and ease of use, especially in India's remote and inaccessible areas.

Source: PIB

GLOBAL MINIMUM TAX

Why in News?

- The Organisation for Economic Cooperation and Development (OECD) recently announced that 136 countries including India has agreed to a global deal to ensure that big companies pay a 15% Global Minimum Tax (GMT).

Key Points:

Reason for Global Minimum Tax:

- Major economies are aiming to discourage multinationals from shifting profits and tax revenues to low-tax countries regardless of where their sales are made.
- Intangible sources such as drug patents, software and royalties on intellectual properties has migrated to these jurisdictions, this allows the companies to avoid paying higher taxes in their traditional home countries.
- The OECD and G20 countries aim to reach a consensus on both by mid-year, i.e taxing cross-

Image source: thehindu

Source: indian express

PLI FOR AUTO SECTOR

Why in News?

- Government recently notified **Rs 25,938 crore** worth **Production Linked Incentive (PLI) Scheme** for Automobile & Auto components, to primarily boost the production of electric vehicles (EVs) and hydrogen fuel cell vehicles.
- In addition, the government has also announced Rs 120 crore for the drone industry.

Scheme details:

- The scheme **excludes conventional petrol, diesel and CNG segments**. It will incentivize only advanced automotive technologies or auto components whose supply chains are weak, dormant, or non-existing.
- It is open to existing Automotive companies as well as new Non-automotive investor companies.
- It will be **effective from FY 2022-2023 for five years** and the base year for the eligibility criteria would be FY 2019-20.
- The PLI incentives are sales-linked and are expected to be in the range of **13-18% on determined** sales values for original equipment manufacturers (OEMs) and 8-13% on determined sales values for auto component manufacturers.
- An additional 5% is to be given for manufacturing components for battery electric vehicles and hydrogen fuel cell vehicles.

Eligibility:

- OEMs in the auto sector must have a minimum of Rs 10,000 crore in revenue and Rs 3,000-crore investment in fixed assets.

border digital services and curbing tax base erosion, including a global corporate minimum tax.

G7 GUIDELINES FOR CENTRAL BANK DIGITAL CURRENCIES

Working of global minimum tax:

- This will apply to overseas profits. Multinational enterprises (MNEs) will be subject to a minimum 15% tax rate from 2023.
- The deal is agreed by 136 countries and jurisdictions representing more than 90% of global GDP.
- Consensus on global minimum tax will practically make tax competition amongst nations rather unfeasible.

Impact of GMT:

- The minimum tax and other provisions are intended to end decades of tax competition among governments in order to attract foreign investment.
- The agreement will encourage multinational corporations to repatriate capital to their country of headquarters, giving a boost to those economies.

About Organisation for Economic Co-Operation and Development:

- OECD is an **intergovernmental** economic organization of **37 countries based in Paris**.
- It was founded in **1961** to stimulate world trade and economic progress.
- **India is not a member of the OECD**, but a key economic partner.
- OECD is an official United Nations observer and is referred to as a think-tank or as a monitoring group.
- Most OECD members are high-income economies with a very high Human Development Index (HDI) and are regarded as developed countries.
- **The objectives** of the OECD include **fostering economic development** and cooperation and fighting poverty through the **promotion of economic stability**.
- OECD issues the **‘international Migrant outlook’ report annually**.
- The **OECD Economic Outlook**, published **twice** a year.
- OECD created agencies such as the
 - » OECD Development Centre (1961)
 - » International Energy Agency (1974) and
 - » Financial Action Task Force (FATF) on Money Laundering

Source: Indian express

Why in News?

- G7 finance leaders have laid out guidelines for central bank digital currencies.

The Guidelines include:

- Any digital currency issued by a central bank must “support and do no harm” to the bank’s ability to fulfil its mandate on monetary and financial stability, and must also meet rigorous standards.
- Currencies must be issued in a way that do not infringe upon the central banks’ mandates and meet rigorous standards of privacy, transparency and accountability for protection of user data.
- Any central bank digital currency (CBDC) should be grounded in long-standing public commitments to transparency, rule of law and sound economic governance.

What is the CBDC or National Digital currency?

- A Central Bank Digital Currency (CBDC), or national digital currency, is simply the digital form of a country’s fiat currency. Instead of printing paper currency or minting coins, the central bank issues electronic tokens. This token value is backed by the full faith and credit of the government.

How can CBDC be used in the Indian context?

- ‘Fit-for-purpose’ money used for social benefits and other targeted payments in a country. For such cases, the central bank can pay intended beneficiaries pre-programmed CBDC, which could be accepted only for a specific purpose.
- CBDCs could be used for faster cross-border remittance payments. International collaboration among the major economies of the world, including India, could help create the necessary infrastructure and arrangements for CBDC transfer and conversion.
- Payment instruments could be made available for payment transactions to be made via CBDC. Furthermore, universal access attributes of a CBDC could also include an offline payment functionality.
- Instant lending to micro, small, and medium enterprises (MSMEs) in India can be possible with the help of CBDC.

Need for CBDC:

- An official digital currency would reduce the cost of currency management while enabling real-time payments without any inter-bank settlement.
- India’s fairly high currency-to-GDP ratio holds out another benefit of CBDC – to the extent large cash

usage can be replaced by CBDC, the cost of printing, transporting and storing paper currency can be substantially reduced.

- The need for inter-bank settlement would disappear as it would be a central bank liability handed over from one person to another.

Challenges in rolling out National Digital Currency:

- Potential cybersecurity threat.
- Lack of digital literacy of the population.
- The introduction of digital currency also creates various associated challenges in regulation, tracking investment and purchase, taxing individuals, etc.
- **Threat to Privacy:** The digital currency must collect certain basic information of an individual so that the person can prove that he's the holder of that digital currency.

SC Garg Committee recommendations (2019):

- Ban anybody who mines, hold, transact or deal with cryptocurrencies in any form.
- It recommends a jail term of one to 10 years for exchange or trading in digital currency.
- It proposed a monetary penalty of up to three times the loss caused to the exchequer or gains made by the cryptocurrency user whichever is higher.
- However, the panel said that the government should keep an open mind on the potential issuance of cryptocurrencies by the Reserve Bank of India.

About G7:

- It was set up in 1975.
- The G7 or the Group of 7 is a group of the seven most advanced economies as per the International Monetary Fund (IMF).
- The seven countries are **Canada, the USA, the UK, France, Germany, Japan and Italy.**

- The G-7 nations meet at annual summits that are presided over by leaders of member countries on a rotational basis.

Source: Economic Times

BHARAT NET PROJECT

Why in news?

- Recently, Tamil Nadu Fibernet Corp signed an agreement to carry out the Bharatnet project.

Objective:

- The objective of Bharat Net is to make e-governance, e-health, e-education, e-banking, Internet, and other services more accessible to rural India.
- To create a highly scalable network architecture that is accessible to everyone.
- To provide on-demand, inexpensive broadband connectivity to all.

About BharatNet:

- The Bharat Net projects began in 2011 as the National Optical Fiber Network (NOFN) and was renamed as BharatNet in 2015.
- It aims to connect 2.5 lakh Gram Panchayats(GPs) to the internet via optical fibre.

Implementation:

- The project is a partnership between the centre and the states, with the states giving free rights of way to help build the Optical Fibre network.

Significance:

- Villages with BharatNet will have improved access to e-services provided by numerous central and state governments organizations.



Environment & Disaster Management

AAPDA MITRA PROGRAMME

Why in News?

- On the occasion of the 17th formation day of the National Disaster Management Authority (NDMA); the Central government plans to roll out an **'Aapda Mitra' (Friends in Disaster) project** in 350 districts of the country.

Aapda Mitra Programme:

- Aapda Mitra is a **centrally-sponsored scheme** by the NDMA in 2016.
- It aims to impart training to 6000 community volunteers (200 volunteers per district) in the 30 most flood-prone districts.
- It provides the community volunteers with the skills that they would need to respond to their community's immediate needs in the aftermath of a disaster.
- Objectives:**
 - Development and Standardization of training modules at National Level;
 - Development of Information Knowledge Management System at National level linked to States/UTs;
 - Training institutions to be empanelled by respective States/UTs at the State/UT level;
 - To create a Community Emergency Stockpile/ Reserve at the district/block level containing essential light search and rescue equipment, medical first aid kits, etc.

National Disaster Management Authority (NDMA)

- NDMA, headed by the Prime Minister of India, is the **apex body** for **Disaster Management**.
- It was **set up in 2006** in pursuance of the Disaster Management Act, 2005.
- Mandate:** It lays down the policies, plans and guidelines for Disaster Management.
- NDMA has **5 major divisions** viz. Policy & Plans, Mitigation, Operations & Communications & Information & Technology, Administration and Finance.

News Source: The Hindu

GREEN TERM LOAN AGREEMENT

Why in News?

- Recently, the NTPC Renewable Energy Ltd (NTPC

REL) has signed the first green term loan agreement of Rs 500 crore with the Bank of India for its two solar projects in Rajasthan and Gujarat.

What is Green Loan?

- A green loan is a type of loan instrument that enables borrowers to **finance projects that have an environmental impact**.

Benefits:

- Acquisition of public acceptance by demonstrating willingness to promote Green Projects.
- By providing Green Loans, lenders can support the realization of the environmental benefits that contribute to creating a sustainable society, while simultaneously gaining returns on their lending.
- Procuring a Green Loan and disclosing the relevant information offers borrowers the opportunity to consolidate their funding base by building new relationships with financial institutions that value **(Environmental, Social, and Governance) ESG loans**.
- Promotion of Green Projects can lower energy costs, strengthen energy security, revitalize the regional economy, and enhance resilience in the event of disasters.

NTPC Renewable Energy Ltd (NTPC REL):

- NTPC had incorporated NTPC Renewable Energy Ltd with the Registrar of Companies, NCT of Delhi & Haryana on October 7, 2020, to undertake renewable energy business.
- Currently, it has a renewable project portfolio of 3,450 MW.
- By 2032, the company plans to have 60GW capacity through renewable energy sources constituting nearly 45 percent of its overall power generation capacity.

News Source: The Economic Times

ONE SUN, ONE WORLD, ONE GRID

Why in News?

India and the United Kingdom are likely to announce a joint declaration on **"one sun, one world, one grid" – or OSOWOG** at the upcoming COP26.

- COP26, is scheduled to be held between October 31 and November 12, 2021 in Scotland.

One sun, One world, One grid:

- **Inception:** The OSOWOG is also known as Green Grid. It was first floated by India in 2018 during the first assembly of the International Solar Alliance.
- OSOWOG **aims to develop a trans-national grid** that will be laid all over the globe to transport the solar power generated across the globe to different load centres.
- **Vision:** OSOWOG is **based on the idea that “the Sun never sets”** and is a constant at some geographical location, globally, at any given point of time.
- » With India at the fulcrum, the **solar spectrum** can easily be **divided into two broad zones:**
 - **Far East:** It would include countries like Myanmar, Vietnam, Thailand, Lao, Cambodia.
 - **Far West:** It would cover the Middle East and Africa Region.
- **Coverage:** As per the draft plan the ambitious OSOWOG will connect 140 countries through a common grid that will be used to transfer solar power.
- OSOWOG is planned to be completed in **three phases:**
- The **first phase** will entail interconnectivity within the **Asian continent;**
- The **second phase** will add **Africa.**
- The **third phase** will **globalise** the whole project.
- It has been taken up under the technical assistance programme of the World Bank.

Significance:

- OSOWOG **can catalyse investments in sustainable energy solutions**, expand energy access, create jobs, improve health, make economies more competitive and resilient and advance the SDGs.
- It will allow national renewable energy management centres in India to grow as regional and global management centres.
- This is **seen as India’s counter to China’s Belt and Road initiative (BRI)** that is primarily an economic diplomacy strategy to boost its domestic economy by improving connectivity and cooperation among the participant countries.
- Several countries, including China, have initiated infrastructure projects in other countries, a step seen as a sign of asserting supremacy.
- » While India is a partner nation with most trade associations, with ISA and OSOWOG it is planning to take a leadership position.

Challenges:

- The mechanism of **cost-sharing will be challenging,**

given the varied priorities of participating countries depending on their socio-economic orders.

- The OSOWOG will turn out to be an expensive, complex and very slow progress project.
- The strategic benefits, if any, of having a single grid will be obliterated in the wake of any geopolitical problem.
- There is a difference in voltage, frequency and specifications of the grid in most regions. Maintaining grid stability with just renewable generation would be technically difficult.

News Source: The Times of India

RAJAJI TIGER RESERVE

Why in News?

Recently, the Central Empowered Committee (CEC) has sought replies from the Centre and Uttarakhand government about the relaxations given for upgrade of a 4.7-km road in the buffer zone of Rajaji Tiger Reserve.

- National Board for Wildlife (NBWL), the apex agency to clear projects in protected areas, has given the relaxations for upgradation of road in the buffer zone.

Tiger Reserve: Core and Buffer Area

- According to the Wild Life (Protection) Amendment Act of 2006, a tiger reserve must have a **core or critical habitat** and a buffer zone peripheral to it.
- » Core areas often conserve the wild relatives of economic species and also represent important genetic reservoirs having exceptional scientific interest.
- While the critical habitat is supposed to be kept inviolate for conservation, a **buffer zone is needed to ensure the integrity of the habitat** with adequate space for dispersal of tigers. It is aimed at **promoting coexistence** between **wildlife and human activity.**

Rajaji Tiger Reserve:

- In 2015, the Government of India notified **Rajaji as 48th Tiger Reserve of India**, and 2nd Tiger Reserve (1st is Jim Corbett) of Uttarakhand
- The Rajaji Tiger Reserve is **spread across** the districts of **Pauri Garhwal, Haridwar and Dehradun.**
- » It forms part of Rajaji National Park.
- **Flora Diversity:** Forests of Rajaji include the **Moist Shivalik Sal Forest, Moist Mixed Deciduous Forest, Northern Dry Mixed Deciduous** and Khair-Sissoo forests.
- **Faunal Diversity:** Leopard, Himalayan Black bear,

sloth bear, Civet, Marten, Jackal, Hyena.

- The **Ganges** and **Song rivers** flow through it.

News Source: The New Indian Express

MARINE PROTECTED AREAS: ANTARCTICA

Why 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)**.

Marine Protected Area:

- In general terms, a Marine Protected Area (MPA) is a marine area that provides protection for all or part of the natural resources it contains.
- Within an MPA certain activities are limited, or entirely prohibited, to meet specific conservation, habitat protection, ecosystem monitoring or fisheries management objectives.
- MPAs **include marine parks, nature reserves and locally managed marine areas** that protect reefs, seagrass beds, shipwrecks, archaeological sites, tidal lagoons, mudflats, saltmarshes, mangroves, rock platforms, underwater areas on the coast and the seabed in deep water, as well as open water.
- MPAs do not necessarily exclude fishing, research or other human activities; in fact, many **MPAs are multi-purpose areas**.

Marine Protected Area & Sustainable Development:

MPA networks contribute to **sustainable development goals** by fostering integrated ocean and coastal management.

- **Ecologically:** An MPA network can help to ensure marine ecosystem function by encompassing the temporal and spatial scales at which ecological systems operate.
- **Socially:** An MPA network can help resolve and manage conflicts in the use of natural resources and ensure that reasonable uses can occur with minimal conflict.
- **Economically:** An MPA network facilitates the efficient use of resources by preventing duplication of effort, such as when small, individual areas attempt to maintain their own management resources.

Contributions by Indian scientists to Antarctic research:

- India's permanent research base station '**Maitri**' is one of the Global Positioning System (GPS) stations contributing to the International database.
- Measurements of atmospheric ozone concentrations made from the Indian Antarctic research station "Maitri" reveal that the recovery of ozone depletion does not take place as fast in Antarctica as in the Arctic.
- India is among the first countries to take up **magnetometer triangulation experiments** in Antarctica to determine the presence and movement of small scale, auroral current systems.

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

- CCAMLR is an **international treaty to manage Antarctic fisheries** to preserve species diversity and stability of the entire Antarctic marine ecosystem.
- CCAMLR came into force in **1982**.
- The Secretariat of **CCAMLR** is located in Hobart, Tasmania, Australia.
- India has been a permanent member of the CCAMLR since 1986.
- **Centre for Marine Living Resources and Ecology (CMLRE)** in Kochi, Kerala coordinates its activities with CCAMLR.

India's Permanent research base stations in Antarctica:

- Dakshin Gangotri
- Maitri
- Bharati

News Source: The Indian Express

NEW TIGER RESERVE IN CHHATTISGARH

Why in News?

- Recently, the Chhattisgarh government's proposal to declare the combined areas of the **Guru Ghasidas National Park** and **Tamor Pingla Wildlife Sanctuary** as a **Tiger Reserve** was approved by the National Tiger Conservation Authority (NTCA).

Key Points:

- The NTCA's 11th Technical Committee approved the proposal under Section 38V(1) of The Wildlife

(Protection) Act, 1972.

- The new Reserve is located in the northern part of Chhattisgarh, bordering Madhya Pradesh and Jharkhand.
- It will be Chhattisgarh's fourth Tiger Reserve after the Udanti-Sitanadi, Achanakmar, and Indravati Reserves.

Significance of New Tiger Reserve:

- 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.

Guru Ghasidas National Park:

- Originally part of the Sanjay Dubri National Park, Guru Ghasidas Park was **created as a separate entity in Chhattisgarh's Sarguja region** after the formation of the state in 2001.
- **Location:** Koriya District, Chhattisgarh.
- It was the **last known habitat of the Asiatic cheetah** in the country.
- It has been **named after the Satnami reformist hero, Guru Ghasidas.**

Tamor Pingla Wildlife Sanctuary:

- Tamor Pingla is located in Surajpur district in the **northwestern part of Chhattisgarh.**
- It has been named after Tamor Hill and the Pingla Nalla (stream).
- Its **terrain is marked by the Moran River** which passes it to finally drain its waters into the Govind Ballabh Pant Sagar in Uttar Pradesh.
- The forest cover consists of a **mix of Sal and other deciduous trees.**

National Tiger Conservation Authority (NTCA)

- **NTCA** has been **constituted under section 38 L (1) of Wildlife (Protection) Act, 1972.**
- NTCA consists of the **Minister in charge of the Ministry of Environment and Forests (as Chairperson)**, the **Minister of State in the Ministry of Environment and Forests (as Vice-Chairperson)**, three members of Parliament, Secretary, Ministry of Environment and Forests.
- Its main objective is to strengthen the ecosystem of tiger conservation.

News Source: The Indian Express

HIGH AMBITION COALITION FOR NATURE AND PEOPLE

Why in News?

- India officially joined the High Ambition Coalition for Nature and People, a group of more than 70 countries encouraging the adoption of the global goal **to achieve the 30x30 target.**

High Ambition Coalition (HAC) for Nature and People:

- The High Ambition Coalition (HAG) for Nature and People is an **intergovernmental group of 70 countries** co-chaired by Costa Rica and France and by the United Kingdom as Ocean co-chair.
- This coalition **aims to promote an international agreement to protect at least 30 % of the world's land and ocean** by 2030.
- **Membership:** 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.
- **Participation of Nations:** There are no financial commitments required in order to participate in the High Ambition Coalition for Nature and People.
 - » However, the HAC nations will agree to meet over the course of the next year and together engage in actions ranging from signing declarations, to holding press conferences and recruiting numerous countries to join.

30x30 Target:

- The 30x30 target is a global target which aims to halt the accelerating loss of species, and protect vital ecosystems that are the source of our economic security.

News Source: Press Information Bureau

NEW CICADA SPECIES

Why in News?

Recently, a **new cicada species (Platyomia kohimaensis)** has been found in the Naga Hills, Nagaland.

- The discovery was published in the Zootaxa journal.

What are Cicadas?

- Cicadas are **hemipteran insects** known for their loud, complex and species-specific acoustic signals or songs.
- It is a dusk singing, large-sized cicada that calls for a

short window during the evening twilight hours.

- **Regional Distribution:** The generic diversity of cicadas in **India and Bangladesh ranks the highest** in the world, followed by China.
- Most **cicadas are canopy dwellers** and are found in natural forests with large trees.

Utility:

- Cicadas, with their acoustic signatures, act as indicators of a healthy forest ecosystem.

Threats:

- The main threat to many cicada species is their rapidly diminishing natural habitat, where they live and breed.
- Unabated capturing and killing of this cicada species due to its culinary use also poses a threat to its survival.

News Source: The Indian Express

ILLEGAL CONSTRUCTION IN KAZIRANGA NATIONAL PARK

Why in News?

- The Central Empowered Committee (CEC), constituted by the Supreme Court, has asked the Assam government to take action on illegal construction in the **identified wildlife corridors** of the Kaziranga National Park and Tiger Reserve.

Kaziranga National Park:

- Kaziranga National Park **lies partly in Golaghat District and partly in Nagaon District** of Assam.
- It covers an area along the river Brahmaputra on the North and the Karbi Anglong hills on the South.
- It was declared a **National Park** in 1974.
- **National Highway 37** passes through it.
- **Diphlu river** flows through it.
- It is a **world heritage site** famous for the Great Indian one-horned rhinoceros.
- Kaziranga is also **home to nine of the 14 species of primates** found in the Indian subcontinent.

What are Wildlife Corridors?

- A wildlife corridor is a **link of wildlife habitat**, generally native vegetation, which joins two or more larger areas of similar wildlife habitat.

- Corridors are **critical for the maintenance of ecological processes** including allowing for the movement of animals and the continuation of viable populations.
- Wildlife Corridors **contribute to the resilience of the landscape** in a changing climate and help to reduce future greenhouse gas emissions by storing carbon in native vegetation.

News Source: The Hindu

INTERNATIONAL SOLAR ALLIANCE

Why in News?

- Recently, the **fourth assembly of the International Solar Alliance** closes with a promise to **achieve 1 trillion dollar in solar investment by 2030**.

Key Highlights:

- **ISA assembly** gives a green light to the "one Sun " political declaration for the launch of Green Grids Initiative - One Sun One World One Grid (GGI-OSOWOG) at COP26.
- Assembly approves a solid action agenda to mobilize USD one trillion dollars in solar investment by 2030, including a blended finance risk mitigation facility.
- The assembly also focused on how ISA's waste management programme will be pivotal for the growing volume of waste & toxic material, lack of waste specific legislation, and high cost of waste management.
- One Sun One World One Grid (OSOWOG) was also discussed at the assembly.
 - » OSOWOG will also help decarbonise energy production, which is today the largest source of global greenhouse gas emissions.

Initiative Launched:

- During the assembly, two new programmes were launched:
 - » **Management of Solar PV panels & battery usage waste,**
 - » **And Solar Hydrogen programme:** the new hydrogen initiative is aimed at enabling the use of solar electricity to produce hydrogen at a more affordable rate than what is available currently.
- The ISA also announced a partnership with Bloomberg Philanthropies to mobilize 1 trillion dollars in global investments for solar energy across ISA's member countries.

About International Solar Alliances (ISA):

- The International Solar Alliances (ISA) is an alliance of 121 countries lying fully or partially between the tropic of cancer and tropic of Capricorn to address their special energy needs.
- It is a treaty-based inter-governmental organization working to create a global market system to tap the benefits of solar power and promote clean energy applications.
- The initiative was launched by the Prime Minister of India and the President of France at the India Africa Summit, and a meeting of member countries ahead of the 2015 United Nations Climate Change Conference in Paris in November 2015.
- Recently, the ISA Framework agreement allowed all the member states of the United Nations to join ISA including those beyond the Tropics.
- Headquarter - **National Institute of Solar Energy campus, Gurugram, Haryana**

Structure of the ISA and decision making process:

- It has a two-tier structure – **the Assembly and the Secretariat.**
- Each member country is represented in the Assembly, which meets annually. It may also meet under special circumstances.
- The Assembly makes all necessary decisions regarding the functioning of the ISA, including the selection of the Director-General and approval of the operating budget.
- **Each Member has one vote in the Assembly.**
- There is no membership fee to join the ISA. All costs relating to the running of the ISA will be funded through voluntary contributions of members.

Wall of China, Earth's heaviest artificial object.

- Last year Global E-waste monitor reported that 53.6 MT of WEEE were generated in 2019.
- According to the WEEE forum, E-waste generation was increasing annually by 2 MT.
- » It attributed the rise to a higher consumption rate of electronics, shorter product lifecycles and limited repair options.

Consumers' role in e-waste generation:

- A key factor is, in used electronic devices not being given for recycling was because consumers themselves did not do so.
- This year's focus for International E-Waste Day is the crucial role each of us has in making circularity a reality for e-products.
- A tonne of discarded mobile phones is richer in gold than a tonne of gold ore.
- Indian generated 3.2 million tonnes of E-waste in 2019; details of 90 per cent of this waste are undocumented.
- The increase in production of **electrical and electronic equipment (EEE)** has been attributed to industrialisation, urbanisation and higher levels of disposable income.
- As of 2019, 78 countries had a policy, regulation or legislation for scientific and sound management of E-waste.
- It is therefore important to note that approximately 40 per cent of our globe is covered by legislation, policy or regulation that governs proper management of E-waste.

India scenario:

- India generated 3.2 million tonnes of E-waste in 2019.
- According to the central pollution control board (CPCB), India has 312 registered E-waste recyclers with a capacity to handle 782,080.62 tonnes of E-waste every year.
- Clearly, the recycling potential of our country is poor.
- More than 90 per cent of our E-waste is handled by the informal sector that resorts to non-scientific and dangerous methods to extract the resource from E-waste and dump it irresponsibly.

Way forward:

- We as a global community have failed miserably to manage our E-waste. The rich are diverting their E-waste to the poor, not only globally, but locally as well.
- We need better implementation methodologies and inclusion policies that provide accommodation and

INTERNATIONAL E-WASTE DAY

Why in News?

- International E-Waste Day has been observed on 14 Oct every year since 2018.

Key Points:

- **WEEE stands for waste electronic and electrical equipment.** This is the Brussels based Non-profit gave some shocking statistics about the rising tide of e-waste.
- This year's WEEE will total about 57.4 million tonnes (MT). This will be greater than the weight of the Great

validation for the informal sector to step up and help us meet our recycling challenges.

development.

INDIAN SANDALWOOD

Why in News?

Recently the union minister of rural development & Panchayati raj has inaugurated a training program on Sandalwood Farming & Management of its health.

- The program is structured around the basics & benefits of Indian sandalwood, seed handling, nursery techniques & managing the health of the plant.
- This free of cost training initiative will help attract the youth towards sandalwood farming, revive this declining art & help reposition India as a market leader in the trade.

About Indian Sandalwood:

- Sandalwood has been long associated with the Indian heritage & culture, as the country contributed 85% of the world; sandalwood trade erstwhile.

Uses of sandalwood:

- It uses for anti-bacterial, anti-biotic & anti-cancer benefits amongst others, sandalwood finds its uses in pharmaceuticals, personal care & furniture.

Major growing areas:

- Globally, India & Australia are the largest growers of sandalwood, while the biggest market lies in the United States, China, Japan & the Indian domestic market.

Can be achieved by taking up multiple initiatives like establishing Sandalwood Technology Innovation centres in the development as well as introducing new methods of cultivation among farmers & young entrepreneurs.

GLOBAL CLIMATE RISK INDEX 2021

Why in news?

- The international environmental think tank **'Germanwatch'** released the Global Climate Risk Index 2021.
- This is the **16th Edition** of the Index. It is published **annually**.
- Germanwatch, based in **Bonn and Berlin (Germany)**, is an independent development and environmental organisation which works for sustainable global

Key Points

- **Findings of the Index:**
 - » **Mozambique, Zimbabwe as well as the Bahamas** were the most affected countries in 2019.
 - » For the period from 2000 to 2019, Puerto Rico, Myanmar and Haiti rank highest.
 - » Storms and their direct implications- precipitation, floods and landslides, were one major cause of losses and damages in 2019.
 - » Of the ten most affected countries in 2019, six were hit by tropical cyclones. Recent science suggests that the number of severe tropical cyclones will increase with every tenth of a degree in global average temperature rise.
 - » Eight out of the ten countries most affected by the quantified impacts of extreme weather events in 2019 belong to the low- to lower-middle income category. Half of them are Least Developed Countries.

About the Index:

- The Index analyses the extent to which countries and regions have been affected by the impacts of weather-related loss events (storms, floods, heat waves etc.).
- The impact is calculated in terms of fatalities and economic losses, both.
- The most recent data available for 2019 and from 2000 to 2019 were taken into account.
- The **2021 Index does not include data from the United States of America**.
- The Climate Risk Index clearly signals that repercussions of escalating climate change can no longer be ignored, on any continent or in any region.
- Impacts from extreme-weather events hit the poorest countries hardest as these are particularly vulnerable to the damaging effects of a hazard, have a lower coping capacity and may need more time to rebuild and recover.
- High-income countries are also getting severely impacted by climate change.

India's Position:

- » The **Global Climate Risk Index (2021)** ranked India the **seventh-most affected** country by weather extremes. India has improved its rankings from last year.

- » The Indian monsoon lasted a month longer than usual in the year 2019, with surplus rains causing major hardship. The rain was 110% of normal, which is the most since 1994.
- » The floods caused by heavy rains were responsible for 1800 deaths and led to the displacement of 1.8 million people.
- » Overall, 11.8 million people were affected by the intense monsoon season and the economic damage caused was estimated to be US\$ 10 billion.
- » India was hit by a total of 8 tropical cyclones. Of which, Cyclone Fani (May 2019) caused the maximum damage.
- » The Himalayan glaciers, the coastlines, and the deserts in India have been severely affected by global warming.
- » The Report also points to an increase in the number of heat waves, increased intensity and frequency of cyclones and an increased rate of melting of glaciers in India.
- **Suggestions:**
 - » The global Covid-19 pandemic has reiterated the fact that both risks and vulnerability are systemic and interconnected. It is therefore important to strengthen the resilience of the most vulnerable against different types of risk (climatic, geophysical, economic or health-related).
 - » After the international climate policy process stalled in 2020 due to the Covid-19 pandemic, expectations regarding progress on the long-term finance goal and adequate support for adaptation lie in 2021 and 2022.
 - » The process **needs to deliver:**
 - A decision on how the need for support for vulnerable countries concerning future loss and damage is to be determined on an ongoing basis.
 - the necessary steps to generate and make available financial resources to meet these needs.
 - strengthening the implementation of measures for adapting to climate change.
 - » Effective climate change mitigation and adaptation to prevent or minimize potential damage.

Source: the hindu

COP 26 CLIMATE CONFERENCE

Why in News?

This year the **UK** will host the **COP 26 UN Climate**

Change Conference from October 31 to November 12.

- It marks the 26th Conference of Parties (thus the name COP26) and will be held in the Scottish Event Campus in Glasgow.

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:** countries will work together to 'protect and restore ecosystems and build defences, warning systems and resilient infrastructure.
- **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 by 2020.
- **'Finalise the Paris Rulebook':** Leaders will work together to frame a list of detailed rules that will help fulfil the Paris Agreement.

What could India 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. Time may have come for India to announce that we will not be building any more coal-fired power plants beyond what is in the pipeline. India also needs to ramp up the legal and institutional framework of climate change.

Formation of Conference of Parties(COP)

- COP comes under the United. Nations Climate Change Framework Convention (UNFCCC) was formed in **1994**.
- The UNFCCC was established to work towards **“stabilisation of greenhouse gas concentrations in the atmosphere.”**
- COP members have been meeting every year since 1995. The UNFCCC has 198 parties including India, China and the USA.
- The **first Conference (COP1)** was held in **1995 in Berlin**.

Significance of COP:

- 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.

Timeline: COP's with significant outcomes

- **1992: Earth summit, Rio De Janeiro**

- » The meeting that set up the architecture for negotiations on an international climate change agreement. It finalises the UN Framework Convention, the mother agreement that lays down the objectives and principles, on which climate action by countries are to be based. It acknowledged that developing countries had fewer obligations and bring down emissions to their 1990 emissions levels by 2000.

- **1997: COP3, KYOTO**

- » Delivered the Kyoto protocol, precursor to Paris agreement. The protocol-specific emission reduction targets for a set of developed countries are to be achieved by 2012.
- » Others were supposed to take voluntary actions to reduce emissions.
- » The Kyoto protocol expired last year as the Paris agreement took its place.

- **2007: COP13, BALI**

- » It reaffirmed the principles of Common But Different Responsibility (CBDR) in the efforts to find a replacement to the Kyoto protocol.
- » Parties agreed on the Bali Road Map and Bali action plan, which charted the way towards a post-2012 outcome. The Plan has five main categories: shared vision, mitigation, adaptation, technology and financing.

- **2010: COP 16 (Cancun)**

- » This resulted in the Cancun Agreements, a comprehensive package by governments to assist developing nations in dealing with climate change.
- » The Green Climate Fund, the Technology Mechanism and the Cancun Adaptation Framework were established.

- **2015: COP21, Paris**

- » The Paris climate agreement does not assign emission reduction targets to any country. Instead, it asks all to do the best they can. But the target they set for themselves must be reported and verified.
- » The objective is to limit the global rise in temperature to within 2 degree from pre-industrial times.

- **2021: COP26, Glasgow**

- » It was supposed to be held last year but postponed because of Covid.

- » The rulebook for the implementation of Paris agreement is still to be finalised.
- » The markets, and the transition of pending carbon credits with some developing countries to that new market.



Image source: pinterest

News Source: indian express

DEBRIGARH WILDLIFE SANCTUARY

Why in News?

- Recently, the wildlife wing of Odisha's forest department has decided to relocate around 420 families from four zero-connectivity villages in Debrigarh Wildlife sanctuary.

Key Points:

- The move is aimed to remove man-animal conflict and provide better conditions to the relocated families.
- The relocation of the villagers is being done to create more space for the animals in the forest.

Background:

- The families were displaced during the construction of the Hirakund dam in the 1950s and rehabilitated in these four villages within the Dibrugarh sanctuary.

About the Debrigarh Wildlife Sanctuary:

- The sanctuary is an important biogeographic zone from both the ecological and environmental points of view.
- It is situated in the Bargarh district of Odisha near Hirakud dam (Mahanadi River). It was declared as a wildlife sanctuary on 8th february 1985.
- Biodiversity:
 - » Flora: Dry deciduous forests
 - » Fauna: four horned antelope, Indian leopard, Indian elephant, sambar, chital, gaur, etc.

WHY HAS OCTOBER BEEN SO RAINY

Why in News?

The monsoon season is over but still several parts of the country are still receiving rainfall.

Key Points:

- October, 2021 has emerged as the wettest month for Delhi since 1960.
- States like Kerala, Uttarakhand and Madhya Pradesh have received very heavy rainfall in October, even though it is a month of transition during which the southwest monsoon withdraws and gives way to the northeast monsoon.

- This is due to the **delayed monsoon withdrawal, development of low-pressure** areas at multiple places and climate change.

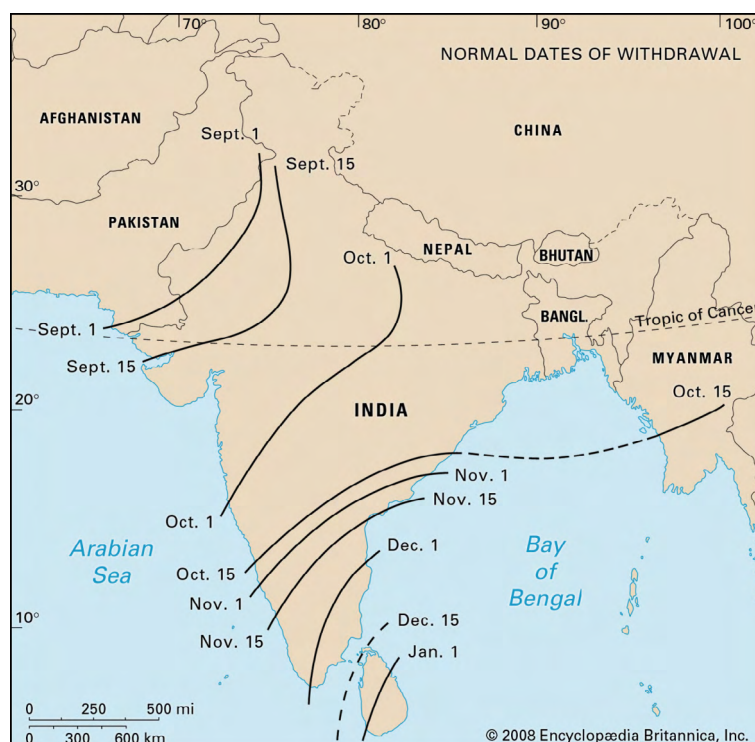
Delayed Monsoon Withdrawal:

- The four-month southwest monsoon season normally withdraws completely by early October.
- 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.
- Normally, by mid-October, the monsoon wind reverses their direction of flow from the southwest to the northeast.

Development of low-pressure areas

- At least two low-pressure systems remained active along the east and west coasts and over central India, bringing rains over large parts of the country.
 - » A low-pressure system that formed in the east-central Arabian sea moved and sustained over Kerala.
 - » Simultaneously, another low-pressure system prevailed over the north Andhra Pradesh coast and southern Odisha.
 - » The interaction between them strengthen the southwest winds which brought extreme rainfall over central and southern Kerala.

Source: indian express



Source: Britanica

WORLD ENERGY OUTLOOK 2021

Why in News?

- The World Energy Outlook (WEO) Report 2021 was recently released by the **International Energy Agency (IEA)**.

Key highlights of the report:

- Global rebound in coal and oil use in 2021, as well as the second-largest annual increase in CO2 emissions in history.
- It analysed current government net-zero emissions pledges, finding demand for fossil fuels would peak by 2025 and global CO2 emissions would fall by 2050.
- **Investment in renewable energy:** according to IEA, investment in renewable energy will need to triple by the end of this decade if the world's climate pledges are to be met.
- » Renewable energy sources, such as solar, wind, hydropower and bioenergy, need to form a far bigger

share in the rebound in energy investment after the coronavirus pandemic.

- The IEA analyzed **two possible scenarios:**

» **First scenario:** The first scenario looks at the measures and policies that governments have already put in place. Despite the measures, annual worldwide emissions would still be the same as developing countries build up their infrastructure,

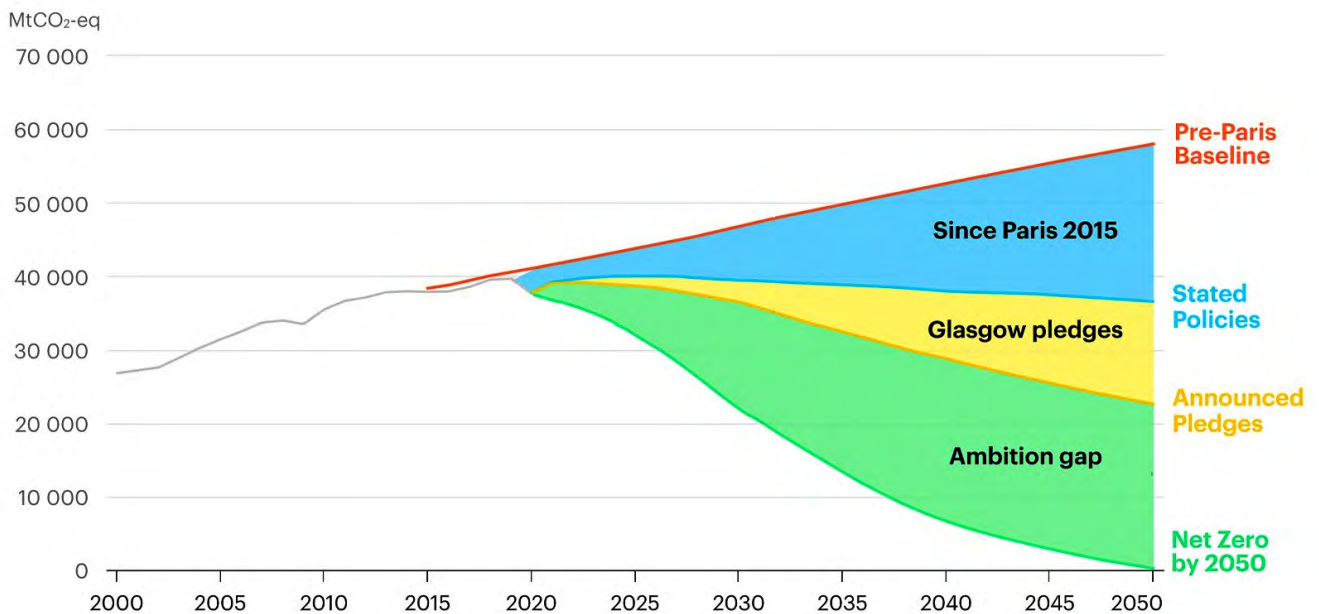
- Under this scenario, temperatures in the year 2100 would be 2.6 C higher than preindustrial levels.

• **Second scenario:** The second scenario looks at governments' pledges to achieve net-zero emissions, potentially doubling clean energy investment over the next decade.

- If countries manage to implement these pledges in time, the global average temperature increase would be around 2.1 C by the year 2100 – an improvement, but still well above the 1.5 Celsius agreed under the Paris accord.

Global CO₂ emissions by scenarios, 2000-2050

World Energy Outlook 2021



source: IEA

Suggestion:

- **Additional push for clean electrification:**
 - » This requires a doubling of solar PV and wind deployment relative to the APS(announced pledges scenarios).
- **Focus on energy efficiency:**
 - » A relentless focus on energy efficiency, together with

measures to temper energy service demand through materials efficiency and behavioural change.

- **Boost to clean energy innovation:**

» All the technologies needed to achieve deep emissions cuts to 2030 are available. But almost half of the emissions reductions achieved in the Net Zero Emission (NZE) in 2050 come from technologies that today are at the demonstration or prototype stage.

Way forward:

- The need for the world to reach Net Zero Emissions

by 2050 lies in the major interim steps that need to be taken through 2030 – to engineer cheap and green energy from hydrogen and renewable energy while making them accessible to all.

- Even as the global economy more than doubles in size and the global population grows by 2 billion people, the world faces a daunting task of cost-effectively transforming the energy sector within 30 years.

Source: indian express

SAUDI ARAB TARGETS ZERO EMISSIONS BY 2060

Why in News?

One of the world's largest oil producers, Saudi Arabia, announced its aims to reach "net-zero" **greenhouse gas emissions by 2060**.

- The announcement came at the start of the kingdom's first-ever Saudi Green Initiative Forum
- Joined by 100 countries in global efforts to try and curb man-made climate change.

Key points:

- Coming at the **Saudi Green Initiative (SGI)**, which comes ahead of **COP26**, the UN climate change conference in Glasgow at the end of the month, which hopes to agree deeper emissions cuts to tackle global warming.
- **Saudi Arabia's Target** aims to **reach zero-net emissions by 2060** under its **circular carbon economy programme** while maintaining its leading role in strengthening security and stability of global oil markets.
 - » That approach focuses on **still unreliable carbon capture and storage technologies** over efforts to actually reduce global reliance on fossil fuels.
 - » It would join a global initiative to reduce methane emissions by 30% from 2020 levels by 2030, which both the US and the European Union (EU) have pushed for (Global Methane Pledge).
- Earlier this month, the United Arab Emirates, another major Gulf Arab energy producer has announced it too would join the "net zero" club of nations with a target to reach net-zero emissions by 2050.
- China and India, the top emitters of greenhouse gases after the United States, have also resisted committing to a 2050 timeline to achieve net-zero, a target that the U.S has adopted.

Source: Indian express

AFRICAN RARE GLACIERS SOON TO DISAPPEAR

Why in News?

- Recently, a report by World Meteorological Organisation (WMO) states that Africa's rare glaciers will disappear in the next two decades because of climate change.

Key points:

- The report from the World Meteorological Organisation and other agencies released ahead of the UN climate conference in Scotland that starts October 31, is a grim reminder that Africa's 1.3 billion people remain "extremely vulnerable" as the continent warms more, and at a faster rate, than the global average.
- Africa's 54 countries are responsible for less than 4 percent of global greenhouse gas emissions.
- The new report seizes on the shrinking glaciers of Mount Kilimanjaro, Mount Kenya and the Rwenzori Mountains in Uganda as symbols of the rapid and widespread changes to come.

Causes of deglaciation:

- **Global warming:** The atmospheric concentration of carbon dioxide, methane and other greenhouse gases (GHGs) produced by industry, transport, deforestation and burning fossil fuels, amongst other human activities, warm the planet and cause glaciers to melt.
- **Ocean warming:** Oceans absorb 90% of the Earth's warmth, and this affects the melting of marine glaciers, which are mostly located near the poles.
- **Rapid industrialisation:** many glaciers around the world have been rapidly melting, specifically, since the industrial revolution.

Implications:

- Massive displacement, hunger and increasing climate shocks such droughts and flooding are in the future, and yet the lack of climate data in parts of Africa "is having a major impact" on disaster warnings for millions of people,
- By 2030, up to 118 million extremely poor people will be exposed to drought, floods and extreme heat in Africa if adequate measures are not put in place.

Way forward:

- Overall, Africa will need investments of over \$3 trillion in mitigation and adaptation by 2030 to implement its national climate plan.
 - » It will require significant, accessible and predictable inflows of green financing in Africa.

- The voices of the African people have been less represented than richer regions at global summits, thus there is a need to increase African participation in all multilateral climate change negotiations.

Source: down to earth

INDIAN RAILWAYS TO BECOME WORLD'S FIRST 'NET-ZERO' EMITTER BY 2030

Why in News?

- Indian Railways (IR) recently announced that it is on track to become the world's first carbon-zero emitter by 2030.

Key Points:

- IR is taking a multi-pronged approach to go green and decarbonise - from increasing its sourcing of Renewable Energy (RE) to electrifying its traction network and reducing its energy consumption.
- The Indian Railway goal is to become a 'net-zero' carbon emitter by 2030. And it has ambitious plans to accomplish this goal.
- The plan includes a significant goal of electrifying the entire network by December 2023. With complete electrification of Indian Railways targeted by financial year 2024, total traction requirement is expected to increase to around 3,400 MW.
- It will be the world's largest 100 per cent electrified rail transportation system by then.

About Indian Railway:

- The Indian Railways transports 24 million passengers every day across the subcontinent on 13,000 trains covering approximately 67,956 km; its carbon footprint is massive.
- Indian Railways, the world's fourth-largest railway network in terms of size, is one of the largest electricity consumers in the country. It consumed approximately 18,410 million units (MU) for traction loads (trains) and 2,338 MU for non-traction loads (office, railway stations, etc) in 2020.
- India's transport sector contributes to 12% of the country's greenhouse gas emissions with the railways accounting for about 4% of these emissions.

Challenges:

- **No objection certificate for open access:** The No objection Certificate (NoC) for open access to electricity flow for railways in West Bengal, Tamil Nadu, Chhattisgarh, Odisha, Andhra Pradesh, Kerala and Telangana has not been operationalised due to regulatory challenges that the railways are vigorously

pursuing.

- **Wheeling and banking provision:** Full deployment of solar potential will become more feasible if states provide wheeling and banking arrangements.
- **Merger of solar purchase obligation and non-solar obligation:** The availability of a banking facility and the consolidation of solar and non-solar obligations will allow the railways to meet their Renewable Purchase Obligations.
- **Unrestricted net metering regulations:** Unrestricted net metering for rooftop solar projects would hasten the deployment of railway solar plants.

Source: down to earth

UNEP PRODUCTION GAP REPORT

Why in News?

Recently, the United Nations Environment Programme (UNEP) has released its production gap report 2021.

- The Production Gap Report measure the gap between governments' planned production of fossil fuels and the global production levels consistent with meeting the Paris Agreement temperature limits (limiting warming to 1.5 degree to 2 degree).

Key findings:

- As countries set net-zero emission targets, and increase their climate ambitions under the Paris Agreement, they have not explicitly recognized or planned for the rapid reduction in fossil fuel production that these targets will require.
- World's governments plan to produce around 110% more fossil fuels in 2030 than would be consistent with limiting warming to 1.5 degree, and 45% more than consistent with 2 degree.
- G20 countries have directed over USD 300 billion in new funds towards fossil fuel activities since the beginning of the COVID-19 pandemic- more than they have towards clean energy.
- **Governments are planning to produce more than double the production of fossil fuels than what the world requires to limit global temperature rise to 1.5 degrees Celsius.**

Key recommendations:

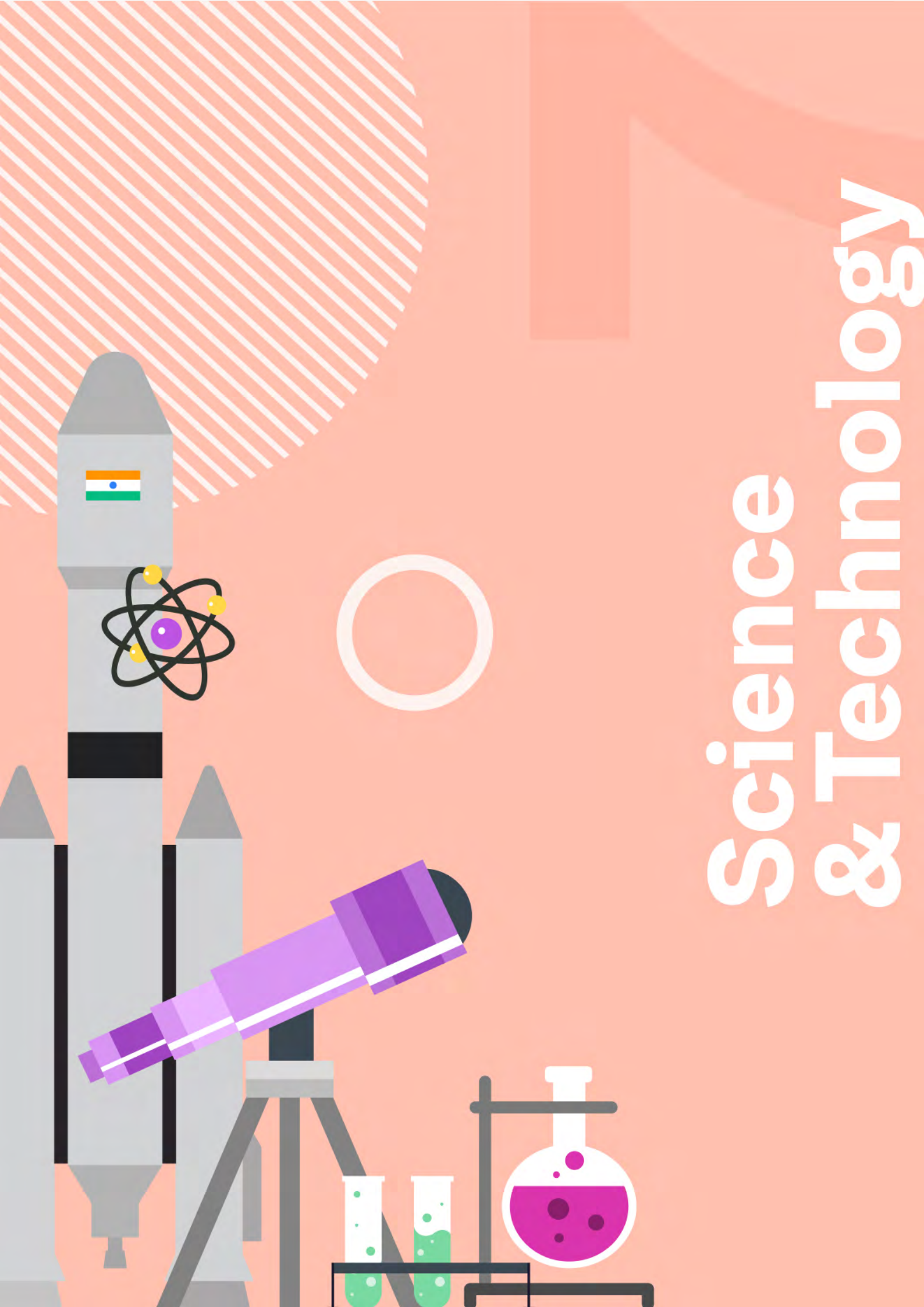
- Acknowledge in their energy and climate plans need to reduce global fossil fuel production in line with Paris Agreement's limits.
- Place a restriction on fossil fuels exploration and extraction and phase out government support for

fossil fuel production.

- Leverage international cooperation to endure a more effective and equitable global wind-down of production.

Net zero-emission, also referred to as carbon neutrality, are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specific period.

Source: down to earth



Science & Technology

INSPIRESAT-1 CUBESAT

Why in News?

- INSPIRE Sat-1 CubeSat, developed under the International Satellite Program in Research and Education (INSPIRE), is ready for launch.

INSPIRESat-1 CubeSat:

- The satellite will be placed in a low earth orbit.
- It is **equipped with a Compact Ionosphere Probe** for studying the earth's ionosphere.
- It weighs less than 10 kg and will be launched aboard an upcoming Polar Satellite Launch Vehicle (PSLV) mission of the Indian Space Research Organisation (ISRO).
- The INSPIRESat-1 mission was originally planned for 2020, but was delayed due to the COVID-19 pandemic.
- It has been **jointly developed by:**
 - the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado at Boulder (United States)
 - the Indian Institute of Space Science and Technology (India)
 - the National Central University (Taiwan)
 - the Nanyang Technological University (Singapore)

International Satellite Program in Research and Education (INSPIRE)

- INSPIRE is a consortium of global space universities formed to advance space science and engineering, spearheaded by CU Boulder-LASP.
- A constellation of earth and space-weather observation satellites is envisaged under the INSPIRE programme.

CubeSats

- CubeSats are a class of research spacecraft called nanosatellites.

News Source: The Hindu

GM RICE VARIETIES

Why in News?

- Recently, the Prime Minister launched the country's first-ever **Non-GM (Genetically Modified) herbicide-tolerant rice varieties**, which have been **developed by the Indian Agricultural Research Institute (IARI)**.

Development of New Varieties:

- These rice varieties have been developed by crossing over two existing popular varieties — **Pusa 1121** and **Pusa 1509 — with Robin**, which is a drought-tolerant rice variety.
- The newly developed rice varieties contain a **mutated acetolactate synthase (ALS) gene**, which allows farmers to use Imazethapyr.
 - The Imazethapyr, a chemical used on crops for weed control management. When it is used on a normal paddy, it does not distinguish between the crop and the invasive plants.
- However, the newly developed rice varieties due to the ALS gene, ensure that Imazethapyr destroys only the weeds, not the crop.
- These new varieties have been **developed through mutation breeding** and not by genetic modification to ensure no foreign gene in the new varieties.

Advantage:

- In conventional rice growing, herbicides are not directly applied as they can't distinguish between the rice plant and weeds. Therefore, paddy seeds are first raised as young plants in nurseries before being planted in the fields.
- This process is very water- and labour-intensive process as the young seedlings need to be maintained in standing water of up to 5 cm depth for almost a month.
- However, new rice varieties simply replace water with Imazethapyr and there's no need for nursery, puddling, transplanting and flooding of fields. Paddy can be sowed directly, just like wheat.

News Source: The Indian Express

INDIAN ASTRONOMICAL OBSERVATORY: HANLE

Why in News?

- According to a recent study, **the Indian Astronomical Observatory (IAO) located at Hanle** near **Leh** in Ladakh is becoming one of the promising observatory sites globally.

Hanle Observatory:

- Hanle site is as dry as Atacama Desert in Chile and has around 270 clear nights in a year and is also one of the emerging sites for infrared and sub-mm optical astronomy.
 - This is because water vapour absorbs electromagnetic signals and reduces their strength.

- The Hanle observatory is **operated by the Indian Institute of Astrophysics, Bengaluru.**
- Hanle is **considered one of the most suitable sites** for astronomical research in the country **due to:**
 - » its location -- high altitude, minimal light pollution and dry weather.
 - » It has an annual precipitation of less than seven cm and thus offers a large window for observations.
- On an average, observations can be made for 260 days in any year.

Other Astronomical observatories:

- Merak (Ladakh)
- Devasthal (Nainital)
- Ali Observatory in the Tibet Autonomous Region in China
- South African Large Telescope in South Africa
- University of Tokyo Atacama Observatory
- Paranal (Chile)
- National Astronomical Observatory in Mexico

News Source: Press Information Bureau

'ROBOT ON WHEELS': ASTRO

Why in News?

- Recently, Amazon announced a **"home robot" named Astro.** It is powered by its Alexa smart home technology.

Astro Robot:

- The robot has cartoony-eyes on a tablet-like touchscreen and comes **equipped with a periscope camera** and microphone.
- It can autonomously navigate the house to keep a tab on security or follow you around while you're on a video call.
- Astro is basically a combination of the Echo Show and sophisticated Ring security camera integrated into one single device.
- The device captures live videos, recognises faces, plays music or videos, and delivers a beer across the home.
- It can **recognise the faces of people** and analyse them until it figures out if it's a family member or an

outsider.

Security Concerns:

- Astro stores face data locally rather than in the cloud, but it is still a **privacy concern** as with any internet-connected device.
- The amount of data Amazon gets to fetch with the Astro, gives the company easy access to the household, **jeopardizing the data privacy.**
- There is a concern that digital maps created by **robot can be hacked** or stolen.

News Source: The Indian Express

LUCY MISSION: NASA

Why in News?

- Recently, NASA launched the 'Lucy' Mission to explore the Jupiter Trojan asteroids from the Cape Canaveral Space Force Station, Florida USA.
- The mission is named after 'Lucy', a 3.2 million-year-old ancestor who belonged to a species of hominins (which include humans and their ancestors)

About Lucy Mission:

- Lucy, the **first solar-powered mission**, embarked on a 12-year journey to eight different asteroids -- one in the Main Belt between Mars and Jupiter and then seven Trojans.
- **Aim:** Lucy's mission is **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.
- The spacecraft's first encounter will be with an asteroid that lies in the main belt that can be found between Mars and Jupiter.
 - » This asteroid is named **'Donald Johnson'** after the paleoanthropologist who discovered the fossilised remains of 'Lucy'.
- **Expenditure:** The total mission cost is \$981 million.
- Lucy's path will circle back to Earth three times for gravity assists, **making it the first spacecraft ever to return to the vicinity of Earth** from the outer solar system.

Significance:

- Lucy finds **will give us vital clues** about the **formation of our solar system.**

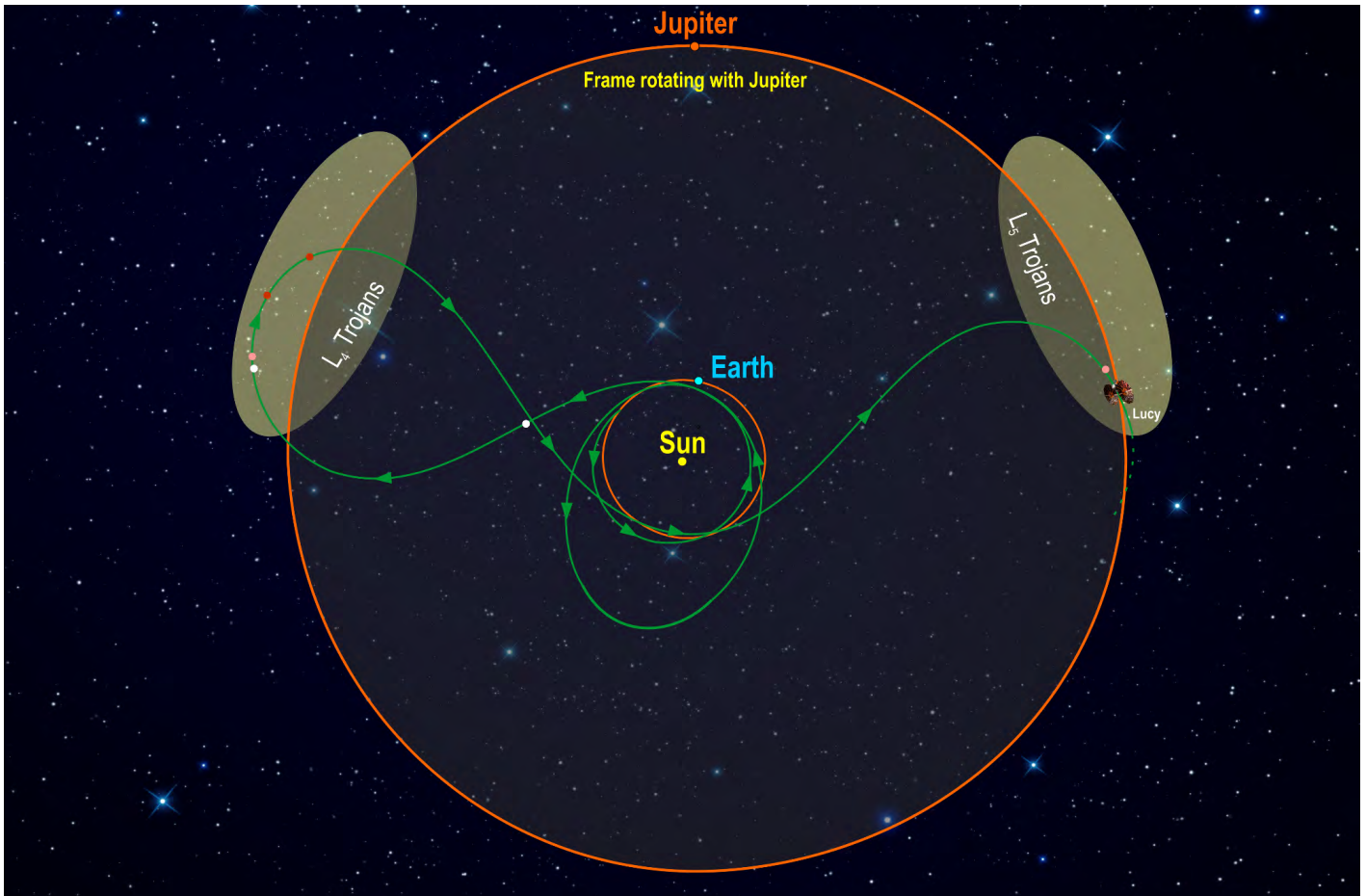


Image Source: NASA

Trojan Asteroids:

- According to some planet formation and evolution models, **Trojan asteroids are believed to be formed from the same material that led to the formation of planets** nearly 4 billion years ago when the solar system was formed.
- Studying these asteroids will help scientists understand origins and evolution of the solar system.

News Source: The Indian Express

INDIAN SPACE ASSOCIATION

Why in News?

- Recently, the Prime Minister launched the Indian Space Association (ISpA) via video conferencing.

Indian Space Association (ISpA):

- Indian Space Association is an industry body consisting of various stakeholders of the Indian space domain.
- **Goal: It aims to supplement the government's efforts towards making India a global leader** in commercial space-based excursions.

- **Membership:** The members of the **ISpA** include government bodies such as Indian Space Research Organisation (ISRO) and private telecom companies such as Bharti Airtel's One Web, Tata Group's Nelcom, L&T, MapMyIndia.
- It will work in tandem with NSIL, a central public sector enterprise under the Department of Space (DOS), which functions as the commercial arm for ISRO and secures launch contracts from customer satellites.
- **Approach Involved:** ISpA will also work towards **building global linkages for the Indian space industry to bring in critical technology and investments** into the country to create more high skill jobs.
- » It will focus on capacity building and space economic hubs and incubators in India.
- ISpA will act as an independent and **"single-window" agency** for enabling the opening up of the space sector to start-ups and the private sector.

Significance of ISpA:

- In the recent past, Globally private sector companies such as Elon Musk's SpaceX, Richard Branson's Virgin Galactic, and Jeff Bezos' Blue Origin have taken the lead in spaceflight, promising to start tourist flights to space.

- The formation of **ISpA** will pave the way for participation of Indian private companies in space exploration.

News Source: The Indian Express

MOSQUIRIX: FIRST MALARIA VACCINE

Why in News?

- Recently, Mosquirix, the first malaria vaccine was recommended by the World Health Organisation (WHO).
- The recommendation is based on the results from an ongoing malaria vaccine pilot programme in three African nations: Ghana, Kenya and Malawi.

Mosquirix Vaccine:

- The Mosquirix vaccine or RTS,S or has been **developed by** British drugmaker **Glaxo SmithKline**.
- It **acts against P. falciparum**, the most deadly malaria parasite globally.
 - » P. falciparum is the most prevalent in Africa.
- It is the **first vaccine against malaria**, which has completed the clinical development process and received a positive scientific opinion from the regulatory body European Medicines Agency.
- The active substance in Mosquirix is made up of proteins found on the surface of the Plasmodium falciparum parasite.
 - » When a child is given the vaccine, the immune system recognises the proteins from the parasite and virus as 'foreign' and makes antibodies against them.
- **Efficacy:** Among children who received 4 doses in large scale clinical trials, the vaccine was able to prevent approximately 4 in 10 cases of malaria over a 4-year period.

About Malaria:

- Plasmodium, a tiny protozoan, is responsible for Malaria. Different species of Plasmodium (P. vivax, P. malaria and P. falciparum) are responsible for different types of malaria.
 - » Of these, malignant malaria caused by Plasmodium falciparum is the most serious one.
- Plasmodium enters the human body as **sporozoites (infectious form)** through the bite of infected female Anopheles mosquito and initiates infection.
- In 2019, there were an estimated **229 million cases**

of malaria worldwide.

- As per WHO, in 2019 India had an estimated 5.6 million cases of malaria compared to about 20 million cases in 2000.

WHO Certification of Malaria Elimination:

- Countries that have achieved at least 3 consecutive years of zero indigenous cases of malaria are eligible to apply for the WHO certification of malaria elimination.
- **Malaria Free Countries:** United Arab Emirates, Morocco, Turkmenistan, Armenia, Sri Lanka

News Source: The Indian Express

NEBRA SKY DISC

Why in News?

- The Nebra Sky Disc will be displayed at the Stonehenge exhibition of the British Museum in London.
- It is thought to be the world's oldest concrete depiction of stars.

The Nebra Sky Disc:

- **Discovery:** In 1999, the discovery was made by treasure hunters using a metal detector in Nebra, a town in Germany.
- The Nebra Sky Disc has been **associated with the Unetice culture** that inhabited parts of Europe around 1600 BC.
 - » The **Unetice culture comprised early Bronze Age communities** in central Europe including in Bohemia, Bavaria, southeastern Germany and western Poland.
 - » **Tin-bronze metallurgy** was one of the distinguishing feature of Unetice Culture.
- The Nebra Sky Disc is **widely believed to be 3,600 years old**, dating from the Bronze Age.
- The Sun and its solstices are also represented with markings on the Nebra disc - and experts believe the Sun was central to northern European Bronze Age religion.
- It **belongs to Germany's State Museum of Prehistory in Halle** but is being loaned to the British Museum.
- **According to Unesco**, the disc gives a unique glimpse into humanity's early knowledge of the heavens.



Image Source: World History Encyclopedia

Ambiguity over its Origin:

- The date of origin of the disc has been called into question by some archaeologists.
- For instance, in the German journal *Archäologische Informationen*, archaeologists claimed that the disc is at least 1,000 years younger than thought, which means it is from the Iron Age and not the Bronze Age.
- However, the State Museum for Prehistory in Germany subsequently disputed these findings saying that it was out of question for the disc to be from the Iron Age.

News Source: The Indian Express

DARK ENERGY

Why in News?

- Recently, an international team of researchers made the first direct detection of dark energy through certain unexpected results in the XENON1T experiment.
- » They write that dark energy may be responsible for

unexpected results.

XENON1T Experiment:

- XENON1T was operated deep underground at the INFN Laboratori Nazionali del Gran Sasso in Italy, from 2016 to 2018.
- It was **primarily designed to detect dark matter**, which makes up 85% of the matter in the universe.
- So far, scientists have only observed indirect evidence of dark matter, and a definitive, direct detection is yet to be made.

What is Dark Energy?

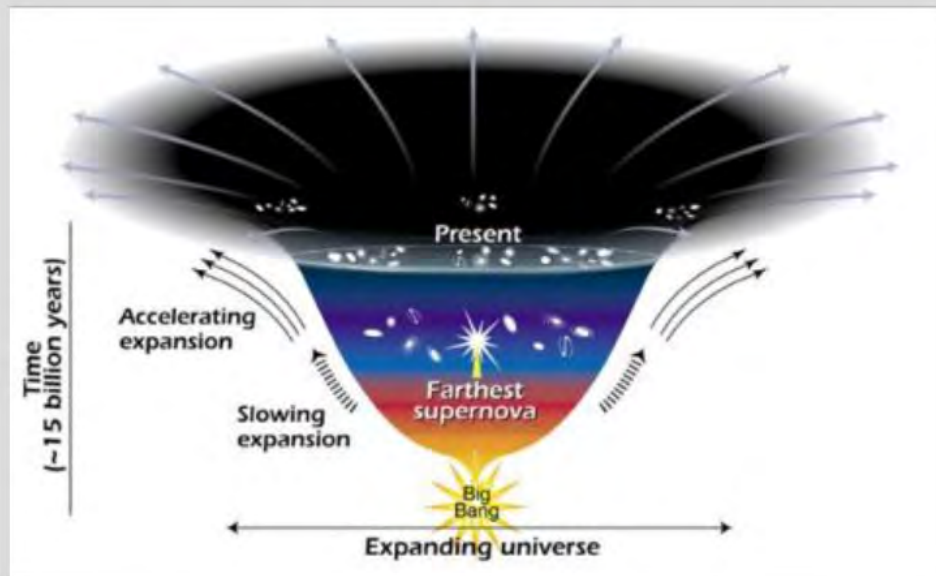
- Dark energy makes up approximately 68% of the universe and appears to be associated with the vacuum in space.
- It is distributed evenly throughout the universe, not only in space but also in time – in other words, its effect is not diluted as the universe expands.
- The even distribution means that dark energy does not have any local gravitational effects, but rather a global effect on the universe as a whole.
- This leads to a repulsive force, which tends to accelerate the expansion of the universe.

Dark energy Vs Dark matter

- In Our Universe, **about 27% is dark matter and 68% is dark energy**. While dark matter attracts and holds galaxies together, dark energy repels and causes the expansion of our universe.
- Despite both components being invisible, we know a lot more about dark matter, since its existence was suggested as early as the 1920s, while dark energy wasn't discovered until 1998.

Some Other Dark Matter & Energy Experiments:

- **LUX-Zeplin** – a next generation dark matter experiment located at the Sanford Underground Research Facility.
- **PandaX-xT** – another project at China Jinping Underground Laboratory could help directly detect dark energy within the next decade.



Universe Dark Energy-1 Expanding Universe

Image Source: NASA

News Source: The Indian Express

LANDSAT9

Why in News?

- Recently, Landsat 9 satellite was launched by NASA from Vandenberg Space Force Base in California, USA.

Landsat 9 Satellite:

- Landsat 9, is a joint mission of NASA and the US Geological Survey (USGS).
- The Landsat 9 joins Landsat 8 that was launched in 2013 and the satellites together will collect images of Earth's surface.
- » It takes 8 days to capture the whole Earth.
- It is the most technologically advanced satellite of its generation.
- It can see more colour shades with greater depths than the previous satellites, helping scientists capture more details about our ever-changing planet.
- The instruments aboard Landsat 9 are the Operational Land Imager 2 (OLI-2) and the Thermal Infrared Sensor 2 (TIRS-2).
- » They measure different wavelengths of light reflected off the Earth's surface.

Applications:

- Landsat images have been used to study the health

of forests, coral reefs, monitor water quality and melting glaciers.

- Landsat 9 will provide data that can help make science-based decisions on key issues such as impacts of wildfire, coral reef degradation, the retreat of glaciers, and deforestation.
- Landsat satellites have collected images of our planet and helped understand how land usage has changed over the decades.

News Source: The Indian Express

INTERMEDIATE-MASS BLACK HOLES

Why in News?

- Recently scientists from **Chennai Mathematical Institute**, with their collaborators have analysed data from the LIGO-VIRGO observatories.
- It estimated the fraction of the binary black hole mergers detected so far that show potential to form intermediate-mass black holes.
- This throws light on the puzzle of how intermediate-mass black holes form.

Key Points:

About Black Holes:

- Black holes form when a massive star undergoes a

supernova explosion towards the end of its lifetime. Black hole forms from the remnants of the explosion.

- A black hole is a place in space where gravity pulls so much that even light cannot get out. Gravity is so strong because matter has been squeezed into a tiny space.
- On the basis of size, black holes can be divided into :
 - » **Tiny black holes** (as small as just one atom),
 - » **Stellar-mass black holes** (a few times sun's mass) and
 - » **Supermassive black holes** (many millions of times Sun's mass).
- Researchers have also identified an **Intermediate Mass Black Hole (IMBH)** somewhere between stellar and supermassive.
- However, there are factors that place limits on the mass of a black hole so formed.
 - » IMBH are unlikely to be produced By standard evolution. However several such black holes have been detected.
- The two detectors of the laser interferometer gravitational-wave observatory(LIGO) made the first observation of a pair of binary black holes on september 19, 2014.

Kicks in Merger:

- During the mergers, gravitational waves take away energy and linear momentum, as a reaction, the remnant black hole acquires an opposite momentum. This is the kick it receives.
- They studied kicks (opposite momentum acquired by remnant black hole) during merger, the kick estimates helped in understanding which black holes have possibility of forming into IMBH.

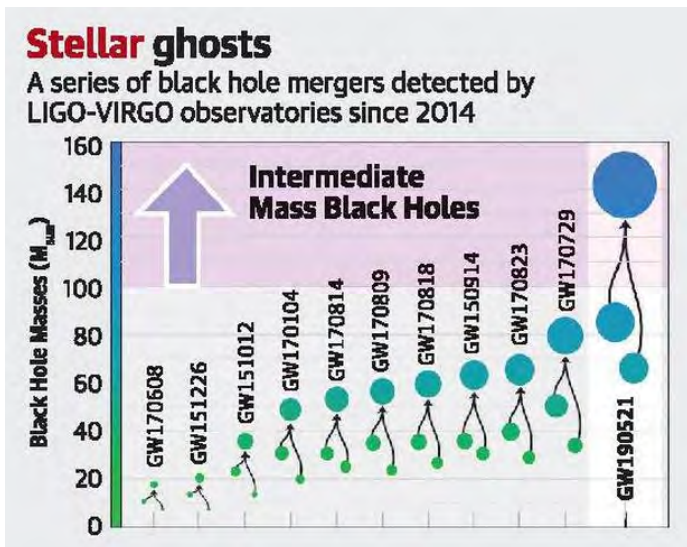


image source : the Hindu

QUANTUM KEY DISTRIBUTION

Why in News?

- Recently, the government has inaugurated C-DOT's (Centre for Development of Telematics) Quantum Communication Lab and unveiled the indigenously developed Quantum Key Distribution (QKD) solution.

Key Points:

- The development of indigenous QKD solutions will address the threat that rapid advancement in Quantum Computing poses to the security of data being transported by various critical sectors through current communication networks.
 - » QKD solution by C-DOT can support a distance of more than 100 kilometres on standard optical fiber.
- Quantum Computing is focused on developing computer technology based on quantum theory principles, which explains nature and behaviour of energy and matter on the quantum (atomic and subatomic) level.
 - » Rather than storing information using bits represented by 0's or 1's as conventional computers do, quantum computers use quantum bits, or qubits, to encode information as 0's, 1's, or both at the same time.
 - » They function according to two key principles of quantum physics.
 - Superposition means that each qubit can represent both 1 and 0 at the same time.
 - Entanglement means that qubits in a superposition can be correlated with each other; i.e., state of one (whether it is a 1 or a 0) can depend on state of another.
- Quantum Technologies can broadly be divided into following verticals viz. Quantum computing, quantum communications, quantum sensors and quantum Materials.

Some other initiatives taken in India:

- **National Mission on Quantum Technologies and Application:** Budget 2020 allocated Rs 8000 crore to the mission for a period of five years.
- **Quantum Communication Lab** was inaugurated at C-DOT, Delhi.
- **Quantum Frontier mission by Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIC).**

NEW GENE-EDITING TECHNIQUE

Why in News?

- A **research coalition** under the Indian Council of Agricultural Research (ICAR) is **using gene-editing techniques to develop rice** varieties which are drought-tolerant, salinity-tolerant and high-yielding.
- However, **draft guidelines for such gene-editing techniques have been stuck** with genetic engineering appraisal committee (GEAC) for almost two years.

Key points:

- Genome (or gene) editing is a **way of making specific changes to the DNA of a cell or organism**. This allows genetic material to be added, removed, or altered at particular locations in the genome.
- » Unlike the older Genetically Modified (GM) technology which involves the introduction of foreign DNA, gene editing tools directly tweak the plants' own gene instead.
- » A genome is an **organism's complete set of DNA**. it includes all chromosomes, which houses DNA, and genes.
- **By editing the genome, the characteristics of a cell or an organism can be changed.**
- » Techniques used for gene editing include **CRISPR-Cas9, ZFNs (zinc-finger nucleases), TALENs (Transcription activators-like effector nucleases)**.
- **Applications of genome editing:**
- » **In agriculture** to improve **crop yields, resistance to disease and drought** etc.
- » Potential **to treat various infections** and genetic conditions.
- » **Research work** by enhanced understanding of biology of organisms

About GEAC:

- In India, the Genetic Engineering Appraisal Committee (GEAC) is the apex body that allows for the commercial release of GM crops.
- It functions under the Ministry of Environment, forest and climate change
- In 2002, the GEAC had allowed the commercial release of Bt cotton. More than 95 per cent of the country's cotton area has since then come under Bt cotton

Penal provisions: Use of the unapproved GM variant can attract a jail term of 5 years and fine of ₹1 lakh under the Environmental Protection Act, 1986.

Source: the hindu

STATE-OF-THE-ART HELI-BORNE SURVEY TECHNOLOGY

Why in News?

- The **Ministry of Jal Shakti** has recently launched a Heli-Borne Survey Technology for water management in **arid regions of Rajasthan**.

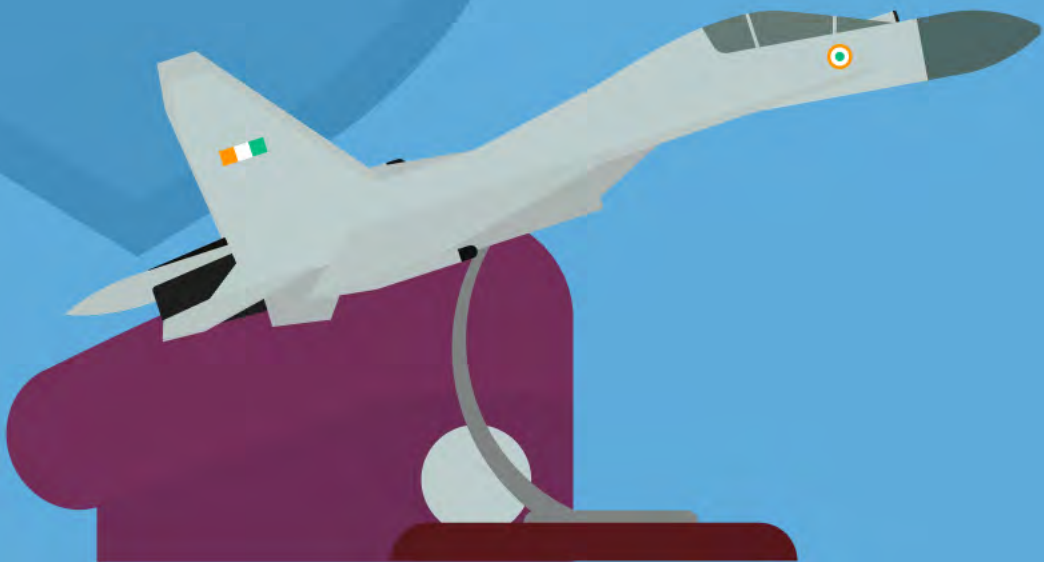
About:

- The latest state-of-the-art technology is being developed by **Council of Scientific & Industrial Research (CSIR)-national geophysical research institute (NGRI)** for mapping groundwater sources in arid regions and thus help to utilize groundwater for drinking purposes.
- » The **NGRI is a geoscientific research organization** established in **1961** under the CSIR.
- The Heli-borne geophysical mapping technique of CSIR-NGRI **provides a high resolution 3D image** of the sub-surface up to a **depth of 500 meters** below the ground.
- It is to be **implemented** in collaboration with the **Ministry of Jal Shakti** as a part of **National Aquifer Mapping Project**.

Significance:

- The Ministry of Jal Shakti is trying to use this technology for providing ground water solutions in the **arid and semi-arid regions of Rajasthan, Gujarat, Punjab and Haryana** states and signed a Memorandum of Agreement with CSIR-NGRI for executing a very important project "**High Resolution Aquifer Mapping & Management in Arid Regions of North Western India**".
- » Arid areas of north western India spread over parts of states of Rajasthan, Gujarat, Haryana and Punjab cover nearly **12 % of the total geographical area** of the country.
- » These areas receive an **annual rainfall of less than 100 to 400 mm** and faces **acute shortage of water** throughout the year.
- The water technologies of CSIR from source finding to water treatment will benefit millions of people across the country and positively contribute to "**Har Ghar Nal Se Jal**" as well as "**doubling farmers income**" goals.

Source: PIB



Internal Security & Defence

AKASH PRIME

Why in News?

- Recently, the Defence Research and Development Organisation (DRDO), successfully tested a new version of the Akash Missile – ‘Akash Prime’ from Integrated Test Range (ITR), Chandipur, Odisha.

Akash Prime:

- Akash Prime is a **medium-range mobile surface-to-air missile (SAM)** system developed by the DRDO and produced by Bharat Dynamics Limited (BDL).
- It is equipped with an **indigenous active Radio Frequency (RF)** seeker which enables it to hit aerial targets with accuracy.
- Akash Prime is **reliable under low temperature environments** in high altitude operational areas such as the northern and northeastern frontiers.



Image Source: Economic Times

Significance:

- The launch of Akash Prime is significant as it marks a step ahead in India's much-focused Atma Nirbhar Bharat mission, which lays a special **emphasis on self-reliance in defence.**
- It will boost the confidence of the Indian Army and Indian Air Force as the Akash system is already

inducted and now getting improved with more lethal missiles.

Akash Missile System:

- Named after the original Sanskrit term for 'sky or space', Akash is primarily a Short Range Surface to Air Missile.
- The Akash weapon system can simultaneously engage multiple targets in group mode or autonomous mode.
- It was developed to replace the Russian 2K12 Kub (SA-6 Gainful) missile system, currently in service.
- It has **built-in Electronic Counter-Counter Measures (ECCM) features**, which means that it has mechanisms on-board that can counter the electronic systems that deceive the detection systems.
- A full Akash missile system comprises a launcher, set of missiles, a control centre, an built-in mission guidance system and a C4I (command, control communication and intelligence) centres and supporting ground equipment along with a radar named Rajendra which accompanies each of the missile batteries.
- According to the Ministry of Defence, the Akash Missile system is 96 per cent indigenised.
- The Akash missiles have been developed by DRDO's Defence Research and Development Laboratory (DRDL), Hyderabad under the Missiles and Strategic Systems (MSS).

News Source: The Indian Express

AIR SPACE MAP OF INDIA

Why in News?

- Recently, the Ministry of Civil Aviation has launched an airspace map of India for drone operations.
- This map has been **developed** by **MapMyIndia** and IT services firm **Happiest Minds.**



Image Source: Map My India

Airspace Map of India:

- The drone airspace map is an **interactive map of India** that demarcates the yellow and red zones across the country.
- **Green zone** is the **airspace upto 400 feet** that has not been designated as a red or yellow zone; and upto 200 feet above the area located between 8-12 km from the perimeter of an operational airport.
 - » In green zones, no permission whatsoever is required for operating drones with an all-up weight up to 500 kg.
- **Yellow zone** is the **airspace above 400 feet** in a designated green zone; above 200 feet in the area located between 8-12 km from the perimeter of an operational airport and above ground in the area located between 5-8 km from the perimeter of an operational airport.
 - » Drone operations in the yellow zone require permission from the concerned air traffic control authority – AAI, IAF, Navy, HAL etc. as the case may be.
 - » Yellow zone has been reduced from 45 km earlier to 12 km from the airport perimeter.
- **Red zone** is the '**no-drone zone**' within which drones can be operated only after a permission from the Central Government.
- The airspace map may be modified by authorised entities from time to time.

- Anyone planning to operate a drone should mandatorily check the latest airspace map for any changes in zone boundaries.
- The drone airspace map is **freely available on the digital sky platform** to all without any login requirements.
- The Airspace map of India has been put up on the Directorate General of Civil Aviation's (DGCA) digital sky platform.

Applications of Drones:

- **Agriculture:** The gained data through drones helps regulate crop health, crop treatment, crop scouting, irrigation, and carry out field soil analysis and crop damage assessments. The drone survey helps boost crop yields and minimise time and expenses.
- **Disaster Management:** Drones have been used to create disaster maps and assess damage after events like hurricanes and earthquakes.
- **Health Sector:** Unmanned Aerial Vehicles are an excellent way to modernise the last mile in medical deliveries and bridge gaps in access. Drones can provide just-in-time resupplies of key medical items, regardless of location.

Digital Sky Platform:

- DigitalSky is a **Ministry of Civil Aviation initiative**, a highly secure and scalable platform which supports technology frameworks such as **NPNT**

(No permission no take-off) designed for enabling flight permission digitally and managing Unmanned Aircraft operations and traffic efficiently.

News Source: Press Information Bureau

LEFT WING EXTREMISM

Why in News?

- Recently, the Ministry of Home Affairs (MHA) has released a data which notice a sharp reduction in areas affected by Left Wing Terrorism (LWE).

Key Points:

- The geographical influence of Maoists has contracted to only 41 districts in the country, a sharp reduction from 96 such districts in 10 States in 2010.
- There has been a **gradual decline in the number of LWE incidents** in the last decade. The incidents have reduced from 2,258 in 2009 to 349 incidents till August 31, 2021.
- » The number of deaths reduced from 908 to 110 during the same period.

Origin of Naxalism:

- The term '**Naxal**' derives its name from a village called **Naxalbari** in West Bengal where the movement had its origin.
- **Political Ideology:** The Naxals are considered far left radical communists who support Maoist political ideology.
- **Origin:** The Naxalbari movement was launched by Charu Mazumdar, Kanu Sanyal and Jangal Santhal in the summer of 1967.
- » They attacked the police in Naxalbari village in north Bengal after a farmer was killed over a land dispute.
- In 1965, Charu Majumdar came out with his historic '**Eight Documents**' which advocated following the example of Mao Zedong's China and taking up an armed struggle against the state.
- The Naxalite movement took shape after some members of the Communist Party of India (Marxist) split to form the Communist Party of India (Marxist-Leninist), after the former agreed to participate in elections and form a coalition government in West Bengal.
- **Affected Regions:** Jharkhand, Chhattisgarh, Madhya Pradesh, eastern Maharashtra, Telangana and western Orissa.

Government of India Approach to tackle LWE:

- **National Policy and Action Plan (2015):** It consists of a multi-pronged approach comprising security measures, development initiatives and ensuring rights & entitlements of local communities.
- Funds for development are also provided to most LWE affected districts under the **Special Central Assistance (SCA) scheme**.
- **Civic Action Programme (CAP):** CAP in LWE affected areas is being implemented since 2010-11 to bridge the gaps between Security Forces and local people through personal interaction and bring the human face of Security Forces before the local population.
- **Aspirational District:** The Ministry of Home Affairs has been tasked with the monitoring of Aspirational districts programme in 35 LWE affected districts.

Maoism

- **Maoism** originated in China as a form of Communist theory derived from the teachings of the Chinese political leader Mao Zedong.
- It emphasised the advancement of people's social and economic life by establishing a classless society through armed revolution.
- Naxalism is actually based on the principles of Maoism to achieve a similar transformation in India.

News Source: The Hindu

ENHANCED POWERS OF BORDER SECURITY FORCE

Why in News?

- The Union Home Ministry **through a notification has enhanced the powers of the Border Security Force (BSF)** to "arrest, search and seize" within 50 km from the international boundary in Assam, West Bengal and Punjab.

About the Notification:

- The notification replaces a 2014 order under the BSF Act, 1968, which also empowers the force to conduct counter-insurgency operations in Manipur, Mizoram, Tripura, Nagaland and Meghalaya.
- It specifically mentions the two newly created Union Territories-J&K and Ladakh.
- In Gujarat, the limit was reduced from the existing 80 km to 50 km. In Rajasthan, the 50-km limit remains unchanged.

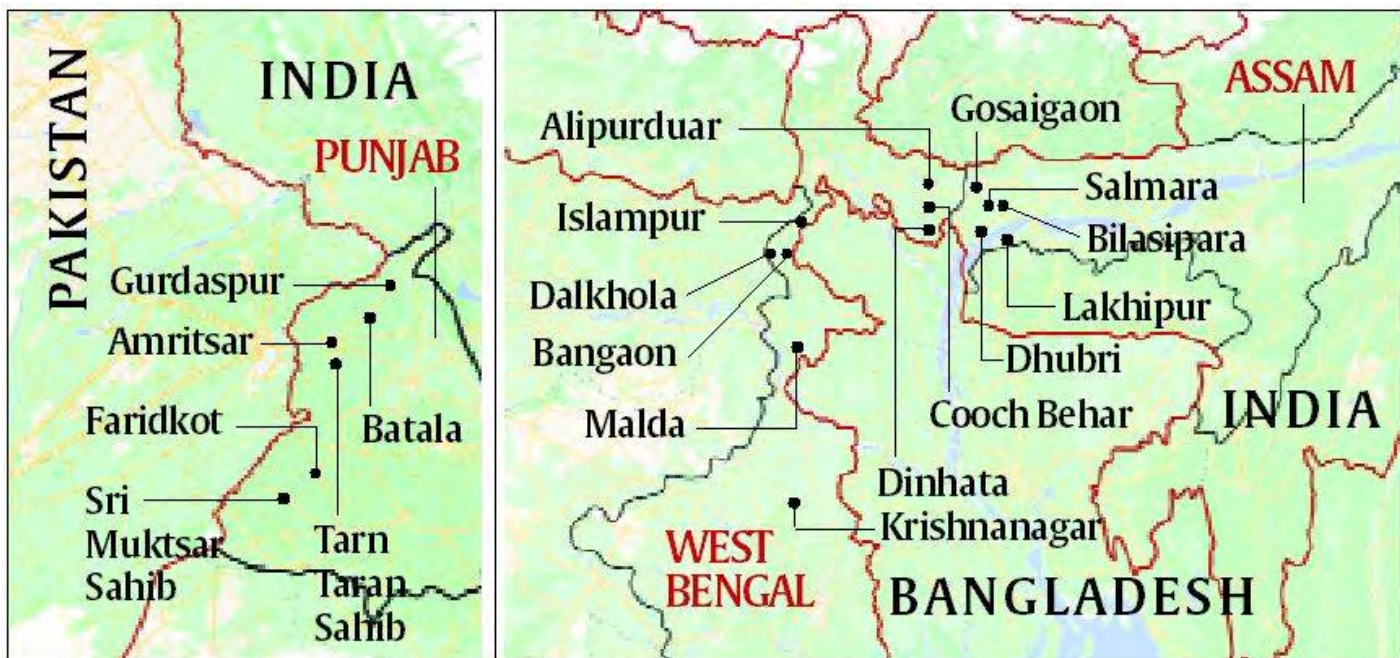


Image Source: The Indian Express

Jurisdiction of BSF:

- The violations against which the BSF carries out search and seizure include smuggling of **narcotics, prohibited items, illegal entry of foreigners** and offences punishable under any other Central Act.
- The MHA has given powers to the BSF personnel in border areas under the Customs Act, the Passport Act, the Narcotics Drugs and Psychotropic Substances Act, the Code of Criminal Procedure (CrPC) etc.
- **The BSF does not have police powers.**
- » After apprehending a suspect it can only conduct “preliminary questioning” and has to hand over a seized consignment or the suspect to the local police within 24 hours.
- It does not have powers to prosecute crime suspects.

Need of Enhancing jurisdiction of BSF:

- The operational writ of the BSF was different in different border States, this amendment establishes uniformity in defining the area within which the BSF can operate.
- The amendment also **improves operational effectiveness of BSF** in curbing trans-border crimes.
- It was necessary due to increasing instances of drones dropping weapons and drugs in Jammu and Kashmir and Punjab.

Criticism:

- The move to enhance the jurisdiction of BSF has been criticised by the Punjab and West Bengal governments, which have called it an **attack on**

the federal structure and an attempt to curtail the rights of the state police.

News Source: The Hindu

THE ARMY AVIATION CORPS

Why in News?

- Recently, the Army Aviation has got control of the **Heron-I Unmanned Aerial Vehicles (UAV)** from Artillery in the Eastern sector.
- This move will bring all aviation assets under one roof and augment its ability to keep an eye on Chinese activities across the border.

Army Aviation Corps (AAC):

- The Army Aviation Corps was raised as a separate formation on **November 1 in 1986.**
- **Composition:** The AAC draws its officers and men from all arms of the Army, including a significant number from the artillery.
- The AAC currently operates with following helicopters- Chetak, Cheetah, Lancer, Dhruv.
- » The main roles played by the AAC choppers are that of reconnaissance, observation, casualty evacuation, essential load drops, combat search and rescue, thus adding an invaluable air dimension to the Army’s capabilities.
- In October 2020, AAC were honored with the **‘President’s Colours’** for their excellence and as recognition of contribution both during war and

peace.

- While initially, AAC operated non-weaponized helicopters and attack helicopters were only with the Air Force, post 2012, the government has allowed induction of weaponised choppers in the AAC.
- **Battle Participation:** Immediately after raising, the units of the Army Aviation Corps were pressed into action in **Operation Pawan** by the Indian Peacekeeping Forces, **in Sri Lanka** against the Tamil Tigers.

News Source: The Hindu

SEVEN NEW DEFENCE PUBLIC SECTOR UNITS (DPSUS)

Why in News?

- Recently the Prime Minister of India formally launched **7 new DPSUs**, incorporated after the **dissolution of the Ordnance Factory Board (OFB)**.
- OFB was an umbrella body for the ordnance factories and related institutions and was a subordinate office of the Ministry of Defence (MoD).

Key Points:

- Under the initiative of Atmanirbhar Bharat, the goal is to make India self-reliant on the modern indigenous defence industry.
- The union government formally launched seven new defence public sector undertakings (DPSU), incorporated after the dissolution of the ordnance factory board (OFB) and amalgamated 41 factories to manufacture defence hardware ranging from munitions to heavy weapons and vehicles.
- » These new companies are headquartered in five cities.
- Defence exports have increased by 325% in the last five years.

Challenges with the OFB:

- The Concerns have been raised about high costs, inconsistent quality and delay in supply;ly of OFB products by the armed forces.”

Significance:

- The new structure will help overcome these various challenges in the existing system of OFB and encourage these companies to become competitive and explore new opportunities in the market including exports.

SOURCE: THE HINDU

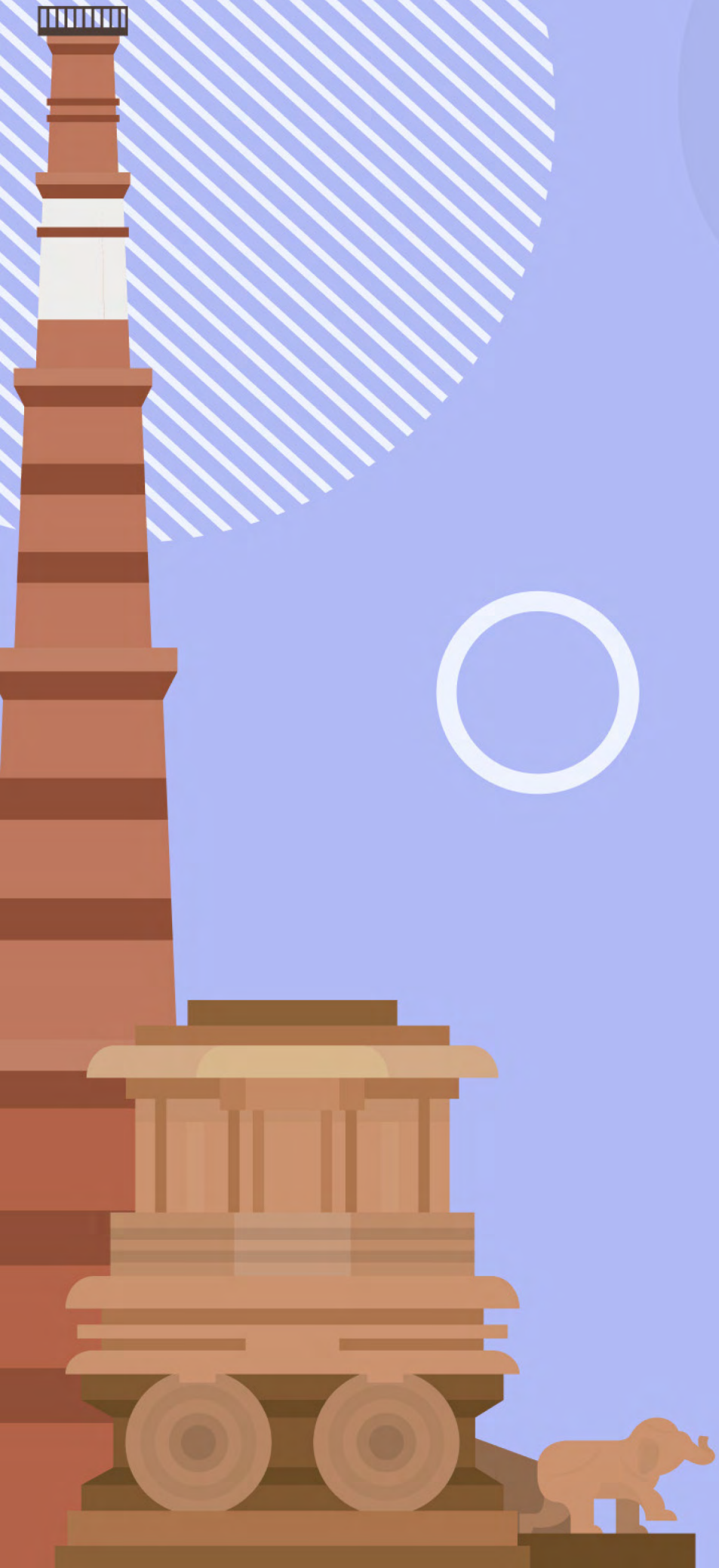
KONKAN SHAKTI EXERCISE

Why in News?

- Indian and UK took part in a bilateral tri-service exercise with the Navy named “**Konkan Shakti 2021**” that commences off the Konkan coast in the **Arabian Sea**.
- The exercise is a part of the U.K’s consistent practice of maritime exercises it has carried out with several other countries like the U.S and Japan in recent years.

About Exercise Konkan Shakti:

- The two forces integrated within their groups with exercises such as replenishment at sea approaches, air direction and strike operations by fighter aircraft (MiG 29Ks and F35Bs), cross control of helicopters (Sea King, Chetak and Wildcat), transiting through war-at-sea scenarios, and gun shoots on expendable air targets.
- It is also aimed at training troops in the conduct of Humanitarian Aid and Disaster Relief Operations by coalition forces in an oppose environment.
- **Other joint exercise between India and UK:**
 - » **Air Force: Indradhanush**
 - » **Military: Ajeya warrior**



History, Culture and Heritage

SHAHEED BHAGAT SINGH

Why in News?

- Recently, the Prime Minister paid tributes to Shaheed Bhagat Singh on his Jayanti.

Key Points:

- Born on **September 28, 1907** in Lyallpur district of the Punjab Province of British India (which now lies in Pakistan).
- **Education:** He was born in a politically active family, where his grandfather did not approve of the Khalsa High School in Lahore and its loyalty to the British government.
 - » As a result, Bhagat Singh did not attend it and was enrolled in an Arya Samaj institution instead.
- He **coined the patriotic slogan 'Inquilab Zindabad'** which means '**long live the revolution**', which later became the freedom movement's calling.
- **Political Vision:** He was heavily **influenced by Marxist ideologies** that fuelled his revolutionary ideas.
- **Views on Religion:** Bhagat Singh considered **religion** to be a **matter of personal belief**. He was fully and consciously secular—two of the six rules drafted by Bhagat for the Punjab Naujawan Bharat Sabha were that its members would have nothing to do with communal bodies and that they would propagate a general feeling of tolerance among people.
- **Views on Revolution:** Bhagat Singh believed that revolution does not necessarily involve sanguinary strife, nor is there a place in it for personal vendetta.
 - » It is not the cult of bomb and pistol. By revolution we mean the present order of things, which is based on manifest injustice, must change.
- **Association with Hindustan Socialist Republican Army:** In 1928, the Hindustan Socialist Republican Army (HSRA) was founded at a meeting in Feroz Shah Kotla ground in Delhi.
 - » Amongst its leaders were Bhagat Singh, Jatin Das and Ajoy Ghosh.
- In April 1929, Bhagat Singh and Batukeswar Dutta threw a bomb in the Legislative Assembly.
 - » The bomb was thrown not with the intention to injure anyone, but for them to be arrested, so they could go public with their cause.
- **On March 23, 1931**, he was **hanged and secretly cremated** on the banks of the Sutlej river by the jail authorities.

News Source: Hindustan Times

NATIONAL MISSION ON CULTURAL MAPPING

Why in News?

- Recently, the National Mission on Cultural Mapping has been handed over to the Indira Gandhi National Centre for the Arts (IGNCA).

National Mission on Cultural Mapping (NMCM):

- The National Mission on Cultural Mapping (NMCM) has been **set up** by the **Ministry of Culture** in 2017.
- Mission will compile data of artists, art forms & geo location with inputs from Central Ministries, State Governments & art/culture bodies.
- The Mission **encompasses data mapping, demography building**, formalising the processes and bringing all cultural activities under one umbrella for better results.
- The work of creating a database for folk arts and mapping of heritage of villages would be carried out over five years.
- Teams of volunteers from the Nehru Yuva Kendra Sanghathan, the National Service Scheme and students of sociology and social work would be deputed to visit villages and collect data on the art forms and heritage of the areas.

Indira Gandhi National Centre for the Arts (IGNCA)

- **IGNCA** was established in 1987 as an **autonomous institution under the Ministry of Culture**, as a centre for research, academic pursuit and dissemination in the field of the arts.
- It aims to complete mapping in 5,000 villages by the end of financial year 2021-2022.

News Source: The Hindu

AZAD HIND GOVERNMENT FORMATION

Why in News?

- Every year on the **21st of October**, the Azad Hind Government celebrates its formation anniversary.
- The Azad Hind Government, India's first independent provisional government, was announced on this day.

Key Points:

About Azad Hind Government:

- Subhash Chandra Bose formed the Provisional Government of Azad Hind (Free India) in Singapore.
- It enabled Bose to negotiate with the Japanese

on equal terms and facilitated the mobilisation of Indians in East Asia to join and support the Indian National Army (INA).

- Shubhash Chandra Bose carried out the struggle for independence from the foreign ground and the outbreak of the Second World War to be a convenient opportunity to strike a blow for the freedom of India.
- He had been put under house arrest in 1940 but he managed to escape to Berlin on March 28, 1941.
- In 1942, following the decision to form the Indian Independence League the Indian National Army (INA) was formed for the liberation of India.
- In 1943 he was made president of the Indian Independence League and the leader of the INA popularly called 'Azad Hind Fauj'.

FUTURE-PROOFING LANGA MANGANIYAR HERITAGE

Why in News?

- Recently, the repository of the Thar region's rich history and traditional knowledge, **the ballads, folklore and songs of the Langa-Manganiyar** artistes are being preserved through an initiative for documentation and digitisation.
- The project is aimed at saving the rapidly disappearing narrative traditions of these communities.
- The initiative was started by the **Archives and Research Centre for Ethnomusicology at the American Institute of Indian Studies (AIIS)**.

Key points:

Location:

- The Langa Manganiyar communities 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**.

Languages:

- The performance are in multiple languages and dialects including **Marwari, Sindhi, Saraiki, Dhatti and Thareli**.

Themes:

- The themes of the communities revolve around legendary lovers such as **Umar-Marvi, Heer-Ranjha, Sohni-Mahiwal, Moomal-Rana and Sorath-Rao Khangar**.
- The folk musicians were also provided with guidance for creating multimedia content of their

performances with the use of smartphones to leverage the social media platforms.

Challenges:

- **Covid -19 pandemic:** The folk artist have been hit hard by Covid-19 pandemic that have stopped their performance in India and abroad.
- **Increased urbanisation:** This vital heritage is also facing a threat from changes in patronage and increased urbanisation in these districts.

Significance:

- The preservation of oral traditions would encourage the local communities in the efforts to nurture an audience and protect the history of the desert region.

Source: thehindu

NIHANGS

Why in News?

- Last year, a group of Nihangs had chopped off the hand of a policeman in Patiala with a sword after he asked them to show 'movement passes' during the Covid lockdown.
- This year, they have again killed a man near Singhu border in New Delhi, allegedly for desecrating a sacred text.

About Nihang:

- Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits.
- **Formation:** Their origin can be traced back to formation of Khalsa by Guru Gobind Singh in 1699.
 - » The word Nihang is mentioned in a hymn in Guru Granth Sahib (Sacred Book of Sikhs) and refers to a fearless and unrestrained person.
- **Membership:** Any person irrespective of caste, creed or religion can be included provided he has unshorn hair as per the Sikh traditions at the time of entering the sect.
- **Characteristics:** They are quite different from other Sikh warriors of Khalsa.
 - » They wear blue dress, same as what Guru Gobind Singh used to wear for battle.
 - » They follow the principles of Khalsa in the strictest sense
 - » They didn't profess allegiance to an earthly master

- » Instead of saffron, they hoist a blue Nishan Sahib (flag) atop their shrines

How were Nihangs different from other Sikhs, and other Sikh warriors?

- Nihangs observe the Khalsa code of conduct in its strictest sense. They do not profess any allegiance to an earthly master. Instead of saffron they hoist a blue Nishan Sahib (flag) atop their shrines.

Role in Sikh history:

- Nihangs had a major role in defending the Sikh Panth after the fall of the first Sikh rule (1710-15) when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-65).
- Nihangs also took control of the religious affairs of the Sikhs at Akal Bunga (now known as Akal Takht) in Amritsar. They did not consider themselves subordinate to any Sikh chief and thus maintained their independent existence.
- Their clout came to an end after the fall of Sikh Empire in 1849 when the British authorities of Punjab appointed a manager (sarbrah) for the administration of the Golden Temple in 1859.

Current Scenario:

- They today constitute a small community. About a dozen bands, each headed by a jathedar (leader), are still carrying on with the traditional order.

Source: indian express

MOUNT MANIPUR AND ANGLO-MANIPUR WAR

Why in News?

- Recently, the Centre has rechristened Mount Harriet, a historical tourist spot in the Andaman and Nicobar islands, as 'Mount Manipur'
- The announcement was made during Home Minister's visit to Port Blair, where he referred to the "significant contribution" the Northeastern state had made in resisting the British, especially during the historic 1891 Anglo-Manipur war.

What is Manipur's connection to Mount Harriet?

- Mount Harriet is the third-highest peak in the A & N Islands where after the Anglo-Manipur War of 1891, several Manipuris who had fought the British in the war, including Maharaja Kulachandra Dhwaja Singh, were exiled to the British penal colony in the Andaman Islands.

- » It has been renamed in a tribute to those freedom fighters of Manipur.

Anglo- Manipur war:

- **Background:** Considered an epoch in the history of Manipur, the Anglo-Manipur War was fought between the kingdom of Manipur and the British over a month in 1891.
- In 1886, when Surchandra inherited the throne from his father Chandrakirti Singh, the kingdom of Manipur was not under British rule but had links with the crown through different treaties.
- However, Surchandra's ascension to the throne was controversial and his younger brothers - Kulachandra, Tikendrajit - revolted against him.
- The 1890 coup by the rebel faction removed Surchandra, and proclaimed Kulachandra, the next oldest brother, the king. Surchandra fled to Calcutta seeking British help to reinstate him.

Aggressive imposition of British law:

- The British **dispatched James Quinton**, the Chief Commissioner of Assam, with an army to Manipur. His mission was to recognise Kulachandra as the king under the condition that they be allowed to arrest the coup leader **Crown Prince Tikendrajit** and deport him from Manipur.
- This aggressive imposition of British law in a sovereign state was rejected by the king, **precipitating the Anglo-Manipuri War of 1891.**

Culmination:

- In the **first phase** of the war, the British surrendered and their officers including Quinton were executed in public.
- In the **second phase**, the British attacked Manipur from three sides, and finally **capture the Kangla Fort in Imphal.**
- Prince Tikendrajit and four others were hanged by the British, while Kulachandra, along with 22 others, were banished to the Andaman Islands.
- Despite their victory, it had led to the death of five important officers. In India, it was viewed as being part of the general uprising against British rule in the country, soon after the Revolt of 1857.
- The **war led to Manipur officially becoming a princely state** under the indirect rule of the British crown.

Source: indian express

KUSHINAGAR INTERNATIONAL AIRPORT

Why In News?

- Recently, the PM has inaugurated the Kushinagar International Airport and it is the latest entrant in India's list of international airports.
- The airport is expected to provide seamless connectivity to people from Southeast Asia countries for Buddhist pilgrimage tourism.

Key points:

- Kushinagar is the centre of the Buddhist circuit, which consists of pilgrimage sites at **Lumbini, Sarnath, Gaya and others.**
- The PM highlighted that India is the centre of the faith of Buddhist society around the world, and he termed the facility of airport as a tribute to their devotion.
- » This region is witness to the entire journey of lord buddha from the enlightenment to Mahaparinirvana.
- There is a special focus on the development of the places associated with Lord Buddha through better connectivity, and the creation of facilities for the devotees.

Significance/ Kushinagar cultural diplomacy:

- **Cultural diplomacy:** In the decade after the civil war, which coincides with China's growing influence in the island nation, India seems keen on recasting its image as a friend and collaborator, using religion and cultural diplomacy.

About Buddhist Circuit:

- The Ministry of Tourism has launched Swadesh

Darshan Scheme in 2014-15 with an aim to develop theme-based tourist circuits on the principles of high tourist value.

- The Buddhist circuit is the root that follows the footsteps of the Buddha from Lumbini in Nepal to Kushinagar in Uttar Pradesh in India.

About Kushinagar:

- Kushinagar is the place where the Buddha attained Mahaparinirvana in 483 BC, and is therefore an international Buddhist pilgrimage centre.
- Kushinagar is one of the poorest districts in Uttar Pradesh in terms of income levels.

About UDAN scheme:

- Ude Desh Ka Aam Naagrik (UDAN) was launched as a regional connectivity scheme under the Ministry of Civil Aviation in 2016.
- It is an innovative scheme to develop the regional aviation market.
- It aims to create affordable yet economically viable and profitable flights on regional routes so that flying becomes affordable to the common man even in small towns.
- The scheme envisages providing connectivity to un-served and underserved airports of the country through the revival of existing airstrips and airports. The scheme is operational for a period of 10 years.

Source: the hindu



Prelims Booster

NOBEL PRIZE

Why in News?

- Recently, **the Nobel Prize for the year 2021** has been awarded in various disciplines i.e. **Physics, Chemistry, Medicine, Literature, Economics and Peace.**

The Nobel Prize for Physics:

- The 2021 **Nobel Prize for Physics** was awarded one half jointly to **Syukuro Manabe and Klaus Hasselmann** and the other half to **Giorgio Parisi.**
- It was **awarded for their groundbreaking contributions to the understanding of complex physical systems.**
- **Syukuro Manabe** and **Klaus Hasselmann** were cited for their work in:
 - » “the physical modeling of Earth’s climate, quantifying variability and reliably predicting global warming”.
- **Giorgio Parisi** was awarded for:
 - » “the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales.”

The Nobel Prize for Chemistry:

- The 2021 Nobel Prize in Chemistry was awarded to **Benjamin List** and **David W C MacMillan.**
- They have been rewarded “**for the development of asymmetric organocatalysis**”.
- **Application of Organocatalysis:**
 - » Organocatalysis finds several applications in pharmaceutical research and other industries.
 - » It has helped streamline the production of existing pharmaceuticals, including paroxetine, used to treat anxiety and depression, and oseltamivir, a respiratory infection medication.

The Nobel Prize for Medicine:

- American scientists **David Julius and Ardem Patapoutian** won **the 2021 Nobel Prize for Medicine.**
- They have been awarded **for discoveries of receptors for temperature and touch** which could pave the way for new pain-killers.
- David Julius and Ardem Patapoutian focused their work on the field of **somatosensation.**
 - » Somatosensation is the ability of specialised organs such as eyes, ears and skin to see, hear and feel.

The Nobel Literature Prize:

- **Tanzanian-born** novelist **Abdulrazak Gurnah,**

whose work focuses on colonialism and the trauma of the refugee experience, **won the Nobel Literature Prize 2021.**

- Abdulrazak Gurnah is **best known for** his 1994 breakthrough **novel Paradise,** set in colonial East Africa during World War I.

The Nobel Peace Prize:

- The 2021 **Nobel Peace prize was awarded to Maria Ressa of the Philippines** and **Dmitry Muratov of Russia.**
- They received the Nobel Peace Prize “for their courageous fight for freedom of expression”.
- **Maria Ressa:**
 - » An investigative journalist, Ressa in 2012 co-founded Rappler, a digital media platform for investigative journalism. This platform has been critical of President Rodrigo Duterte regime’s controversial, murderous anti-drug campaign.
- **Dmitry Muratov:**
 - » His efforts have been recognised for defending the freedom of speech in Russia under increasingly challenging conditions.
 - » He along with around 50 colleagues started Novaja Gazeta in 1993, the only truly critical newspaper with national influence in Russia.

The Nobel Prize for Economic Sciences:

- One half of the 2021 Nobel prize for Economics will go to **David Card,** while the other half will be shared by **Joshua D. Angrist** and **Guido W. Imbens.**
- David Card won the prize for his “**empirical contributions to labour economics,**” while Joshua D. Angrist and Guido W. Imbens were awarded the million-dollar prize for their “**methodological contributions to the analysis of casual relationships.**”
- 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.

Nobel Prize:

- The prestigious award comes with a gold medal and 10 million Swedish kronor (over \$1.14 million).
- The prize money comes from a bequest left by the prize’s creator, Swedish inventor Alfred Nobel, who died in 1895.

News Source: The Hindu

HENLEY PASSPORT INDEX 2021

Why in News?

- In the latest edition of Henley Passport Index, **India** has been **ranked** at **90th Position**.

International Rankings:

- **Japan** and **Singapore** stood at the **top of this year's list**, with their passport holders allowed to travel visa-free to 192 countries.
- » For the third consecutive year, Japan has secured the top position.
- **South Korea** and **Germany** share the second position in the index.
- **Finland, Italy, Luxembourg,** and **Spain** are **third** on the list while **Austria** and **Denmark** are on the **fourth position**.
- **Least Powerful Passports:** Meanwhile, the passports of Afghanistan, Iraq, Syria, Pakistan, and Yemen are among the least powerful.

Henley Passport Index:

- Henley Passport Index is **prepared by Henley and Partners, a global citizenship and residence advisory firm based in London**.
- It measures the world's most travel-friendly passports each year.
- The index ranks the passports of countries according to the number of destinations their holders can visit without a prior visa.
- The rankings are based on the analysis of data provided by the International Air Transport Association (IATA).
- The index covers 227 destinations and 199 passports.

News Source: The Indian Express

EXERCISE AJEYA WARRIOR

Why in News?

- Recently, the 6th Edition of **India - UK Joint Company Level Military Training EXERCISE AJEYA WARRIOR** was held in Uttarakhand.

Key Points:

- The exercise is **part of an initiative to develop interoperability** and sharing expertise with friendly foreign nations.
- **Participation:** An Infantry Company from the Indian Army and an equivalent strength from UK Army participated which shared their experiences gained

during the conduct of various military operations in their respective countries and during overseas engagements.

- **Significance:** This joint military training will go a long way in **improving bilateral relations** and also will be a major step towards further **strengthening the traditional bond of friendship** between the two Nations.

Other Major Defence Exercises: India - U.K.

- Konkan (Navy)
- Indradhanush (Air Force)

News Source: Press Information Bureau

LUKHA RIVER: MEGHALAYA

Why in News?

- The Meghalaya government has claimed that a detoxing pilot project has brought the Lukha river back from the dead.

Key Points:

- The Lukha – **“reservoir of fish”** in the local Pnar language was considered toxic beyond redemption a decade ago.
- The Meghalaya Pollution Control Board had in its 2012 investigative report blamed the contamination on acid mine drainage and run-off from the coal mines.
- The pilot project to detoxify was undertaken under the District Mineral Fund after reports of low pH levels affecting the aquatic life in the river.
- The **detoxification process** of the Lukha river was carried out through **phycoremediation**.
- » Phycoremediation technique uses algae to remove toxic contents from the water which improves the PH of water.

The Lukha River:

- The Lukha river, draining the southern part of East Jaintia Hills, is fed by the Lunar river, its main tributary and numerous streams from the hills of the Narpuh Reserve Forest.
- Later, it flows into Bangladesh via Assam's Barak Valley.
- It is located in that region of Megalhya where most of the rat-hole coal mines are located.

News Source: The Indian Express

ABQUL QADIR KHAN

Why in News?

- Abdul Qadir Khan, a controversial scientist known as the **father of Pakistan's clandestine nuclear programme**, passed away.

About Abdul Qadir Khan:

- He is **eulogised as the man who single-handedly ensured that Pakistan succeeded in making nuclear weapons**, and in this significant respect, made Pakistan an equal of India.
- Pakistan honored him with the titles of **Nishan-e-Imtiaz (Order of Excellence, Pakistan's highest civilian honour)** and **Mohsin-e-Pakistan (Benefactor of Pakistan)**.
- He **played a vital role in providing the first blueprints for Pakistan's centrifuges**, setting it on the path to uranium enrichment.
- He worked in Holland in a uranium enrichment facility as a German-Dutch translator.
- » The Dutch facility suspected him of stealing blueprints for making centrifuges. Later, He was convicted by a Dutch court for the theft.
- In 1976, he **joined Pakistan Atomic Energy Commission's nuclear weapons** effort.
- He **remained under house arrest** for his act of smuggling of nuclear secrets to Libya, Iran and North- Korea.

News Source: The Indian Express

YUDH ABHYAS 2021

Why in News?

- Recently, the Joint Military Training Exercise "Yudh Abhyas 2021" was conducted between India and USA in Alaska, USA.

Yudh Abhyas 2021

- Yudh Abhyas is primarily aimed at sharing tactical level drills and learning best practices from each other.
- The exercise aims at enhancing understanding, cooperation and interoperability between two Armies.
- It focusses on Combined Arms Manoeuvres in cold climatic conditions.

India's Major Military Exercises:

- Maitree** Exercise with Thailand
- Shakti** with France
- INDRA** with Russia
- KAZIND** with Kazakhstan
- DUSTLIK** with Uzbekistan
- Malabar** with Australia, India, Japan and US

News Source: Press Information Bureau

SHANTI SWARUP BHATNAGAR PRIZE

Why in News?

- The winners of the Shanti Swarup Bhatnagar Prize (SSB prize) were announced on 26 September i.e CSIR Foundation Day.

About: Shanti Swarup Bhatnagar Prize

- The award is named after the founder Director of the Council of Scientific & Industrial Research (CSIR) India, the late Dr. Shanti Swarup Bhatnagar.
- The purpose of the award is **to recognise outstanding Indian work in science and technology**.
- SSB Prizes, each of the value of **Rs 5,00,000 (Rupees five lakh only)**, are awarded annually for notable and outstanding research, applied or fundamental, in the following disciplines:
 - » Biological Sciences, Chemical Sciences, Earth, Atmosphere Ocean and Planetary Sciences.
 - » Engineering Sciences, Mathematical Sciences, Medical Sciences and Physical Sciences
- The winners for the year 2021 are:**
 - » **Biological Sciences:** Dr Amit Singh and Dr Arun Kumar Shukla
 - » **Chemical Sciences:** Dr Kanishka Biswas and Dr T Govindaraju
 - » **Earth, Atmosphere, Ocean and Planetary Sciences:** Dr Binoy Kumar Saikia,
 - » **Engineering Sciences:** Dr Debdeep Mukhopadhyay
 - » **Mathematical Sciences:** Dr Anish Ghosh and Dr Saket Saurabh
 - » **Medical Sciences:** Dr Jeemon Panniyammakal and Dr Rohit Srivastava
 - » **Physical Sciences:** Dr Kanak Saha

News Source: The Hindu

THE EARTH SHOT PRIZE 2021

Why in News?

- Recently, the inaugural edition of The Earth Shot Prize 2021 was won by Vidyut Mohan.
- He won the award for creating fuel from agricultural waste.

The Earth Shot Prize 2021:

- **The Earth Shot Prize** was inspired by US president John F. Kennedy's "**Moonshot**" project in the 1960s to put a man on the moon.
- Dubbed as the "Eco Oscar", the Earthshot Prize is an **award set up by Prince William and the Royal Foundation**, the charity founded by the Duke and Duchess of Cambridge, and historian David Attenborough.
- Established in 2020, 2021 was the first year when awards were handed out to finalists for their contributions towards the five UN Sustainable Development Goals:
 - » restoration and protection of nature
 - » air cleanliness
 - » ocean revival
 - » waste-free living
 - » climate action
- The Earthshot Prize aims to encourage and support the development of solutions for Earth's environmental problems.
- Each year five winners will be selected, one for each of the UN SDG goal categories, with a total of 50 million euros being awarded by 2030.
- The winners are chosen from 15 finalists, three for each category, by the Earthshot Prize Council.

News Source: The Hindu

ALLIUM NEGIANIUM

Why in News?

- Recently, a plant named Allium negianum has been discovered from Chamoli District of Uttarakhand.
- The newly discovered plant belongs to the genus Allium which includes many staple foods such as onion and garlic, among 1,100 species worldwide.

Allium negianum:

- Allium is one of the **largest genera in Amaryllidaceae**, a family of herbaceous, mainly perennial and bulbous flowering plants.
- The scientific name Allium negianum honours the late

Dr Kuldeep Singh Negi, an explorer and Allium collector.

- It grows at 3,000 to 4,800 m above sea level and can be found along open grassy meadows, sandy soils along rivers, and streams forming in snow pasture lands along alpine meadows.
- Its distribution is restricted to the region of the western Himalaya.
- Indian Himalayan region has two distinct centers of Allium diversity, the western Himalaya (over 85% of total diversity) and the eastern Himalaya (6%), covering the alpine-sub temperate region.
- **Threats:** Indiscriminate harvesting of its leaves and bulbs for seasoning may pose a threat to its wild populations.

News Source: The Indian Express

AADHAR HACKATHON 2021

Why in News?

- The **Unique Identification Authority of India (UIDAI)** is hosting a Hackathon titled "**Aadhaar Hackathon 2021**" targeted at young innovators between 28 Oct - 31 Oct 2021.

Aadhaar Hackathon 2021:

- Aadhaar Hackathon 2021 is **themed** around two topics:
 - » **Enrolment and Update:** It essentially covers some of the real-life challenges being faced by the residents while updating their address.
 - » **Identity and Authentication:** Under this theme, UIDAI is soliciting innovative solutions to prove Identity without sharing the Aadhaar number or any demographics information.
- The winners of each theme would be rewarded by UIDAI through prize money and other lucrative benefits.

Unique Identification Authority of India (UIDAI):

- UIDAI is a **statutory authority** established under the provisions of the **Aadhaar Act 2016** in 2016 by the Government of India.
- It is under the **aegis of the Ministry of Electronics and Information Technology (MeitY)**.
- UIDAI issues a **12-digit identification number** to the resident of India for free of cost.

Hackathon:

- A hackathon is any event of any duration where people come together to solve problems.

News Source: Press Information Bureau

GEORISSA MAWSMAIENSIS

Why in News?

- Recently, a new micro snail species was found after a gap of 170 years from the Mawsmi limestone cave located in Meghalaya.

Key Points: 'Georissa mawsmiensis'

- **Size:** 'Georissa mawsmiensis' are so small in size that an adult **measures less than 2 millimetres** in length.
- The discovery has been reported in the **Journal of Conchology**.
- » The **researchers involved** in the discovery are **Nipu Kumar Das and NA Aravind** of the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru
- **Habitat:** 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.
- **Geographical Distribution:** The members of the Georissa genus are widely distributed across and reported from Africa, Asia, and the Pacific.

The Mawsmi cave

- **Mawsmi Cave** is situated in **East Khasi Hills district** of Meghalaya.
- The term '**Mawsmi**' means '**Oath Stone**' in the Khasi language. The Khasi people use the local term 'Krem' for the cave.
- Mawsmi cave is located at an altitude of 1,195 metres above sea level and is **indirectly influenced by the streams of the Kynshi river** originating from the East Khasi Hills.

News Source: Down to Earth

SHORTAGE OF DIAMMONIUM PHOSPHATE (DAP)

Why in News?

- Farmers in Haryana have been **facing acute shortage** of di-ammonium phosphate (DAP).

Reasons for DAP Shortage:

- **Disruption in Global Supply Chains:** Pandemic has disrupted the global supply chain of fertilizers that led to the rise in prices at global level.
- » Due to higher global prices, India has cut down its fertilizer imports.

- **Fixed Subsidies** provided by the government to fertilizer companies have not been adequate, as a result these companies have cut down the DAP production.

Diammonium Phosphate

- It is the most popular phosphatic fertiliser because of its high analysis and good physical properties.
- » The composition of DAP is **N-18%** and **P2O5 -46%**.
- DAP fertilizer is an **excellent source of P and nitrogen (N)** for plant nutrition.
- It is highly soluble and thus **dissolves quickly in soil** to release plant-available phosphate and ammonium.
- Besides use in agriculture, DAP is used as a fire retardant.

Importance of DAP during Sowing Season:

- Being a basic nutrient for Rabi crops, the DAP fertiliser has to be sprinkled at the time of sowing crops like mustard and wheat. Any delay in its supply could adversely impact the sowing of crops.

News Source: Indian Express

KAMDHENU DIPAWALI CAMPAIGN 2021

Why in News?

- Recently, the **Kamdheni Deepawali 2021** campaign was launched to manufacture and market **more than 100 crore cow dung based Deepak lamps**.

Key points:

- The purpose of the Kamdheni Deepawali is to make caws to be economically useful by proper economic use of Cow Dung and Cow urine along with its Milk, Curd, Ghee.
- More than 300 items are getting made now by Panchgavya from Cow.
- » The items include Deepak, Lamos, Candles, Sambrani cup, Laxmi Ganesh idols etc.

Significance:

- The Gomaya lamps made by Cow Entrepreneurs and cow owners will save the environment by providing eco-friendly alternatives to top chemical bases Chinese lights.
- **Rashtriya Kamdheni Aayog** provides training along with many Volunteer organizations across India.
- The eco-friendly campaign will also help Gaushalas to become self-sustainable on the lines '**Aatmnirbhar Bharat**', startUp India.

Source: pib

PANDORA PAPERS

Why in News?

- The “Pandora Papers” are the latest in a series of mass International Consortium of Investigative Journalists (ICIJ) leaks of financial documents that started with LuxLeaks in 2014 and was followed by the Panama Papers, the Paradise Papers and FinCen.

Key Points:

- The Pandora Papers is an investigation into the shadowy offshore financial system that reveals the workings of a secret economy that benefits the wealthy and well-connected at the expense of everyone else.
- The “papers” are the more than 11.9 million confidential records obtained by the International Consortium of Investigative Journalists that form the backbone of the investigation.

Why is it called “Pandora” Papers?

- **The project is called as Pandora Papers because the investigation builds upon previous ICIJ led collaborations, the Panama and Paradise Papers; the ancient myth of Pandora’s Box evokes an outpouring of trouble and woe.**

Difference between Pandora and Panama Papers:

- **Size, scale, scope:** The Panama Papers was based on the files of a single offshore services provider, the Pandora Papers records come from 14.

Source: indian express

SILICOSIS

Why in News?

- Recently, countless of workers engaged in mines, construction and factories in India were silently dying of exposure to dust, utmost exploitation and apathy.

Key Points:

- Rajasthan with the top-most share of over 17% in value of mineral production in the country, was the first to notify silicosis as an epidemic in 2015, under the Rajasthan epidemic Disease act 1957.

About Silicosis:

- Silicosis is part of the pneumoconiosis family of

diseases, described by the policy as “occupational disease due to dust exposure are incurable, cause permanent disability.

- A disability portal was hosted by the Department of Social Justice and empowerment.
- In the last two years, the state has officially certified and compensated over 25,000 patients of silicosis, out of which 5,500 have already died of disease.

Labour code dilutions:

- Persistent attempt to establish the employer-worker

Measures to prevent silicosis:

- **Preventive annual health checks:** state government could lead the way by establishing a robust system of preventive annual health checks as a real and regular feature of the silicosis prevention plan.
- **Low-cost dust-suppressant and wet-drilling mechanisms:** local manufacturers must be incentivised to innovate and develop low-cost dust-suppressant and wet-drilling mechanisms that could either be subsidised or provided free of cost to the mine owners.

Source: indian express

FLOWER SCORPIONFISH

Why in News?

- Recently, a unique, lesser-known fish species that was till now thought to be found only in the Pacific Ocean has been found in the Indian Ocean too.

Key Points:

- Scientific name: Hoplosebastes Armatus
- The Hoplosebastes Armatus was discovered in the Pacific Ocean off Japan almost a century ago in **1929**.
- The species had not been found in the Indian Ocean. That is till two specimens of Hoplosebastes were collected by scientists from the harbour of Digha in West Bengal’s Purba Medinipur.
- Later on scientists collected 22 other specimens from the waters off Paradip in Odisha.

Structure:

- The length of the species ranged from 75-127 mm, while its body width was from 14-22 mm.
- The head of the species was comparatively large and greater than the body.
- Scorpionfish blend in perfectly with their coral and rocky surroundings because of their mottled color patterns.

Habitat:

- They were previously only found in the **Pacific Ocean**. However, its range now has expanded to include the **Northwest Pacific and the Indian Ocean**.



SOURCE: DOWN TO EARTH

WORLD FOOD DAY

Why in News?

- World Food Day is celebrated every year on October 16 to commemorate the date of the founding of the United Nations Food and Agriculture Organisation in 1945.

Key Points:

- The day is also observed by organisations like World Food Programme and International Fund for Agriculture Development.
- The theme for World Food Day for this year is “Our actions are our future - better production, better nutrition, a better environment and a better life”.

About FAO:

- The **Food and Agriculture Organization (FAO)** is a **specialized agency of the United Nations** that leads international efforts to defeat hunger.

Objective:

- The goal of FAO is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.

Member countries: 194

Source: indian express

BHASKARABDA: A LUNI-SOLAR CALENDAR

Why in News?

- Bhaskarabda, an era counted from the date of the ascension of a 7th-century local ruler, will be added to the Saka and Gregorian in the official calendar of the Assam government.

Key Points:

- Bhaskarabda began when Bhaskaravarman was crowned ruler of the Kamrupa kingdom. He was a contemporary and political ally of northern Indian ruler Harshavardhana.
- The local calendar is counted from the date of the ascension of Bhaskaravarman, the 7th-century ruler of Kamrup and contemporary of Harshavardhana.
- Bhaskarabda began when Bhaskaravarman was crowned ruler of the Kamrupa kingdom. He was a contemporary and political ally of northern Indian ruler Harshavardhana.

Difference between Gregorian and Assamese calendars:

- Unlike the Gregorian calendar, where a day starts at midnight, the Assamese calendar begins and ends at sunrise over 24 hours.
- The Gregorian calendar goes by the solar cycle, the Saka and Bhaskarabda use a lunisolar system based on both the phases of the moon and the solar year.
- The gap between the bhaskarbda and gregorian calendar is 593 years.

Source: indian express

PEOPLE'S PLAN CAMPAIGN

Why in news?

- Recently, Union government launched **People's Plan Campaign 2021- Sabki Yojana Sabka Vikas** and **Vibrant Gram Sabha Dashboard**.

About People's Plan campaign:

- The People's Plan Campaign (PPC) is an effective strategy for ensuring the preparation of GPDP in a campaign mode. During the campaign, structured Gram Sabha meetings will be held for preparing Panchayat Development Plans for the next financial year 2022–2023.
- The meetings will involve physical presence and presentation by frontline workers/supervisors on 29 sectors. Special efforts have been made to ensure maximum participation of vulnerable sections of

society like SC/ST/Women etc.

- The Panchayat Development Plan aims to strengthen the role of elected representatives of Panchayats and SHG Women under DAY-NRLM in effective Gram Sabha. There are 31.65 lakh elected Panchayat representatives across the country in which 14.53 lakh are women.

Gram Panchayat Development Plan (GPDP) and its importance

- Article 243G of the Constitution of India mandates the Gram Panchayats (GPs) to prepare and implement GPDP for economic development and social justice. The GPDP does three essential things:
 - » It provides a vision of what the people would like their village to look like;
 - » It sets out clear goals to achieve that vision, and
 - » Gives an action plan to reach those goals.
- The GPDP should be comprehensive and based on participatory process involving the community particularly Gram Sabha, and in convergence with schemes of all related Central Ministries / Line Departments related to 29 subjects listed in the Eleventh Schedule of the Constitution.
- The convergence assumes greater significance in view of the fact that Panchayats can play an important role for effective implementation of flagship schemes on subjects of National Importance for the transformation of rural India.
- Ministry of Panchayati Raj has prepared model guidelines for GPDP and circulated the same to all the States where part IX of the constitution is applicable.

GI TAG

Why in News?

- Recently **3 products from the North East** were awarded the geographical indication (GI) tag. These include **Judima wine from Assam and Manipur's Hathei chilli and Tamenglong orange.**

Key Points:

- GI Tag is given to products that have a specific place of origin and have a reputation because of their geographical origin.
- **Judima wine:**
 - » Made by the Dimasa community of Assam, Judima wine is the first beverage to get a GI tag from the north-east.
 - » Made from sticky rice, which is steamed and mixed

with traditional herbs, the wine has a distinct sweet taste and takes around one week to prepare.

- » It is intrinsic to the social and cultural life of the Dimasas, who mainly inhabit Dimapur in Nagaland besides Cachar, Karbi Anglong, and Dima Hasao districts of Assam

- **Hathei Chilly:**

- » Hathei chilly, commonly known as the Sirarakhong chilly, is known for its unique flavour. It is almost 9-inches in size and bright red in colour, and is loaded with antioxidants and contains high calcium and Vitamin C levels.

- » It thrives well only in climatic condition of Sirarakhong village, Ukhrul district (Manipur).

- **Tamenglong Orange:**

- » Tamenglong Orange belongs to the Tamenglong district of Manipur, which is also known as The Orange Bowl of Manipur.

SUKHET MODEL

Why in News?

- The Prime Minister recently praised the Sukhet model of Bihar's Madhubani district. The model is named after Sukhet village, where it is being implemented by **Dr Rajendra Prasad Central Agriculture University.**

Key Points:

- Under it, dung and household waste are collected from households and then it is converted into vermicompost (organic manure).
- In exchange, income generated from the sale of organic manure is used to provide LPG cylinders for free to these households, once every two months.

Benefits

- It ensures a pollution-free environment at home, waste disposal, monetary assistance for LPG cylinders and availability of organic fertiliser to the local farmers.
- It is transforming the lives of rural women by facilitating access to modern cooking solutions.
- The plan is to expand this model to other districts of Bihar. Implementing it in all the villages of Bihar can generate annual wealth of over Rs 10,000 crores.
- Generate employment for local youth and make villages' soil nutrient self-sufficient.

Source: thehindu

KANNIYAKUMARI CLOVE GETS GI TAG

Why in News?

- **Tamilnadu Kanyakumari** clove recently received the prestigious **Geographical Indication Tag (GI Tag)** by the Controller General of Patents, Designs and Trade Marks.

Key Points:

- It is known for its unique qualities like high concentration of volatile oil content and aroma.



- The Kannyakumari clove that accounts for nearly 65% of the country's production got the GI tag thanks to the efforts of the Maramalai Planters and Blackrock Hill Planters Associations since 2019.
- It is grown on 760 hectares in the densely wooded areas of Maaraamalai, Blackrock and Velimalai in the Western Ghats of the Veerapuli Reserve Forests and Mahendragiri.
- Of the total production of 1,100 tonnes of cloves in India, Tamil Nadu accounts for close to 1,000 tonnes, of which over 65% is grown in the district.
- Known as the "champion spice", the evergreen clove tree (*Syzygium aromaticum*), related to eucalyptus, is native to the Spice Islands or the Maluku Islands in Indonesia.
- Clove was introduced in India by the East India Company during the 1800s along the Courtalam high ranges of the erstwhile south Travancore region.
- The plant is indigenous to North Molucca Islands of Indonesia. It is also grown in Zanzibar, Madagascar, Malaysia, Sri Lanka and India.
- The tree prefers well drained rich soil with sufficient soil moisture throughout the year. High atmospheric temperature (25 to 35 degree C) with heavy sun light, good and well-distributed rainfall (above 150 cm) and high humidity (above 70%) are preferred.

Source: the hindu

UNITED NATIONS DAY

Why in News?

- United Nations Day, on 24 the October, marks the anniversary of the day in 1945 when the UN charter entered into force.
- On this day, the Prime Minister pointed out India's contributions to the UN in various fields.
- » UN is an international organization, founded in 1945, whose primary role is to maintain world peace and security.
- » India is a founding member of UN.

India and UN:

- **Peacekeeping:**
 - » India has deployed more than a quarter of a million troops over the years in as many as 49 UN peacekeeping missions.
 - Recently India provided 2,00,000 doses of COVID-19 vaccines for UN Peacekeeping personnel worldwide.
 - » India was the first country to deploy an all women contingent for formed police unit to the UN peacekeeping mission in Liberia.
- **Development and economic issues:**
 - » Indian was instrumental in the setting up of UNCTAD in 1964 for promoting trade and development.
 - Indian has emphasized the need for enhanced flows of official development assistance(ODA) to developing countries.
- **Terrorism/ human rights:**
 - » India took the initiative to pilot a draft comprehensive convention on international terrorism.
 - » India played an active role in drafting the universal declaration on human rights.
- **Reforms and restructuring:**
 - » India is collaborating with G-4 (India, Brazil, Germany and Japan) and L.69 (group of like-minded countries from Asia, Africa and Latin America) on reform and expansion of the UN Security Council.
- **Fight against colonization and apartheid:**
 - » India was the co-sponsor of the declaration on granting of independence to colonial countries and peoples.
 - » India was the first country to raise apartheid issues at the UN.
 - » India was among the earliest signatories of convention on elimination of all forms of racial discrimination.

'STATE ENERGY EFFICIENCY INDEX (SEEI)-2020

Why in News?

- Recently, the Union Ministry of Power has released the 'state energy efficiency index (SEEI) 2020.

Key Points:

- **SEEI is developed** jointly by the **Bureau of Energy (BEE)** and alliance for an energy-efficient economy(AEEE) and was first launched in 2018.
- » It assesses the performance of the **36 states and UTs** in energy efficiency using **68 qualitative, quantitative,** and outcome-based indicators, across six sectors, namely, Building, Industry, Municipalities, Transport, agriculture & DISCOMs and Cross-Sector.
- » Indicators assess states' performance in policy and regulation, financing mechanisms, institutional capacity, adoption of energy efficiency measures and energy savings.
- » Based on their efforts and achievements, states have been classified as
 - **Front runner** (with above 60 points score)
 - **Achiever** (with a score of 50-60)
 - **Contender** (with a score in the range of 30-50) and
 - **Aspirant** (with a score below 30 points)
- » Rajasthan has ranked second after Karnataka on the SEEI index 2020.
 - Rajasthan has been the state to show the maximum improvement.
 - The Solar Energy Policy 2019 and the Wind and Hybrid Energy Policy 2019 have emerged as major facilitators to harness the natural advantage Rajasthan holds in the renewable energy sector.
- **Significance:**
 - » It helps in the effective formulation and implementation of Energy Efficiency (EE) policies and programmes
 - » It highlights best practices and foster healthy competition
 - » It provides a foundation to set state-specific EE targets and track progress.
- **Recommendations:**
 - » Institutionalising end-use energy data collection and analysis to drive efficiency(EE).
 - » Improve EE financing and budget allocation.
 - » Collaborating with the private sector to realise EE gains.

- The government also launched a proposal for a national carbon market with an objective to involve corporate and private sectors towards energy saving and carbon emission reduction.

Source: the Hindu

SOVEREIGN GOLD BOND SCHEME

Why in News?

- **Recently, the government of India, in consultation with the Reserve Bank of India has decided to issue Sovereign Gold Bonds.**

Key Points:

- The government announced the calendar for Sovereign Gold Bonds (SGB) that will be issued on four tranches.
- The Government of India in consultation with the Reserve Bank of India has decided to issue Sovereign Gold Bonds for 2021-2022.

What is SGBS:

- SGBs are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity.

Details of the scheme:

- **Issuance:** Issued by Reserve Bank India on behalf of the Government of India.
- **Eligibility:** The Bonds will be restricted for sale to resident individuals, HUFs, Trusts, Universities and Charitable Institutions.
- **Denomination:** The Bonds will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram.
- **Tenor:** The tenor of the Bond will be for a period of 8 years with exit option after 5th year to be exercised on the interest payment dates.
- **Minimum size:** Minimum permissible investment will be 1 gram of gold.
- **Maximum limit:** The maximum limit of subscribed shall be 4 KG for individuals, 4 Kg for HUF and 20 Kg for trusts and similar entities per fiscal (April-March) notified by the Government from time to time.
- **Interest rate:** The investors will be compensated at a fixed rate of 2.50 percent per annum payable semi-annually on the nominal value.

KUNMING DECLARATION ON BIODIVERSITY CONSERVATION

Why in News?

- The Kunming Declaration was recently adopted by over **100 countries** at the **15th meeting** of the Conference of Parties to the **United Nations Convention on Biological Diversity(UNCBD)**, which is currently taking place in **China**.

Key Points:

- The adoption of the declaration will create momentum for a new global biodiversity pact.
- The **theme** of the declaration is **Ecological Civilization: Building a Shared Future for All Life on Earth**.
- It calls upon the parties to **“mainstream”** biodiversity protection in decision-making and recognises the importance of conservation in protecting human health.
- Signatory nations will ensure that the post-pandemic recovery policies, programmes and plans contribute to the **conservation and sustainable use of biodiversity, promoting sustainable and inclusive development**.

Source: down to earth

KARUPPUR KALAMKARI PAINTINGS, KALLAKURICHI WOOD CARVINGS GET GI TAGS

Why in News?

- In Tamil Nadu, **the Karuppur kalamkari paintings** and the **Kallakurichi wood carvings** recently received the Geographical Indication (GI) tags.

Key Points:

- **Karuppur Kalamkari Paintings:** The paintings are intricately made on **cotton cloth** using **pens or brushes** made out of **bamboo tree** and **coconut tree stems**.
- » They are made for temples like **ceiling cloth, cylindrical hangings, umbrella covers** and **chariot covers**.



Image Source: Indian Express

- **Kalukuruchi Wood Carving:** The wood carving is essentially one wherein the craftsmen are specialised in carving **temple-related items** and also furniture, using traditional designs.
- » Kallakurichi wood carvings are mostly practised in **Tamil Nadu's Kallakurichi district**.



Image Source: The Hindu

About GI tag:

- Covered under the Paris Convention for the Protection of Industrial Property as an element of IPRs.
- Governed by WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In India, GI tag is governed by **Geographical Indications of Goods (Registration and Protection Act), 1999**.
- This Act is administered by the Controller General of Patents, Designs and Trademarks, who is also Registrar of Geographical Indications

BOVINE MASTITIS

Why in New?

- Recently, The medicine called **Mastirak Gel** has been developed by **National Innovation Foundation**

(NIF) to treat Mastitis in **Dairy Cattle**.

- **NIF** is an autonomous institute of the **Department of Science and Technology (DST)**, which renovates indigenous technologies based on farmer's wisdom.

Key Points:

- Bovine Mastitis is a common infectious disease, which affects farm productivity due to fall in milk

quality, thus impacting income-generating activities.

- It is a potentially fatal mammary gland infection, that is most common in dairy cattle worldwide.
- Microorganisms such as viruses, mycoplasma, fungus, and bacteria cause mastitis. This condition is also caused by physical injury to the mammary region, poor hygiene, and/or trauma.