Current Affairs
(CONSOLIDATION)

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(PART – I)

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Polity and Governance

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UP Ordinance on Unlawful Conversions

Why in News

The Uttar Pradesh (UP) government has recently **passed an ordinance to deal with unlawful religious conversions**, which are in opposition of various judgements of the **Supreme Court** (SC).

Key Points

➢ **UP Unlawful Religious Conversion Prohibition Ordinance, 2020:**
  ❍ It makes religious conversion for marriage a **non-bailable offence** and the onus will be on the defendant to **prove that conversion was not for marriage**.
  ❍ The notice period to the **District Magistrate** for the religious conversion is **two months**.
  ❍ In case of conversion done by a woman for the **sole purpose of marriage**, the **marriage would be declared null and void**.
  ❍ Violation of the provisions of the law would invite a jail term of not less than **one year extendable to five years with a fine of Rs. 15,000**.

  ❍ If a **minor woman** or a **woman** from the **Scheduled Caste** (SC) or **Scheduled Tribe** (ST) converts, the jail term would be a **minimum of three years** and could be extended to **10 years with a fine of Rs. 25,000**.
  ❍ The ordinance also lays down strict action, including **cancellation of registration of social organisations** conducting **mass conversions**, which would invite a jail term of not less than three years and up to **10 years** and a fine of **Rs. 50,000**.

➢ **Supreme Court on Marriage and Conversion:**
  ❍ The SC in its various judgments, has held that **faith**, the **state** and the **courts** have **no jurisdiction** over an **adult's absolute right to choose a life partner**.
  ❍ India is a "**free and democratic country**" and any **interference by the State in an adult's right to love and marry** has a "**chilling effect**" on freedoms.
  ❍ Intimacies of marriage lie within a **core zone of privacy**, which is **inviolable** and the choice of a life partner, whether by marriage or outside it, is **part of an individual's** "**personhood and identity**".
  ❍ The absolute right of an individual to choose a life partner is **not in the least affected by matters of faith**.

Note:

➤ **Related Previous Judgements:**

○ **Hadiya Judgement 2017:**

● Matters of **dress** and of **food, of ideas and ideologies, of love** and **partnership** are within the central aspects of **identity.** Neither the State nor the law **can dictate** a choice of partners or **limit the free ability** of every person **to decide** on these matters.

○ **K.S. Puttuswamy or 'privacy' Judgment 2017:**

● **Autonomy of the individual** was the ability to make decisions in vital matters of concern to life.

○ **Lata Singh Case 1994:**

● The apex court held that India is going through a "**crucial transformational period**" and the "**Constitution will remain strong only if we accept the plurality and diversity of our culture**".

● Relatives disgruntled by the **inter-religious marriage** of a loved one could opt to "**cut off social relations**" rather than resort to **violence or harassment**.

○ **Soni Gerry case, 2018:**

● The SC warned judges from playing "**super-guardians**", succumbing to "**any kind of sentiment of the mother or the egotism of the father**".

○ **Salamat Ansari-Priyanka Kharwar case of Allahabad High Court 2020:**

● The right to choose a partner or live with a person of choice was part of a citizen's **fundamental right to life and liberty** (Article 21).

● It also held that earlier court rulings upholding the idea of **religious conversion for marriage as unacceptable** are not good in law.

Unnat Bharat Abhiyan Scheme

Why in News

A review meeting regarding the progress of **Unnat Bharat Abhiyan Scheme** (UBA) was held via videoconferencing.

Key Points

➤ **Highlights of the Meeting:** The **Union Education Minister emphasised** on the following:

○ Identify **three to five core issues common amongst all the villages** and few issues based on **local conditions** and work on these.

○ Efforts should be made to maximise the number of **Higher Educational Institutions** under the scheme in order to benefit more villages.

○ UBA should be used in **sensitizing the school teachers regarding** National Education Policy, 2020.

○ **Need for a portal** was highlighted which will serve as an interactive platform for different institutions wherein they can share success stories and motivate each other.

○ Carry out a **state-wise stud**y and **set targets regarding the parameters under UBA** such as improvement in literacy, healthcare etc.

➤ **Unnat Bharat Abhiyan**:

○ It is a flagship program of the **Ministry of Education.** It was **launched in 2014.**

○ It aims to **link the Higher Education Institutions (HEIs) with a set of at least (5) villages**, so that these institutions can contribute to the economic and social betterment of these village communities using their knowledge base.

● It **covers two major domains** for holistic development of villages – **human development** and **material (economic) development** - in an integrated way.

○ The **Indian Institute of Technology Delhi** (IIT, Delhi) has been designated as the **National Coordinating Institute** (NCI) for the UBA scheme.

○ **Main Objectives**:

● To **engage the faculty and students of HEIs in identifying development issues in rural areas** and finding sustainable solutions for the same.

● Identify & select existing innovative technologies, enable customisation of technologies, or devise implementation methods for innovative solutions, **as required by the people**.

● To allow HEIs to contribute to devising systems for **smooth implementation of various Government programmes.**

○ **Unnat Bharat Abhiyan 2.0:**

● It is the upgraded version of **UBA 1.0.** It was **launched in 2018.**

■ **UBA 1.0** or UBA Phase-1 was the **Invitation Mode** in which Participating Institutions were invited to be a part of UBA.
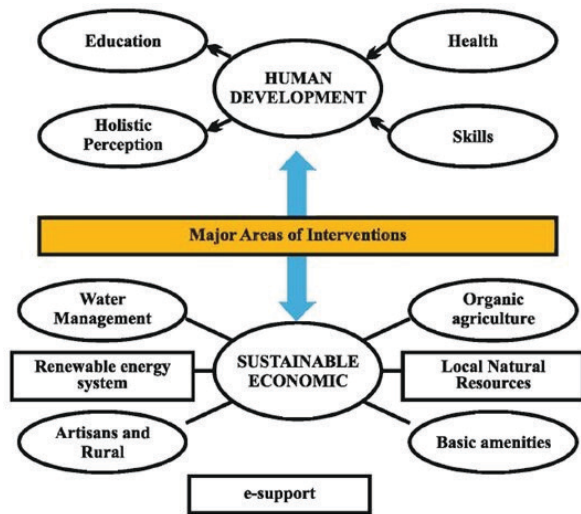
- Whereas **UBA 2.0 is the Challenge Mode** of Unnat Bharat Abhiyan programme where all HEIs are required to willingly adopt at least 5 villages. Currently, UBA 2.0 Mode is going on.

India's Top 10 Police Stations for 2020

Why in News

The **Ministry of Home Affairs** has released a list of the top 10 police stations in India for the year 2020.

Key Points

➢ The annual ranking is done since **2015** when the Prime Minister announced such an exercise, while addressing the **Directors General of Police's Conference in Kutch, Gujarat.**

➢ **Objective:**
  ○ To rank the top 10 Police Stations out of 16,671 Police Stations in the country through **data analysis, direct observation and public feedback**.

➢ **Performance Parameter:**
  ○ Property offences, crimes against women and weaker sections of the society etc.
  ○ This year, the government introduced **three new parameters.**
    - Missing persons, Unidentified found persons and Unidentified dead bodies.

➢ Performance of Police Stations located in **rural and remote areas has been worth appraising**.

○ This indicates that **while availability of resources is important**, more important is the **dedication and sincerity of police personnel** to prevent and control crime and serve the nation.

➢ **Top 3 Police Stations for 2020**:
  ○ **Nongpok Sekmai** police station in **Thoubal district of Manipur** has **topped** the list.
  ○ **AWPS-Suramangalam** police station in Salem City of **Tamil Nadu** ranks second.
  ○ **Kharsang police station** in Changlang district of **Arunachal Pradesh**.

➢ **Benefits of Annual Ranking**:
  ○ To recognize the **hard work and encourage** and instill a sense of **competitiveness** in the police force.
  ○ It also provides a picture of the state of **physical infrastructure, resources and deficiencies** at the level of police stations.
  ○ The annual exercise of ranking police stations works as a **constant guide for improvements**.

Tobacco Ban in Jharkhand

Why in News

The Jharkhand Government, in a recent order, has **banned consumption of any form of tobacco** products for all **State Government employees.**

Key Points

➢ The State Government has made it **mandatory** for all state government employees to submit an affidavit stating that they **will abstain from consuming any form of tobacco**.

➢ Tobacco products **include** any cigarettes, bidi, khaini, gutkha, pan masala, zarda or supari as well as hukka, e-hookah, e-cigarettes and tobacco products being used by any name - smoking and smokeless.

➢ The decision was taken at a meeting of the **National Tobacco Control Programme's state chapter,** with an aim to implement the **Cigarettes and other Tobacco Products Act, 2003 (COTPA).**

➢ The decision will be **implemented from 1st April, 2021.**

➢ There has been **no clarity over penal provision** in case of violation of the order.

➢ The government is also taking measures for **bringing behavioural change** by using **panchayat level institutions.**

- ❍ **Zila Parishads, Panchayat Samitis and Gram Panchayats** are asked to organise tobacco control discussions in every gram sabha meeting.
- ➢ The Police have been ordered to increase vigil at checkposts to **stop entry of banned tobacco products.**
- ➢ Previously in April 2020, Jharkhand had **banned sale and consumption of tobacco products in public places**, including online sales, in view of an increase in chances of Covid-19 infection.

Tobacco Control in India

- ➢ **International Convention**:
  - ❍ India **ratified the WHO Framework Convention on Tobacco Control** (WHO FCTC) in 2004.
- ➢ **Cigarettes and Other Tobacco Products Act (COTPA), 2003**:
  - ❍ **Replaced the Cigarettes Act of 1975** (largely limited to statutory warnings- 'Cigarette Smoking is Injurious to Health' to be displayed on cigarette packs and advertisements. It did not include non-cigarettes).
  - ❍ The 2003 Act also included cigars, bidis, cheroots, pipe tobacco, hookah, chewing tobacco, pan masala, and gutka.
- ➢ **National Tobacco Control Programme (NTCP), 2008:**
  - ❍ **Objective**: To control tobacco consumption and minimize tobacco consumption related deaths.
  - ❍ **Implementation**: NTCP is implemented through a three-tier structure, i.e. (i) National Tobacco Control Cell (NTCC) at Central level (ii) State Tobacco Control Cell (STCC) at State level & (iii) District Tobacco Control Cell (DTCC) at District level.
- ➢ **Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2020:**.
  - ❍ These provide for new sets of specified health warnings with enhanced pictorial images to be printed on all tobacco products.
- ➢ **mCessation Programme**:
  - ❍ It is an initiative using **mobile technology for tobacco cessation**.
  - ❍ India launched **mCessation using text messages** in 2016 as part of the government's **Digital India initiative**.
- ➢ **Prevention and Control of Pollution Act of 1981**:
  - ❍ Recognized smoking as an air pollutant.
- ➢ **Cable Television Networks Amendment Act of 2000**:
  - ❍ Prohibited the transmission of advertisements on tobacco and liquor in India.
- ➢ The Government of India has issued regulations under the **Food Safety and Standards Act 2006** which lay down that tobacco or nicotine cannot be used as ingredients in food products.

World Malaria Report 2020: WHO

Why in News

Recently, the **World Health Organisation** (WHO) has released the **World Malaria Report (WMR) 2020**.

- ➢ The report provides a **comprehensive update on global and regional malaria data** and trends including prevention, diagnosis, treatment, elimination and surveillance.
- ➢ It indicates that **India has made considerable progress in reducing its malaria burden**.

Key Points

- ➢ **Global Analysis:**
  - ❍ Malaria cases **globally numbered about 229 million**, an annual estimate that has remained virtually **unchanged over the last four years.**
    - In **2019**, it claimed about 4,09,000 lives, compared to 4,11,000 in 2018.
  - ❍ The report noted that the **11 highest-burden countries** viz. Burkina Faso, Cameroon, the Democratic Republic of the Congo, Ghana, **India**, Mali, Mozambique, Niger, Nigeria, Uganda and Tanzania, account for **70% of the global estimated case burden** and **71% of global estimated deaths** from malaria.
  - ❍ Countries in **South-East Asia made particularly strong progress**, with **reductions in cases and deaths** of 73% and 74%, respectively.
- ➢ **Indian Analysis:**
  - ❍ India is the **only high endemic country** which has **reported a decline of 17.6%** in 2019 as compared to 2018.
  - ❍ The **Annual Parasite Incidence** (API, the number of new infections per year per 1000 population) reduced by 18.4% in 2019 as compared to 2018.
    - India has sustained API less than one since the year 2012.

Note:

○ India has also **contributed to the largest drop in cases region-wide**, from approximately 20 million to about 6 million.

- The percentage **drop in the malaria cases was 71.8%** and **deaths were 73.9%** between **2000 to 2019**.

○ India achieved a **reduction of 83.34% in malaria morbidity** and **92% in malaria mortality** between the year 2000 and 2019, thereby achieving **Goal 6 of the Millennium Development Goals**.

- MDG 6 aimed to **combat HIV/AIDS, malaria and other diseases**, which have a direct and indirect impact on rural development, agricultural productivity and food and nutrition security.

- The Sustainable Development Goals have replaced the MDGs.

○ States of **Odisha**, **Chhattisgarh**, **Jharkhand**, **Meghalaya** and **Madhya Pradesh** (**high endemic states**) disproportionately accounted for nearly **45.47% of malaria cases** in 2019.

- **63.64% of malaria deaths** were also reported from these states.

○ The figures and trends between the last two decades clearly show the **drastic decline in malaria**, hence the **malaria elimination target of 2030 looks achievable**.

➢ **Initiatives to Curb Malaria:**

○ **In India, malaria elimination efforts** were **initiated in 2015** and were intensified after the launch of the **National Framework for Malaria Elimination** (NFME) in **2016** by the **Ministry of Health and Family Welfare**.

- NFME is in line with **WHO's Global Technical Strategy for Malaria**, 2016-2030, which guides the **WHO Global Malaria Programme** (GMP), responsible for coordinating WHO's global efforts to control and eliminate malaria.

○ The **National Strategic Plan for Malaria Elimination** (**2017-22**) was launched in **July 2017** which laid down strategies for the following five years.

- It gives year wise elimination targets in various parts of the country depending upon the endemicity of malaria.

○ Implementation of High Burden to High Impact (HBHI) **initiative** was started in **four states** (West Bengal, Jharkhand, Chhattisgarh and Madhya Pradesh) in **July 2019**.

- In 2018, the WHO and the RBM Partnership initiated the HBHI initiative in **11 high malaria burden countries**, including **India** to end malaria.

- It has continued to make impressive gains in India, with **18% reductions in cases** and **20% reductions in death**, over the last 2 years.

○ Due to the efforts made by the Government of India in the **provision of microscopes, rapid diagnostics Long Lasting Insecticidal Nets** (LLINs) to high burden areas has led to a reduction in endemicity in these otherwise very high endemic states.

- LLINs are **nets treated** in the factory with an **insecticide incorporated into the net fabric which makes the insecticide last at least 20 washes** in standard laboratory testing and **three years of recommended use** under field conditions.

- Use of LLINs has been accepted by the community at large and has been one of the main contributors to the drastic malaria decline in the country.

Export Promotion Council for Technical Textiles

Why in News

Recently, the Ministry of Textiles has invited proposals for the constitution of a dedicated **Export Promotion Council** (EPC) for Technical Textiles.

Key Points

➢ The constitution of an EPC is **a part of the** National Technical Textiles Mission.

○ The Council shall abide by all directions of the Central Government in respect of promotion and development of international trade.

➢ **National Technical Textiles Mission:**

○ It was approved with **a total outlay of Rs. 1480 crore** in February 2020.

○ **Aims:**

- To position the country as a **global leader in technical textiles** and **increase the use** of technical textiles in the **domestic market.**

- To take **domestic market** size to **USD 40 billion to USD 50 billion by 2024**.

○ It will be implemented for **four years starting from 2020-2021** and has **four components:**

- **First Component:** Focuses on **research, development and innovation** with an outlay of **Rs. 1,000 crores**.
  - The research will be at both **fibre level and application-based** in geo, agro, medical, sports and mobile textiles and development of **biodegradable** technical textiles.
  - Research activities will also focus on **the development of indigenous machinery** and process equipment.
- **Second Component:** For the promotion and **development of the market** for technical textiles.
- **Third Component:** Focuses on **export promotion** so that technical textile exports from the country reach from Rs.14,000 crores to Rs. 20,000 crores by **2021-2022** and will ensure **10% average growth** every year till the Mission ends.
- **Fourth Component:** Focuses on education, training and skill development.
  - A **Mission Directorate** is operational in the **Ministry of Textiles** for implementation of the Mission.
- **Data on the Indian Technical Textiles Segment:**
  - It is estimated at **USD 16 billion** which is approximately **6% of the USD 250 billion technical textiles market**.

Technical Textiles

- Technical textiles are textiles materials and products manufactured **primarily for technical performance and functional properties** rather than aesthetic characteristics.
- These are **functional fabrics** that have applications across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety (fireproof jackets), personal protection (bulletproof jackets, high altitude combat gear), space applications, etc.
- Based on usage, there are **12 technical textile segments:**
  - Agrotech, Meditech, Buildtech, Mobiltech, Clothtech, Oekotech, Geotech, Packtech, Hometech, Protech, Indutech and Sportech.
  - **For example**, **Mobiltech** refers to **products in vehicles** such as seat belts and airbags, aeroplane seats. **Geotech**, which is incidentally the fastest-growing segment, is used to **hold back soil,** etc.

- The penetration level of technical textiles in India varies between **5% and 10% against the level of 30% to 70%** in developed countries.

Right to Vote for NRIs

Why in News

Recently, the **Election Commission of India** (ECI) has informed the Ministry of Law and Justice that it is "**technically and administratively ready**" to extend the **Electronically Transmitted Postal Ballot System** (ETPBS) to **Non Resident Indian** (NRI) voters for elections next year in Assam, West Bengal, Kerala, Tamil Nadu and Puducherry.

Key Points

- **Background:**
  - The ECI started to look for possible options after receiving **several requests from MPs, industrialists, ministers and also writ petitions by NRIs** in the **Supreme Court** (SC) in 2013 and 2014.
  - After the **2014 Lok Sabha elections**, a **12-member committee** was set up to **study mainly three options** of:
    - Voting by post.
    - Voting at an Indian mission abroad.
    - Online voting.
  - The committee ruled out online polling as it felt this could compromise "**secrecy of voting**" and also shot down the proposal to vote at Indian missions abroad as they **do not have adequate resources**.
  - In **2015**, the panel finally recommended that NRIs should be given the **"additional alternative options of e-postal ballot** and **proxy voting**", apart from voting in person.
    - Under proxy voting, a registered elector can delegate his **voting power to a representative**.
    - At present, postal ballots are **allowed** for certain categories of voters (**Service Voters**) living in India, which include:
      - Members of the Armed Forces.
      - Members of the Armed Police Force of a State, serving outside that State.
      - Persons employed under Government of India on post outside India.

Note:

○ In **2017**, the Union Cabinet **passed the proposal on proxy voting rights** for NRIs and brought a Bill amending the **Representation of the People Act 1950.**

○ However, the bill lapsed in Rajya Sabha due to **dissolution of the 16th Lok Sabha** and the proposal has not been revived yet.

  ● The **ECI pushed only for postal voting rights** for NRIs instead of the proxy voting.

  ● To extend the postal voting facility to overseas voters, the government only needs to **amend the Conduct of Election Rules 1961**. **It does not require Parliament's nod**.

➢ **Current Voting Process for NRIs:**

○ Voting rights for NRIs were introduced only in **2011**, through an **amendment to the Representation of the People Act 1950**.

○ An NRI can vote in the constituency in **his/her place of residence**, as mentioned in the passport, is located.

○ He/She can **only vote in person** and will have to **produce her passport in original at the polling station for establishing identity**.

➢ **Current Strength of NRI Voters:**

○ According to a **United Nations** report of 2015, India's diaspora population is the **largest in the world at 16 million people.**

○ However, registration of NRI voters has been **very low** with a little over one lakh overseas Indians registered as voters in India.

○ In the **2019 Lok Sabha elections**, roughly **25,000** of them flew to India to vote.

➢ **Process of Voting by Postal Ballots:**

○ Any NRI interested in voting through the postal ballot will have to **inform the Returning Officer (RO) not later than five days after the notification of the election**.

  ● The RO of a parliamentary or assembly constituency is **responsible for the conduct of elections in the parliamentary or assembly constituency**.

○ On receiving such information, the **RO will dispatch the ballot paper electronically**.

○ The NRI voters will **download the ballot paper**, **mark their preference** on the printout and send it back along **with a declaration attested by an officer appointed by the diplomatic or consular representative of India** in the country where the NRI is resident.

○ However, it is not clear right now, if the voter will return the **ballot paper herself through ordinary post or drop it off at the Indian Embassy**, which may then segregate the envelopes constituency-wise and send them to the **Chief Electoral Officer** of the state concerned for forwarding to the RO.

➢ **Political Stand:**

○ The committee had **consulted national political parties and the Ministry of External Affairs** (MEA) on the options being considered for NRIs to cast their vote abroad.

○ Among parties, **only the NCP has expressed complete support** and according to the **BSP, BJP and CPI**, postal ballots were **not a viable option** due to time constraint. The **Congress** was **not in favour** of sending the postal ballot paper electronically.

○ The MEA expressed **strong reservations over attesting the declaration** as the **process might be difficult in non-democratic countries**.

Non Resident Indian

➢ According to India's **Foreign Exchange Management Act 1999 (FEMA)**, NRI is an Indian citizen or Foreign National of Indian Origin residing outside India for **purposes of employment, carrying on business or vocation** in circumstances as would indicate an intention to stay outside India for an indefinite period.

➢ Visiting NRIs whose total income (which is defined as taxable income) in India is up to **Rs. 15 lakh during the financial year** will continue to remain **NRIs if the stay does not exceed 181 days**.

  ○ The **Union Budget 2020** proposed to **reduce this period to 120 days** for all NRIs.

Centre's Power for Land Acquisition for Highway: SC

Why in News

Recently, the **Supreme Court (SC)** has upheld notifications issued under the **National Highways Act, 1956**, for acquisition of land for construction of the **Chennai-Krishnagiri-Salem national highway**.

➢ The verdict came on a batch of appeals filed by the Centre and the National Highways Authority of

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India (NHAI) and few landowners and others. These **pleas were filed against the Madras High Court's judgement**, holding as **"illegal and bad in law"** the notifications issued.

Key Points

➢ **Chennai-Krishnagiri-Salem National Highway:**
  ○ It is a **part of the first phase of the 'Bharatmala Pariyojna' project**.
    ● **Bharatmala Pariyojna Project** stretches across 24,800 km and has an estimated outlay of Rs. 5.35 lakh crore. It seeks to **improve the efficiency of freight and passenger movement** across the country by bridging critical infrastructure gaps.
  ○ It is a **277.3-km-long eight-lane greenfield project** which aims to **cut travel time** between the two cities Chennai and Salem by half to about two hours and 15 minutes.
    ● A **greenfield project** is one which is not constrained by prior work. It is **constructed on unused land** where there is no need to remodel or demolish an existing structure.
  ○ The Project **has faced opposition** from locals, including farmers, over **fears of losing their land**, besides environmentalists, who are **against felling of trees. It runs through reserve forest and water bodies.**

➢ **Supreme Court's Judgement:**
  ○ **Centre's Powers:**
    ● There is **nothing in the Constitution which constricts the power of Parliament** to make a law for declaring any stretch/section within the State (not being a road or an existing highway) to be a national highway.
    ● Provisions in the Constitution unambiguously indicate that the **legislative as well as executive power** regarding all matters concerning and connected with a highway to be designated as a national highway, **vests in Parliament**, and the laws to be made by it in that regard.
    ● The **Central government is free** to construct/build a new national highway keeping in mind the obligations it has to discharge under **Part IV of the Constitution** (Directive Principles of State Policy) for securing a social order and promotion of welfare of the people in the concerned region.

➢ **Importance of National Highways:**
  ○ National highways are the **arteries of India's economy.** By its very nomenclature, a national highway is to **link the entire country and provide access to all** in every remote corner of the country for interaction and to promote commerce and trade, employment and education, including health related services.
    ● This approach **enhances and furthers the federal structure**.
  ○ The availability of a highway in any part of the State paves way for **sustainable development** and for overall enhancement of **human well-being**.

➢ **Other Aspects Related to the Project:**
  ○ The **Madras High Court had been wrong to quash the acquisition proceedings** on the ground that **no prior environmental clearance** was taken.
    ● The SC said that the **notification is only an expression of interest to acquire the designated land**, and no prior environmental clearance was needed before issuing it.
    ● **Prior environmental clearance** under the **Environment (Protection) Act** and Rules of 1986 is **required to be taken before commencement of the "actual construction or building work" of the national highway** by the executing agency (NHAI).
  ○ On complaints about "alterations" in the highway route, the court said **changes to the extent of 15% was permissible in a project of such a macro scale.**
    ● **Unforeseen concerns** like land availability factors related to congestion, reduction of distance, operational efficiency attract such alteration.

National Highways
➢ The **major roads** in India are the **national and state highways**. **National Highways (NH)** are built, financed and maintained by the **Central government** whereas **State Highways (SH)** are developed by the **respective States' public works department.**
➢ **Constitutional Provisions:**
  ○ Highways declared by or under law made by Parliament to be national highways - **Union List under Seventh Schedule.**

Note:

❍ **Article 257 (2):** The **executive power of the Union** shall also extend to the giving of directions to a State as to the construction and maintenance of means of communication declared in the direction to be of national or military importance.

● Provided that nothing in this clause shall be taken as restricting the **power of Parliament to declare highways or waterways to be national highways or national waterways** or the power of the Union with respect to the highways or waterways so declared.

➢ The **Ministry of Road Transport and Highways** is primarily responsible for development and maintenance of NHs.

❍ The Ministry has taken up detailed review of NHs network with a view to develop the road connectivity to **Border areas,** development of **Coastal roads** including road connectivity for Non-Major ports, improvement in the efficiency of **National Corridors**, development of **Economic Corridors**, Inter Corridors and Feeder Routes along with integration with **Sagarmala**, etc., under **Bharatmala Pariyojana.**

➢ NHs in the country **are notified under the National Highways Act, 1956**.

➢ **National Highways Authority of India** (NHAI) was set up by an act of the Parliament, **NHAI Act, 1988,** for the development, maintenance and management of national highways and for matters connected therewith or incidental thereto.

➢ **Land for development of National Highways** and associated purposes is acquired under **Section 3 of the NHs Act, 1956** and **compensation** is determined in accordance with the First Schedule of the **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013.**

➢ **BhoomiRashi portal** was launched in **2018**, to fully **digitize and automate the entire process of land acquisition.**

➢ The aim of the **Green Highways (Plantation, Transplantation, Beautification & Maintenance) Policy, 2015** is to **promote greening of Highway corridors** with participation of the community, farmers, private sector, NGOs, and government institutions.

CCTV in Police Stations: SC

Why in News

Recently, the **Supreme Court** (SC) has asked the **States and Union Territory** (UT) **governments** to ensure that the **Closed-Circuit Television** (CCTV) **cameras** are installed in each and every **police station.**

Key Points

➢ **Background:**

❍ **2015:** In the case of *D K Basu versus State of West Bengal,* the **SC** directed that **CCTVs** should be installed in every **police station and prison** to **check human rights abuses.**

❍ **2018:** The SC asked the Ministry of Home Affairs to set up a **Central Oversight Body** (COB) to implement the plan of action with respect to **videography in the crime scene during the investigation**.

❍ Recently, the **SC** has found that the majority of the states and UTs **lack the details** of installing CCTVs in police stations.

➢ **Latest Directions:**

❍ **States** and **UTs** should **ensure that CCTV cameras are installed** at each and every police station, at all entry and exit points, main gate, lock-ups, corridors, lobby and reception as also areas outside the lock-up rooms so that no part is left uncovered.

❍ CCTV systems **must be equipped with night vision** and **have audio as well as video footage** and it shall be mandatory for the Centre, states and UTs to purchase such systems which allow storage of data for the maximum period possible, **at least one year.**

❍ The Centre should install CCTV cameras and recording equipment at the offices of investigating agencies, including the **Central Bureau of Investigations** (CBI), the **Enforcement Directorate** (ED) and the **National Investigation Agency** (NIA), which **conduct interrogations and have the power of arrest.**

● **Oversight Bodies** should be **extended to the state and district level.**

➢ **Constitutional Dimension:** The current directions by the SC are the furtherance of the fundamental right enshrined in **Article 21** (Protection of life and personal liberty) of the Indian Constitution.

Note:

- **Article 21:** It states that no person shall be deprived of his life or personal liberty except according to the procedure established by law.
- The expanded scope of **Article 21** has been explained by the **SC** in the case of *Unni Krishnan versus State of Andhra Pradesh 1993* and the **SC** has itself provided the list of some of the rights covered under Article 21 on the basis of earlier pronouncements and some of them are listed below:
  - Right to go abroad, right to privacy, right to shelter, right to social justice and economic empowerment, right against solitary confinement, right against handcuffing, right against delayed execution, right against custodial death, right against public hanging, doctors' assistance, protection of cultural heritage, right of every child to full development, right to pollution-free water and air.
- ➢ **Data Related to Violence in Custody:**
  - According to **the** National Crime Records Bureau (NCRB) data, **between 2001 and 2018, only 26 policemen were convicted of** custodial violence **despite 1,727 such deaths** being recorded in India.
    - Only **4.3% of the 70 deaths in 2018 were attributed to injuries** during custody due to physical assault by police.
  - Apart from custodial deaths, **more than 2,000 human rights violation cases were also recorded against the police between 2000 and 2018.** And only 344 policemen were convicted in those cases.
- ➢ **India is not a signatory of the** United Nations Convention Against Torture **which requires states to take effective measures to prevent torture in any territory under their jurisdiction and forbids states to transport people to any country where there is a reason to believe they will be tortured.**
- ➢ **Closed-Circuit Television:**
  - It is a **Television system** in which **signals** are not publicly distributed but are **monitored**, primarily for **surveillance and security purposes.**
  - **Components:** It consists of basic components that do not vary much from system-to-system. At a high level, these include **a camera** (with a lens), **cabling, a digital video recorder** (DVR) **or network video recorder** (NVR), and **a video monitor**.
  - **Security Uses:**
    - It is one of the **most important physical security controls** to **address terrorism** and **other security threats**.
    - CCTV has incomparable value as a **forensic tool** as well as in **deterring all types of physical and electronic threats**.

Waqf Boards in Jammu and Kashmir

Why in News

The process of establishing Waqf Boards in **Jammu and Kashmir** and **Leh-Kargil** has started recently.

Key Points

- ➢ There are thousands of Waqf properties in Jammu-Kashmir and Leh-Kargil and the process has been started to **register these Waqf properties.**
  - **Digitisation, Geo-Tagging/GPS** Mapping of these Waqf properties has also been initiated.
- ➢ The Central Government will provide adequate **financial assistance** to construct infrastructure for socio-economic and educational activities on Waqf properties in Jammu-Kashmir and Leh-Kargil under the **Pradhan Mantri Jan Vikas Karyakram** (PMJVK).
  - PMJVK seeks to provide better socio-economic infrastructure facilities to the minority communities particularly in the field of **education, health and skill development** which would further lead to a lessening of the gap between the national average and the minority communities with regard to backwardness parameters.
    - The erstwhile **Multi-sectoral Development Programme** has been restructured and renamed as PMJVK for effective implementation since 2018.

Central Waqf Council
- ➢ Central Waqf Council is a **statutory body** under the administrative control of the **Ministry of Minority Affairs** set up in **1964** as per the provision given in the Waqf Act, 1954.
- ➢ It is an **advisory body** to the Central Government on matters concerning the working of the Waqf Boards and the due administration of **Auqaf**.

Note:

drishti

- ❍ **Auqaf** (also spelt **awkaf,**) is an Arabic word meaning **assets.**
- ❍ The Council consists of **Chairperson**, who is the **Union Minister-in-charge** of Waqf, such other members, **not exceeding 20 in number**, as may be appointed by the **Government of India**.
- ➢ **Each state has a Waqf Board headed by a chairperson**, one or two nominees from the state government, Muslim legislators and parliamentarians, Muslim members of the State Bar Council, recognised scholars of Islamic theology and mutawalis.

Suggestions for Delimitation Exercise

Why in News

Pranab Mukherjee Foundation (PMF), a **non governmental institution**, has made suggestions for the next delimitation exercise.

- ➢ **Delimitation** literally means the **act or process of fixing limits or boundaries of territorial constituencies** in a country to represent changes in population.

Key Points

- ➢ **Suggestions**: The next delimitation exercise should be a **two step process:**
  - ❍ A **Delimitation Commission** should be set up to **draw the boundaries as per the 2031 Census** and recommend the reorganisation of States based on population.
  - ❍ A **State Reorganisation Act** should be brought to give effect to the Delimitation Commissions' recommendations **"by splitting States into smaller ones".**
- ➢ **Current Scenario**:
  - ❍ The **84th Amendment to the Constitution in 2002** had **put a freeze** on the delimitation of **Lok Sabha and State Assembly** constituencies till the **first Census after 2026.**
  - ❍ The current boundaries were drawn on the **basis of the 2001 Census**, the **number of Lok Sabha seats** and State Assembly seats **remained frozen on the basis of the 1971 Census.**
  - ❍ The population according to the **last census preceding the freeze** was **50 crore, which in 50**

years has grown to 130 crore, causing **a massive asymmetry in the political representation** in the country.

Delimitation Commission
- ➢ The Delimitation Commission is appointed by the **President of India** and works in collaboration with the **Election Commission of India**.
- ➢ **Composition**:
  - ❍ Retired Supreme Court judge
  - ❍ Chief Election Commissioner
  - ❍ Respective State Election Commissioners
- ➢ **Functions:**
  - ❍ To determine the **number and boundaries of constituencies** to make the population of all constituencies nearly **equal**.
  - ❍ To identify seats **reserved for Scheduled Castes and Scheduled Tribes**, wherever their population is relatively large.
- ➢ Delimitation Commissions have been **set up four times** — 1952, 1963, 1973 and 2002 under the Acts of 1952, 1962, 1972 and 2002.
- ➢ The Delimitation Commission in India is a high power body whose orders have the **force of law** and cannot be **called in question before any court.**

Gender Gap and Sensitisation in Judiciary

Why in News

Recently, the **Attorney General** (AG) **K K Venugopal**, in his written submission to the **Supreme Court** (SC), has emphasised the need for greater **gender sensitisation among members of the judiciary**.

- ➢ He also highlighted that the **figure of female judges has been consistently low** across the Higher Judiciary.

Key Points

- ➢ **Background:**
  - ❍ The SC had asked AG and others to **recommend ways to improve gender sensitivity towards victims** while laying down **bail conditions for sex crime offenders**.
  - ❍ The Bench had sought view on a plea about courts **imposing bail conditions** for sex crime offenders

Note:

which **end up further harassing, objectifying their victims**.

- The **Madhya Pradesh** (MP) **High Court** (HC) **asked a man** (accused in a case of attempting to outrage the modesty of a woman) **to visit the home of the alleged victim and request her to tie a rakhi**.

➢ **Data on Gender Gap in Judiciary:**

❍ The **SC** only has **2 women judges**, as against the **34 seats reserved for women judges** and there has **never been a female Chief Justice of India** (CJI).

❍ There are **only 80 women judges** out of the **total sanctioned strength of 1,113** judges in the **SC and the HCs**.

- Out of these 80 women judges, there are only two in the SC, and the other 78 are in various HCs, comprising only 7.2% of the total number of judges.

- Of the 26 courts whose data was accessed, including the SC, the **Punjab and Haryana HCs has the maximum strength** of women judges (11 out of 85 judges) in the country, **followed by the Madras HC** (9 out of 75 judges). Both Delhi and Bombay HCs have 8 women judges.

- The **HCs of Manipur, Meghalaya, Patna, Tripura, Telangana, and Uttarakhand**, **do not have any women** in the sitting judges.

❍ Currently, **no data is centrally maintained** on the number of **women in tribunals or lower courts**.

❍ In the **senior designation of lawyers**, there are **only 17** women senior counsel designates in the SC as **opposed to 403 men**.

- The Delhi HC has 8 women and 229 men designates. Similarly, in the Bombay HC, there are 6 women and 157 men designates.

➢ **Importance of Women in Judiciary:**

❍ The **2030 Agenda for Sustainable Development**, and **Sustainable Development Goals** (**SDG 5** and **SDG 16** in particular), address the global responsibility of having **gender equality and women's representation in public institutions** such as the **judiciary**.

❍ Achieving equality for women judges is important not only because it is a **right for women**, but also because it is **right for the achievement of a more just rule of law**. Women judges **strengthen the judiciary and help to gain the public's trust**.

❍ The entry of women judges is a positive step in the direction of **judiciaries being perceived as being more transparent, inclusive, and representative** of the people whose lives they affect.

❍ Women judges **enhance the legitimacy of courts**, sending a powerful signal that they are **open and accessible to those who seek recourse to justice**.

❍ Women judges **bring those lived experiences to their judicial actions, experiences that tend toward a more comprehensive and empathetic perspective**.

❍ **Adjudication is enhanced** by the presence of women who **bring to the fore considerations that would not have been taken into account in their absence** and the scope of the discussion is hence enlarged, possibly **preventing ill-considered or improper decisions**.

❍ By elucidating how laws and rulings can be based on gender stereotypes, or how they might have a different impact on women and men, a **gender perspective enhances the fairness of adjudication**, which **ultimately benefits both men and women**.

➢ **Suggestions:**

❍ Courts should declare that **such remarks** (MP HC issue) **are unacceptable** which can potentially cause harm to the victim and to society at large.

❍ Judicial orders should **conform to certain judicial standards** and necessary steps have to be taken to ensure that this does not happen in the future.

❍ The **SC must direct the collection of data to determine the number of women** judges in the lower judiciary and tribunals and also **to determine the year-wise number of senior designates** by all HCs.

❍ **Greater representation of women should be ensured at all levels** of the judiciary, including the SC and this initiative must come from the SC itself, considering that the **power of appointment rests almost exclusively with the SC Collegium**.

- The judges of the SC are **appointed by the President**. The CJI is appointed by the President **after consultation with such judges of the SC and HCs** as (s)he deems necessary.

- The **other judges** are appointed by the President **after consultation with the CJI and such other judges of the SC and the HCs** as (s)he deems necessary. The consultation with the CJI is

Note:

obligatory in the case of appointment of a judge other than CJI.

○ The **goal must be to achieve at least 50% representation of women** in all leadership positions and there should be a **mandatory training of all lawyers on gender sensitisation**.

● Judges, who might belong to the "**old school**" and are maybe "**patriarchal**" in outlook, **should be sensitised to deal with cases of sexual violence** so that they do not pass orders objectifying women in such cases.

Technical Education in Mother Tongue

Why in News

Recently, the **Union Education Minister** has set up a task force for preparing a roadmap on imparting **technical education in the mother tongue** of students.

Key Points

➢ **The Task force:**

○ **Chairmanship:** It will be set-up under the chairmanship of the secretary, higher education, Amit Khare.

○ **Objective:** To achieve the Prime Minister's vision that students may pursue the professional courses such as medicine, engineering, law, etc in their mother tongue.

● This is part of the **National Education Policy (NEP) 2020** which suggests teaching in regional language till class 8 and enabling teaching the curriculum in a language which a student is comfortable in.

○ **Function:** It will take into consideration the **suggestions** made by various **stakeholders** and will submit a report in a month.

➢ **Reasons for imparting technical education in regional languages:**

○ **Enhances formative learning:** It has been observed that **the human mind is more receptive to communication in the language** in which it is accustomed to thinking from childhood.

● When explained in regional languages, especially mother tongue, **grabbing the concepts or**

expression of the ideas by the students becomes fairly **easy.**

○ **Practiced by Many Countries:** Across the globe, classroom teaching is pursued in a variety of regional languages, be it France or Germany or Russia or a country like China, which has over 300 languages and dialects with 8 of them being the major ones.

○ **Creates Inclusion:** It will help in **social inclusiveness, improving literacy rates, reduction in poverty and international cooperation.** Language can become a **catalyst for inclusive development**. Removal of the existing linguistic barriers will help in realizing the goal of inclusive governance.

➢ **Challenges**: Providing technical education in regional languages requires **teachers proficient** in undertaking classes **in the vernacular medium along with English**, **textbooks and reference materials** in regional languages, besides **technological assistance** such as audio translation aids.

➢ **Government Initiatives to Promote Regional Languages:**

○ The recently announced **National Education Policy** 2020 promotes education in regional languages**.**

○ **The Commission for Scientific and Technical Terminology (CSTT)** is providing publication grants towards the publications of University Level Books in regional languages.

● It was established in 1961 to evolve technical terminology in all Indian Languages.

○ The **National Translation Mission (NTM)** is being implemented through the **Central Institute of Indian Languages (CIIL)**, Mysore under which the text books of various subjects prescribed in Universities and Colleges are being translated in all **languages of the Eighth Schedule.**

● CIIL was established in 1969 under the administrative control of the Ministry of Education.

○ The Government of India is running a scheme known as **"Protection and Preservation of Endangered Languages"** for conservation of threatened languages.

○ **The University Grants Commission (UGC)** also **promotes regional languages in higher education courses in the country** and supports nine Central Universities under the scheme "Establishment of Centre for Endangered Languages in Central Universities".

Note:

○ Recently, an initiative **Namath Basai by Kerala State Government** has proved to be very beneficial in educating **children from tribal areas by adopting vernacular languages as medium of instruction**.

➢ **Global Efforts:**

○ The **Yuelu Proclamation made by United Nations Educational, Scientific and Cultural Organization (UNESCO) at Changsha, China,** in 2018 plays a central role in guiding the efforts of countries and regions around the world to protect linguistic resources and diversity.

○ The **United Nations General Assembly** had proclaimed **2019** as the **International Year of Indigenous Languages (IYIL)**.

● The **IYIL 2019** aimed to **preserve, support and promote** indigenous languages at the national, regional and international levels.

**Constitutional and Legal
Provisions Safeguarding Regional Languages**

➢ **Article 29** (Protection of interests of minorities) gives all citizens right to conserve their language and prohibits discrimination on the basis of language.

➢ **Article 120** (Language to be used in Parliament) provides for use of Hindi or English for transactions of Parliament but gives the right to members of Parliament to express themselves in their mother tongue.

➢ **Part XVII of the Indian Constitution** deals with the **official languages** in **Articles 343 to 351**.

○ **Article 350A (Facilities for instruction in mother-tongue at primary stage)** provides that it shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups.

○ **Article 350B (Special Officer for linguistic minorities)**: The President should appoint a special officer for linguistic minorities to investigate all matters relating to the constitutional safeguards for linguistic minorities and to report to him. The President should place all such reports before the Parliament and send to the state government concerned.

○ **Article 351 (Directive for development of the Hindi language)** provides that it shall be the

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duty of the Union to promote the spread of the Hindi language.

➢ **The Eighth Schedule** recognises following 22 languages: Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu, Bodo, Santhali, Maithili and Dogri.

➢ **Right to Education (RTE) Act, 2009** says that the medium of instruction shall, as far as practicable, be in a child's mother tongue.

Tharu Tribals

Why in News

The **Uttar Pradesh (UP) government** is working to **connect Tharu villages** in the districts of Balrampur, Bahraich, Lakhimpur and Pilibhit bordering Nepal, **with the home stay scheme** of the UP Forest Department.

➢ The idea is to **offer tourists an experience of living in the natural Tharu habitat**, in traditional huts made of grass collected mainly from the forests.

➢ This is expected to **create jobs and bring economic independence** for the tribal population.

Key Points

➢ **Meaning of 'Tharu':** The word tharu is believed to be **derived from sthavir**, meaning followers of **Theravada Buddhism**.

➢ **Habitat:** The Tharu community **belongs to the Terai lowlands**, amid the Shivaliks or lower Himalayas.

○ Terai is a **region of northern India and southern Nepal** running **parallel to** the **lower ranges of the Himalayas.**

○ The Tharus **live in both India and Nepal**. In the Indian terai, they **live mostly in Uttarakhand, Uttar Pradesh, and Bihar.**

➢ **Scheduled Tribe:** Tharu is a scheduled tribe in the states of **Uttarakhand, Uttar Pradesh** and **Bihar.**

➢ **Occupation:** Most of them are **forest dwellers**, and some practice **agriculture**.

➢ **Culture:**

○ They **speak various dialects of Tharu, a language of the Indo-Aryan subgroup**, and variants of Hindi, Urdu, and Awadhi.

Note:

- Tharus **worship Lord Shiva** as Mahadev, and call their supreme being **"Narayan"**, who they believe is the provider of sunshine, rain, and harvests.
- **Tharu women have stronger property rights** than is allowed to women in mainstream North Indian Hindu custom.
- Standard items on the Tharu plate are **bagiya or dhikri** – which is a steamed dish of rice flour that is eaten with chutney or curry – **and ghonghi,** an edible snail that is cooked in a curry made of coriander, chili, garlic, and onion.

Theravada Buddhism

➢ It is **strongest in** Sri Lanka, Cambodia, Thailand, Laos and Myanmar. It is sometimes called **'Southern Buddhism'**.

➢ The name means **'the doctrine of the elders'** - the elders being the senior Buddhist monks.

➢ This school of Buddhism **believes that** it has remained closest to the original teachings of the Buddha. However, it **does not over-emphasise** the status of these teachings in a fundamentalist way - they are **seen as tools to help people** understand the truth, **and not as having merit of their own**.

➢ It emphasises **attaining self-liberation through one's own efforts**. The **follower is expected to** "abstain from all kinds of evil, to accumulate all that is good and to purify their mind".

- The **ideal of Theravada Buddhism is the arhat**, or perfected saint, who attains enlightenment as a result of his own efforts.

➢ **Meditation** is one of the **main tools** by which a Theravada Buddhist transforms themselves, and so a monk spends a great deal of time in meditation.

Scheduled Tribe

➢ **Article 366 (25) of the Constitution** refers to **Scheduled Tribes** as those communities, who are **scheduled in accordance with Article 342 of the Constitution.**

➢ **Article 342** says that only those communities who have been declared as such by the President through an initial public notification or through a subsequent amending Act of Parliament will be considered to be Scheduled Tribes.

➢ The **list of Scheduled Tribes is State/UT specific** and a community declared as a Scheduled Tribe in a State need not be so in another State.

➢ The **Constitution is silent about the criteria** for specification of a community as a Scheduled Tribe. **Primitiveness, geographical isolation, shyness and social, educational & economic backwardness** are the traits that distinguish Scheduled Tribe communities from other communities.

➢ There are certain Scheduled Tribes, **75 in number known as Particularly Vulnerable Tribal Groups (PVTGs)**, who are **characterised by**:- a) pre-agriculture level of technology; b) stagnant or declining population; c) extremely low literacy; and d) subsistence level of economy.

➢ **Government Initiatives:** The **Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act,** 2006 (FRA); The **Provision of the Panchayats (Extension to the Scheduled Areas) Act**, 1996; Minor Forest Produce Act 2005; **SC And ST (Prevention Of Atrocities) Act**; and the Tribal Sub-Plan Strategy are focused on the socio-economic empowerment of STs.

Medicine Supplies and Make in India

Why in News

Recently, the **Ministry of Railways** has written to the **Department for Promotion of Industry and Internal Trade** (DPIIT) seeking **exemption for procuring certain medical items** manufactured outside India, particularly medicines used in the treatment of **Covid-19**, **cancer**, etc.

➢ DPIIT is a **central government department** under the **Ministry of Commerce and Industry**.

Key Points

➢ **Background:**

- In **August 2020**, Northern Railway formally wrote to the Railway Board, expressing **difficulty in procuring drugs and surgical items in the light of the Make in India** policy.
  - Indian Railways is **one of the largest employers in the country** with over 12 lakh employees and **has its own network of healthcare infrastructure**, including super speciality hospitals in all Zonal Headquarters.
- It highlighted that certain **drugs used in cancer treatment** and the **supplies of antiviral medicines**

and the vaccines for Covid-19 are manufactured outside India but available in the Indian market through agents or dealers, who **may not fall under the Class-I or Class-II categories**, which is required for purchases under the new Make in India guidelines.

- The revised **Public Procurement (Preference to Make in India), Order 2017** introduced a concept of Class-I, II and non-local suppliers, based on which they will get preference in government purchases of goods and services.

- In **June 2020**, the **government modified public procurement norms** to give **maximum preference to companies whose goods and services have 50% or more local content**, a move aimed at promoting 'Make in India' and making the country self-reliant.

➢ **Issue:**

○ In the existing **Make in India policy**, there is no window available to procure such items from the suppliers who may not meet the **Local Content Criteria required for Class-I and Class-II Local Supplier category**.

  - **Class-I** is a local supplier or service provider whose goods, services or works offered for procurement have l**ocal content equal to or more than 50%.**

  - **Class-II** is a supplier or service provider whose goods, services or works offered for procurement have a **local content of more than 20% but less than 50%.**

  - **Only these two categories of suppliers shall be eligible to bid in the procurement** of all goods, services or works and with an estimated value of purchases of **less than Rs. 200 crores**.

○ It is therefore **proposed to seek an exemption to procure** such medicines and medical items **from Indian Market from 'non-local suppliers'** (suppliers who supply **local content of less than 20%**).

○ However, the DPIIT informed that **procurement of imported items through Indian agents/ traders amounted to an indirect violation of the General Finance Rules, 2017** and hence, it was **not recommended and advised to get specific relaxation** for procurement of such medicines/ medical equipment.

  - **Rule 161 (iv) of GFR 2017** was amended by the

Department of Expenditure in May 2020 order to **restrict global tender enquiry for contracts worth more than Rs. 200 crore**.

- This was intended to enable floating of local tenders by procuring entities of the government to benefit local entities.

○ The purpose of seeking relaxation was **to achieve indigenisation of the items** that are **presently not being manufactured in the country** and the **objective is defeated** in case the subject relaxation is granted.

➢ The DPIIT has forwarded the issue to the **Department of Pharmaceuticals** and **Ministry of Health and Family Welfare**, which are the **nodal agencies for Pharmaceuticals, Medical Devices and Equipment**.

➢ The Ministry of Railways was **advised to exercise the powers conferred under Para 14 of the Make in India policy guidelines** with the approval of the Minister-in-charge **to seek relaxation in any particular procurement**, if required.

○ Para 14 empowers Ministries and various Departments to **grant an exemption and to reduce minimum local content.**

Partners in Population and Development Initiative

Why in News

Recently, the Union Minister for Health and Family Welfare has digitally addressed the **Inter-Ministerial Conference by Partners in Population and Development** (PPD).

Key Points

➢ **Partners in Population and Development:**

○ **Aim:** It is an **intergovernmental initiative** created specifically for the purpose of **expanding and improving South-South Cooperation** in the fields of reproductive health, population, and development.

○ **Launch:** PPD was **launched at the 1994 International Conference on Population and Development** (ICPD), when **ten developing countries from Asia, Africa and Latin America** formed an intergovernmental alliance to help implement the **Cairo Program of Action** (POA).

Note:

- The POA, **endorsed by 179 nations**, stresses the need to **establish mechanisms to promote development** through the sharing of experiences in reproductive health (RH) and family planning (FP) within and among countries.
  - **Members:** An alliance of **27 developing countries. India is a member country.**
  - **Secretariat:** Dhaka, Bangladesh
- **Inter-Ministerial Conference by PPD:**
  - It was **jointly organised by** PPD, **National Health Commission of China** (NHC) and the **United Nations Population Fund** (UNFPA).
  - **Objective:**
    - Advocate and ensure political support and investment to address the effects of **Covid-19 pandemic** in the achievement of the **Three Zeros by 2030**, finalised under the **Nairobi Summit 2019**.
  - **India appreciated the efforts of PPD** in promoting cooperation in key areas of reproductive health, population and development.

Nairobi Summit

- In **November 2019**, the Nairobi Summit, also known as **ICPD+25**, was held in Nairobi, Kenya, to celebrate the **25th anniversary of the ICPD** (held in Cairo in 1994).
- The **UNFPA and the Government of Kenya hosted** the Nairobi Summit, which brought together governments, UN agencies, private sector organizations, women's groups and youth networks to discuss and agree on initiatives to **further advance the implementation of the ICPD Programme of Action**.
- **Three Zeros by 2030:** Pledges were announced to achieve **zero preventable maternal deaths**, **zero unmet need for family planning**, and **zero gender-based violence and harmful practices by 2030**.

- **Steps Taken by India:**
  - Steadfast in its reaffirmation of the **commitments made at the Nairobi Summit**.
  - Committed to ensuring **universal health coverage** through its flagship programme **Ayushman Bharat**.
  - The Government has **pledged USD 3 billion by 2020 for improving reproductive health services**.
  - With aspirations of achieving **universal health care**, India's **National Health Policy 2017** aims at raising public health expenditure to 2.5% of the **Gross Domestic Product** (GDP).
  - Continuous efforts to **substantially reduce the unmet need for contraception** by increasing the range of contraceptives and improving accessibility and quality of family planning services.
  - Implementation of **Surakshit Matritva Aashwasan** (SUMAN) initiative for achieving the **Sustainable Development Goal** (SDG) target for reducing Maternal Mortality Rate (MMR) to less than 70 by 2030.
  - It is **enacting stringent legislation** to **address gender-based violence** and eliminate all forms of atrocities against women and girls.
  - Dedicated to providing quality, timely and disaggregated data, **investing in digital health innovations, and improvement of data systems** by 2030 to achieve sustainable development.
    - The **National Digital Health Mission (NDHM)** aims to develop the backbone necessary to support the integrated digital health infrastructure of the country.
  - India's **Covid-19 response** started even before it was declared as a pandemic by the **World Health Organisation** (WHO).
  - **Community-based interventions** including **family planning** are also a part of various services provided.
  - **Promotion of alternate service delivery mechanisms** along with **telemedicine** services, digital platforms for training, improving finances and streamlining supply chain systems.

Scheme for Special Assistance to States for Capital Expenditure

Why in News

All the **States except Tamil Nadu** have availed benefits of the scheme for **"Special Assistance to States for Capital Expenditure"**.

- The scheme was **announced by the Ministry of Finance** as a part of the **Aatmanirbhar Bharat package.**

Key Points

- **Background:** As part of the Aatmanirbhar Bharat Package, the government had announced that the **Centre will**

Note:

offer **Rs. 12,000 crore special interest-free 50-year loan to states**, exclusively for capital expenditure.

➢ **Aim**: To **boost capital expenditure by the State governments** which are facing a difficult financial environment this year due to the shortfall in tax revenue arising from the **Covid-19 pandemic.**

➢ **Three Parts:**

❍ **Part–I** of the scheme **covers the north-eastern region** (Rs. 200 crores)**.**

❍ **Part-II** is for **all other States** (Rs. 7500 crores)**.**

❍ **Part-III** of the scheme is **aimed at pushing various citizen-centric reforms** in the States.

● Under this Part, an amount of **Rs. 2000** crores is earmarked.

● This amount **will be available only to those States** which **carry out at least three out of the four reforms** specified by the Ministry of Finance on the reform-linked additional borrowing permissions.

● **Four Reforms: One nation one ration card,** ease of doing business**,** urban local body/ utility reform and power sector reforms.

➢ **Status:**

❍ The Ministry of Finance has **approved Rs. 9,879.61 crore** worth of capital expenditure proposals of 27 States.

● Of this, Rs. 4,939.81 crore has been released as the first instalment.

❍ The capital expenditure projects have been **approved in diverse sectors** such as health, rural development, water supply, irrigation, power, transport, education, urban development.

Capital Expenditure

➢ **Meaning:**

❍ Capital expenditure is the **money spent by the government** on the development of machinery, equipment, building, health facilities, education, etc.

❍ It also includes the expenditure incurred **on acquiring fixed assets** like land and investment by the government that gives profits or dividend in future.

❍ Along with the creation of assets, **repayment of loan** is also capital expenditure, as it reduces liability.

❍ Capital spending is **associated with investment or development spending**, where expenditure has benefits extending years into the future.

➢ **Significance:**

❍ Capital expenditure, which leads to the creation of assets are long-term in nature and allow the economy to **generate revenue for many years** by adding or improving production facilities and boosting operational efficiency.

❍ It also **increases labour participation**, takes stock of the economy and **raises its capacity to produce more in future.**

➢ **Different from Revenue Expenditure:**

❍ Unlike capital expenditure, which creates assets for the future, revenue expenditure is one that **neither creates assets nor reduces any liability** of the government.

❍ Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure. It is **recurring in nature**.

National Family Health Survey-5

Why in News

Recently, the **first-phase data** of the **National Family Health Survey-5** (NFHS-5) 2019-20 has been released by the **Ministry of Health and Family Welfare**.

➢ NFHS is a **large-scale, multi-round survey conducted in a representative sample of households throughout India**.

➢ All NFHSs have been conducted under the stewardship of the Ministry of Health and Family Welfare, Government of India, with the **International Institute for Population Sciences** (IIPS) Mumbai, serving as the nodal agency.

❍ **Established in 1956** under the joint sponsorship of Sir Dorabji Tata Trust, the Government of India and the **United Nations** (UN), IIPS has established itself as the premier institute for **training and research in population studies for developing countries in the Asia and Pacific region**.

➢ **Phase 2** of the survey (covering remaining states) was **delayed due to the Covid-19 pandemic** and its results are expected to be made available in **May 2021**.

Key Points

➢ **About the Survey:**
  ○ The NFHS-5 captured data **during 2014-19** and its **content is similar to NFHS-4** (2015-16) to allow comparisons over time and also **marks a shift** from it.
  ○ It provides an **indicator for tracking 30 Sustainable Development Goals** (SDGs) that the country **aims to achieve by 2030**.
  ○ However, **NFHS-5 includes some new topics**, such as preschool education, disability, access to a toilet facility, death registration, bathing practices during menstruation, and methods and reasons for abortion.
  ○ In **2019**, for the **first time**, the NFHS-5 sought details on the **percentage of women and men who have ever used the Internet**.

➢ **Data Analysis:**
  ○ Several states across the country have **reversed course and recorded worsening levels of child malnutrition despite improvements** in sanitation and better access to fuel and drinking water.
    ● The latest data captures the state of health in the states before the **pandemic**.
  ○ Several states have either witnessed **meagre improvements** or **sustained reversals** on **four key metrics** of child (under 5 years of age) malnutrition parameters.
    ● These four key metrics are **child stunting**, **child wasting**, **share of children underweight** and **child mortality rate**.
    ● The data from these metrics is also used in several global indices such as the **Global Hunger Index**.

➢ **Child Stunting:**
  ○ The **most surprising reversals** have happened in child stunting, which reflects **chronic undernutrition**, and refers to the **percentage of children who have low height for their age**.
  ○ Stunting, more than any other factor, is likely to have **long-lasting adverse effects on the cognitive and physical development** of a child.
  ○ **Telangana, Gujarat, Kerala, Maharashtra, and West Bengal** saw increased levels of child stunting.
  ○ The reversals in child stunting are "hugely troubling" as normally, stunting levels do not increase because all the things that affect child growth tend to improve as stable democracies and economies move ahead.

➢ **Child Wasting:**
  ○ It reflects **acute undernutrition** and refers to **children having low weight for their height**.
  ○ **India has always had a high level of child wasting**.
    ● Instead of reducing it, **Telangana, Kerala, Bihar, Assam and Jammu-Kashmir** witnessed an **increase** and **Maharashtra and West Bengal** have been **stagnant**.

➢ **Share of Children Underweight:**
  ○ In the proportion of underweight children, big states like **Gujarat, Maharashtra, West Bengal, Telangana, Assam and Kerala** have seen an **increase**.

➢ **Child Mortality Rate:**
  ○ **Infant Mortality Rate** (the number of deaths per 1000 live births for children under the age of 1) and **Under 5 Mortality Rate** data is mostly **stagnant**.
  ○ **Between NFHS-3** (2005-05) and **NFHS-4**, there was **progress on mortality reduction** but **NFHS-5 and NFHS-4** are about five years apart still there is **very little progress** in many states.
  ○ In **Maharashtra**, the under-5 mortality rate is basically the same in NFHS-4 and in **Bihar**, it **reduced by just 3%** over five years.
  ○ Over 60% of child mortality is explained by child malnutrition, which is the central problem and needs to be addressed.

➢ **Urban-rural Gender Gaps in Internet Use:**
  ○ There is an **urban-rural gap** as well as **gender divide** with respect to the use of the Internet in several states and union territories.
    ● On average, **less than 3 out of 10 women in rural India** and **4 out of 10 women in urban India** ever **used the Internet**.
  ○ **General Data:** An average 42.6% of women ever used the Internet as against an average of 62.16% among the men.
  ○ **In Urban India:** An average of 56.81% of women ever used the Internet compared to an average of 73.76% among the men.
  ○ **In Rural India:** A dismal 33.94% women in rural India ever used the Internet as against 55.6% among men.
    ● The **percentage of women**, who ever used the Internet, **significantly dropped in rural India**.

Note:

Reducing Emissions from Coal-Based Power Sector

Why in News

Recently, in a webinar by think-tank **Centre for Science and Environment (CSE),** experts discussed the measures to **reduce carbon dioxide (CO_2)** footprints of **India's coal-based power sector.**

➢ **Centre for Science and Environment (CSE)** is a public interest research and advocacy organisation based in New Delhi.

➢ CSE researches into, lobbies for and communicates **the urgency of development that is both sustainable and equitable.**

Key Points

➢ **Power Generation in India:**
  ○ India mainly uses **three types** of thermal power plants- **Coal, Gas and Liquid-fuel based.**
  ○ The electricity generated by these plants adds up to **62.2%** of the total power generation in the country.

➢ **Emissions from coal-based Power Sector:**
  ○ India's coal-based thermal power sector is one of the **country's biggest emitters of CO_2.**
  ○ It emits **1.1 giga-tonne of CO_2 every year**; this is **2.5%** of global **GreenHouse Gas** (GHG) emissions, one-third of India's **GHG** emissions, and around **50%** of India's fuel-related CO_2 emissions.

Fuel		MW	% of Total
Total Thermal		2,31,456	62.2%
	Coal	1,99,595	53.7%
	Lignite	6,360	1.7%
	Gas	24,992	6.7%
	Diesel	510	0.1%
Hydro (Renewable)		45,699	12.3%
Nuclear		6,780	1.8%
RES* (MNRE)		88,042	23.7%
	Total	371,977	

➢ **Policies Needed to Reduce Emissions:**
  ○ **Improving fleet technology and efficiency, renovating and modernising:**
    ● India has one of the youngest coal-based thermal plants in the world, with around **64% of the capacity (132 GW) less than a decade old.**
    ● The government's renovation and modernisation policies need to play a key role in maintaining the efficiency of this fleet.
  ○ **Planning for the Old Capacity:**
    ● In 2015, over **34 GW capacity** in India was more than 25 years old, and **60 % of it was highly inefficient.**
    ● **Increasing India's renewable electricity generation** can help further the cause to accelerate the retirement of old and inefficient plants.
  ○ **Propagating Biomass Co-firing:**
    ● **Biomass co-firing** stands for adding biomass as a partial substitute fuel in high efficiency coal boilers.
      ■ **Coal and biomass are combusted together in boilers** that have been designed to burn coal. For this purpose, the existing coal power plant has to be partly reconstructed and retrofitted.
      ■ Co-firing is an option to **convert biomass to electricity, in an efficient and clean way, and to reduce GHG emissions of the power plant**
    ● Biomass co-firing is a globally accepted **cost-effective method** for **decarbonising** a coal fleet.
      ■ **Decarbonising** means reducing carbon intensity, i.e. reducing the emissions per unit of electricity generated (often given in grams of carbon dioxide per kilowatt-hour).
    ● India is a country where biomass is usually burnt on the field which reflects apathy towards resolving the problem of clean coal using a very simple solution that is readily available.
  ○ **Investing in Carbon Capture and Storage (CCS):**
    ● Globally, carbon capture and storage has struggled to pick up and India's prospects appear to be dim at least until 2030.
    ● Businesses should invest in indigenous research and development to bring down the costs of CCS.
  ○ **Coal Beneficiation:**
    ● **Coal Beneficiation** is a process by which **the quality of raw coal is improved** by either reducing the extraneous matter that gets extracted along with the mined coal or reducing the associated ash or both.
➢ **Other Initiatives to Reduce Emissions:**

Note:

○ India shifted from **Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI)** emission norms from 1st April 2020 which was earlier to be adopted by 2024.

○ It has distributed more **than 360 million LED bulbs under the UJALA scheme,** which has led to energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO_2 per year.

○ **International Solar Alliance:** It is an Indian initiative conceived as a **coalition of solar-resource-rich countries** (which lie either completely or partly between the tropic of Cancer and the tropic of Capricorn) to address their special energy needs.

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

Vision 2035: Public Health Surveillance in India

Why in News

Recently, the **NITI Aayog** has released a white paper, **"Vision 2035: Public Health Surveillance in India"** which is envisaged to serve as a vision document **to propel Public Health Surveillance** (PHS) in India and establish India as a global leader in the area.

➤ A **white paper** is an **informational document**, usually issued by a company or not-for-profit organization, **to promote or highlight the features of a solution, product, or service**.

Key Points

➤ **Background:**

○ **NITI Aayog's mandate is to provide strategic directions** to the various sectors of the Indian economy. In line with this mandate, the Health Vertical released a set of four working-papers compiled in a volume entitled '**Health Systems for New India: Building Blocks-Potential Pathways to Reforms**' during November 2019.

○ This white paper is a **continuation of the work on strengthening the health systems**.

➤ **About the White Paper:**

○ This paper is a **joint effort** of **Health Vertical**, **NITI Aayog**, and **Institute for Global Public Health**, University of Manitoba, Canada with **contributions from technical experts** from the Government of India, States, and International agencies.

○ It **lays out India's vision 2035 for PHS** through the integration of the **three-tiered (primary, secondary and tertiary) public health system into Ayushman Bharat**.

○ It contributes by **suggesting mainstreaming of surveillance** by making individual electronic health records the basis for surveillance.

➤ **Main Features:**

○ Strengthen non-communicable disease prevention, detection, control and to reduce out of pocket expenses of individuals and families.

○ It **builds on initiatives such as the Integrated Health Information Platform** of the **Integrated Disease Surveillance Program**.

○ A**ligns with the citizen-centricity** highlighted in the **National Health Policy 2017** and the **National Digital Health Blueprint**.

● It encourages the use of mobile and digital platforms and point of care devices and diagnostics for amalgamation of data capture and analyses.

○ It **highlights the importance of capitalizing on initiatives** such as the **Clinical Establishments (Registration and Regulation) Act 2010** to enhance private sector involvement in surveillance.

○ It **points out the importance of a cohesive and coordinated effort of apex institutions** including the **National Centre for Disease Control**, the **Indian Council of Medical Research** (ICMR), and others.

➤ **Vision:**

○ To make India's PHS system **more responsive and predictive to enhance preparedness** for action at all levels.

○ To make it **more citizen-friendly to ensure individual privacy and confidentiality**, enabled with a client feedback mechanism.

○ To **improve data-sharing mechanisms** between Centre and states for better disease detection, prevention, and control.

○ To **provide regional and global leadership** in managing events that constitute a public health emergency of international concern.

Note:

Public Health Surveillance

➤ PHS is an important public health function that **cuts across the three-tiered public health system and care provided**. Surveillance is '**Information for Action**' and is an **essential action for disease detection, prevention, and control**.

➤ Challenges:
  ○ **Data Collection and Sharing:** Various **verticals to collect data work differently and in separation** with no mechanism for data sharing.
    ● There is **no single system** where surveillance data generated by target specific populations like the **National AIDS Control Programme**, **National TB Elimination Programme**, etc. **could be understood in its entirety**.
  ○ **Poor Quality Data:** The data generated is of **low quality** and the **research or use of data** to answer critical health policy questions of the country has **been very limited**.
  ○ **Limited Synchronisation:** There is the limited ability of programme implementation structures to work in synchrony with research organisations and vice versa.
  ○ **Missing Linkages:** India invests significant resources in the registration of deaths. However, various **reviews have not been able to link the causes of mortality with morbidities**. There was still **no proper linking to find common ground** between the causes of diseases and deaths.
  ○ **Lack of Human Resources:** Human resources also form a formidable challenge. As many as **42% vacancies existed** at state and district level surveillance systems.
    ● Most of the positions of the Central Surveillance Unit at the Centre are **filled either by deputation or on contract** and the individuals are **loaded with multiple other responsibilities**.
  ○ **Lack of Epidemic Intelligence:** India **does not have an adequate number** of public health **professionals having expertise** in the field.
    ● 'Epidemic intelligence' can be defined as all the activities related to early identification of potential health threats, their verification, assessment and investigation in order to recommend public health measures to control them.
  ○ **Under-developed Systems:** A **non-communicable diseases** (NCDs) **surveillance system hardly exists** in India and other factors like integration of surveillance for NCD risk factors, surveillance of injury and accidents, air pollution and its effects, etc, are **yet to be included in surveillance**.
  ○ **Lack of Occupational Health Surveillance:** This type of surveillance **addresses issues like lead toxicity, silicosis, etc**. Whatever data has been generated hardly became part of India's PHS system.
  ○ **Emerging Challenges:** Growing **antimicrobial resistance** (AMR), new infectious diseases or new strains of existing diseases and increased rate of NCDs.

➤ Suggestions:
  ○ **Creation of a skilled and strong health workforce** dedicated to surveillance activities.
  ○ **Integration** of NCDs, reproductive and child health, occupational and environmental health and injury into PHS.
  ○ **Merger of morbidity data** from health information systems.
  ○ **Amalgamation** of plant, animal, and environmental **surveillance in a One-Health approach** that also includes surveillance for antimicrobial resistance and predictive capability for pandemics.
  ○ **Strengthening of laboratory capacity** with new diagnostic technologies including molecular diagnostics, genotyping, and phenotyping.
  ○ **Establishment of a governance framework** that is inclusive of political, policy, technical, and managerial leadership at the national and state level.
  ○ **Enhancement of surveillance** of NCDs, citizen-centric and community-based surveillance and use of point of care devices and self-care diagnostics.
  ○ **Prioritization of diseases** that can be targeted for elimination as a public health problem, regularly.
  ○ **Improvement of core support functions** and system attributes for surveillance at all levels.
  ○ **Establishment of mechanisms to streamline data sharing**, capture, analysis, and dissemination for action.
    ● These could **include the use of situation-aware real-time signals** from social media, mobile sensor networks, and participatory surveillance systems for event-based epidemic intelligence.
  ○ **Encouragement of innovations** at every step-in surveillance activity.

Note:

Formulation of Policy for 3D Printing

Why in News

The **Ministry of Electronics and Information Technology** (MeitY) will soon come up with a **policy aimed at promoting 3D printing** on an industrial scale in view of its emerging market.

Key Points

➢ **3D Printing:**
- ○ **3D printing or additive manufacturing** uses computer-aided designing to make prototypes or working models of objects by laying down successive layers of materials such as plastic, resin, thermoplastic, metal, fibre or ceramic.
- ○ With the help of software, the **model to be printed is first developed by the computer**, which then gives instructions to the 3D printer.
- ○ 3D printing and a viable industry around it is mostly in the shape of **additive manufacturing**, wherein **companies make specific products for projects where there are very specific demands** such as lightweight equipment, etc.
  - • One of the key applications for such products is in the medical and allied sector.
- ○ The **USA remains the global leader in 3D printing**, with **more than 35% market share**.
  - • In **Asia**, about **50% of its market is cornered by China**, followed by **Japan** at 30%, and **South Korea** at 10%.

➢ **Features of the Policy:**
- ○ **Encourage market leaders to establish global bases for 3D manufacturing in India**, while **also discouraging imports** of printed material for domestic requirements.
- ○ **Objectives:**
  - • Help develop a **conducive ecosystem** for design, development and deployment of 3D printing and additive manufacturing.
  - • Help domestic companies to overcome technical and economic barriers so that they can build supportive and ancillary facilities for world leaders in the technology, such as the USA and China.

- ○ **Key Areas of Focus and Application:**
  - • Auto and ancillary auto and motor spare part business, such as engines, interior and exterior parts of luxury vehicles, or landing gear, complex brackets, and turbine blades.
  - • There can be some application of it in consumer electronics, printed circuit boards, clothing, toys and jewellery as well.
- ○ **Challenges:**
  - • **Lack of Standards:** Since 3D printing is **a very niche and new domain**, there are **no global qualifications and certification norms**.
  - • **Hesitation in Adoption:** Another challenge is **to convince the industry and ministries to push for its adoption** in their respective sectors as any new technology, which is not understood easily, faces a tough time.
  - • **Risk of Job Losses:** In the initial meetings on the subject, there was a **lot of resistance on whether this technology would eat into the jobs of highly-skilled workers** in the medical equipment or aerospace technology sectors.
  - • **High Costing:** Although actual printing is cheap, **parts to build a 3D printer are very expensive** as the **equipment and manufacturing costs are very high**. In addition, there is a **concern about warranty** hence, resource companies are **hesitant to put 3D-printed parts into their machines if they are not covered for damage** in case the parts fail.
  - • **Sector Specific Challenges:** Globally and even in India, the **largest consumer of 3D printing is the automotive industry** and right now it is going through a lot of changes like the introduction of **BS-VI** and **electric vehicles**. **New vehicle design development has slowed** and so has the demand for 3D printing.
- ○ **Potential Market:**
  - • According to MeitY's estimates, the **global market for additive manufacturing** is expected to reach **USD 34.8 billion by 2024**, which is growing at a compound annual growth rate of 23.2%.
  - • 3D printing **may not lead to an increase in net employment**, but this technology is something which can be pushed ahead.

Note:

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National Energy Conservation Day 2020

Why in News

The National Energy Conservation Day is organized on **14ᵗʰ December every year** by the **Bureau of Energy Efficiency (BEE)** with an aim to showcase India's achievements in energy efficiency and conservation.

➤ The **National Energy Conservation Awards** are given on the occasion.

Key Points

➤ **Energy Conservation:**
- ○ It is **any behavior that results in the use of less energy**.
  - ● Turning the lights off when leaving the room and recycling aluminum cans are both ways of conserving energy.
- ○ It is **different from the term 'energy efficiency'**, which is using technology that requires less energy to perform the same function.
  - ● Using a Light-Emitting Diode (LED) light bulb or a Compact Fluorescent Light (CFL) bulb that requires less energy than an incandescent light bulb to produce the same amount of light is an example of energy efficiency.
- ○ The **Energy Conservation (EC) Act was enacted in 2001** with the goal of **reducing the energy intensity of Indian economy**.
  - ● The **Bureau of Energy Efficiency (BEE)** was set up as the **statutory body** in 2002 at the central level to **facilitate the implementation of the EC Act.**
    - ■ It functions under the **Ministry of Power.**
- ○ **India's energy demand is expected to double between 2013 and 2030**, to approximately 1500 million tons of oil equivalent.

➤ **Energy Conservation Act, 2001:** The Act provides **regulatory mandates** for:
- ○ Standards & labeling of equipment and appliances;
- ○ Energy conservation building codes for commercial buildings; and
- ○ Energy consumption norms for energy intensive industries.

➤ **National Energy Conservation Awards:**
- ○ These Awards are given by eminent dignitaries of the Government of India **to Industries, Buildings, Transport and Institutions sectors along with Energy Efficient Manufacturers** to recognize innovation and achievements made by them in energy conservation.
- ○ The awards were **given for the first time on 14ᵗʰ December, 1991**, which is celebrated as **"National Energy Conservation Day"** throughout the country.

➤ **Schemes To Promote Energy Conservation and Energy Efficiency:**
- ○ The Ministry of Power through the BEE is implementing various policies and schemes viz. PAT Scheme, Standard and Labelling, Energy Conservation Building Codes and Demand Side Management.
  - ● **PAT Scheme:**
    - ■ **Perform Achieve and Trade Scheme (PAT)** is a **market based mechanism** to enhance the cost effectiveness in improving the Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded.
    - ■ It is a part of the **National Mission for Enhanced Energy Efficiency (NMEEE)**, which is one of the **eight missions** under the **National Action Plan on Climate Change (NAPCC).**
  - ● **Standards and Labeling:**
    - ■ The scheme was **launched in 2006** and is currently invoked for equipments/appliances Room Air Conditioner (Fixed/VariableSpeed), Ceiling Fan, Colour Television, Computer, Direct Cool Refrigerator, Distribution Transformer, Domestic Gas Stove, General Purpose Industrial Motor, LED Lamps, Agricultural Pumpset, etc.
    - ■ It **provides the consumer an informed choice** about the energy saving and thereby the cost saving potential of the relevant marketed product.
  - ● **Energy Conservation Building Code (ECBC):**
    - ■ It was **developed for new commercial buildings in 2007.**
    - ■ ECBC sets **minimum energy standards** for new commercial buildings having a connected

load of 100kW (kilowatt) or contract demand of 120 KVA (kilovolt-ampere) and above.

- BEE has also developed **a voluntary Star Rating Programme** for buildings which is based on the actual performance of a building, in terms of energy usage in the building over its area expressed in kWh/sq. m/year.

- **Demand Side Management:**
  - DSM is the selection, planning, and implementation of measures intended to have an influence on the demand or customer-side of the electric meter.

- Furthermore, the development of **Energy Conservation Guidelines** and **State Energy Efficiency Preparedness Index** are complimented within different sectors of Industries and States for implementing the energy efficiency programmes more effectively.

- India's **first convergence project** to generate green energy for rural and agriculture consumption is set to come up in Goa.

➢ **Global Efforts:**

- **International Energy Agency:**
  - It works with countries around the world to shape energy policies for a secure and sustainable future.
  - **India** is not a member country but an **association country**.
  - The IEA and Energy Efficiency Services Ltd. (EESL - Ministry of Power) co-produced a case study on the Indian Government's domestic efficient lighting programme - **UJALA** - to showcase the multiple benefits of energy efficient lighting.

- **Sustainable Energy for All (SEforALL):**
  - It is an **international organization** that works in partnership with the United Nations and leaders in government, the private sector, financial institutions and civil society to drive faster action towards the achievement of **Sustainable Development Goal 7 (SDG7)** – access to affordable, reliable, sustainable and modern energy for all by 2030 – in line with the **Paris Agreement** on climate.

- **Paris Agreement:**
  - It is a **legally binding international treaty** on climate change. Its goal is to limit global warming

to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

- As a part of the Paris Agreement, India has committed to **reducing its energy intensity** (units of energy use per unit of GDP) by 33-35% by 2030 compared to the 2005 levels.

- **Mission Innovation (MI):**
  - It is a **global initiative of 24 countries and the European Commission** (on behalf of the European Union) to accelerate clean energy innovation.
  - **India** is one of the **member countries**

Vehicle Insurance in India

Why in News

Recently, the **Insurance Information Bureau** (IIB) of India has released the **Motor Annual Report 2018-19**.

➢ **IIB** was promoted by the **Insurance Regulatory Development Authority of India** (IRDAI) as a single platform to meet the needs of the insurance industry, in 2009.

Key Points

➢ **Uninsured Vehicles:**

- Nearly **57% of the total vehicles on the road were uninsured** as of March 2019, up from **54% in March 2018**.

- The **bulk of uninsured vehicles are two-wheelers**, with the numbers being as high as 66%.
  - According to the **Motor Vehicles Act 2019**, it is **mandatory** for all vehicles to be insured with **third-party vehicle insurance policy**.
  - Third-party insurance is essentially a **form of liability insurance purchased by an insured** (first-party) **from an insurer** (second party) **for protection** against the claims of another (third party). The first party is responsible for their damages or losses, regardless of the cause of those damages.

➢ **Reasons:**

- **Weak enforcement** by traffic police in states, lack of follow-up by insurers and the **rising cost of third-party covers** has resulted in a larger number of vehicle owners not renewing their motor insurance policy.

Note:

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- ➢ **Concerns:**
  - ❍ About 13.2 crore vehicles on Indian roads are plying without the mandatory third-party insurance covers. **Victims of accidents caused by these vehicles will not get adequate compensation** as there would not be any insurance company on which the liability can be pinned. The owners, too, have limited means to provide compensation.
  - ❍ In 2019, the Ministry of Road Transport and Highways released the **annual report on Road Accidents in India**.
    - ● **Road Accidents Numerics**:
      - ▪ It **kills** almost **1.5 lakh people annually** in India.
      - ▪ The **accidents, as well as accident-related deaths** in the period 2010-2018**, dropped drastically compared with the previous decades**, despite the very high rate of growth of automobiles.
      - ▪ The road accident **severity** (the number of persons killed per 100 accidents) has **increased by 0.6% in 2018 compared to 2017**.
    - ● **Major Cause:**
      - ▪ **Over-speeding** is a major cause, accounting for 64.4% of the persons killed.
      - ▪ **Two-wheelers accounted for the highest share** (35.2%) in total accidents in 2018.
  - ❍ **For insurance companies**, the low level of compliance results in a **higher claims ratio as**, on several occasions, the tribunals have held the insurers liable for compensation, asking them to recover from the insured.

- ➢ **Suggestions:**
  - ❍ There is a **need for complementary thrust to spread awareness and improve financial literacy, particularly the concept of insurance, and its importance**.
  - ❍ Another area that necessitates regulatory scrutiny is that of **application of technology** in insurance.
  - ❍ The regulator needs to **exercise vigilance on three other aspects**.
    - ● It must ensure that **insurance is not denied to lower-income people** who make up the bulk of the population and have the most need for protection.
    - ● It should insist that **insurers facilitate a simple online process** for direct buying of insurance products, bypassing intermediaries.
    - ● It should ensure that **players do not overcharge or add hidden costs**.

Related Global initiatives

- ➢ **Brasilia Declaration on Road Safety, 2015:**
  - ❍ It was signed at the **second Global High-Level Conference on Road Safety** held in **Brazil**. The first conference was held in Russia in 2009.
  - ❍ Through it, countries plan to achieve the **Sustainable Development Goal** (SDG) 3.6 i.e. to **half the number of global deaths and injuries from road traffic accidents by 2030**.
- ➢ The **United Nations** has also declared **2010-2020 as the decade of action for Road Safety**.

■■■

Economic Scenario

Highlights

- *Minimum Support Price for Crops*
- *Monetary Policy: RBI*
- *Fall in Manufacturing PMI*
- *Demand for Interest Waiver*

- *Municipal Bonds*
- *Lottery, Gambling, Betting Taxable under GST Act: SC*
- *Database of Migrants*

Minimum Support Price for Crops

Why in News

One of the major demands of **protesting farmers** has been that the government guarantee in writing the **Minimum Support Price** system, which assures them of a fixed price for their crops, **1.5 times of the cost of production.**

➢ Farmer Unions are protesting against the newly enacted **three farm laws** and the **Electricity Amendment Bill 2020**.

Key Points

➢ **Minimum Support Price:**
  ○ MSP is a **"minimum price"** for any crop that the government considers as remunerative for farmers and hence deserving of "support".
  ○ It is **also the price** that government agencies pay whenever they procure the particular crop.
  ○ The **Union Budget for 2018-19** had announced that MSP would be kept at levels of **1.5 the cost of production**.

➢ **MSP is given for the following crops:**
  ○ The **Commission for Agricultural Costs & Prices** (CACP) recommends MSPs for **22 mandated crops** and **fair and remunerative price** (FRP) for **sugarcane**.
    ● CACP is an attached office of the **Ministry of Agriculture and Farmers Welfare**, Government of India.
      ■ It came into existence in **January 1965.**
      ■ It is an advisory body whose recommendations are **not binding on the Government.**

○ The mandated crops include **14 crops of the kharif season**, **6 rabi crops** and **2 other commercial crops**.
○ In addition, the MSPs of **toria and de-husked coconut** are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.
○ The **list of crops** are as follows:
  ● **Cereals (7)**: Paddy, wheat, barley, jowar, bajra, maize and ragi,
  ● **Pulses (5)**: Gram, arhar/tur, moong, urad and lentil,
  ● **Oilseeds (8)**: Groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and niger seed,
  ● Raw **cotton**, Raw **jute**, **Copra**, De-husked **coconut**, and
  ● **Sugarcane** (Fair and remunerative price).
○ The CACP **considered various factors** while recommending the MSP for a commodity, including **cost of cultivation**.
  ● It also took into account the **supply and demand situation** for the commodity, **market price trends** (domestic and global) and **parity vis-à-vis other crops**, and **implications for consumers** (inflation), **environment** (soil and water use) and **terms of trade between agriculture and non-agriculture sectors.**

➢ **Changes made by the 2018-19 budget:**
  ○ Budget for 2018-19 announced that **MSPs would henceforth be fixed at 1.5 times of the production costs for crops as a "predetermined principle"**.
  ○ CACP's job is now only to estimate production costs for a season and recommend the MSPs by applying the 1.5-times formula.

Note:

- ➤ **Mechanism of arriving at Production Cost:**
  - ❍ The CACP **does not do any field-based** cost estimates itself.
  - ❍ It makes **projections** using **state-wise, crop-specific production cost** estimates provided by the **Directorate of Economics & Statistics in the Agriculture Ministry.**
    - ● The latter are, however, generally available with a **three-year lag.**
  - ❍ The CACP projects **three kinds of production cost for every crop**, both at state and all-India average levels.
    - ● **'A2'**
      - ■ Covers all paid-out costs directly incurred by the farmer in cash and kind on seeds, fertilisers, pesticides, hired labour, leased-in land, fuel, irrigation, etc.
    - ● **'A2+FL'**
      - ■ Includes A2 plus an **imputed value of unpaid family labour**.
    - ● **'C2'**
      - ■ It is a more comprehensive cost that factors in **rentals and interest forgone on owned land and fixed capital assets**, on top of A2+FL.
  - ❍ **Issues with the Pricing**:
    - ● In the 2018-19 Budget Speech, the government **did not specify the cost** on which the **1.5-times formula was to be computed.**
    - ● The **CACP's 'Price Policy for Kharif Crops: The Marketing Season 2018-19' report** stated that its MSP recommendation was based on **1.5 times the A2+FL costs.**
    - ● Farm activists demand that the 1.5-times MSP formula originally recommended by the **National Commission for Farmers headed by agricultural scientist M S Swaminathan** should be applied on the **C2 costs.**
    - ● **Government's Stand:**
      - ■ CACP considers all costs in a comprehensive manner which is based on the methodology recommended by **Expert Committees from time to time.**
      - ■ CACP considers both **A2+FL and C2** costs while recommending MSP.
      - ■ CACP reckons only **A2+FL cost for return**. However, C2 costs are used by CACP primarily as **benchmark reference costs.**

Monetary Policy: RBI

Why in News

Recently, the **Monetary Policy Committee** (MPC) of the **Reserve Bank of India** (RBI) has left the **repo rate unchanged** and **maintained an accommodative policy stance** as it prioritised support for the economy's recovery over inflation amid the **Covid-19 pandemic**.

- ➤ It has also announced various other **liquidity management measures** and steps to **improve regulatory oversight** of the financial system.
- ➤ The MPC is a **statutory and institutionalized framework** under the **RBI Act 1934**, for maintaining price stability, while keeping in mind the objective of growth. It **determines the policy interest rate** (repo rate) **required to achieve the inflation target** (4%).

Key Points

- ➤ **Repo Rate:**
  - ❍ The MPC has kept the RBI's key lending rate, the **repo rate**, **steady at 4%** and **reverse repo rate** at **3.35%**.
    - ● The **repo rate**, also known as the **policy rate**, is the interest rate at which the RBI provides loans to banks.
    - ● The **reverse repo** is the rate at which commercial banks park their money with the central bank.
  - ❍ It has left key policy rates **unchanged for the third time in a row** in the wake of persistently high retail inflation, even as it pointed to the economy, which contracted in the last two quarters, showing signs of early recovery.
  - ❍ The central bank has **slashed the repo rate by 115 basis points** (bps) **since late March** to cushion the economy from the fallout of the Covid-19 and the resultant **lockdowns**.
    - ● Generally, **a low repo rate translates into low cost loans** for the general masses.
- ➤ **GDP Projections:**
  - ❍ The real **Gross Domestic Product** (GDP) for FY 2020-21 has been projected at **-7.5%**.
    - ● **Real GDP** is an **inflation-adjusted measure** that reflects the value of all goods and services produced by an economy in a given year.

Note:

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○ However, with the country gradually opening up after the lockdown and the improvement in activity in the second quarter, GDP is expected to **expand by 0.1% in the December quarter** and **0.7% in the March quarter**.

- GDP growth contracted by 23.9% in the Q1 of 2020 compared to the same period (April-June) in 2019.

➢ **Inflation:**

○ Inflation still remains a concern for policymakers as the supply-side bottlenecks **had fuelled inflation** and **large margins were being charged** to the consumer.

○ **Cost push pressure or cost push inflation** continue to impinge on core inflation, which has not changed much and could firm up as economic activity normalises and demand picks up.

- **Cost-push Inflation:** Spurt in production prices of certain commodities also causes inflation as the price of the final product increases.

- **Core Inflation:** It **excludes volatile goods** from the basket of commodities tracking **Headline Inflation.** These volatile commodities mainly comprise **food and beverages** (including vegetables) and **fuel and light (crude oil)**.

○ RBI **projected retail inflation to average 6.8% in Q3**, before moderating to 5.8% in Q4 and 5.2% to 4.6% in the first half of the fiscal year 2021-22, with risks broadly balanced.

○ This **constrains monetary policy at the current juncture from using the space available to act in support of growth**. At the same time, the signs of recovery are far from being broad-based and are dependent on sustained policy support.

○ Consumer Price Inflation (CPI) at a **six-year high of 7.6% in October**, which is well above its medium target level of 4% within a band of plus/minus 2%.

➢ **Accommodative Stance:**

○ The MPC had decided to **continue with the accommodative stance** as long as necessary, at least during the current financial year and into the next financial year, to **revive growth on a durable basis and mitigate the impact of Covid-19** on the economy.

➢ **Risk-based Internal Audit Norms:**

○ RBI has announced the introduction of **risk-based internal audit norms** for large **Urban Cooperative Banks** (UCBs) and **Non-Banking Financial Companies** (NBFCs), as part of measures aimed at **improving governance and assurance functions** at supervised entities.

○ The RBI also moved to harmonise the guidelines on the **appointment of statutory auditors** for commercial banks, UCBs and NBFCs in order **to improve the quality of financial reporting**.

○ It had been decided **to put in place transparent criteria for the declaration of dividends by different categories** of NBFCs.

○ With a view to deepening financial markets, regional rural banks would be allowed to access the **Liquidity Adjustment Facility** (LAF) and **Marginal Standing Facility** (MSF) of the RBI, as also the call/notice money market.

- **LAF** is a tool used in monetary policy by the RBI, that allows banks to borrow money through repurchase agreements (repos) or for banks to make loans to the RBI through reverse repo agreements.

- **MSF** is a window for scheduled banks to borrow overnight from the RBI in an emergency situation when interbank liquidity dries up completely. Under interbank lending, banks lend funds to one another for a specified term.

➢ **Digital Payment Security Controls Directions:**

○ To significantly improve the ecosystem of digital payment channels with robust security and convenience for users, the RBI has **proposed to issue Digital Payment Security Controls directions for the regulated entities**.

○ These directions will **contain requirements for robust governance**, **implementation and monitoring of certain minimum standards** on common security controls for channels like Internet and mobile banking and card payments.

➢ **Targeted Long-Term Repo Operations:**

○ RBI has decided to **bring the 26 stressed sectors identified by the Kamath Committee within the ambit of sectors eligible under on tap Targeted Long-Term Repo Operations** (TLTRO), providing **more liquidity** to the slowdown-hit economy.

- The RBI had announced the TLTRO on Tap scheme in **October 2020**, which will be available up to **31st March 2021**.

Note:

- Accordingly, it was decided to conduct on tap TLTRO with **tenors of up to three years for a total amount of up to Rs. 1 lakh crore** at a floating rate linked to the policy repo rate with flexibility to enhance the amount and period after a review of the response to the scheme.

○ Under TLTRO, banks can **invest in specific sectors through debt instruments** like **corporate bonds**, **commercial papers** and **non-convertible debentures** (NCDs) to push the credit flow in the economy.

○ As part of the **Aatmanirbhar Bharat Package 3.0**, the Centre launched the **Emergency Credit Line Guarantee Scheme 2.0** (ECLGS 2.0).

- Under it, the corpus of Rs. 3 lakh crore of existing ECLGS 1.0 was extended to provide 100% guaranteed collateral-free additional credit to entities in 26 stressed sectors identified by the Kamath panel.

○ According to the RBI, **banks are encouraged to synergise the two schemes by availing funds from RBI under on tap TLTRO and seek guarantee under ECLGS 2.0** to provide credit support to stressed sectors.

Fall in Manufacturing PMI

The **Purchasing Managers' Index** (PMI) for India's manufacturing shows that the **sector's expansion** as well as the **pace of new orders** slowed down while employment declined further **as business optimism faded** during the month of November.

➤ PMI is an **indicator of business activity** in the **manufacturing and services sectors.**

Key Points

➤ **Data Analysis:**

○ India's **Purchasing Managers' Index (PMI)** fell to a three-month low of 56.3 in November from an over 12-year high of 58.9 in October.

- In PMI parlance, a print **above 50 means expansion**, while a score below that **denotes contraction.**
- Although India's PMI is in the expansion zone, the **ongoing rise in Covid cases** in some states and **uncertainty about regional lockdowns** is denting confidence.

○ There were **slower increases** in factory orders, exports, buying levels and output.

○ Indian manufacturers are **refraining from hiring.** Employment **fell in November** as companies observed **social distancing guidelines**.

➤ **Calculation of PMI:**

○ It is a survey-based measure that **asks the respondents about changes in their perception about key business variables** as compared with the previous month.

○ The **purpose** of the PMI is to provide information about current and future business conditions to company decision-makers, analysts, and investors.

○ It is **calculated separately** for the **manufacturing and services sectors** and then a composite index is also constructed.

○ The PMI is a number from **0 to 100.**

- PMI **above 50 represents an expansion** when compared to the previous month;
- PMI **under 50 represents a contraction**, and
- A reading **at 50** indicates **no change.**

○ If PMI of the previous month is higher than the PMI of the current month (as is the case mentioned above), it represents that the **economy is contracting**.

○ It is usually released at the **start of every month**. It is, therefore, considered a **good leading indicator** of economic activity.

○ PMI is **compiled by IHS Markit** for more than 40 economies worldwide. IHS Markit is a global leader in information, analytics and solutions for the major industries and markets that drive economies worldwide.

○ As the official data on industrial output, manufacturing and GDP growth **comes much later,** PMI helps to make informed decisions at an earlier stage.

○ It is **different from the Index of Industrial Production (IIP),** which also gauges the level of activity in the economy.

Demand for Interest Waiver

Why in News

Recently, the **Supreme Court (SC)** has heard a batch of **petitions seeking interest waiver** during the **loan moratorium period.**

➤ The **Reserve Bank of India** (RBI) granted a **six-month loan moratorium** earlier this year, letting **borrowers**

defer payments on loans and EMIs. The move was intended **to provide borrowers relief** during the **Covid-19 pandemic**.

Key Points

➤ **Central Government's Stand**:

  ○ **Huge Cost:** It revealed that **a blanket waiver of interests on debts** incurred by all borrowers for the moratorium period will mean forgoing an estimated **over Rs. 6 lakh crore**.

  ○ **Possible Impact on Banks:** If the **banks were to bear this burden**, then it would **necessarily wipe out a substantial and a major part of their net worth**, rendering most of the lenders unviable and raising a very serious question mark over their very survival.

  ○ **Deposits vs. Loans:** **Continued payment of interest to depositors** is not only one of the most essential banking activities but is a huge responsibility that can never be compromised as most of the depositors are bound to be **small depositors, pensioners etc. surviving on the interest from their deposits.**

    ● In the Indian banking system, **for every loan account, there are about 8.5 deposit accounts.**

  ○ **Use of Financial Resources:** There is **a need to conserve and rationally use financial resources** to deal with the economic effects of pandemic over an uncertain and indeterminate time frame.

    ● It also **pointed out the sector-specific relief measures** taken by the Centre for the small and mid-sized business/MSMEs including from sectors such as restaurants and hotels.

➤ **Relief Measures Taken by the Centre:**

  ○ **For Power Sector:**

    ● The government had sanctioned over **Rs. 90,800** crore liquidity injection for the power distribution companies. This would **enable them to pay their outstanding dues** to power producers and transmission companies.

  ○ **For Real Estate Sector:**

    ● An advisory was issued allowing the extension of registration and completion dates of projects under Real Estate Regulatory Authorities by treating **Covid-19** as an event of **force-majeure.**

      ■ From a contractual perspective, a force majeure clause provides **temporary reprieve** to a party from performing its obligations under a contract upon occurrence of a **force majeure event.**

  ○ **For Micro, Small and Medium Enterprises (MSME) Sector:**

    ● An **emergency credit line (ECLGS) of up to Rs. 3 lakh crore**, backed by 100% government guarantee to enable the MSMEs to get back to regular operations.

  ○ **For Small Borrowers:**

    ● The Centre has decided that the **relief on waiver of compound interest** during the six-month moratorium period shall be limited to the most vulnerable category of borrowers who availed loan up to **Rs. 2 crore.**

      ■ The RBI has classified **"big borrowers"** having the loan account of **Rs. 1500 crores and above** and rest as "not big borrowers".

  ○ **For Big Borrowers:**

    ● The **Kamath Committee set up by the RBI** has recommended financial parameters for **debt restructuring of 26 sectors** affected by Covid-19.

  ○ **Other Measures:**

    ● The **Insolvency & Bankruptcy Code (IBC)** was **suspended** for a period of **six months** in order to protect companies in distress due to the pandemic being dragged into bankruptcy tribunals.

    ● The **Security and Exchange Board of India** (SEBI) has issued circulars to relax the **"recognition"** of defaults committed during moratorium.

Municipal Bonds

Why in News

Recently, **Rs. 200-crore worth Lucknow Municipal Corporation (LMC) bonds** have been listed on the **Bombay Stock Exchange (BSE).**

➤ **Lucknow** becomes **ninth city** to raise municipal bonds, incentivised by the **Ministry of Housing and Urban Affairs (Mohua)** under **Mission Amrut.**

➤ **BSE** is the oldest stock exchange in India as well as Asia.

Key Points

➤ **Municipal Bonds:**

  ○ A **municipal bond (muni)** is a **debt security issued**

by a state, municipality or county to **finance its capital expenditures**, including the construction of highways, bridges or schools.

- Through muni bonds, a municipal corporation raises money from individuals or institutions and promises to pay a **specified amount of interest** and returns the **principal amount** on a specific maturity date.

○ These are mostly **exempt from federal taxes and from most state and local taxes**, making them especially attractive to people in high income tax brackets.

Mission Amrut

➢ **Atal Mission for Rejuvenation and Urban Transformation** (Amrut) was **launched in 2015** to:

○ Ensure that every household has access to a tap with the **assured supply of water** and a **sewerage connection.**

- The Priority zone of the Mission is water supply followed by sewerage.

○ **Increase the amenity value of cities** by developing greenery and well maintained open spaces (e.g. parks).

○ **Reduce pollution by switching to public transport** or constructing facilities for non-motorized transport (e.g. walking and cycling).

➢ It is a **centrally sponsored scheme** with **80%** budgetary support from the Centre.

➢ **History of Municipal Bonds Issuance in India:**

○ Municipal bonds were first issued in India in 1997, five years after the **74th Constitutional Amendment** decentralized urban local bodies and gave them autonomy; made them accountable to citizens, and reformed their finances enabling them to access capital markets and financial institutions.

○ Between 1997 and 2010, the city corporations of Bengaluru, Ahmedabad and Nashik **experimented with bond issues** but barely managed to raise Rs. 1,400 crore.

○ The **poor investor response** was due to the fact that **these bonds were not tradable** and **lacked regulatory clarity.**

○ **Securities and Exchange Board of India (SEBI)**'s detailed guidelines for the issue and listing of municipal bonds in March 2015, clarified their regulatory status and rendered them safer for investors.

○ In 2017, Pune Municipal Corporation had raised Rs. 200 crore through muni bonds at an interest of 7.59% to finance its 24x7 water supply project.

- The plan was to raise Rs. 2,264 crore in five years in what was then the biggest municipal bonds programme in the country.

➢ **Significance of Municipal Bonds Market:**

○ Municipal Bonds can help the **Urban Local Bodies (ULBs)** to garner revenue to complete budgetary projects as property tax is the only major source of municipal revenue.

○ Growth of the municipal bond market is critical for India's large cities and towns to **upgrade their creaking infrastructure.**

○ The ability of municipal bodies to be self-sustaining is also critical to the success of the Centre's pet projects **such as Smart Cities and Amrut.**

➢ **Benefits of Municipal Bonds for Investors:**

○ **Transparency:**

- Municipal bonds that are issued to the public are rated by renowned agencies such as **CRISIL**, which allows investors transparency regarding the credibility of the investment option.

○ **Tax benefits:**

- In India, municipal bonds are exempted from taxation if the investor conforms to certain stipulated rules. In addition to such conformation, interest rates generated on such investment tools are also exempt from taxation policy.

○ **Minimal risk:**

- Municipal bonds are issued by municipal authorities, implying involvement of minimal risk with these securities.

  ■ Government bonds are usually viewed as low-risk investments, because the likelihood of a government defaulting on its loan payment tends to be low.

➢ **Challenges:**

○ **Reduced investor trust and confidence:** Weak financial position and poor governance and management of city agencies have limited their ability to issue bonds, and reduced investor trust and confidence.

○ **No authentic financial data available**: Investors have doubt over local bodies as there is no authentic financial data available.

Note:

❍ **Other Issues**: Low accountability and autonomy of city agencies followed by lack of an enabling environment.

Suggestions

➢ With the plight of the **Covid-19**, revenue generation and state finances have come to a virtual standstill, **hampering the funding of ULBs.** However, under the **Atmanirbhar Bharat Abhiyan** package, states are **offered an increase in borrowing capacity, based on potential reform of the urban property tax regimen.**

➢ Still, most urban local bodies **do not have the institutional agency to raise funds,** systemise accounting, and put up bankable projects. In order to address this, the reforms enlisted in the **15ᵗʰ Finance Commission (which makes it mandatory for urban local bodies to submit audited accounts by linking them to grant disbursement)** must be implemented.

Lottery, Gambling, Betting Taxable under GST Act: SC

Why in News

Recently, the **Supreme Court** (SC) has held that **lottery, gambling** and **betting** are **taxable** under the **Goods and Services Tax (GST) Act, 2017**.

Key Points

➢ **Background:**
   ❍ The SC passed the order in a batch of pleas filed by various **lottery dealers** who argued that the **Central government** had **wrongfully classified lottery as goods.**
   ❍ **Challenging Section 2 (52) of the 2017 Act** and notifications levying tax on lottery, petitioners contended that the law was **violative of the fundamental rights** and contrary to the SC judgment *(Sunrise Associates Vs. Government of NCT of Delhi* 2006*)* that held that lotteries were merely actionable claims and cannot be defined as 'goods'.

➢ **Judgement**:
   ❍ Lottery, betting and gambling are **actionable claims** and **come within the definition of goods** under **Section 2 (52) of the Central Goods and Services Tax Act, 2017.**

❍ The levy of GST on lotteries **does not amount to hostile discrimination.**
   ● As per **Schedule III of CGST Act 2017**, actionable claims other than lottery, betting and gambling are neither treated as supply of goods nor a supply of services.

❍ The **Parliament** has an **absolute power** to go for an **inclusive definition** of the term **'goods'** to include **actionable claims** like lottery, gambling and betting.
   ● **Article 246A** of the Constitution fully empowers the Parliament to make laws with respect to goods and services tax and expansive definition of goods given in Section 2 (52) cannot be said to be not in accord with the constitutional provisions.

Actionable Claim

➢ A **claim to any debt other than** a debt secured by mortgage of immovable property or hypothecation or pledge of movable property.
   ❍ Hypothecation occurs when an asset is pledged as collateral to secure a loan.

➢ **Only activities relating to lottery, betting and gambling are subject to GST** and except these three, no actionable claim is covered under GST by virtue of **Schedule III.**

➢ **Some examples of actionable claims:**
   ❍ Insurance Policy which is not secured by way of mortgage or hypothecation or pledge.
   ❍ Claim for arrear of rent is actionable claim since it is not secured on anything.
   ❍ Right to claim provident fund.
   ❍ Claim for unsecured debt.
   ❍ Claim in profit by a partner in a firm.

Central Laws Related to Lottery, Gambling and Betting

➢ **The Lotteries Regulation Act, 1998:**
   ❍ Lottery is considered as **legal** in India. Lottery should be organized by the state government and the place of Draw should be in that particular state.

➢ **Indian Penal Code, 1860:**
   ❍ The code has provisions for punishing anyone who to the annoyance of others does any obscene act in a public place or sings, recites or utters any obscene song, ballad or words, in or near any public place.

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○ These provisions of the IPC may be attracted if any obscene matter is used for the purpose of advertising betting and gambling activities.

➢ **Prize Competitions Act, 1955:**
  ○ It defines Prize in Competitions.

➢ **Foreign Exchange Management Act, 1999:**
  ○ Remittance of the income generated from lottery winning, racing/riding is **prohibited** under this Act.

➢ **Information Technology Rules, 2011:**
  ○ Under these rules, any internet service provider, network service provider or any search engine will **not host any such content** which directly or indirectly **support Gambling.**

➢ **Income Tax Act, 1961:**
  ○ Under this Act, current taxation policy in India covers all types of Gambling industry directly and indirectly. Thus, it can be said that all regulated and legalized Gambling is supported in the **Gross Domestic Product (GDP)** of India.

Database of Migrants

The Government has decided to create a **database of migrant workers**, including workers in the **informal economy**.

➢ **Migration** is the movement of people away from their usual place of residence, across either **internal (within country)** or **international (across countries)** borders. The latest government data on migration comes from the **2011 Census.**

➢ As per the Census, India had **45.6 crore migrants in 2011** (38% of the population) compared to **31.5 crore migrants in 2001** (31% of the population).

Key Points

➢ **Background:**
  ○ The **Inter-State Migrant Workmen Act, 1979,** required all establishments who hired inter-state migrants to be **registered,** as well as all **contractors who recruited** these workers to be **licensed**.
  ○ Proper implementation of this law would have ensured **information on inter-state migrants** to aid the state machinery in its relief efforts.
    ● However, no such **detailed records were maintained**, and information on the number of migrants was unavailable to both **central and state governments.**

○ A comprehensive database for migrant and other unorganised sector workers is seen as **necessary in the wake of the Covid-19 pandemic.**

➢ **Recent Government Initiatives to help returning migrants find livelihood:**
  ○ **The Ministry of Skill Development and Entrepreneurship** (MSDE) has launched '**Atma Nirbhar Skilled Employee Employer Mapping** (ASEEM)' portal to help skilled people find sustainable livelihood opportunities.
    ● **Database of labour migrants** in Indian states and overseas citizens, who returned to India under the **Vande Bharat Mission** and filled **SWADES Skill Card,** has been **integrated** with the **ASEEM portal.**
  ○ The **National Disaster Management Authority (NDMA)** has developed an online dashboard called '**National Migrant Information System (NMIS)**'
    ● The online portal (NMIS) would maintain a **central repository of migrant workers** and help in speedy inter-state communication to facilitate the smooth movement of migrant workers to their native places.
  ○ The Maharashtra Government has launched a portal named **'Mahajobs' for job seekers and employers**, owing to the economic situation caused by Covid-19 pandemic.
  ○ **Atma Nirbhar Uttar Pradesh Rozgar Abhiyan**:
    ● The scheme seeks to **promote local entrepreneurship and create partnership** with industrial associations to provide **employment opportunities to 1.25 crore migrant workers** who lost their jobs during the **Covid-19 pandemic**. The state government has already mapped the skill of the workers so that they can be provided employment as per their expertise.
    ● The **migrant commission announced by the Uttar Pradesh government will map skills of workers** who have returned to the state, providing data to employment exchanges.

➢ **Causes for Migration**:
  ○ Migration is a global phenomenon caused not only by economic factors but many other factors like social, political, cultural, environmental, health, education are included under the broader classification of Push and Pull factors of migration:

- **Push Factor**: Push factors are those that compel a person, due to different reasons, to leave a place of origin (out-migration) and migrate to some other place.
- **Pull Factor:** Pull factors indicate the factors which attract migrants (in-migration) to an area (destination).

Push-factors Countries of origin	Migrants	Pull-factors Countries of destination
⇒ Population growth, young age structure ⇒ Inadequate educational institutions, medicare and social security	**Demographic factors and social infrastructure**	⇒ Stable population, population decline, demographic ageing ⇒ Welfare state benefits, educational institutions, medicare, social security
⇒ Unemployment, low wages ⇒ Poverty, low consumption and living standard	**Economic factors**	⇒ Labour demand, high wages ⇒ Welfare, high consumption and living standard
⇒ Dictatorships, shadow democracy, bad governance, political upheaval ⇒ Conflict, (civil) war, terrorism, human rights violation, oppression of minorities	**Political factors**	⇒ Democracy, rule of law, pluralism, political stability ⇒ Peace, security, protection of human and civil rights, protection of minorities
⇒ Ecologic disaster, desertification, lack of natural resources, water shortage, soil erosion, lack of environmental policy	**Ecological factors**	⇒ Better environment, environmental policy, protection of natural resources and environmental protection
⇒ Decisions of the family or the clan ⇒ Information flows, media,	**Migrant flows and migrant stocks**	⇒ Diaspora, ethnic community ⇒ Information flows, media, transferred picture of

- **Patterns of Migration**:
  - Internal migrant flows can be **classified on the basis of origin and destination**:
    - Rural-rural, rural-urban, urban-rural and urban-urban.
  - Another way to classify migration is:
    - Intra-state, and inter-state.
- As of 2011, **Uttar Pradesh and Bihar** were the largest **source** of inter-state migrants while **Maharashtra and Delhi** were the largest receiver states. Around 83 lakh residents of Uttar Pradesh and 63 lakh residents of Bihar had moved either temporarily or permanently to other states.
- **Plan for the Database**:
  - The plan aims to get data from existing databases of government schemes such as **MGNREGA,** and the **one nation-one ration card** to create a **unique registration** of migrant workers.
  - Details of those working in unorganised sectors not covered by such schemes, are likely to be **added separately.**
  - **Aadhaar platform** would be used to address the problem of duplicity and ghost cards.

- **Issues:**
  - **No collection of data of intra-state migrants:**
    - The scope of the database needs to be expanded to include both sets of migrants.
  - **Discrepancy in definition of employed:**
    - The extent of migration in the country depends on the definition of employed. For example, the definitions used by the **National Sample Survey and the Census** are different**.**
    - A comprehensive definition needs to be worked out for employment**.**
  - **Technological Constraints:**
    - Merging the **existing databases** at the state level may be problematic as the **softwares and structures of data storage** may be different.
      - Aadhaar-linked databases may have security concerns.
  - **Lack of clarity over registration of workers:**
    - No **procedure of registration** yet mentioned, whether the process to register will be voluntary or by a government agency.
    - **Track over migration flows** etc has not been discussed.
  - **Portability Issue:**
    - Governments will also have to examine the issue of portability of benefits across states.

Inter-State Migrant Workmen Act, 1979

- The Act seeks to regulate the employment of inter-State migrants and their conditions of service.
- It is applicable to every establishment that employs **five or more migrant workmen from other States;** or if it had **employed five or more such workmen** on any day in the **preceding 12 months.**
- It is also **applicable to contractors** who employed a similar number of inter-State workmen.
- It envisages a system of **registration of such establishments.** The principal employer is prohibited from employing inter-State workmen **without a certificate of registration** from the relevant authority.
- The law also lays down that **every contractor who recruits workmen** from one State for deployment in another State **should obtain a licence to do so.**

■■■

International Relations

Highlights

- Criticism of Policies on Kashmir: OIC
- Countries of Particular Concern: US
- India Switzerland Relations
- SCO Online International Exhibition
- ASEAN Defence Ministers' Meeting Plus
- United Nations Investment Promotion Award 2020
- SAARC Charter Day

- Morocco Normalises Relations with Israel
- India-Uzbekistan Virtual Summit
- Rohingyas at Isolated Bangladesh Island
- Negotiations on UK's Brexit Deadline
- San Isidro Movement in Cuba
- Israel-Bhutan Ties

Criticism of Policies on Kashmir: OIC

Why in News

India has 'strongly' **rejected the criticism of its Kashmir policy by the Organisation of Islamic Cooperation (OIC).**

➤ The **47ᵗʰ session of the OIC Council of Foreign Ministers**, held at **Niamey (Niger)**, had made a reference to India over its **policies on Jammu and Kashmir.**

Organisation of Islamic Cooperation

➤ OIC is the **second largest intergovernmental organization** after the United Nations with a membership of **57 states**.
  ○ **India is not a member of the OIC**.
➤ It is the **collective voice of the Muslim world**. It endeavors to safeguard and protect the interests of the Muslim world in the spirit of **promoting international peace and harmony** among various people of the world.
➤ It was established upon a decision of the historical summit which took place in **Rabat, Kingdom of Morocco, in 1969**.
➤ **Headquarters:** Jeddah, Saudi Arabia.

Key Points

➤ **47ᵗʰ Session of OIC:** A report submitted at the 47ᵗʰ session referred to the situation in Jammu and Kashmir.

○ It said that the decision of the Indian government to **repeal special status** (in 2019) was aimed towards **changing the demographic and geographic composition** of the territory.
○ The continuous blockade and restrictions together have **led to human rights abuses.**
○ The statement **acknowledged the support that Pakistan has been providing to keep the Kashmir issue** on the agenda of the organisation.

➤ **India's Stand:**

○ India strongly hit out at the OIC, accusing it of making **"factually incorrect and unwarranted"** references to Jammu and Kashmir in resolutions adopted by the grouping at the session.
○ India asserted that the **union territory is an integral and inalienable part of the country.**
○ India **advised the OIC to refrain from making such references in future** and said it is regrettable that the **grouping continues to allow itself to be used by a certain country** "which has an abominable record on religious tolerance, radicalism and persecution of minorities" in a **clear reference to Pakistan.**
  ● After India revoked **special status** in Kashmir, Pakistan lobbied with the OIC for their condemnation of the move.
  ● Over the last one year, Pakistan has tried to rouse sentiments among the Islamic countries, but only a handful of them, **Turkey** and **Malaysia** publicly criticised India.

Note:

- **Saudi Arabia** and the **UAE,** both top leaders among the Muslim countries, were **not as critical** of India as Pakistan had hoped.

➢ **Significance of India's latest statement:**
  ○ India believes to bust the **double standard of OIC**, where it supports the agenda of Pakistan in the name of human rights.
  ○ India now sees the **duality of the OIC unjustifiable**, since many of the member countries of the OIC have **good bilateral ties** and convey to India to ignore OIC statements **but sign off on the joint statements** which are **largely drafted by Pakistan**.
  ○ India also wants to challenge this issue because of the possibility of the **Joe Biden administration in the US** which may have a strong view on human rights in Kashmir and **may issue statements** that may complicate India's image at the global stage.
  ○ With India preparing to take **over a non-permanent member's seat at the UN Security Council**, it wants to use its diplomatic clout and goodwill to bury this issue at the global body in the next two years and bring up the **Pakistan-sponsored cross-border terrorism** high on agenda.

India and OIC

➢ **India's relationship with OIC as an organisation:**
  ○ At the 45th session of the Foreign Ministers' Summit in 2018, Bangladesh, the host, **suggested that India**, where more than 10% of the world's Muslims live, **should be given Observer status**, but **Pakistan opposed** the proposal.
  ○ In 2019, India **made its maiden appearance** at the OIC Foreign Ministers' meeting, as a "guest of honour".
    ● This **first-time invitation was seen as a diplomatic victory for India**, especially at a time of heightened tensions with Pakistan following the Pulwama attack.

➢ **Criticism of India's Policies by OIC:**
  ○ It has been **generally supportive of Pakistan's stand on Kashmir**, and has issued statements criticising the alleged Indian "atrocities" in the state/Union Territory.
    ● In 2018, the OIC General Secretariat had "expressed strong condemnation of the killing of innocent Kashmiris by Indian forces in Indian-occupied Kashmir".

  ● It described the "**direct shooting at demonstrators**" as a "**terrorist act**", and "**called upon the international community to play its role in order to reach a just and lasting solution to the conflict in Kashmir**".
  ○ OIC has criticised the Government of India over the **Citizenship (Amendment) Act, 2019**, and the **Babri Masjid verdict** of the Supreme Court.
  ○ OIC has also criticised the Indian government for what it called **"growing Islamophobia"** in India.

➢ **India's Response:**
  ○ India has always maintained that **OIC has no locus standi in matters strictly internal to India** including that of Union Territory of Jammu and Kashmir which is an integral and inalienable part of India.

➢ **India's relationship with OIC member countries**:
  ○ Individually, India has good relations with almost **all member nations**.
  ○ Ties with the **UAE** and **Saudi Arabia**, especially, have improved significantly in recent years.
    ● The **Crown Prince of Abu Dhabi (UAE)** was a special chief guest at the **68th Republic Day** celebrations in 2017.
  ○ The OIC includes two of **India's close neighbours**, Bangladesh and Maldives.
    ● Indian diplomats say both countries **privately admit that they do not want to complicate their bilateral ties with India on Kashmir**.

Countries of Particular Concern: US

Why in News

Recently, the **US State Department** has designated **Pakistan and China** among eight other countries that are of **particular concern for violation of religious freedom.**

➢ Earlier, the **US State Department** had released its annual **International Religious Freedom (IRF) Report in 2019**, which is a survey of the state of religious freedom across the world.

Key Points

➢ **Country of Particular Concern (CPC):**
  ○ Designation of the CPC is the top tier recommendation **by the US Commission on International Religious**

Note:

Freedom (USCIRF) when it comes to violation of **international religious freedom.** It is **followed by Special Watch List Countries for severe violations.**

- This is in line with the **International Religious Freedom Act of 1998** which was passed to promote religious freedom as a foreign policy of the United States.
- The Act aims to **promote greater religious freedom** in countries which engage in or tolerate violations of religious freedom, and to advocate on the behalf of individuals persecuted for their religious beliefs and activities in foreign countries.

○ **Nations on the CPC list** for engaging in or tolerating **systematic, ongoing, egregious violations of religious freedom** are Pakistan, China, Myanmar, Eritrea, Iran, Nigeria, North Korea, Saudi Arabia, Tajikistan and Turkmenistan.

- **Nigeria** is the **first secular democracy** that has been named a **CPC.**

○ Notably, the State Department **did not accept the USCIRF recommendation** that **India**, Russia, Syria and Vietnam **be also designated as CPCs**.

- Earlier, the **US Commission on International Religious Freedom (USCIRF report) had downgraded India's religious freedom** to the lowest grade in the **'Country of Particular Concern (CPC)** category.
- **India's Stand:**
  ■ The Indian government had **rejected the report** by asserting that there is **no locus standi for a foreign government** to comment on the state of its **citizens' constitutionally protected rights.**

➢ **Special Watch List:** Governments that have engaged in or tolerated **"severe violations of religious freedom"** are included in this list**.**

○ **Comoros, Cuba, Nicaragua** and **Russia** are on the list.

○ **Sudan and Uzbekistan** have been **removed from the list** based on significant, concrete progress undertaken by their respective governments over the past year.

➢ **Entities of Particular Concern:** This list includes **al-Qaida, Boko Haram** (based in Nigeria), **the Houthis** (of Yemen), **ISIS** (Islamic State), ISIS-Greater Sahara, ISIS-West Africa, and the **Taliban**, etc.

Freedom of Religion in India

➢ Freedom of religion in India is a **fundamental right guaranteed by Article 25-28 of the Constitution of India.**

○ **Article 25** (Freedom of conscience and free profession, practice and propagation of religion).

○ **Article 26** (Freedom to manage religious affairs).

○ **Article 27** (Freedom as to payment of taxes for promotion of any particular religion).

○ **Article 28** (Freedom as to attendance at religious instruction or religious worship in certain educational institutions).

➢ Further, **Article 29 and 30** of the Constitution deal with the **protection of interest of minorities.**

India Switzerland Relations

Why in News

A **virtual meeting took place** recently between an Indian Minister and his Swiss Counterpart.

Key Points

➢ **Trade**:

○ Both the Ministers reiterated the desire to move forward on the **India-EFTA Trade & Economic Partnership Agreement (TEPA) negotiations**.

- The **European Free Trade Association** (EFTA) is the intergovernmental organisation of **Iceland, Liechtenstein, Norway and Switzerland**
- These countries are **not part of the European Union** (EU) with which India is negotiating a separate trade agreement called the **India-EU Broad-based Trade and Investment Agreement**.

○ The proposed agreement covers trade in **goods and services, investments, trade facilitation, customs cooperation, protection of intellectual property and public procurement.**

○ India-Switzerland **Bilateral Investment Treaty** (BIT) which is under negotiation was also discussed.

- BITs are treaties between two countries aimed at protecting investments made by investors of both countries.

➢ **Multilateral Forums**:

○ The Indian Minister sought support of Switzerland

Note:

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for the **joint proposal of India and South Africa in World Trade Organization (WTO) for TRIPS waiver.**

- **South Africa and India** have called for the (WTO) to **suspend intellectual property (IP) rights** related to Covid-19 to ensure equitable sharing of vaccines and new technology to control the pandemic.
  - A temporary ban would allow multiple actors to start production, instead of having manufacturing concentrated in the hands of a **small number of patent holders**.

India Switzerland Relations

- **Background**:
  - India and Switzerland have had cordial and friendly relations since India's Independence, based on **shared values of democracy and rule of law**. A Treaty of Friendship between India and Switzerland was signed at New Delhi in 1948.

- **Economic Relation**:
  - **Trade**:
    - As per EXIM Bank, Switzerland was the **11th largest trading partner** for India in 2018-19.
  - **Investment**:
    - Switzerland invested FDI equity worth approximately USD 4.781 billion in India from April 2000 to September 2019 thus becoming the **12th largest investor and accounting for about 1.07% of total FDI** in India during this period
- **Science and Technology:**
  - During the visit of Swiss President to India in 2003, an **inter-Governmental framework Agreement on Technical and Scientific Cooperation** was

signed under which an **Indo-Swiss Joint Research Programme** (ISJRP) was launched in 2005.

- **Skill Training**:
  - Several Institutes from both the countries have **collaborated** to impart the highest standards of skill training in India. **E.g.:**
    - Bharatiya Skill Development Campus and University.
    - Indo-Swiss Centre of Excellence, Pune.
    - Vocational Training Center, Andhra Pradesh.

SCO Online International Exhibition

Why in News

Recently, the **Vice President of India** has launched the first ever **SCO Online Exhibition on Shared Buddhist Heritage**.

- The launch happened during the **19th Meeting of the Shanghai Cooperation Organisation Council of Heads of Government** (SCO CHG), held in **New Delhi**.
  - India highlighted that the **crossborder terrorism** is the **biggest challenge** for the SCO countries.

Key Points

- **SCO Online International Exhibition:**
  - **Developed by: First ever of its kind** the exhibition was developed and curated by the **National Museum**, **New Delhi**, in active collaboration with SCO member countries.
  - **Participants:** Museums from India, Kazakhstan, China, Kyrgyz Republic, Pakistan, Russia, Tajikistan and Uzbekistan.
  - **Significance:**
    - **Buddhist Connection:** Buddhist philosophy and art of Central Asia connects **SCO** countries to each other and presents an excellent **opportunity for visitors** to access, appreciate and compare **Buddhist art antiquities from SCO** countries on a **single platform**.
    - **Knowledge about Different Schools of Buddhism:** The visitors can explore the Indian Buddhist treasures from the **Gandhara and Mathura Schools**, Nalanda, Amaravati, Sarnath, etc. in a **3D virtual format**.

Note:

- **Artistic Wealth and Excellence:** The international exhibition gives a glimpse of the artistic wealth displayed in various museums across Asia and also represents the artistic excellence embedded within an eclectic historical timeline.

○ **Highlights:**

- The **Pakistan Hall** depicts the life of **Gautama Buddha** and **buddhist art through a collection of impressive Gandhara art objects** including fasting Siddhartha and footprint of Buddha from Sikri, meditating Buddha from Sahri Bahlol, miracle of Sravasti from Gandhara, etc.

- The **State Oriental Art Museum, Moscow** contributed objects which depict the **Buddhist Buriyat Art of Russia** through icons, ritual objects, monastery traditions etc.

- **The Dunhuang Academy of China** contributed a rich **digital collection on buddhist art** which include **ingenious architecture, resplendent murals, decorative designs, costumes etc**.

➤ **India on Terrorism:**

○ India raised the issue of terrorism at the meeting and highlighted it as the enemy of humanity. It expressed its concerns on the **state sponsored terrorism and in particular crossborder terrorism**.

- India supports the **BRICS Counter-Terrorism Strategy**.

Shanghai Cooperation Organisation

➤ It is a **permanent intergovernmental international organisation** and a **Eurasian political, economic and military organisation** aiming to maintain **peace, security and stability in the region** created in **2001.**

➤ The **SCO** is widely regarded as the **"Alliance of the East",** due to its growing centrality in Asia-Pacific, and has been the primary security pillar of the region.

➤ It is the **largest regional organisation in the world** in terms of geographical coverage and population, covering **three-fifths of the Eurasian continent and nearly half of the human population**.

➤ **Members**: Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan.

➤ **Observer states:** Afghanistan, Belarus, Iran and Mongolia.

➤ **Dialogue Partners:** Azerbaijan, Armenia, Cambodia, Nepal, Turkey and Sri Lanka.

- Recently**, India's annual resolution on the issue of counter-terrorism** was adopted by consensus in the **First Committee** of the **United Nations General Assembly** (UNGA).

○ India also criticised Pakistan for using terrorism as a **instrument of state policy** and called upon the members of **SCO** to fight it **collectively**.

ASEAN Defence Ministers' Meeting Plus

Why in News

Recently, India's defence minister attended the **14th ASEAN Defence Ministers' Meeting (ADMM) Plus** organized online at Hanoi, Vietnam.

➤ It marked the **10th anniversary of ADMM Plus**.

➤ The **Association of Southeast Asian Nations (ASEAN)** is a regional organization which was established to promote **political and social stability amid rising tensions among the Asia-Pacific's post-colonial states.**

Key Points

➤ **About ASEAN Defence Ministers' Meeting Plus:**

○ **Creation:** The 2nd ASEAN Defence Ministers' Meeting (ADMM) in **2007** at Singapore **adopted a resolution to establish the ADMM-Plus.**

- The **first** ADMM-Plus was convened at **Hanoi, Vietnam in 2010.**

○ **Objective**: The **ADMM-Plus is a platform for ASEAN (The Association of Southeast Asian Nations) and it's eight Dialogue Partners** to strengthen security and defence cooperation for peace, stability, and development in the region.

○ **Membership**: The ADMM-Plus countries include **ten ASEAN Member States and eight Plus countries**, namely **Australia, China, India, Japan, New Zealand, Republic of Korea, Russian Federation, and the United States.**

○ **Chairman**: The chairmanship of the **ADMM-Plus follows the chairmanship of the ADMM.**

- This year it was chaired by **Vietnam.**

○ **Aim:** It aims to promote **mutual trust and confidence** between defence establishments through greater **dialogue and transparency.**

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ADMM / ADMM-Plus
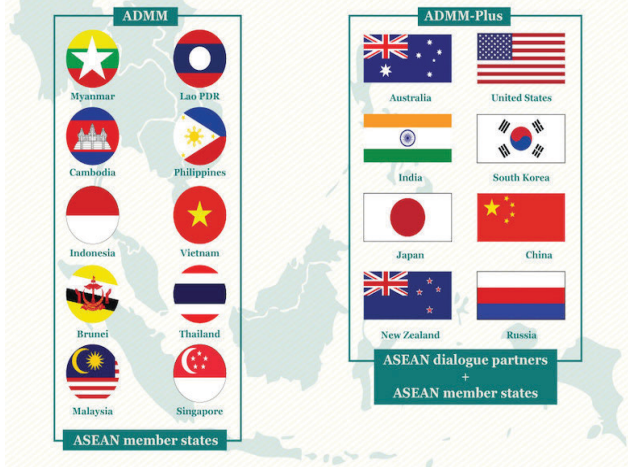
- ○ **Areas of cooperation**: Maritime security, counter-terrorism, humanitarian assistance and disaster relief, peacekeeping operations and military medicine.
- ➤ **The current meet** comes at the time when India and China remain engaged in a military standoff along the **Line of Actual Control in Ladakh**, and **tensions continue to mount in the South China Sea.**
- ➤ **India's Stand at the Meet:**
  - ○ **Future:** The future of the **South East Asian Countries** will be defined by their **ability to collectively respond to challenges** in the region, based on the fundamentals of freedom, inclusivity and openness.
  - ○ **Covid-19:** The response to the pandemic needs to be **collective and collaborative**.
  - ○ **Challenges:** Threats to the **rules-based order, maritime security, cyber-related crimes and terrorism**.
    - ● Challenges are becoming increasingly **trans-boundary in character** which requires closer **military-to-military interactions and cooperation amongst the ADMM-Plus countries.**
  - ○ **Tools for Cooperation:** The conduct of **field training exercises and table-top exercises** amongst the ADMM-Plus countries are important tools to understand each other, cooperate to enhance security and maintain peace in the region.
    - ● **Example: MAITREE** which is an annual training event that is conducted in **India and Thailand alternatively, since 2006.**

United Nations Investment Promotion Award 2020

Why in News

Recently, the **United Nations Conference on Trade and Development** (UNCTAD) has **declared 'Invest India'** as the **winner of the United Nations Investment Promotion Award 2020.**

Key Points

- ➤ **United Nations Investment Promotion Award:**
  - ○ It recognises and celebrates the outstanding achievements of the world's **Investment Promotion Agencies** (IPAs). Since **2002**, UNCTAD has organised these awards **annually**.
  - ○ The awards also highlight the contributions of these organizations in raising private sector investment in sustainable development and in achieving the **Sustainable Development Goals** (SDGs).
  - ○ The **response of IPAs to the Covid-19 pandemic** became the **basis for the evaluation** of the 2020 award.
  - ○ **Germany, South Korea and Singapore** have been some of the **past winners** of the award.
- ➤ **Invest India:**
  - ○ It is the **National Investment Promotion and Facilitation Agency of India** and acts as the first point of reference for investors in India.
  - ○ It is a **non-profit venture set up in 2009** under the Department for Promotion of Industry and Internal Trade, **Ministry of Commerce and Industry**, Government of India.
  - ○ **UNCTAD highlighted good practices followed by Invest India**, such as the Business Immunity Platform, Exclusive Investment Forum webinar series, its social media engagement and focus Covid response teams created as a response to the pandemic, in its publications.
- ➤ **Government Measures Related to Investment Promotion:**
  - ○ India's attractiveness as a **Foreign Direct Investment** (FDI) **destination** has surged in recent times. In 2019, it was **among the top 10 countries attracting foreign funds**, receiving billions of dollars in a

variety of sectors, including services, technology, IT and telecom, and construction.

○ In **2020, factors such as** a swift response in combating the Covid crisis, favourable demographics, impressive mobile and internet penetration, massive consumption and technology uptake, played an important role in attracting the investments.

○ Launch of Schemes attracting investments, such as, **National technical Textile Mission**, **Production Linked Incentive Scheme**, **Pradhan Mantri Kisan SAMPADA Yojana**, etc.

- The government has elaborated upon the initiatives under the **Atmanirbhar Bharat** to encourage investments in different sectors.

○ As a part of its **Make in India initiative** to promote domestic manufacturing, India deregulated FDI rules for several sectors over the last few years.

○ The Government of India continues to improve **Ease of Doing Business** in the country by releasing notifications highlighting measures to improve the business environment in India.

- India **ranked 63rd out of 190 countries** (moved up by 14 spots) in **Doing Business 2020: World Bank Report.**

United Nations Conference on Trade and Development

➤ UNCTAD is a **permanent intergovernmental body** established by the United Nations General Assembly in **1964**. Its headquarters are located in **Geneva, Switzerland.**

➤ It was established to **promote the development-friendly integration of developing countries into the world economy.**

➤ It is a **central agency** that monitors the performance of **Investment Promotion Agencies** (IPAs) and identifies global best practices.

➤ Some of the **reports** published by it are:
  ○ Trade and Development Report
  ○ **World Investment Report**
  ○ **Global Investment Trend Monitor Report**
  ○ Least Developed Countries Report
  ○ Information and Economy Report
  ○ Technology and Innovation Report
  ○ Commodities and Development Report

SAARC Charter Day

Why in News

In a message to the **South Asian Association for Regional Cooperation** (SAARC) on its **36th Charter Day** anniversary, the Prime Minister of India said that SAARC can only be fully effective in the absence of "terror and violence".

➤ SAARC Charter Day is **observed annually on 8th December**. This day marks the **signing of the SAARC Charter in 1985** by the leaders of SAARC Countries at the **First SAARC Summit** held in **Dhaka** (Bangladesh).

Key Points

➤ **India's Stand:**
  ○ The full potential of SAARC can only be realised in an atmosphere free of terror and violence.
    - This indicates that **India's concerns over cross-border terrorism from Pakistan remain a primary obstacle** in India's participation in the summit.
    - In their messages, both Pakistan and Nepal called for the SAARC summit to be held soon.
  ○ India also called for SAARC countries to **"recommit to defeating the forces that support and nurture terrorism**."
  ○ India is also **committed to** an "integrated, connected, secure and prosperous South Asia", and will support the economic, technological, cultural and social development of the region.
  ○ Highlighting the importance of **greater collaboration,** India referred to the **example of the early coordination between SAARC countries for dealing with the Covid-19 pandemic.**
    - An **emergency Covid-19 fund** was created with an initial contribution of USD 10 million from India.

➤ **Stalled SAARC Process:**
  ○ SAARC's functioning and activities have virtually stalled **because of the strained relations between India and Pakistan.**
  ○ Besides **a virtual meeting in March** on the Covid-19 situation, SAARC **has not had any significant engagements since India pulled out of the summit** that was to be held in Pakistan in 2016 in the aftermath of the Uri terror attack.

Note:

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Morocco Normalises Relations with Israel

Why in News

Recently, **Morocco and Israel** have agreed to normalise relations in a **deal brokered by the USA**.

➤ It makes Morocco the **fourth Arab country**, after **the UAE, Bahrain** (**Abraham Accords**) and **Sudan**, to set aside hostilities with Israel in the past four months.

Key Points

➤ **Highlights of the Deal:**

  ○ Morocco will **establish full diplomatic relations and resume official contacts** with Israel, **reopen** their **liaison offices** in Rabat (capital of Morocco) and **Tel Aviv** (a city in Israel) immediately with the intention to open embassies and **promote economic cooperation** between Israeli and Moroccan companies.

  ○ Morocco **intends to facilitate direct flights** for Israeli tourists to and from Morocco.

  ○ The USA has **changed its longstanding policy** and recognised **Morocco's sovereignty over Western Sahara**.

    ● **Since 2007**, the **UN Security Council**, of which the USA is a veto-capable permanent member, has called on **Morocco and the Polisario to engage in negotiations without preconditions** to reach a "**mutually acceptable political solution**, which will provide for the self-determination of the people of Western Sahara."

➤ **Significance:**

  ○ The USA is putting in efforts to **present a united front against Iran** and **minimise Tehran's regional influence**.

  ○ This step is considered as a sovereign move and will **contribute to strengthening the common quest for stability, prosperity and lasting peace** in the region.

  ○ The deal would **deepen Morocco's engagement with the West** and will also **boost Israel's motive** which has made it a **priority to forge ties with formerly hostile countries in Africa and the Arab** world in the absence of any progress with the Palestinians.

➤ **Reactions:**

  ○ **Palestinians have been critical** of the normalisation deals, saying Arab countries have set back the cause of peace by **abandoning a longstanding demand of Israel giving up land for a Palestinian state** before it can receive recognition.

  ○ **Egypt and the UAE have welcomed** Morocco's decision.

    ● Egypt and Israel signed a **peace treaty in 1979**.

  ○ The **Polisario Front** "**highly regrets**" the change in USA's policy, which it called "**strange but not surprising**." It holds that the deal will not change an inch of the reality of the conflict and the right of the people of Western Sahara to self-determination.

Note:

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Western Sahara

Morocco-controlled territory
Polisario-controlled territory

➢ **Western Sahara** is a desert region, a **former Spanish colony** and was **annexed by Morocco in 1975**.

➢ Since then, it has been the subject of a long-running territorial dispute between Morocco and its **indigenous Saharawi people**, led by the **pro-independence Polisario Front**.

➢ **Morocco** says it has **always been part of its territory**, while the **African Union recognises it as an independent state**.

➢ A 16-year-long insurgency ended with an **UN-brokered truce in 1991** and the **promise of a referendum on independence**, which has yet to take place.

○ The USA supported the **ceasefire** between **Morocco and the Polisario Front**.

➢ In **November 2020**, after a border incident, the **Polisario pulled out of that deal** and announced a return to armed struggle.

➢ The USA's backing of Morocco's claim to sovereignty over Western Sahara is a big deal because it **diminishes the hope of a people who have aspired for the independence** of that territory for decades.

India-Uzbekistan Virtual Summit

Why in News

In a recent virtual summit, **India and Uzbekistan** have deliberated on **expanding bilateral ties aiming to expand cooperation in a range of areas**, including new and renewable energy, digital technologies, cybersecurity and sharing of information.

➢ The agreements also include cooperation on **connectivity projects in Afghanistan** and its **peace process**, **trilateral dialogue with Iran**, **combatting terrorism**, etc.

Key Points

➢ **Trade, Economic and Investment Cooperation:**

○ Making efforts to achieve the **mutually identified target of USD 1 billion for bilateral trade**.

● The **current bilateral trade** level of about **USD 285 million** (2018) is far below the potential.

○ Fast-track the conclusion of the ongoing **Joint Feasibility Study** that will pave the way for the commencement of negotiations on a **Preferential Trade Agreement**.

○ Early conclusion of the **Bilateral Investment Treaty** which shall facilitate investment promotion and protection for further improvement of trade and economic cooperation.

● The sides noted the prospects for greater opportunities in the free economic zones of the two countries, including in the **Uzbek-Indian free pharmaceutical zone** in the **Andijan region** (eastern part of the Fergana Valley in far eastern Uzbekistan).

○ Uzbekistan welcomed the opportunities in India for investing/manufacturing under the '**Make in India**' programme.

➢ **Development Cooperation:**

○ India confirmed the **approval of a USD 448 million Line of Credit for four developmental projects** in Uzbekistan in the areas of road construction, sewerage treatment and information technology.

➢ **Defence and Security:**

○ Appreciated the enhanced pace of bilateral defence cooperation since the convening of the first meeting of **Joint Working Group on Defence Cooperation in February 2019**.

○ Welcomed the holding of the "**Dustlik 2019**", **first-ever joint military exercises in November 2019**.

○ Agreed to further strengthen cooperation between the law enforcement agencies and special services of the two countries, including under the framework of the **Uzbekistan-India Joint Working Group on Counter-Terrorism**.

➢ **Civil Nuclear Energy:**

○ Welcomed the conclusion of the bilateral agreement between the **Global Centre for Nuclear Energy Partnership** (GCNEP) **India** and the **Agency for Development of Nuclear Energy, Uzbekistan**.

Note:

- GCNEP is the **sixth research and development (R&D) unit** under the aegis of **Department of Atomic Energy** (DAE) and helps in capacity building, in association with the interested countries and the **International Atomic Energy Agency** (IAEA).

➢ **Connectivity:**
  ○ Reiterated continued commitment for **enhancing connectivity** between India and Uzbekistan and in the larger Central Asian region to bolster trade and investment.
  ○ India welcomed the **proposal to hold trilateral dialogue among India, Iran and Uzbekistan** to promote connectivity through the Chabahar port.
  ○ India also **requested Uzbekistan to consider joining** the **International North-South Transport Corridor** (INSTC) which would add to the overall improvement of connectivity in the larger Eurasian space.

➢ **Culture, Education and People-to-People Contacts:**
  ○ India invited Uzbekistan to avail of increased scholarship opportunities provided by the **Indian Council for Cultural Relations** (ICCR) and training and capacity building under the **Indian Technical and Economic Cooperation (ITEC) programme**.

➢ **Terrorism:**
  ○ Strongly **condemned terrorism** in all its forms and manifestations and reaffirmed the determination to combat this menace by destroying terrorist safe-havens, networks, infrastructure and funding channels.
  ○ Also underlined the need for every country to ensure that its territory is not used to launch terrorist attacks against other countries and called for early finalisation of a **Comprehensive Convention on International Terrorism** (CCIT).

➢ **Afghanistan:**
  ○ Called for the **settlement of the Afghan conflict** on the principle of Afghan-led, Afghan-owned and Afghan-controlled peace process and expressed unanimity in support for a united, sovereign and democratic Islamic Republic of Afghanistan.

➢ **Reformed Multilateralism:**
  ○ Reaffirmed that the **United Nations** (UN) must play a central role in maintaining global peace and security and also called for **comprehensive reform of the UN structures** including the Security Council with expansion in both categories of membership.

○ Uzbekistan **reaffirmed its support to India's candidature for permanent membership of the UN Security Council** and congratulated India on its **election as a non-permanent member** of the UN Security Council for the term **2021-22**.
○ India also congratulated the **Uzbek side on its successful election** to the **UN Human Rights Council** for the term **2021-23**.
○ Appreciated their close cooperation in the **Shanghai Cooperation Organization** (SCO).
  - In November 2020, India hosted the **first-ever meeting of the Council of the Heads of Government of SCO since its joining the SCO**.
○ India appreciated Uzbekistan's support in the successful holding of the **2nd India-Central Asia Dialogue** at the level of Foreign Ministers with the participation of Afghanistan.
○ **Uzbekistan is a member of the Organisation of Islamic Cooperation** (OIC), which is the second largest intergovernmental organization after the UN.
  - **India is not a member** of the OIC. However, India was **invited as a guest of honour** at the **46th Session of the Council of Foreign Minister in 2019**.

➢ **Covid-19 Pandemic:**
  ○ Emphasized the need for bilateral and global cooperation to continue the **fight against the pandemic** including development and distribution of effective vaccines and other medicines.
  ○ **Uzbekistan thanked India for the assistance rendered to Uzbekistan in its fight against the pandemic** and India reaffirmed its continued commitment.

Rohingyas at Isolated Bangladesh Island

Why in News

Recently, authorities in **Bangladesh** sent the first group of more than **1,500 Rohingya refugees to an isolated Bhasan Char island** in the Bay of Bengal**.**

Key Points

➢ **Background:**
  ○ The **Rohingya** people are stateless, **Indo-Aryan ethnic group** who reside in **Rakhine State, Myanmar.**

Note:

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"Floating Island": New home for Rohingya

Bangladesh is turning a cyclone-lashed island in the Bay of Bengal into a home for 100,000 Rohingya Muslims who have fled violence in neighbouring Myanmar

Bhasan Char, meaning "floating island", emerged from silt around 20 years ago. It regularly floods during Jun-Sep monsoon season

Bhasan Char project
Area: 6.7 sq km
Cost: $280m

Kutupalong: More than 585,000 people living in and around refugee camp

More than 688,000 Rohingya have fled persecution in Myanmar's Rakhine State since Aug 2017, joining around 300,000 refugees already in Bangladesh

- There were an estimated **1 million Rohingya living in Myanmar before the 2016–17 crisis**. An estimated **625,000 refugees from Rakhine, Myanmar, had crossed the border into Bangladesh since August 2017**. The majority are Muslim while a minority are Hindu.

- They are described by **the United Nations (UN)** as **one of the most persecuted minorities in the world.**

- The Rohingya population is **denied citizenship under the 1982 Myanmar nationality law.** They have denied the Rohingya the possibility of acquiring a nationality.

  - Although **Rohingya history in the region can be traced back to the 8th century**, Myanmar law does not recognize the ethnic minority as one of the eight national indigenous races.

- The flow of Rohingya from Myanmar intensified in 2017 and the **coast near the Bangladeshi city of Cox's Bazar** was taken over by refugee settlements.

- In **June 2015**, the Bangladesh government **suggested** resettling **Rohingya refugees** on the **Bhasan Char island** under its **Ashrayan Project**.

➢ **Recent development:**

- The Bangladesh government is moving these refugees to an isolated island known as **Bhasan Char** which is located **21 miles (34 kilometers) from the mainland.**

  - **Bhasan Char:**

    - **Bhasan Char (Floating Island)** also known as **Char Piya or Thengar Char Island,** is an island in **Hatiya, Bangladesh.** It surfaced only **20 years ago and was never inhabited**.

    - It was formed with **Himalayan silt from the mouth of river Meghna in 2006 spanning 40 square kilometres.**

- The island, which was once regularly **submerged by monsoon rains, now has flood protection embankments, houses, hospitals and mosques** built at a cost of more than 112 million dollars by the **Bangladesh navy.**

  1. It is underwater from June to September because of the **monsoon.**

➢ **Concern:**

- As **Bhashan Char** falls in an **ecologically fragile** area prone to **floods, erosion and cyclones,** it is **not** considered **safe for human settlements.**

- **The UN** and various other human rights agencies are against this relocation as they believe that **Rohingya refugees must be able to make a free and informed decision** about relocating to the island based upon relevant, accurate and updated information.

- Earlier this year, **Amnesty International** released a **damning report** on the conditions faced by **Rohingyas** already living on the island.

  - The report contained allegations of cramped and unhygienic living conditions, limited food and healthcare facilities, a lack of phones, as well as cases of sexual harassment by both the Navy and local labourers engaging in extortion.

➢ **India's Stand:**

- India maintains that Rohingyas are a **threat to its national security and have links with international terror groups**.

- India has so far **refused to exert any pressure on Myanmar** for taking the Rohingyas back and giving them recognition as the citizens of Myanmar.

➢ **International Provisions to Protect the Rights of Rohingyas:**

- **International Covenant on Civil and Political Rights (ICCPR):** Even though the refugees are foreigners in the country of asylum, by virtue of **Article 2 of the ICCPR, 1966,** they could enjoy the **same fundamental rights and freedoms as nationals.**

  - The right to equality before the law, equal protection of the law and non-discrimination which form a cornerstone of international human rights laws call for banning discrimination against refugees based on their status as such.

- **The 1951 Refugee Convention :** The core principle of the convention is **non-refoulement**, which asserts that a **refugee should not be returned to a country where they face serious threats to their life or freedom.**

Note:

Negotiations on UK's Brexit Deadline

Why in News

Recently, the **UK** and the **European Union** (EU) have **agreed to continue Brexit trade deal talks** and **abandon the 31st December deadline**, end of the transition period for a **post-Brexit trade agreement**.

➤ Under the **Withdrawal agreement** between the UK and the EU, a transition period of 11 months was finalised until 31st December 2020.

○ During this period, the UK continues to **participate in the EU's Customs Union** and in the **Single Market**.

○ The transition period makes sure that there is **not a sudden shock but a degree of continuity that allows both parties to secure an orderly Brexit**, minimising disruption for the citizens, businesses, public administrations, as well as for the international partners.

Key Points

➤ In the negotiations on the post-Brexit trade agreement, significant differences remain on **three critical issues: level playing field**, **governance** and **fisheries**.

➤ **Level Playing Field:**

○ What measures there should be to ensure a "level playing field" for businesses between the UK and the EU and the role of the European Court of Justice.

○ Deadlock over **the EU's demands for a mechanism that would make tariff-free trade with the both sides maintaining fair competition** for business through a regulatory "level playing field".

○ **The UK rejected** "**evolution mechanism**" or "**equivalence mechanism**". This mechanism **intends to deter the UK from undercutting the EU** if the bloc decides to raise its standards in areas such as environmental rules or workers' rights.

○ The UK **could not accept a deal that left it bound to EU rules** in the future.

➤ **Governance:**

○ The UK **wants to strike out a deal through bilateral talks with EU leaders**.

○ However, the EU had already proposed that the **mechanism should be administered by a joint committee of EU-UK officials**, with the arbitration in case of disputes and the **negotiations must be conducted** on behalf of all of the bloc's 27 member states **by the committee**.

➤ **Fisheries:**

○ The key focus is over **access to UK waters by the EU's fishing fleets**.

○ According to reports, **France is leading the charge in this area** and demanding access rights for at least 10 years, a demand the UK is unwilling to give in to, claiming it **fails to meet its take back control criteria** for leaving the bloc.

➤ **Possibilities After Failed Negotiations:**

○ If a deal is not reached before the December-end deadline, the "most likely" outcome remains a **no-deal Brexit** on **World Trade Organization** (WTO) terms on 1st January.

● In a no-deal situation, **the UK would immediately leave the EU with no agreement about the divorce process** (term used for the UK's separation from the EU), **leave the single market and customs union arrangements** overnight.

● The UK will have to **immediately leave EU institutes** and other bodies like the European Court of Justice and Europol, its law enforcement body and will **no longer contribute to the EU budget**.

○ Without a trade deal, **cross-Channel trade will revert to WTO rules**, with **tariffs driving up prices and generating paperwork** for importers and **border checks and taxes will be introduced for goods travelling** between the UK and the EU.

○ It would have a far-reaching impact on the way business and trade is conducted in Europe and could **spoil the relations between the UK and the EU**.

San Isidro Movement in Cuba

Why in News

Recently, the **Movimiento San Isidro** (MSI) has become a **platform for Cuban dissidents both within and outside the nation**.

Key Points

➤ **Background:**

○ MSI started **two years ago in 2018** to protest **against the state censorship of artistic** work through **Decree 349**.

- Decree 349 is a **law** that would have given powers to Cuba's Government **to restrict cultural activity** it did not approve of.
  - Artists, poets, journalists and activists gathered in San Isidro, **a black-majority locality** that is among **Havana's poorest yet most culturally active regions**.
- ➢ **Global-View:**
  - Various **national governments** and **international human rights organisations** such as **Amnesty International** have raised concern for human rights in Cuba.
  - Cuban diaspora in many countries continues to hold rallies **in support of the movement**.
- ➢ **Cuban Government's Stand:**
  - Cuban government alleges that the movement is **funded by the USA** and is being used to **subvert the state**.

India Cuba Relations

- ➢ India shares **close, warm and historical relations with Cuba** and both countries are **founding members of the Non-Aligned Movement** (NAM).
- ➢ In **1959**, the Cuban-Argentinean guerrilla commander **Ernesto Che Guevara** paid a **diplomatic visit to India** and was welcomed by the then Prime Minister Pandit Jawaharlal Nehru.
- ➢ In **2019**, **India supported the resolutions** in the **UN General Assembly** calling for a lifting of **USA sanctions against Cuba**.
- ➢ In **2019**, India and Cuba also agreed to collaborate in the areas of **Biotechnology, Homeopathy and the traditional system of medicine**.

Israel-Bhutan Ties

Why in News

Recently, **Israel** has established **diplomatic ties** with **Bhutan**, just two days after **Israel and Morocco agreed to normalise** ties.

- ➢ **Bhutan has become the fifth country,** after the **UAE, Bahrain** (**Abraham Accords**), **Sudan** and **Morocco** to set aside hostilities with Israel in the past four months.

Key Points

- ➢ **Historical Background:**
  - Israel has supported Bhutanese human resource development **since 1982**, especially in the area of **agriculture development that has benefited hundreds of Bhutanese youths**.
  - Both the countries maintained a **cordial relation** despite a lack of formal ties.
  - Israel briefly had a **non-resident ambassador** to Bhutan in **2010**.
  - Israel's **Agency for International Development Cooperation MASHAV** has trained hundreds of **Bhutanese youth since 2013**.
- ➢ **Recent Developments:**
  - The two nations established a formal diplomatic relation and agreed to work closely together in various sectors.
  - The two sides will **not be setting up embassies** in Thimphu and Tel Aviv however, and will **coordinate through their missions in New Delhi, India**.
- ➢ **Significance:**
  - The establishment of diplomatic relations would create new avenues for cooperation between the two countries in **water management, technology, human resource development, agricultural sciences** and other areas of mutual benefit.
  - As for **tourism**, Bhutan that limits the number of outsiders who can enter will now likely be more open to Israelis.
  - The ties between the peoples through cultural exchanges and tourism would also be further enhanced.
- ➢ **Bhutan's Foreign Relations:**
  - **India's Role:** Bhutan's foreign relations till date are **mostly under the guidance of India,** with which Bhutan has official diplomatic relations since **1949**.
    - The basis for bilateral relations between India and Bhutan was formed by the **Indo-Bhutan Treaty of Peace and Friendship of 1949**.

Note:

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- However, **Article 2** of the treaty critically gave India a role in guiding Bhutan's foreign policy. Hence, some alterations were made in the treaty in 2007. As per the new treaty, **Bhutan can import arms as long as Indian interests are not harmed and there is no re-export of the weapons, either by the government or individuals**.
- Bhutan became a member of the **United Nations** (UN) in **1971**.
  - However, it does not have diplomatic ties with any of the **five permanent members** of the **UN security council**.
- Until **2007**, it had formal relations with just **22 countries** in the world but after their **2008 elections**, the Bhutanese government **rapidly increased its diplomatic relations**, signing agreements with **31 countries in five years.**
- Bhutan has diplomatic relations with around **53 countries** and the **European Union**, with Germany being its latest diplomatic partner.

■■■

Note:

Science and Technology

Highlights

- *China's Artificial Sun*
- *Dust Samples from Hayabusa 2*
- *Jupiter Saturn Great Conjunction*
- *Beresheet 2: Israel*
- *Influenza and Bacterial Infection*
- *Rise in AI Adoption in India Amidst Pandemic*
- *Honey Adulteration*

- *The Cancer Genome Atlas 2020 Conference*
- *P Ovale Malaria*
- *Ramanujan Prize for Young Mathematicians 2020*
- *Cannabis Removed from Dangerous Substances: UN*
- *Robotic Surgery*
- *Havana Syndrome*
- *Mucormycosis Fungal Infection*

China's Artificial Sun

Why in News

China successfully powered up its **"artificial sun"** **nuclear fusion reactor** for the first time recently, marking a great advance in the country's **nuclear power research capabilities**. The nuclear reactor is expected to provide clean energy.

Key Points

➢ The **HL-2M Tokamak reactor** is China's **largest and most advanced nuclear fusion** experimental research device, and scientists hope that the device can potentially unlock a powerful clean energy source.

- ❍ HL-2M Tokamak device is used in it to replicate the **nuclear fusion process that occurs naturally in the sun.**

➢ It uses a **powerful magnetic field** to fuse **hot plasma** and can reach temperatures of over **150 million degrees Celsius**, approximately **ten times hotter than the core of the sun**.

➢ Located in **Sichuan province**, the reactor is often called an **"artificial sun" on account of the enormous heat and power it produces.**

➢ Other Similar Experiment:

- ❍ **International Thermonuclear Experimental Reactor** (ITER):
  - It is a collaboration of **35 nations, launched in 1985**. It is located in **France**.

- **Aim:** To build the **world's largest tokamak** to prove the feasibility of fusion as a large-scale and carbon-free source of energy.
  - ■ The tokamak is an **experimental machine designed to harness the energy of fusion.** Inside a tokamak, the energy produced through the **fusion of atoms** is absorbed as heat in the walls of the vessel.
  - ■ Like a conventional power plant, a fusion power plant uses this heat to produce steam and then electricity by way of turbines and generators.

Nuclear Reactions

➢ **Description:**
- ❍ A nuclear reaction is the process in which two nuclei, or a nucleus and an external subatomic particle, collide to produce one or more new nuclides. Thus, a nuclear reaction must cause a transformation of at least one nuclide to another.

➢ **Types:**
- ❍ **Nuclear Fission:**
  - The nucleus of an atom splits into **two daughter nuclei.**
  - This decay can be natural spontaneous **splitting by radioactive decay**, or can actually be simulated in a lab by achieving necessary conditions **(bombarding with neutrons, alpha particles, etc**.).

Note:

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- The resulting fragments tend to have a combined mass which is less than the original. The **missing mass is usually converted into nuclear energy.**
- Currently **all commercial nuclear reactors are based on nuclear fission**.
  - ○ **Nuclear Fusion:**
    - Nuclear Fusion is defined as the **combining of two lighter nuclei** into a heavier one.
    - Such nuclear fusion reactions are the **source of energy in the Sun** and other stars.
    - It takes considerable **energy to force the nuclei to fuse**. The conditions needed for this process are extreme millions of degrees of temperature and millions of pascals of pressure.
    - The hydrogen bomb is based on a **thermonuclear fusion** reaction. However, a nuclear bomb based on the fission of uranium or plutonium is placed at the core of the hydrogen bomb to provide initial energy.

Dust Samples from Hayabusa 2

Why in News

Recently, **Japan Aerospace Exploration Agency (JAXA)** has received a capsule from the **unmanned Hayabusa 2**, carrying the **first extensive samples of dust** from the **asteroid Ryugu**.

Key Points

➢ Hayabusa 2 was launched from **Japan's Tanegashima space centre in 2014** and took **four years to reach** the asteroid Ryugu.
  - ○ The mission builds on the **original Hayabusa mission** that was launched in **2003** and successfully linked up with **asteroid Itokawa in 2005**.
    - It **returned samples to Earth in 2010** marking the **first time when sample materials** from an asteroid were brought back to Earth.
  - ○ Hayabusa is the Japanese term used for the **peregrine falcon**, which is the **fastest bird during its hunting dive** (200 mile per hour).

Hayabusa-2 capsule to return to Earth
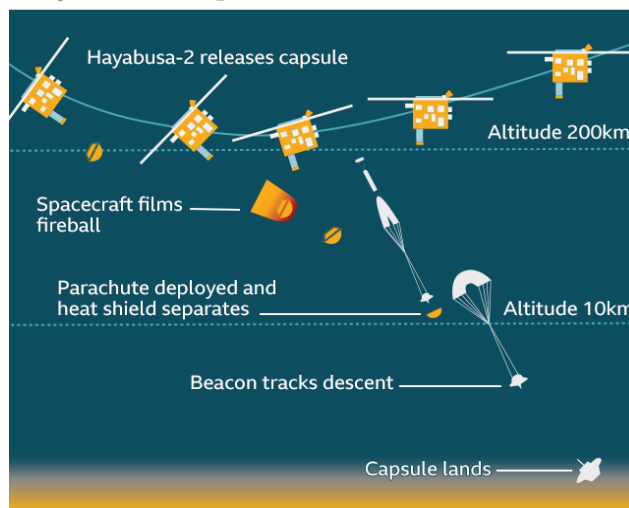
Source: Japan Aerospace Exploration Agency — BBC

➢ The space probe **orbited above the asteroid for a few months to map its surface** before landing. Then it used **small explosives to blast a crater**, **collected the resulting debris** and headed back to Earth in November 2019.
➢ The craft's mission **seeks to answer some fundamental questions** about the **origins of the Solar system** and **where molecules like water came from**.
➢ **Significance:**
  - ○ Asteroids and **comets** are **primitive bodies** that can be considered to be the **building blocks of the early Solar system** and they hold a **record of the birth and initial evolution**.
  - ○ **Larger planets** like Earth went through a **more complex evolution over which the pristine materials were melted and altered significantly**. Due to this change, the materials found on large planets **do not hold information into their early stages of formation**.
  - ○ Asteroids and **comets** retain a record of when, where and in what conditions they were formed. Exploration of these primitive bodies is e**ssential in gaining insight into the formation of the Solar system**.
    - **Gases trapped** in the rock samples could **reveal more about** the **chemical mixture** from the planets formed.
  - ○ Significantly, among all the **reasons that will eventually cause the extinction of life on Earth**, an **asteroid hit** is widely acknowledged as one of the likeliest.

Note:

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Asteroids

➢ Asteroids are also known as **minor planets** and are made up of **metals and rocks**.

➢ They **orbit the Sun** and have s**horter and elliptical orbits**.

➢ Most asteroids are **irregularly shaped**, though a **few are nearly spherical**.

➢ Many asteroids are known to have a **small companion moon** (some have two moons).

➢ There are also **binary** (double) **asteroids**, in which two rocky bodies of roughly equal size orbit each other, as well as **triple asteroid systems**.

➢ **Classification of Asteroids:**

  ❍ **Main Asteroid Belt:** The majority of known asteroids orbit within the asteroid belt which is a torus-shaped region in the Solar system, located roughly **between the orbits of the planets Mars and Jupiter**.

  ❍ **Trojans:** These asteroids **share an orbit with a larger planet**, but do not collide with it because they gather around two special places in the orbit (called the **L4 and L5 Lagrangian points**). There, the gravitational pull from the sun and the planet are balanced.

    ● **Lagrange Points:** These are positions in space where the **gravitational forces of a two body system** like the Sun and the Earth produce **enhanced regions of attraction and repulsion**. These can be used by spacecraft to reduce fuel consumption needed to remain in position.

  ❍ **Near-Earth Asteroids:** These objects have orbits that **pass close by that of Earth**. Asteroids that actually cross Earth's orbital path are known as **Earth-crossers**.

Jupiter Saturn Great Conjunction

Why in News

In a rare celestial event, Jupiter and Saturn will be seen very close to each other (conjunction) on 21st December 2020, appearing like one bright star.

Key Points

➢ **Conjunction:** If **two celestial bodies visually appear close to each other from Earth**, it is called a conjunction.

➢ **Great Conjunction:** Astronomers use the term great conjunction to **describe meetings of the two biggest worlds** in the solar system, **Jupiter and Saturn.**

  ❍ It happens **about every 20 years.**

  ❍ The conjunction is the **result of the orbital paths of Jupiter and Saturn coming into line**, as viewed from Earth.

    ● **Jupiter** orbits the sun about every **12 years**, and **Saturn** about every **29 years**.

  ❍ The conjunction will be on **21st December, 2020**, also the date of the **December solstice.**

  ❍ It **will be the closest alignment** of Saturn and Jupiter **since 1623**, in terms of distance. The **next time** the planets will be this close is **2080**.

  ❍ They will **appear to be close** together, however, they will be **more than 400 million miles apart.**

➢ **Jupiter:**

  ❍ Fifth in line from the Sun, Jupiter is, by far, the **largest planet in the solar system** – more than twice as massive as all the other planets combined.

    ● Jupiter, Saturn, Uranus and Neptune are called **Jovian or Gas Giant Planets**. These have thick atmosphere, **mostly of helium and hydrogen.**

  ❍ Jupiter's iconic **Great Red Spot** is a giant storm bigger than Earth that has raged for hundreds of years.

  ❍ Jupiter **rotates once about every 10 hours** (a Jovian day), but takes about **12 Earth years** to complete **one orbit of the Sun** (a Jovian year).

  ❍ Jupiter has **more than 75 moons.**

    ● The planet Jupiter's **four largest moons are called the Galilean satellites** after Italian astronomer Galileo Galilei, who first observed them in 1610.

    ● These large moons, named **Io, Europa, Ganymede, and Callisto**, are each distinctive worlds.

  ❍ In 1979, the **Voyager mission** discovered Jupiter's faint **ring system.**

  ❍ **Nine spacecraft** have visited Jupiter. Seven flew by and two have orbited the gas giant. **Juno,** the most recent, arrived at Jupiter in 2016.

➢ **Saturn:**

  ❍ Saturn is the **sixth planet from the Sun** and the **second largest** planet in the solar system.

  ❍ Saturn takes about **10.7 hours to rotate** on its axis once - a Saturn "day" - and **29 Earth years to orbit** the sun.

○ Saturn has **53 known moons** with **an additional 29 moons** awaiting confirmation of their discovery - that is a total of **82 moons**. It has the **giant moon 'Titan'**.

○ Saturn has the **most spectacular ring system**, with seven rings and several gaps and divisions between them.

○ **Few missions** have visited Saturn: **Pioneer 11** and **Voyagers 1 and 2** flew by; But **Cassini** orbited Saturn 294 times from 2004 to 2017.

Beresheet 2: Israel

Why in News

Recently, Israel launched the **Beresheet 2 project** aimed at landing an **unmanned craft** on the moon in **2024.**

➢ Earlier, Israel's **Beresheet probe crash landed** on the Moon.

Key Points

➢ **Background:**

○ The **Beresheet probe was a private mission** to the Moon by Israeli non-profit SpaceIL organisation.

● Beresheet in hebrew (spoken in Israel) **means Genesis.**

○ It was successfully launched in **February 2019,** on board a **Falcon 9 rocket** from **Cape Canaveral (USA)** and arrived in lunar orbit in **April 2019.**

○ It suffered an **engine failure** as it prepared to land and **crashed abruptly** on the surface of the **moon.**

➢ **Beresheet 2:**

○ **Objective:** Conducting **experiments and collecting data** on behalf of school students.

○ **Structure:** It will involve launching **two landing craft and an orbiter** that would circle the moon for years.

○ **Cost:** It will cost around **100 million dollars** raised from **international partnerships** and **donors.**

○ **Significance: Israel could become the fourth nation** to land a spacecraft on the moon after the **USA, the former Soviet Union and China.**

➢ **Other Missions to Moon:**

○ **India** has planned a new moon mission named **Chandrayaan-3.** It is likely to be launched in early **2021.**

● It will be a mission repeat of **Chandrayaan-2** and will include a Lander and Rover similar to that of **Chandrayaan-2**, but will not have an orbiter.

● **Chandrayaan-2** failed which crushed **India's dream to become the first nation** to successfully touch down on the lunar surface in its maiden attempt.

○ The **United Arab Emirates (UAE)** has decided to send an **unmanned spacecraft to the moon in 2024.**

○ **Artemis** is a crewed spaceflight program of the **National Aeronautics and Space Administration (**NASA**)** that has the goal of landing **"the first woman and the next man"** on the Moon, specifically at the lunar south pole region **by 2024.**

Influenza and Bacterial Infection

Why in News

Recently, researches at **Sweden's Karolinska Institute** have come out with findings on **superinfections** and have also highlighted that **influenza makes people more susceptible to bacterial infections**.

Key Points

➢ **Superinfections:** These are infection **occurring after or on top of an earlier infection**, especially following treatment with broad-spectrum antibiotics. It is an overgrowth of an opportunistic pathogen from the bacterial or yeast imbalance of systemic antibiotics.

○ For example, **influenza** is caused by a **virus**, but the **most common cause of death** in influenza patients **is secondary pneumonia**, which is caused by **bacteria**.

● However, the **reason** behind influenza infections leading to an increased risk of bacterial pneumonia is **not known**.

➢ **Case study of Spanish Flu:**

○ It was an **influenza pandemic** that swept across the world in the year **1918–1920**.

○ It disproportionately hit young healthy adults and important reason for this was **superinfections** caused by bacteria, in particular **pneumococci**.

- **Pneumococcal infections** are the most common cause of community acquired **pneumonia** and a leading global cause of death.
- A prior **influenza** virus infection is often followed by a **pneumococcal infection**.

➢ **Findings of the Research:**
  ○ When an individual is **infected by influenza** different **nutrients and antioxidants, such as vitamin C**, leak from the blood.
  ○ The absence of nutrients and antioxidants **creates a favourable environment for bacteria in the lungs**.
  ○ The bacteria **adapt to the inflammatory environment** by **increasing** the production of an enzyme called **High temperature requirement A** (HtrA).
  ○ The presence of **HtrA** weakens the **immune system and promotes bacterial growth in the influenza-infected airways**.
  ○ The **ability of pneumococcus to grow** seems to **depend on the nutrient-rich environment with its higher levels of antioxidants** that occurs during a viral infection, as well as on the **bacteria's ability to adapt to the environment and protect itself** from being eradicated by the immune system.

➢ **Significance:**
  ○ The results could be **used to find new therapies for double infections between the influenza virus and pneumococcal bacteria**.
    - A possible strategy can therefore be **use of protease inhibitors to prevent pneumococcal growth** in the lungs.
  ○ The information can **contribute to the research on Covid-19**.
    - However, it is still not known if **Covid-19 patients are also sensitive to such secondary bacterial infections**.

Influenza
➢ It is a **viral infection that attacks the respiratory system** i.e. nose, throat and lungs and is commonly called the **flu**.
➢ **Symptoms:** Fever, chills, muscle aches, cough, congestion, runny nose, headaches and fatigue.
➢ **Common Treatment:**
  ○ Flu is primarily treated with **rest and fluid intake** to allow the body to fight the infection on its own.

○ **Paracetamol may help** cure the symptoms but **Non Steroidal Anti-inflammatory Drugs** (NSAIDs) should be avoided. **An annual vaccine can help prevent** the flu and limit its complications.
➢ Young children, older adults, pregnant women and people with chronic disease or weak immune systems are at high risk.

Pneumonia
➢ It is an infection that **inflames the air sacs in one or both lungs**. The air sacs may fill with fluid or pus.
➢ **Cause:** Variety of organisms, including bacteria, viruses and fungi.
➢ **Symptoms:** Cough with phlegm or pus, fever, chills and difficulty breathing.
➢ **Treatment: Antibiotics** can treat many forms of pneumonia. Some forms of pneumonia can be prevented by **vaccines**.
➢ The infection can be **life-threatening to anyone**, but particularly to **infants, children and people over 65.**

Rise in AI Adoption in India Amidst Pandemic

Why in News

As per **a report by PwC** (a global network of firms), India reported a **45% increase** in the use of **Artificial Intelligence**, the highest among all countries, following the outbreak of the virus.

Key Points

➢ **Findings:**
  ○ The rise of AI adoption (45%) recorded in the country is the highest, when compared to major economies like the USA, Japan and the UK.
    - The **USA recorded a 35% rise, the UK 23% and Japan 28%** following the outbreak of the virus.
  ○ The report **attributes** the growing AI adoption to the **shift in buying behaviour and new business challenges** (owing to **Covid-19 pandemic**).
    - For instance, AI-enabled use cases like contactless sales and delivery have gained traction. AI solutions are also being used to make the workplace safer and enforce best practices.

Note:

❍ The **sectors with highest Covid-19 led disruption adopted AI solutions** in a more definitive manner. In the **travel and hospitality sector**, 89% firms have implemented AI in some form.

➢ **Artificial Intelligence:**

❍ It describes the **action of machines accomplishing tasks** that have historically required human intelligence.

❍ It includes technologies like **machine learning, pattern recognition, big data, neural networks, self algorithms etc.**

❍ AI involves complex things such as **feeding a particular data into the machine and making it react as per the different situations**. It is basically about creating **self-learning patterns** where the machine can give answers to the never answered questions like a human would ever do.

❍ AI technology helps in analyzing data and thus can improve the **efficiency of the systems** like power management in cars, mobile devices, weather predictions, video and image analysis.

❍ **Example (Use):** Self driving cars.

➢ **Recent Government Initiatives:**

❍ India has launched **National AI Strategy** and National AI Portal and has also started leveraging AI across various sectors such as education, agriculture, healthcare, e-commerce, finance, telecommunications, etc.

❍ Recently, India joined the **'Global Partnership on Artificial Intelligence (GPAI)'** as a founding member to support the responsible and human-centric development and use of AI.

Use of AI in India

➢ **To Tackle the Pandemic**:

❍ **At the National Level:**

● For the Covid-19 response, an **AI-enabled Chatbot** was used by **MyGov** for ensuring communications.

● Similarly, the **Indian Council of Medical Research (ICMR)** deployed the **Watson Assistant** on its portal to respond to specific queries of frontline staff and data entry operators from various testing and diagnostic facilities across the country on Covid-19.

❍ **In Kerala:** Use of **Srishti Robotics' 'Nightingale-19 Robot'** is a good example.

● It **delivers food and medicines** in bulk and also allows doctors and other healthcare practitioners to use video interactive technologies to interact with patients.

❍ **In Maharashtra: FebriEye** is an **AI based thermal screening system** for real-time and automated, non-intrusive monitoring to ensure that a person entering does not **have a high fever.**

● It has been **installed in** Chhatrapati Shivaji Maharaj Terminus and Lokmanya Tilak Terminus in Mumbai.

➢ **In Other Sectors:**

❍ AI-based solutions on **water management, crop insurance and pest control** are also being developed.

● ICRISAT has developed an **AI-power sowing app**, which utilises weather models and data on local crop yield and rainfall to more accurately predict and advise local farmers on when they should plant their seeds.

❍ An **AI-based flood forecasting model** that has been i**mplemented in Bihar** is now being expanded to cover the whole of India to ensure that around 200 million people get alerts and warnings 48 hours earlier about impending floods.

❍ The **Central Board of Secondary Education** has integrated AI in the school curriculum to ensure that students passing out have the basic knowledge and skills of data science, machine learning and artificial intelligence.

❍ The **Ministry of Electronics and Information Technology (MeitY)** had launched a **"Responsible AI for Youth"** programme this year in April, wherein more than 11,000 students from government schools completed the basic course in AI.

Honey Adulteration

Why in News

According to a recent investigation by the **Centre for Science and Environment** (CSE), **honey** sold by several major brands in India is **adulterated with sugar syrup**.

➢ CSE is **not-for-profit public interest research and advocacy** organisation.

Key Points

➢ **Findings:**

Note:

○ **Samples of 10 out of 13 brands**, which were examined, **failed to clear the Nuclear Magnetic Resonance** (NMR) **test**.

  ● Honey samples from **brands** such as Dabur, Patanjali, Baidyanath, Zandu, Hitkari and Apis Himalaya**,** all **failed** the internationally accepted NMR test.

○ Indian companies in the business are **importing synthetic sugar syrups from China** for adulteration.

  ● CSE tracked down **Chinese trade portals which were advertising fructose syrup** that can bypass tests to check adulteration.

    ■ Chinese companies informed CSE that even if **50-80% of the honey is adulterated with syrup**, they would **pass all stipulated tests as per Indian standards**.

  ● Tests employed as **per Indian regulations** check whether the honey is adulterated with **C4 sugar** (cane sugar) or **C3 sugar** (rice sugar).

○ Adulteration also destroyed the **livelihoods of bee-keepers** who found it **unprofitable to make pure honey** because **sugar-syrup honey** was often available at **half the price.**

➢ **Impact:**

○ Households consume more honey because of its **antimicrobial and anti-inflammatory properties**.

○ As per this investigation, most of the honey sold in the market is **adulterated with sugar syrup.** Therefore, instead of honey, people are eating more sugar, which will **add to the risk of Covid-19** and increase the risk of **obesity**.

Nuclear Magnetic Resonance Test

➢ It is a test that can **ascertain the composition** of a product at the **molecular level**.

➢ It is **an analytical chemistry technique** used in quality control and research for determining the content and purity of a sample as well as its molecular structure.

➢ The NMR test is **not required by Indian law** for honey that is being marketed locally **but is needed for export.**

➢ Recent NMR tests, while being able to detect additives**, were not able to detect the quantity of adulteration**.

The Cancer Genome Atlas 2020 Conference

Why in News

Recently, the **Minister of Science and Technology** has virtually inaugurated **second The Cancer Genome Atlas** (TCGA) **2020 Conference** in **New Delhi.**

➢ The Conference brings together scientists and clinicians from across the globe to build **Indian Cancer Genome Atlas** (ICGA).

Key Points

➢ **Indian Cancer Genome Atlas:**

○ It aims to create an indigenous, open-source and comprehensive **database of molecular profiles** of **all cancers prevalent** in **Indian population.**

○ Diverse molecular mechanisms including **genetic and lifestyle factors contribute to cancer,** posing significant challenges to treatment. Therefore, it is necessary to better understand the **underlying factors** patient by patient.

➢ **The Cancer Genome Atlas:**

○ It is a landmark **cancer genomics program** that molecularly characterized over 20,000 primary cancer and matched normal samples spanning 33 cancer types.

  ● Genomics aims to **sequence, assemble, and analyse** the structure and function of **genomes**.

  ● **Genome** is **all genetic material of an organism**. It consists of DNA or RNA.

○ TCGA is a joint effort of the **National Cancer Institute** (NCI) and the **National Human Genome Research Institute** (NHGRI), which are both parts of the **National Institutes of Health**, **US Department of Health and Human Services.** It was **started in 2006**.

○ TCGA generated a huge amount of genomic, epigenomic, transcriptomic, and proteomic data.

  ● Transcriptomics technologies are the techniques used to **study an organism's transcriptome**, the sum of all of its RNA transcripts.

  ● A Proteome is a **set of proteins** produced in an organism.

○ This data has led to improvements in the ability to **diagnose, treat, and prevent cancer**.

Note:

○ On similar lines, the establishment of **ICGA** has been initiated by a consortium of key stakeholders in India led by **Council of Scientific and Industrial Research** (CSIR), Government of India in which several government agencies, cancer hospitals, academic institutions and private sector are partners.

➤ **Other Similar Missions:**

○ **Genome India:**

● Its aim is to ultimately build a grid of the Indian "**reference genome**", to fully understand the **type and nature of diseases and traits that comprise the diverse Indian population.**

● The mega project hopes to form a grid after collecting **10,000 samples in the first phase from across India,** to arrive at a **representative Indian genome.**

○ **IndiGen Genome Project:**

● The initiative was implemented by the **CSIR-Institute of Genomics and Integrative Biology** (IGIB), Delhi and **CSIR-Centre for Cellular and Molecular Biology** (CCMB), Hyderabad.

● The IndiGen programme aims to undertake the **whole genome sequencing of thousands of individuals representing diverse ethnic groups from India**.

Cancer

➤ It is a **large group of diseases** that can start **in almost any organ or tissue** of the body when **abnormal cells grow uncontrollably**, go beyond their usual boundaries to invade adjoining parts of the body and/or spread to other organs. The latter process is called **metastasizing** and is a **major cause of death** from cancer.

○ A **neoplasm** and **malignant tumour** are other common names for cancer.

➤ Lung, prostate, colorectal, stomach and liver cancer are the most common types of cancer in men, while breast, colorectal, lung, cervical and thyroid cancer are the most common among women.

➤ **Government Initiative:** **National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke** (NPCDCS) is being implemented under the **National Health Mission** (NHM) for up-to-the district-level activities.

P Ovale Malaria

Why in News

Recently a **not very common type** of malaria, *Plasmodium ovale*, has been identified in a jawan in Kerala.

➤ The soldier is believed to have contracted it in **Sudan**, where Plasmodium ovale is endemic.

Key Points

➤ **About:**

○ Plasmodium ovale is **one among the five kinds** of malarial parasites — Plasmodium falciparum, Plasmodium vivax (the commonest ones), Plasmodium Malariae, Plasmodium Ovale and Plasmodium Knowlesi.

○ It is termed ovale as about **20% of the parasitised cells are oval in shape.**

○ The parasite can remain in the spleen or liver of the body for a long time, even years, after the mosquito bite, and the person could become symptomatic later.

➤ **Symptoms:**

○ Symptoms include fever for 48 hours, headache and nausea, and it rarely causes severe illness.

➤ **Similar to P vivax:**

○ P ovale is very similar to P vivax and the treatment modality is the same as it is for a person infected with P vivax.

○ Distinguishing between P vivax and P ovale may be tricky and can be differentiated only through careful detection.

➤ **Prevalence:**

○ P ovale malaria is **endemic to tropical Western Africa**. It is relatively unusual outside of Africa and, where found, comprises less than 1% of the isolates.

○ It has also been detected in the Philippines, Indonesia and Papua New Guinea, but is still relatively rare in these areas.

➤ **Transmission in India:**

○ According to the **National Institute of Malaria Research (NIMR)**, the Kerala case could be an isolated one and there are no recorded cases of local transmission so far.

Note:

drishti

○ Previously, too, isolated cases were reported in Gujarat, Kolkata, Odisha and Delhi. However, **no local transmission has been recorded** — which means these cases have been acquired.

○ In India, out of 1.57 lakh malaria cases in the **high-burden states of Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh** in 2019, 1.1 lakh cases (70%) were cases of **falciparum malaria.**

○ According to the recent **World Malaria Report 2020**, cases in India dropped from about 20 million in 2000 to about 5.6 million in 2019.

Malaria

➢ Malaria is caused by **Plasmodium (a protozoan).**

➢ Malaria caused by **Plasmodium falciparum** is the **most serious** one and can even be **fatal.**

➢ **Life Cycle of Plasmodium:**

○ Plasmodium enters the human body as **sporozoites (infectious form)** through the bite of infected **female Anopheles mosquito.**

○ The parasites initially multiply within the liver cells and then attack the **Red Blood Cells (RBCs)** resulting in their rupture.

● The rupture of RBCs is associated with release of a **toxic substance, haemozoin**, which is responsible for the chill and high fever recurring every three to four days.

○ When a female Anopheles mosquito bites an infected person, these parasites enter the mosquito's body and undergo further development.

○ The parasites multiply within them to form sporozoites that are stored in their salivary glands. When these mosquitoes bite a human, the sporozoites are introduced into his/ her body, thereby initiating the events mentioned above.

Note:

➢ It is interesting to note that the malarial parasite **requires two hosts** – **human** and **mosquitoes** – to complete its life cycle.

➢ The **female Anopheles mosquito** is the **vector (transmitting agent) too**.

➢ **World Malaria Day** is observed on **25th April.**

○ It can be noted that the **World Health Organisation (WHO)** officially endorses disease-specific global awareness days for only four diseases viz. **HIV-AIDS, TB, Malaria, and Hepatitis.**

Ramanujan Prize for Young Mathematicians 2020

Why in News

The **Ramanujan Prize for Young Mathematicians 2020** has been awarded to **Dr. Carolina Araujo**, Mathematician from the Institute for Pure and Applied Mathematics (IMPA), Rio de Janeiro, **Brazil.**

➢ She received the Prize for her **outstanding work in algebraic geometry.** Her work area focuses on **birational geometry**, which aims to classify and describe the structure of algebraic varieties.

Key Points

➢ The Ramanujan Prize for **Young Mathematicians from developing countries has been awarded annually since 2005.**

➢ It was **originally instituted** by the International Centre for Theoretical Physics (ICTP), the Niels Henrik Abel Memorial Fund, and the International Mathematical Union (IMU).

○ The **participation of the Abel Fund ended in 2012**.

○ **ICTP:** Founded in 1964 by the late Nobel Laureate Abdus Salam, it seeks to accomplish its mandate by providing scientists from developing countries with the continuing education and skills that they need to enjoy long and productive careers.

○ **IMU:** It is **an international non-governmental and non-profit scientific organization**, with the purpose of promoting international cooperation in mathematics.

● It is a **member of the International Science Council (ISC)**.

■ The ISC was **created in 2018** and is an **international non-governmental organization** bringing together the natural and social sciences and the largest global science organization of its type.

■ It has its office in **Paris, France.**

● **India is a member country.**

● IMU Secretariat is located in **Berlin, Germany**.

➢ The **Department of Science and Technology of the Government of India (DST)** has **agreed to fund the Prize,** starting with the 2014 Prize.

- It has been supported by DST **in the memory of Srinivasa Ramanujan**, a genius in pure mathematics who was essentially self-taught and made spectacular contributions to elliptic functions, continued fractions, infinite series, and analytical theory of numbers.
- In India, **22nd December** is celebrated as **National Mathematics Day** in the memory of Srinivasa Ramanujan.
- It is **awarded to a researcher from a developing country** who is **less than 45 years of age on 31st December** of the year of the award, and who has **conducted outstanding research in a developing country**.
  - Researchers **working in any branch** of the mathematical sciences **are eligible.**
  - The Prize carries a **USD 15,000 cash award.**

Cannabis Removed from Dangerous Substances: UN

Why in News

Recently, the **United Nations** (UN) **Commission on Narcotic Drugs** (CND), at its **63rd session**, has taken a number of decisions, leading to **changes in the way cannabis** (Marijuana or Hemp) **is internationally regulated**, including its reclassification out of the most dangerous category of drugs.

Key Points

- **Background:**
  - In **January 2019**, the **World Health Organisation** (WHO) made six recommendations related to the **scheduling of cannabis in UN treaties**, including the deletion of cannabis and cannabis resin from **Schedule IV of the Single Convention on Narcotic Drugs, 1961**.
    - Schedule IV is the **category of drugs** that are considered to have "**particularly dangerous properties**" in comparison to other drugs.
  - The proposals **were to be placed before the CND's session in March 2019**, but members **voted to postpone** the vote, requesting more time.
- **Global Decision:**
  - **Older Status:** The CND decision will **remove cannabis from Schedule IV**, where it was **listed alongside deadly, addictive opioids, including heroin**.

- **Current Status:** Now, both cannabis and cannabis resin will remain on **Schedule I**, which includes the **least dangerous category of substances**.
- **Countries in Favour:** 27 of the CND's 53 Member States, including India, the USA and most European nations, voted in favour of the motion.
- **Countries not in Favour:** 25 countries, including China, Pakistan, and Russia, were not in favour and there was one abstention, Ukraine.
- **Significance:**
  - Since the Convention was enforced in 1961, cannabis had been subject to the strictest control schedules, which even **discouraged its use for medical purposes**.
  - The reclassification of cannabis, although significant, **would not immediately change its status** worldwide as long as **individual countries continue with existing regulations**.
  - However, it will impact this process, as many **nations follow the lead of international protocols** while legislating in their respective nations.
  - With this historic vote, the CND has opened the door to **recognizing the medicinal and therapeutic potential** of cannabis.
- **India's Stand and Regulations:**
  - **India has voted with the majority** to remove cannabis and cannabis resin from the list of most dangerous substances in the Convention.
  - Under India's **Narcotic Drugs and Psychotropic Substances (NDPS) Act 1985**, the **production**, **manufacture**, **possession**, **sale**, **purchase**, **transport**, and **use** of cannabis is a **punishable offence**.
    - The Act was enacted in 1985 which succeeded the **Dangerous Drugs Act 1930**.
  - The **Narcotics Control Bureau** (NCB) is vested with the **power to charge individuals** in cases related to the **illegal use and supply of narcotics**.

Cannabis

- According to the WHO, cannabis is a generic term used to denote the **several psychoactive preparations of the plant *Cannabis sativa***.
- According to the WHO, cannabis is by far the

Note:

most widely cultivated, trafficked and abused illicit drug in the world.

➢ The major psychoactive constituent in cannabis is **Delta9 tetrahydrocannabinol** (THC).

➢ The **unpollinated female plants** are called *hashish*. Cannabis oil (hashish oil) is a concentrate of **cannabinoids** (compounds which are structurally similar to THC) obtained by solvent extraction of the crude plant material or of the resin.

➢ According to the **NDPS Act** "cannabis plant" means **any plant of the genus cannabis**.

   ❍ *'Charas'* is the separated **resin extracted** from the cannabis plant. The NDPS Act covers separated raisin, in whatever form, whether crude or purified, obtained from the cannabis plant and also includes concentrated preparation and resin known as hashish oil or liquid hashish.

   ❍ The Act defines '*ganja*' as the **flowering or fruiting tops of the cannabis plant** but it clearly excludes the seeds and leaves.

   ❍ The Act **illegalises any mixture with or without any neutral material, of any of the two forms of cannabis, charas and ganja, or any drink prepared** from it.

   ❍ The legislature **left seeds and leaves** of the cannabis plant **out of the ambit of the Act**, because the serrated leaves of the plant have **negligible THC content**.

   ❍ '*Bhang*', which is commonly consumed during festivals like Holi, is a paste made out of the leaves of the cannabis plant, and is **hence not outlawed**.

Commission on Narcotic Drugs

➢ It is the **UN agency** mandated to decide on the scope of control of substances by placing them in the schedules of global drug control conventions.

➢ It was founded in **1946** and is headquartered in **Vienna.**

➢ Global attitudes towards cannabis have changed dramatically since the commencement of the 1961 Convention, with many jurisdictions permitting cannabis **use for recreation, medication or both**.

➢ Currently, **over 50 countries allow medicinal cannabis programmes**, and its recreational use has been legalised in **Canada**, **Uruguay** and **15 states of the USA**.

   ❍ Similarly, **CBD oil**, an acronym for **cannabidiol** derived from the leaves of the cannabis plant, **would not come under the NDPS Act**.

   ● The NDPS Act **does not permit the recreational use of cannabis** in India.

   ● While CBD oil manufactured with a licence under the **Drugs and Cosmetics Act, 1940** can be **legally used**, it is not very common.

Robotic Surgery

Why in News

Recently, **Insurance Regulatory and Development Authority of India (IRDAI)** has standardised health policies across all health insurers to even cover **robotic and bariatric surgeries.**

➢ **Bariatric surgery** is an operation that helps **lose weight** by making changes to the **digestive system.**

➢ Recently, India became the **first country to perform a telerobotic coronary surgery** on humans.

Key Points

➢ **Robotics:** It is the intersection of **science, engineering and technology** that produces machines, called **robots**, to **substitute for (or replicate) human actions**.

   ❍ **Application of Robotics:**

   ● **Industrial Sector:** Industrial robots are electronically controlled, both programmable and reprogrammable to carry out certain tasks with high precision and accuracy.

   ● **Aerospace**: Another application of robots is in aerospace for outer space exploration. **Aerospace robots or unmanned robotic spacecraft** play a key role in outer space probes.

   ● **Outer Space**: **Robotic arms** that are under the control of a human being are employed to unload the docking cove of outer-space shuttles to launch satellites or to build a space station.

   ● **Exploration**: Robots can **enter the environments that are injurious to human beings**. An illustration is observing the atmosphere within a volcano or investigating our deep marine life.

   ● **Healthcare Delivery:** A highly possible advancement in healthcare is using robots in **Robotic Surgery**. Due to technological advancement, this is possible even if the patient

is located in remote areas. This possibility defies distance.

➤ **Robotic Surgery:**
  ❍ **Robotic or Robot-assisted surgery** integrates advanced **computer technology with the experience of the skilled surgeons.** This technology provides the surgeon with a **10x magnified, high-definition, 3D-image** of the body's intricate anatomy.

  ❍ The surgeon **uses controls in the console to manipulate special surgical instruments** that are smaller, as well as more flexible and manoeuvrable than the human hand. The **robot replicates the surgeon's hand movements**, while **minimizing hand tremors**.

➤ **Benefits of Robotic Surgery:**
  ❍ **Easy Procedures:** Makes the performance of complicated procedures much easier.
  ❍ **Increases Flexibility, Precision and Control:** It allows doctors to perform different types of complex procedures with more **precision, flexibility, and control than possible with conventional techniques.**
  ❍ **Reduces Trauma:** It reduces the trauma caused to the patient by allowing surgery to be performed through **small ports or 'keyholes' rather than via large incisions.**
  ❍ **Simplifies Surgeries:** The instruments can access hard-to-reach areas of a patient's body more easily through **smaller incisions** compared with traditional open and laparoscopic surgeries.
  ❍ **Reduces Recovery Time:** It helps in **shorter recovery times, with fewer complications and a shorter hospital stay.**
  ❍ **Other Advantages:** Less pain and blood loss, and smaller, less noticeable scars.

➤ **Reasons for High Demand of Robotic Surgery:** Factors which are pushing the demand of robotic surgery are:
  ❍ Advancements in technology.
  ❍ Rising incidence of chronic diseases.
  ❍ High incidence of medical errors.
  ❍ Demand for faster recovery and reduction in pain.
  ❍ Increase in awareness about the benefits of robot-assisted surgery.

➤ **Reasons for Slow Growth of the Sector:**
  ❍ **High cost of installation:** Instruments are not only expensive but also incur a large **recurring cost due** to the **disposable nature** of instruments and ancillaries.
  ❍ **Monopoly:** There exist only a **few companies that manufacture the equipment** for robotics surgery.the monopoly of few companies makes it difficult to expand robotics surgery in the Indian healthcare system.
  ❍ **Untrained Resource:** Another challenge is the **unavailability of trained surgeons** for conducting robotic surgeries.

➤ **Robotic Surgery in India:**
  ❍ **Quality:** India is the **most preferred destination** for getting **high-quality treatment across the globe**, and is dotted with various **multi-speciality hospitals and patient-care centres.**
  ❍ **Infrastructure:** The hospitals are well equipped with advanced, highly sophisticated and **world-class infrastructure** facilities using state-of-the-art technologies for the treatment of various critical illnesses.
  ❍ **Cost:** India is very **affordable** unlike in the U.S., U.K., and Canada. Overall, the cost of such procedures in India is **pocket-friendly**, that too, **without compromising on the quality of services and infrastructure.**

Havana Syndrome

Why in News

Recently, a report by the **National Academies of Sciences** (NAS), USA has found **directed microwave radiation** to be the **plausible cause of the Havana syndrome**.

Key Points

➤ **Havana Syndrome:**
  ❍ In late **2016**, USA diplomats and other employees stationed in **Havana** (**capital of Cuba**) reported

Note:

feeling ill after hearing strange sounds and experiencing odd physical sensations.

○ The symptoms included **nausea**, **severe headaches**, **fatigue**, **dizziness**, **sleep problems**, and **hearing loss**, which have since come to be known as the **Havana Syndrome**.

○ The **more chronic problems** suffered by Havana personnel included mainly **vestibular processing** and **cognitive problems** as well as **insomnia** and **headache**.

○ While the symptoms have **resolved for some of the affected employees**, for **others**, the **effects have lingered and posed a significant obstacle** to their work and affected the normal functioning of lives.

➢ **About the Report:**

○ The NAS report **examined four possibilities** to explain the symptoms viz. **infection**, **chemicals**, **psychological factors** and **microwave energy**.

○ So far, **only this report provides the clearest and detailed estimation** of what may have transpired.

● **In earlier attempts** by various other government agencies, scientists talked about **psychological illness** due to the stressful environment of foreign missions or **brain abnormalities** in the diplomats who had fallen ill.

➢ **Findings of the Report:**

○ **Directed pulsed microwave radiation energy** appears to be the most plausible mechanism in explaining the cases of Havana syndrome among those that the committee considered.

● By calling it "**directed**" and "**pulsed**" energy, the report leaves no room for confusion that the **victims' exposure was targeted** and **not due to common sources of microwave energy**.

○ The immediate symptoms that patients reported, including sensations of pain and buzzing sound, apparently **emanated from a particular direction**, or **occurred in a specific spot** in a room.

○ It **warns about the possibility of future episodes** and **recommends establishing a response mechanism** for similar incidents, adding that future incidents might be more dispersed in time and place, and even more difficult to recognise quickly.

○ However, the committee **cannot rule out other possible mechanisms** and considers it likely that a **multiplicity of factors** explains some cases and the differences between others.

○ It also **does not mention the source** and **if the energy was delivered intentionally**, even though it conducted significant research on **microwave weapons**.

➢ **USA's Reaction:**

○ The USA has praised the NAS for undertaking the effort but also highlighted that **each possible cause remains speculative**. It also **flagged the committee's lack of access to some information** because of potential security concerns that limit the scope of the report.

○ The government also included a **provision in the new defence authorisation bill to provide long-term emergency care benefits** to the government employees affected by the syndrome.

○ The **USA had accused Cuba** of carrying out "attacks", but **Cuba denied** any knowledge of the illnesses.

Microwave Weapons

➢ These are supposed to be a type of **direct energy weapons**, which **aim highly focused energy** in the form of sonic, laser, or microwaves, at a target.

➢ The high-frequency electromagnetic radiations **heat the water in the human body and cause discomfort and pain.** It **works the same way as the kitchen appliance.**

○ In a microwave oven, an **electron tube called a magnetron produces electromagnetic waves** (microwaves) that bounce around the metal interior of the appliance, and are absorbed by the food.

○ The **microwaves agitate the water molecules in the food**, and their **vibration produces heat** that cooks the food. **Foods with a high water content cook faster** in a microwave often than drier foods.

➢ **Countries with Microwave Weapons:**

○ A number of countries are thought to have developed these weapons **to target both humans and electronic systems**.

○ **China** had first put on display its microwave weapon, called **Poly WB-1**, at an air show in 2014.

○ The **USA** has also developed a prototype microwave-style weapon, which it calls the "**Active Denial System**", which is the first non-lethal, directed-energy, counter-personnel system with an extended range greater than currently fielded non-lethal weapons.

Note:

- **Concerns:**
  - American diplomats and members of their families in Cuba and China were suspected to have been targeted using 'microwave weapons' **(Havana Syndrome)**.
    - People exposed to high-intensity microwave pulses have **reported a clicking or buzzing sound**, as if seeming to be coming from within the head.
  - Concerns have been raised on whether they can damage the eyes, or have a carcinogenic impact in the long term.
  - It is not clear yet whether these can kill or cause lasting damage in human targets.
  - The USA holds that studies have shown that natural blink reflex, aversion response and head turn all **protect the eyes from the weapon.**

Mucormycosis Fungal Infection

Why in News

Recently, doctors have witnessed increased cases of Covid-19 triggered Mucormycosis.

- The **reduced immunity** of Covid-19 patients **makes them more susceptible** to this **fungal infection**.

Key Points

- **Mucormycosis** is also called **Black Fungus** or **Zygomycosis** and is a **serious but rare fungal infection** caused by a **group of molds called mucormycetes**.
- **Types of Mucormycosis:**
  - **Rhinocerebral (Sinus and Brain) Mucormycosis:** It is an infection in the sinuses that can spread to the brain. It is the most common in people with uncontrolled diabetes and in people who have had a kidney transplant.
  - **Pulmonary (Lung) Mucormycosis:** It is the most common type of mucormycosis in people with cancer and in people who have had an organ transplant or a stem cell transplant.
  - **Gastrointestinal Mucormycosis:** It is more common among young children than adults, especially premature and low birth weight infants less than 1 month of age, who have had antibiotics, surgery, or medications that lower the body's ability to fight germs and sickness.

- **Cutaneous (Skin) Mucormycosis:** It occurs after the fungi enter the body through a break in the skin (for example, after surgery, a burn, or other types of skin trauma). It is most common among people who do not have weakened immune systems.
- **Disseminated Mucormycosis:** It occurs when the infection spreads through the bloodstream to affect another part of the body. The infection most commonly affects the brain, but also can affect other organs such as the spleen, heart, and skin.

- **Transmission:**
  - It occurs through **inhalation, inoculation, or ingestion of spores** from the environment.
    - For example, the lung or sinus forms of the infection can occur after someone inhales the spores from the air.
  - Mucormycosis **does not spread between people** or **between people and animals**.
  - It **usually occurs in people who have health problems or take medicines** that lower the body's ability to fight germs and sickness.

- **Symptoms:**
  - General symptoms are **one-sided facial swelling and numbness**, **headache**, **nasal or sinus congestion**, **black lesions** on nasal bridge or upper inside of the mouth, **fever**, **abdominal pain**, **nausea** and **gastrointestinal bleeding.**
  - Disseminated mucormycosis typically occurs in people who are already sick from other medical conditions, so it can be **difficult to know which symptoms are related to mucormycosis**. Patients with disseminated infection in the brain can develop **mental status changes or coma**.

- **Diagnosis and Testing:**
  - Healthcare providers **consider medical history, symptoms, physical examinations, and laboratory tests** when diagnosing mucormycosis.
  - If suspected of the infection, healthcare providers collect a **sample of fluid from the respiratory system** or may **perform a tissue biopsy**.
    - In tissue biopsy, a small sample of affected tissue is analysed in a laboratory for evidence of mucormycosis under a microscope or in a fungal culture.

- **Treatment:**
  - It needs to be treated with **prescription antifungal**

Note:

**medicine** to prevent mucormycosis and other mold infections.

○ Often, mucormycosis **requires surgery to cut away the infected tissue**.

➤ **Prevention and Cure:**

○ There is **no vaccine to prevent** mucormycosis and it is **difficult to avoid breathing in fungal spores** because the **fungi are common in the environment**.

○ For people who have weakened immune systems, there may be some **ways to lower the chances of developing mucormycosis**.

• These include **avoiding areas with a lot of dust** like construction or excavation sites, **avoiding direct contact with water**-damaged buildings and flood water after hurricanes and natural disasters and **avoiding activities that involve close contact to soil**.

○ **Early detection** can prevent loss of eyesight, nose or jaw through clinical intervention.

Mucormycetes

➤ Mucormycetes, the **group of fungi that cause mucormycosis**, are **present throughout the environment**, particularly in soil

and in association with decaying organic matter, such as leaves, compost piles, and animal dung.

○ Several different types of fungi can cause mucormycosis and belong to the **scientific order _Mucorales_**.

○ The most common types that cause mucormycosis are _**Rhizopus species**_ and _**Mucor species**_.

➤ They are **more common in soil than in air**, and **in summer and fall than in winter or spring**.

➤ These fungi are **not harmful to most people but for people who have weakened immune systems**, breathing in micromycetes spores can cause an infection.

■■■
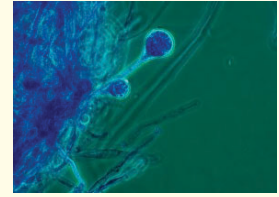
Note:

Environment and Ecology

Highlights

- *Malayan Giant Squirrel*
- *Provisional Report on the State of the Global Climate 2020: WMO*
- *Deteriorating Great Barrier Reef*
- *Narmada Landscape Restoration Project*
- *Peacock Soft-shelled Turtle*
- *Emissions Gap Report 2020: UNEP*

- *Extreme Climate Events: CEEW*
- *Elephant Corridors in Odisha*
- *Myristica Swamp Treefrog*
- *Climate Change Performance Index*
- *Lakshadweep Declared an Organic Union Territory*
- *Five Years of Paris Climate Accord*

Malayan Giant Squirrel

Why in News

Recently, the **Zoological Survey of India** (ZSI), in a first-of-its-kind study, has projected that numbers of the **Malayan Giant Squirrel** could **decline by 90% in India by 2050**, and it could be extinct by then if urgent steps are not taken.

➤ Headquartered at **Kolkata**, ZSI is a subordinate organisation of the **Ministry of Environment, Forest and Climate Change**, established in **1916**.

➤ It is a **national centre for faunistic survey and exploration of the resources** leading to the advancement of knowledge on the exceptionally rich **faunal diversity** of the country.

Key Points

➤ **Scientific Name:** *Ratufa bicolor*.

➤ **Features:**

○ It is one of the **world's largest squirrel species** that has a dark upper body, pale under parts, and a long, bushy tail.

○ Unlike the **nocturnal flying squirrels**, giant squirrels are **diurnal** (active during the day), but **arboreal** (tree-dwelling) and **herbivorous** like the flying squirrels.

• India is home to **three giant squirrel species**

and the other two are **Indian Giant Squirrel** and **Grizzled Giant Squirrel** which are found in peninsular India.

➤ **Habitat:**

○ It is found mostly in **evergreen and semi-evergreen forests**, from plains to hills at elevations of 50 m to 1,500 m above sea level.

○ **Globally** it is distributed through Southern China, Thailand, Laos, Vietnam, Burma, the Malayan Peninsula, Sumatra, and Java.

○ **In India**, is found in the **forests of Northeast** and is currently found in parts of West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, and Nagaland.

• Of the roughly 1.84 lakh sq km of the squirrel's range in Asia, about **8.5% is in India**.

➤ **Significance:**

○ It is considered to be a **forest health indicator species**.

• An **indicator species provides information on the overall condition of the ecosystem** and of other species in that ecosystem. They reflect the quality and changes in environmental conditions as well as aspects of community composition.

➤ **Threats:**

○ According to the study, the squirrel and its habitat are under threat from **deforestation**, **fragmentation of forests**, **crop cultivation** and **over-harvesting of food**, **illegal trade** in wildlife, and **hunting** for consumption.

Note:

drishti

- **Slash-and-burn jhum cultivation** in many areas of the Northeast contribute to destruction of its habitat.
  - ○ **Destruction of its habitat** could restrict the squirrel to only southern Sikkim and North Bengal by 2050.
    - Only 43.38% of the squirrel's original habitat in India is now favourable to it and by 2050, the favourable zone **could shrink to 2.94% of the area** the species was meant to inhabit.
    - The population of the squirrel in India **declined by 30%** over the last two decades.
- ➤ **Conservation Status:**
  - ○ **IUCN Red List:** Near Threatened.
  - ○ **CITES:** Appendix II.
  - ○ **Wildlife Protection Act, 1972:** Schedule I.

Provisional Report on the State of the Global Climate 2020: WMO

Why in News

According to the latest **State of the Global Climate provisional report** by the **World Meteorological Organization** (WMO), the year **2020 is set to be among the three warmest** on record. Also, the **decade 2011-2020 would be the warmest** ever.

- ➤ The **final report** will be published in **March 2021.** The **report** is published **annually** to keep a track of global warming.
- ➤ **WMO** is one of the specialized agencies of the **United Nations** (UN).

Key Points

- ➤ **Rise in Global Temperature:**
  - ○ The global mean surface temperature for January-October 2020 was **1.2°C higher** than the pre-industrial baseline (1850-1900).
    - There is at least a one in five chance of it **temporarily exceeding 1.5°C** by 2024.
    - The **Paris Agreement** central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

- ○ **2020 will be one of the three hottest**, just behind **2016 and 2019.**
  - The record heat in 2020 has been **despite near-La Niña** conditions prevailing in the equatorial Pacific Ocean since August and **moderate La Niña** conditions prevailing since October.
  - The **La Niña phase of the El Niño Southern Oscillation** (ENSO) phenomenon generally has a cooling effect on many parts of the world.
- ➤ **High Temperature over Ocean Surfaces:**
  - ○ **80%** of ocean areas have experienced at least one **marine heatwave** (MHW) so far in 2020.
    - A **heatwave** is a period of prolonged abnormally high surface temperatures relative to those normally expected.
    - At the time of MHW, the **average temperature of the ocean** surface (up to a depth of 300 feet or more) rises by **5-7°C** above normal.
    - MHWs can be **caused by locally formed heat fluxes** between the atmosphere and the ocean or due to large-scale drivers of the Earth's climate like the ENSO.
    - There were also much more strong MHWs (43%) over the oceans in 2020 than moderate ones (28%).
  - ○ **Global sea-level rise** was also similar to 2019 value. This was mainly **due to the increased melting of the ice sheets in Greenland and Antarctica**.
- ➤ **Reasons:** Scientific evidence indicates **increasing temperatures** are a direct result of **human-led global warming** which is an impact of the **emission of greenhouse gases** (GHG).
  - ○ After **record GHG levels of 2019**, there has been a slight **dip this year** due to measures taken by many countries to fight the ongoing **Covid-19 pandemic**.
  - ○ However, data from specific locations, including Mauna Loa (Hawaii) and Cape Grim (Tasmania) indicate that levels of **Carbon dioxide (CO_2), Methane (CH_4) and Nitrogen dioxide (N_2O) continued to increase** in 2020.
- ➤ **Consequences of Global Warming in 2020:**
  - ○ **Extreme weather events** such as **tropical cyclones, floods, heavy rainfall and droughts** impacted many parts of the world and **cases of wildfire** have also increased this year.

Note:

- **Atlantic Hurricane Season:** The season witnessed **30 named storms** from June to November which is the **highest number ever** recorded.
- **Heavy Rains:** There were heavy rainfall and flooding in many parts of **Asia and Africa.**
- **Droughts:** South America experienced **severe droughts** with northern Argentina, Paraguay and western areas of Brazil being some of the worst affected.
- **Sea-level rise:** Melting of ice resulted in sea level rise which is an existential concern for the **small island nations.**
  - A significant sea-level rise by the end of the century will mean that these countries will drown in the oceans and their respective populations will be homeless.
- **Loss to Humanity:**
  - **Population Movements:** The climate and weather events have triggered significant population movements and have severely affected vulnerable people on the move, including in the Pacific region and Central America.
  - **Agricultural Losses:** Brazil alone recorded agricultural losses of 3 billion American dollars.
  - **Loss of Human lives, Property and Livelihoods:** The most affected were the Sahel and Greater Horn regions of Africa and China, India, Korea and Japan regions of Asia.

Deteriorating Great Barrier Reef

Why in News

Recently, the **International Union for Conservation of Nature** (IUCN) has highlighted that **Australia's Great Barrier Reef** is in a critical state and deteriorating as **climate change** warms up the waters in which it lies.

Key Points

➤ **Great Barrier Reef:**
  - It is the **world's most extensive and spectacular coral reef eco-**

system composed of over 2,900 individual reefs and 900 islands.
  - The reef is located in the **Coral Sea** (North-East Coast), **off the coast of Queensland**, **Australia**.
  - It can be **seen from outer space** and is the **world's biggest single structure made by living organisms**.
  - This reef structure is composed of and built by billions of tiny organisms, known as **coral polyps**.
    - They are made up of genetically identical organisms called **polyps**, which are tiny, soft-bodied organisms. At their base is a hard, protective limestone skeleton called a **calicle**, which forms the structure of coral reefs.
    - These polyps have **microscopic algae called zooxanthellae** living within their tissues. The corals and algae have a **mutualistic** (**symbiotic**) relationship.
  - It was selected as a **World Heritage Site** in **1981**.
➤ **Concern:**
  - Coral along large swathes of the 2,300-kilometre reef have been killed by **rising sea temperatures** linked to climate change, leaving behind skeletal remains in a process known as **coral bleaching**.
    - When corals face **stress by changes in conditions such as temperature, light, or nutrients**, they **expel the symbiotic algae zooxanthellae** living in their tissues, causing them to **turn completely white**. This phenomenon is called coral bleaching.
    - Corals **can recover if the stress-caused bleaching is not severe**.
    - Coral bleaching has occurred in the Caribbean, Indian, and Pacific oceans on a regular basis.
➤ In **August 2019**, Australia downgraded its long-term outlook to "Very Poor" for the first time and there are high chances that it will be considered for the **List of World Heritage in Danger**.

International Union for Conservation of Nature
➤ It is a **membership union** uniquely composed of **both government and civil society organisations**.
➤ Created in **1948**, it is the global authority on the status of the natural world and the measures needed to safeguard it.
➤ It is headquartered in **Switzerland**.
➤ The **IUCN Red List of Threatened Species**, is the **world's most comprehensive inventory of the global conservation status** of plant and animal species.

Note:

○ The List is designed to inform the international community of conditions which threaten the very characteristics for which a property was inscribed on the World Heritage List.

○ It also encourages corrective action.

Narmada Landscape Restoration Project

Why in News

National Thermal Power Corporation (NTPC) has signed a Memorandum of Understanding (MoU) with **Indian Institute of Forest Management** (IIFM), **Bhopal**, to implement the **Narmada Landscape Restoration Project (NLRP).**

➤ NTPC Ltd. is a central Public Sector Undertaking (PSU) under the Ministry of Power. It became a **Maharatna company** in May 2010.

Key Points

➤ **About NLRP:**

○ It is a **collaborative and participatory** approach that will demonstrate the interdependence of the **upstream sustainably managed forest** and **farm practices** on **downstream water resources.**

○ It aims to establish an **incentivisation mechanism to maintain sustainable landscape practices** in the Narmada basin.

● Landscape management means action, from a perspective of **sustainable development**, to ensure the **regular upkeep of a landscape,** so as to guide and harmonise changes which are brought about by **social, economic and environmental processes**.

➤ **Funding Mechanism**:

○ The program is in partnership with a **grant in aid** from **NTPC Ltd** (under its **Corporate Social Responsibility** initiative) and **United States Agency for International Development** (USAID) in equal proportions.

● USAID is the world's premier **international development agency** and a catalytic actor driving development results.

● USAID's work advances U.S. national security and economic prosperity, demonstrates American

generosity, and promotes a path to recipient self-reliance and resilience.

➤ **Implementation**:

○ The **4-year project** will be implemented in **Khargone District of Madhya Pradesh,** in the catchments of selected tributaries of the River Narmada between **Omkareshwar and Maheshwar dams.**

● **Omkareshwar Dam:**

■ It is one of the major **downstream dams of Indira Sagar Project**, lies along the bank for the Narmada and Kaveri.

■ Indira Sagar is a **multipurpose project** consisting of various dams on Narmada river.

■ **Omkareshwar Jyotirlinga**, one of the 12 Jyotirlinga is situated on the **confluence** of river Narmada and Kaveri.

● **Maheshwar Dam:**

■ Maheshwar is one of the planned large dams on the Narmada Valley to **provide 400 MW electricity**.

➤ **Implementing Agencies**:

○ **IIFM, Bhopal**, an Autonomous Institute under the Ministry of Environment, Forest and Climate Change (MoEF&CC) will be **jointly implementing this project** with **Global Green Growth Institute** (GGGI).

➤ **Benefits of the Project:**

○ Will demonstrate **nature-based solutions for enhancing ecosystem services**.

○ It will promote a **clean and sustainable environment** concerning land, water and air.

○ Improvement in **water quality and quantity.**

Narmada River
Source: International Rivers Network
©Eureka Cartography, Berkeley, CA
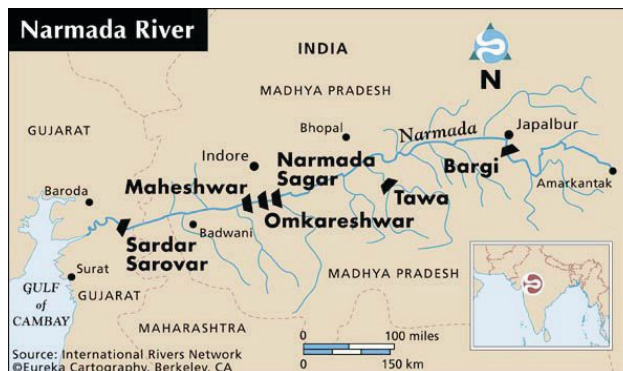
Narmada River

➤ Narmada is the **largest west flowing river** of the

peninsular region flowing through a rift valley between the **Vindhya Range** on the **north** and the **Satpura Range** on the **south.**

Global Green Growth Institute

➤ GGGI was established as an **international intergovernmental organization in 2012 at the Rio+20** United Nations Conference on Sustainable Development.

➤ Its vision is a low-carbon, resilient world of strong, inclusive, and sustainable growth and its mission to support Members in the transformation of their economies into a green growth economic model.

➤ **India** is **not a member country but a partner country.**

➤ **Headquarters:** Seoul, South Korea.

➤ It **rises from** Maikala range near Amarkantak in Madhya Pradesh.

➤ It **drains** a large area in **Madhya Pradesh** besides some areas in the states of **Maharashtra** and **Gujarat.**

➤ The river near **Jabalpur** (Madhya Pradesh) forms the **DhuanDhar** Falls.

➤ There are **several islands** in the estuary of the Narmada of which **Aliabet** is the largest.

➤ **Major Tributaries:** Hiran, Orsang, the Barna and the Kolar.

➤ The **major Hydro Power Projects** in the basin are **Indira Sagar, Sardar Sarovar** etc.

➤ **Narmada Bachao Andolan (NBA):**

○ It is an Indian **social movement spearheaded** by native tribes (adivasis), farmers, environmentalists and human rights activists **against a number of large dam projects across the Narmada River.**

○ **Sardar Sarovar Dam** in Gujarat is one of the biggest dams on the river and was one of the first focal points of the movement.

# Peacock Soft-shelled Turtle

Why in News

Recently, **Peacock soft-shelled turtle** (a turtle of a **vulnerable species**) has been rescued from a fish market in **Assam's Silchar**.

Key Points

➤ **Scientific Name:** *Nilssonia hurum.*

➤ **Features:**

○ They have a **large head, downturned snout** with low and oval carapace of dark olive green to nearly black, sometimes with a yellow rim.

○ The **head and limbs are olive green**; the **forehead has dark reticulations** and large **yellow or orange patches or spots**, especially behind the eyes and across the snout.

○ **Males** possess **relatively longer and thicker tails** than females.
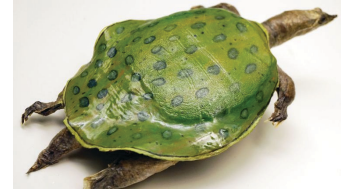
➤ **Habitat:**

○ This species is confined to **India, Bangladesh and Pakistan**.

○ In india, it is widespread in the northern and **central parts of the Indian subcontinent**.

○ These are found in **rivers, streams, lakes and ponds with mud or sand bottoms**.

➤ **Major Threats:**

○ The species is **heavily exploited for its meat and calipee** (the outer cartilaginous rim of the shell).

○ Threats in the River Ganga to the species are those generic for all large river turtles, including **reduction of fish stock**, as a result of **overfishing, pollution, increase in river traffic, and sand-mining**, among others.

➤ **Conservation Status:**

○ **Wildlife Protection Act, 1972:** Schedule I

○ **IUCN Red List:** Vulnerable

○ **CITES:** Appendix I

Emissions Gap Report 2020: UNEP

Why in News

United Nations Environment Programme (UNEP)'s **Emissions Gap Report 2020** has been published recently.

➤ The annual report from UNEP measures the gap between anticipated emissions and levels consistent with the **Paris Agreement** goals of limiting global warming this century to well below 2°C and pursuing 1.5°C.

Key Points

- **Analysis for the year 2019:**
  - **Record high GreenHouse Gas (GHG) emissions:**
    - Global GHG emissions continued to grow for the third consecutive year in 2019, reaching a record high of **52.4 Gigatonne carbon equivalent** ($GtCO_2e$) **without including land use changes (LUC).**
    - There is some indication that the **growth in global GHG emissions is slowing.**
      - However, GHG emissions are **declining in Organisation of Economic Cooperation and Development** (OECD) economies and **increasing in non-OECD economies**.
  - **Record carbon emission:**
    - Fossil **carbon dioxide (CO_2) emissions (from fossil fuels and carbonates)** dominate total **GHG emissions.**
    - Fossil CO_2 emissions reached a record **38.0 $GtCO_2$ in 2019.**
  - **Forest fires increasing GHG emissions:**
    - Since 2010, global GHG emissions have grown **1.4% per year on average**, with a more rapid increase of **2.6% in 2019** due to a large **increase in vegetation forest fires.**
  - **G20 countries account for bulk of emissions:**
    - Over the last decade, the **top four emitters (China, the United States of America, EU27+UK and India**) have contributed to **55% of the total GHG emissions without LUC**.
    - The **top seven emitters** (including the Russian Federation, Japan and international transport) have contributed to 65%, with G20 members accounting for 78%.
      - The ranking of countries changes when considering **per capita emissions.**
  - **On consumption-based emissions:**
    - There is a general tendency that **rich countries have higher consumption-based emissions** (emissions allocated to the country where goods are purchased and consumed, rather than where they are produced) than **territorial-based emissions**, as they typically have cleaner production, relatively more services and more imports of primary and secondary products.

- Both emission types have **declined at similar rates.**

- **Impact of the Pandemic:**
  - **Emissions Level: CO_2 emissions** could **decrease by about 7% in 2020** compared with **2019 emission levels**, with **a smaller drop expected in GHG emissions** as **non-CO_2** is likely to be less affected.
    - The resulting atmospheric concentrations of GHGs such as **methane (CH_4) and nitrous oxide (N_2O) continued to increase in both 2019 and 2020**.
  - **Sector reporting the lowest dip in emission due to pandemic:**
    - The biggest changes have occurred in **transport,** as restrictions were targeted to **limit mobility**, though reductions have also occurred in other sectors.

- **Issues and Possible Solutions:**
  - The world is still heading for a temperature rise in excess of 3°C this century.
    - The levels of ambition in the Paris Agreement still must be roughly **tripled for the 2°C pathway** and **increased at least fivefold** for the 1.5°C Pathway.
  - Rise of 3°C in global temperatures **could cause catastrophic weather-related events** around the world.
    - UN Experts believe the way to avoid it is encourage **green recovery** for countries facing Covid-induced economic slumps.
    - A green recovery involves **investment in zero emissions tech and infrastructure,** reducing **fossil fuel subsidies, stopping new coal plants,** and **promoting nature-based solutions**, according to the UN.
    - Such actions could cut 25% of predicted emissions by 2030, and gives the planet a 66% chance of keeping warming below the 2°mark that the Paris pact had set as a long term goal.

> **United Nations Environment Programme**
> - The UNEP is a leading global environmental authority established on **5th June 1972.**
> - **Functions:** It sets the **global environmental agenda,** promotes the sustainable development within the **United Nations** system, and serves as an authoritative advocate for global environment protection.

Note:

> ➢ **Major Reports:** Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.
> ➢ **Major Campaigns:** Beat Pollution, UN75, World Environment Day, Wild for Life.
> ➢ **Headquarters:** Nairobi, Kenya.

Extreme Climate Events: CEEW

Why in News

According to a recent study on the report "**Preparing India for Extreme Climate Events**" released by the **Council on Energy, Environment and Water** (CEEW), **over 75% of districts in India are hotspots of extreme climate events** such as **cyclones**, **floods**, **droughts**, **heat waves** and **cold waves**.

- ➢ This is the **first time** that extreme weather event hotspots in the country have been mapped.
  - ○ **CEEW** is an independent, non-partisan, one of Asia's leading not-for-profit policy research institutions, devoted to research on all matters affecting the use, reuse, and misuse of resources.
- ➢ The report comes just after the **United Nations Environment Programme** (UNEP) **Emissions Gap Report 2020** which warned that the world is heading for a temperature **rise of over 3 degrees Celsius** this century.

Key Points

- ➢ **Major Findings:**
  - ○ The **frequency**, **intensity**, and **unpredictability** of extreme events have risen in recent decades.
    - While India witnessed 250 extreme climate events in 35 years between 1970 and 2005, it recorded 310 such weather events in only 15 years since then.
    - With an unusual spike in extreme events since 2005, these districts are bearing the **effects of changing microclimate** with **loss of property, livelihoods and lives**.
  - ○ The **pattern reflects the global changes:**
    - Extreme weather events resulting from climate change led to **4,95,000 human deaths across the world in 1999-2018**.
    - More than 12,000 extreme weather events led to **losses worth USD 3.54 trillion** (measured

in terms of **purchasing power parity** or PPP) during this period.
  - ○ The **current trend** of catastrophic climate events **results from a mere 0.6 degrees Celsius temperature rise in the last 100 years**.
    - India is **already the 5th most vulnerable country globally** in terms of extreme climate events, and it is all set to become the world's flood capital.

- ➢ **Cyclones:**
  - ○ **After 2005**, the yearly average number of **districts affected by cyclones tripled** and the **cyclone frequency-doubled**.
  - ○ In the past decade, 258 districts were affected by cyclones with hotspot districts **all along the eastern coastline**.
  - ○ The east coast's warming regional microclimate, **land-use change**, and **degrading forests** are triggering the region's cyclonic activity.

- ➢ **Flood Events:**
  - ○ The decade **2000-2009 showed a spike** in **extreme flood events and in associated flood events**, which affected almost 473 districts.
    - Events associated with floods such as **landslides, heavy rainfall, hailstorms, thunderstorms, and cloudbursts** increased by over 20 times.
  - ○ The compounding effects of **land subsidence**, the **urban heat island phenomenon**, and **sea-level rise** due to glacial melts are leading to the **intensification of cyclonic disturbances**, thus increasing the number of flood events experienced during the decade and making it an outlier.
  - ○ While the **number of rainy days during monsoon has decreased**, **single-day extreme rainfall events are increasing**, leading to flooding.
  - ○ **Six of India's eight most flood-prone districts** in the last decade, Barpeta, Darrang, Dhemaji, Goalpara, Golaghat and Sivasagar, are **located in Assam**.

- ➢ **Droughts:**
  - ○ The **yearly average of drought-affected districts increased 13 times after 2005**.
    - Until 2005, the number of districts affected by drought was six, but **after 2005 this figure rose to 79**.
  - ○ While the **intensity of damage in terms of loss of life has reduced significantly**, droughts **increase uncertainties related to agriculture and rural livelihoods**.

○ **Drought-affected district hotspots of India in the last decade** were Ahmednagar, Aurangabad (both Maharashtra), Anantapur, Chittoor (both Andhra Pradesh), Bagalkot, Bijapur, Chikkaballapur, Gulbarga, and Hassan (all Karnataka).

➢ **Weakening of Monsoon:**
○ The empirical evidence generated from the analysis coincides with the **weakening of monsoons due to rising micro-temperatures**.
● This further can be validated by the fact that states like Maharashtra, Karnataka, and Uttar Pradesh saw severe **water scarcity during 2015 due to record-breaking temperatures during summer and weakening monsoons**.

➢ **Swapping of Nature of Extreme Events:**
○ The study also found a **shift in the pattern of extreme climate events**, such as **flood-prone areas becoming drought-prone and vice-versa**, in over 40% of Indian districts.
○ This swapping has **happened in two ways**.
● In some cases, districts which were **flood-prone have now become drought-prone and vice versa**.
● While **many districts are facing floods and droughts simultaneously**. This trend is both **unusual and alarming**, and **requires further investigation**.
○ **Coastal southern Indian states** are increasingly **witnessing more droughts**.
○ Further, **floods and droughts coincide during the same season** in several districts of Bihar, Uttar Pradesh, Odisha, and Tamil Nadu.

➢ **Suggestions:**
○ **Develop a Climate Risk Atlas** to map critical vulnerabilities such as coasts, urban heat stress, water stress, and biodiversity collapse.
○ **Develop an Integrated Emergency Surveillance System** to facilitate a systematic and sustained response to emergencies.
○ **Mainstream risk assessment at all levels**, including localised, regional, sectoral, cross-sectoral, macro and micro-climatic level.
○ **Enhance adaptive and resilience capacity** to climate-proof lives, livelihoods and investments.
○ **Increase the participatory engagement of all stakeholders** in the risk assessment process.
○ **Integrate risk assessment** into local, sub-national, and national level plans.

Microclimatic zones shifting
➢ Microclimatic zones, or **areas where the weather is different from surrounding areas**, are **shifting across** various districts of India.
➢ A shift in microclimate zones may **lead to severe disruptions across sectors**.
○ Every 2 degrees Celsius rise in annual mean temperature will reduce agricultural productivity by 15-20%.
➢ Some **reasons identified behind this shift** in microclimatic zones is **change in land-use patterns**, **deforestation**, **encroachments upon mangroves**, **disappearing wetlands** and **natural ecosystems by encroachment**, and **urban heat islands that trap heat locally**.

Elephant Corridors in Odisha

Why in News

Recently, the **National Green Tribunal** (NGT) has directed **the Odisha government** to prepare an **action plan** for **14 identified elephant corridors**.

Key Points

➢ **Background:**
○ The **NGT issued a prohibition order in 2017** directing that all such activities which are not permissible to be carried out in a highly **Eco-Sensitive Zone** (ESZ), should not be undertaken.
● The **NGT** also **directed authorities to expedite demarcation of the corridors** within a specific time frame.
○ The Odisha government **proposed 14 corridors stretching over a total area of 870.61 sq. km. having a length of 420.8 km**. Even after several years, **no tangible progress has been made** on the government's proposal.

➢ **Elephant Corridors:**
○ They are **narrow strips of land that connect two large habitats of elephants**.
○ They are crucial to **reducing animal fatalities due to accidents and other reasons**.
○ Fragmentation of forests makes it all the more important to **preserve migratory corridors**.

Note:

- The all-round development like **human settlements, roads, railway line, electric lines, canal and mining are the main cause of corridor fragmentation**.
- This movement of Elephants helps in **enhancing the species survival and birth rate**.
- **88 elephant corridors** have been identified by the **Wildlife Trust of India under the National Elephant Corridor project**.
- **Reasons for Protecting the Corridors:**
  - To **ensure that their populations are genetically viable.** It also helps **to regenerate forests** on which other species, including tigers, depend.
  - Nearly 40% of **elephant reserves are vulnerable**, as they are not within protected parks and sanctuaries. Also, **migration corridors have no specific legal protection.**
  - Forests that have turned into farms and unchecked tourism are blocking animal paths. Animals are thus forced to seek **alternative routes resulting in increased elephant-human conflict**.
  - **Weak regulation** of ecotourism is severely impacting important habitats. It particularly affects animals that have large home ranges, like elephants.

Elephants

- Elephants are a **keystone species**.
- There are three subspecies of **Asian elephant viz. the Indian, Sumatran, and Sri Lankan**.
- The Indian elephant has the widest range and accounts for the **majority of the remaining elephants on the continent**.
- **Conservation Status:**
  - **Wildlife Protection Act, 1972: Schedule I**
  - **IUCN Red List: Endangered**
  - **CITES: Appendix I**
- **India's Initiatives for Conservation of Elephants:**
  - **Gaj Yatra:** A nationwide campaign to protect elephants, was launched on the occasion of **World Elephant Day in 2017.**
  - **Project Elephant:** It is a **centrally sponsored scheme** which was launched in 1992.
- **International Initiatives:**

- **Monitoring of Illegal Killing of Elephants (MIKE) Programme:** It is mandated by the **Conference Of Parties** (COP) resolution of **CITES**. It was **started in South Asia in 2003** with the following purpose:
  - To measure levels and trends in **illegal hunting** of elephants.
  - To determine changes in these trends over time.
  - To determine the factors causing or associated with these changes and to try and assess in particular to what extent observed trends are a result of any decisions taken by the Conference of the Parties to CITES.

Myristica Swamp Treefrog

Why in News

Recently, **Myristica swamp treefrog** has been recorded for the **first time in Kerala's Thrissur district.**

Key Points

➢ **Scientific Name:** *Mercurana myristicapalustris*

➢ **About:**
  - These are **endemic** to the Western Ghats.
  - Rare **arboreal species** (Pertaining to moving about, living in or among trees).
  - **Active only for a few weeks** during their breeding season.

➢ **Unique Breeding Behaviour:**
  - The breeding season, unlike for other frogs, starts in the pre monsoon season (May) and ends before the monsoon becomes fully active in June.
  - Before the end of the breeding season, the female frogs along with their male counterparts **descend on the forest floor.**
  - The **female digs the mud and lays eggs** in shallow burrows in mud. After breeding and egg laying, they **retreat back to the high canopies** of the tree and remain elusive till the next breeding season.

Myristica Swamps

➢ **About:**
  - The **Myristica swamps are tropical freshwater swamp forests** with an abundance of **Myristica trees.**

Note:

- **Myristica trees** are the **most primitive** of the **flowering plants** on earth.
- The evergreen, water-tolerant trees have dense stilt roots helping them stay erect in the thick, black, wet alluvial soil.
- The trees form a **fairly dense forest** with a **closed canopy.**

○ The swamps are **typically found in valleys**, making them prone to **inundation during monsoon rains**.

➢ **Significance:**

○ **Research & Study:** These swamps are considered as **living museums** of ancient life and could promote **better understanding of the influence of climate change** on the evolution of plants.

○ **Check Vagaries of Extreme Events:** These swamps have **high watershed value.** When they are drained, filled or otherwise disturbed, their water holding capacity is lost, resulting in **floods and erosion** during the rainy season and dry streambeds the rest of the year.

○ **Habitat:** Provide habitat for a rich diversity of invertebrate and vertebrate species, including amphibians, reptiles and mammals.

- It is estimated that the wetlands contain 23% of butterflies, more than 50% of amphibians, more than 20% of reptiles and birds in the whole of Kerala.

○ **Carbon Sequestration:** These have higher potential to store carbon than nearby non-swamp forests. They function as **carbon sinks** and can store carbon produced by upland agriculture, forestry and other land uses.

➢ **Present Status:**

○ Studies have shown that the swamps, which would have occupied large swathes of the thickly-wooded Western Ghats in the past, are **now restricted to less than 200 hectares in the country.**

○ Further, the Myristica swamps of the **Western Ghats are fragmented**, with Kerala holding a major share of this habitat.

○ Leaving aside a few more patches in Karnataka and Goa, this exceptional wetland has almost disappeared from the Indian subcontinent due to the climatic alteration over the last 18,000 to 50,000 years (Late Pleistocene period).

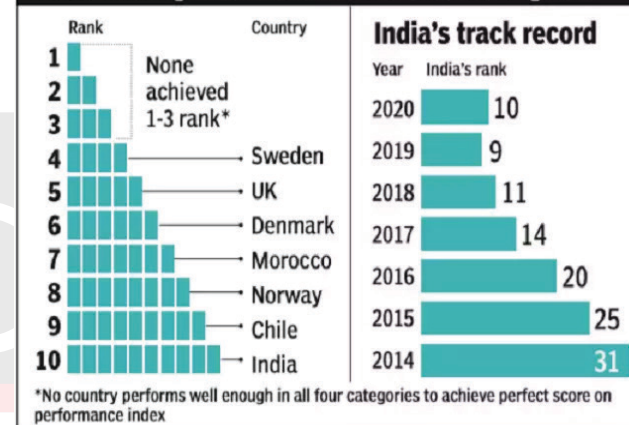# Climate Change Performance Index

Why in News

India ranked **10th** in **Climate Change Performance Index** (CCPI) 2021.

➢ India, for the **second time in a row,** continued to remain in the **top 10.**

➢ Last year, India had been ranked at the **ninth position.**

Key Points

➢ **About Climate Change Performance Index (CCPI):**

○ **Published by: Germanwatch**, the **New Climate Institute** and the **Climate Action Network** annually since **2005.**

○ **Scope:** It is an independent monitoring tool for tracking the climate protection performance of **57 countries and the European Union.**

- These countries together **generate 90%+ of global greenhouse gas emissions.**

○ **Aim:** It aims to **enhance transparency** in international climate politics and enables comparison of climate protection efforts and progress made by individual countries.

○ **Criteria:** The CCPI looks at **four categories**, with 14 indicators: **Greenhouse Gas Emissions** (40% of the overall score), **Renewable Energy** (20%), **Energy Use** (20%), and **Climate Policy** (20%).

➢ **CCPI 2021:**

Note:

- Top three ranks were empty as no country had met the criteria to get placed high enough on the index.
- Only two G20 nations, the United Kingdom and India are among the high rankers in CCPI 2021, which covers the year 2020.
- Six other G20 nations including the USA, Canada, South Korea, Russia, Australia and Saudi Arabia are ranked at the bottom of the index.
  - This is the second time in a row that the USA (ranked last), which is the largest historical polluter, is ranked at the bottom.
- China, which is the biggest current emitter of greenhouse gases, is ranked at the 33rd position on the CCPI 2021 report.
- India's Performance:
  - Overall Performance: India ranked 10th and scored 63.98 points out of 100.
  - Renewable Energy: India has been ranked at 27th out of 57 countries under the category this time. Last year, the country was ranked at 26th.
    - In September 2019, at the United Nations Climate Action Summit, India announced increasing the renewable energy target to 450 GW by 2030 from 175 GW by 2022.
    - In its Intended Nationally Determined Contribution (INDC), India has pledged to increase the share of non-fossil fuels-based electricity to 40% by 2030.
  - Emissions: Per capita emissions stayed at a comparatively low level. India was ranked 12th.
    - BS-VI Emission Norms: India moved to BS-VI Emission Norms to control the emissions from the automobiles.
  - Climate Policy: India's performance was rated as medium (13th).
    - The National Action Plan on Climate Change (NAPCC) was launched in 2008 which aims at creating awareness among the representatives of the public, different agencies of the government, scientists, and the industry on the threat posed by climate change and the steps to counter it.
  - Energy Use: India was ranked High (10th) under this category.
    - The country has not only established a comprehensive policy for energy efficiency – National Mission for Enhanced Energy Efficiency

(NMEEE), but has also executed successful demand side management programmes for consumers and municipal corporations to achieve overall energy savings while gradually mitigating the impact of climate change.
  - NMEEE is a part of NAPCC.
- Suggestion for India:
  - India's climate change mitigation strategy should include post-Covid-19 recovery plans, according to the report. These include reducing fossil fuel subsidies, phasing out coal, better coordination between the central and state governments and raising self-sufficiency by domestic manufacturing in the renewable sector.

Lakshadweep Declared an Organic Union Territory

Why in News

Recently, the entire Lakshadweep archipelago (a group of islands) has been declared as an organic agricultural area under the Participatory Guarantee System (PGS) of India.

Participatory Guarantee System
- PGS is a process of certifying organic products, which ensures that their production takes place in accordance with laid-down quality standards.
  - The certification is in the form of a documented logo or a statement.
- It is implemented by the Ministry of Agriculture and Farmers' Welfare.
- It is only for farmers or communities that can organise and perform as a group within a village or a cluster of contiguous villages, and is applicable only to farm activities such as crop production, processing, and livestock rearing, and off-farm processing by PGS farmers of their direct products.

Key Points

- About:
  - Lakshadweep is the first Union Territory (UT) to become 100% organic as all farming is carried out without the use of synthetic fertilisers and pesticides, providing access to safer food choices and making agriculture a more environmentally-friendly activity.

Note:

- Earlier in 2016, **Sikkim** became India's first **100% organic** state.
○ The entire 32 square kilometres geographical land area of the UT was declared as organic after receiving required certifications and declarations under Centre's **Paramparagat Krishi Vikas Yojana**.
➤ **Background:**
○ Earlier, the UT administration had imposed a formal **uniform ban on the sale, use and entry of synthetic chemicals for agriculture purposes** from October 2017 onwards to make the islands a **chemical-free zone**.
➤ **Benefits:**
○ Better marketing of **organic products** such as desiccated coconut and coconut milk.
○ The organic tag will allow farmers to realise a premium for the farm produce.
○ The island's coconut farmers are also expected to benefit from the Union government's '**One District One Product**' programme of food processing.
  - Under it, the entire island is being considered as a **single district** and coconut oil has been identified as the **product**.
➤ **Cropping Pattern:**
○ Coconut is the **only major crop** on the islands and the coconut processing industry works only for about six months. The period between **May and December sees the industry come to a standstill**.
  - The island administration plans to **introduce dryers and other machinery to utilise the nuts** even during this standstill period.

Organic Farming

➤ According to the **Food Safety and Standards Authority of India** (FSSAI), **organic farming** is a **system of farm design** and management to create an ecosystem of agriculture production **without the use of synthetic external inputs such as chemical fertilisers, pesticides and synthetic hormones or genetically modified organisms**.
➤ **Government Initiatives to Promote Organic Farming:**
○ **Paramparagat Krishi Vikas Yojana:**
  - The scheme promotes cluster-based organic farming with certification and training, certification and marketing are supported under the scheme.

○ **Mission Organic Value Chain Development for North Eastern Region:**
  - The scheme promotes **3rd party certified organic farming** of niche crops of the northeast region **through Farmers Producer Organizations (FPOs)** with a focus on exports.
○ **Capital Investment Subsidy Scheme:**
  - It comes under the **Soil Health Management Scheme**.
  - 100% assistance is provided to State Government/Government agencies for setting up of mechanized fruit/vegetable market waste/agro waste compost production unit.
○ **National Mission on Oilseeds and Oil Palm:**
  - Financial assistance at 50% subsidy to the tune of Rs. 300/ha is being provided for different components including **bio-fertilizers**.
○ **National Food Security Mission:**
  - Financial assistance is provided **for promotion of Bio-Fertilizers**.

Lakshadweep

➤ India's **smallest UT,** Lakshadweep is an archipelago consisting of **36 islands with an area of 32 sq km**.
○ The capital is **Kavaratti** and it is also the principal town of the UT.

MAP OF LAKSHADWEEP

➤ **There are three main groups of islands:**
○ Amindivi Islands
○ Laccadive Islands
○ Minicoy Island
  - **Amindivi Islands** are the northernmost while the Minicoy island is the southernmost.
➤ All are tiny **atolls** (ring-shaped coral reef island) and are surrounded by fringing reefs.

Five Years of Paris Climate Accord

Why in News

Recently, India has reiterated its commitment to the **Paris Climate Accord**, prior to the **Climate Ambition**

Summit, which will start from 12th December 2020 at Glasgow, Scotland.

➢ The **2020 Summit** will mark the **fifth anniversary** of the **Paris Agreement**, and will **provide a platform** for government and non-governmental leaders to **demonstrate their commitment** to the Paris Agreement and the multilateral process.
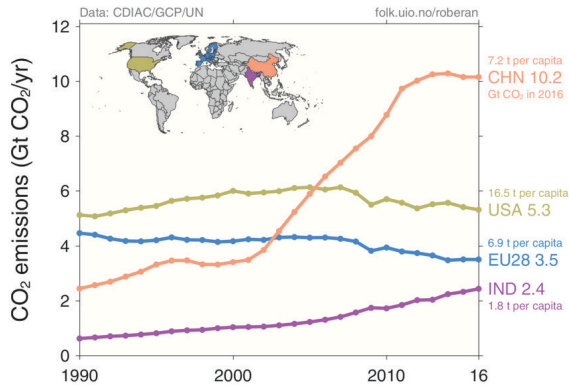
Key Points

➢ **Climate Ambition Summit 2020:**
  ○ **Objective:** To set out new and ambitious commitments under the three pillars of the **Paris Agreement** that are **mitigation, adaptation and finance commitments**.
  ○ **Scope:** Provide a **meaningful platform** for businesses, cities and other non-state actors who are rallying together and collaborating to support governments and **accelerate the systemic change required to reduce emissions and build resilience**.
  ○ **Hosted By**: The **United Nations**, the United Kingdom (UK) and France in partnership with Chile and Italy.

➢ **History of Emissions:**
  ○ As the most abundant **Greenhouse Gas** (GHG) in the atmosphere, **carbon dioxide (CO_2)** has become a direct proxy for measuring climate change. Its levels have varied widely over the course of the Earth's 4.54 billion year history.
  ○ Historically it's the **developed countries that have been major contributors** to carbon emissions.
    ● The **USA has the highest emissions** at **25%**, followed by the **European Union** (EU) at **22%** and China at **13%**.
    ● **India** has a **low carbon emission contribution** of only **3%**.

➢ **Current Status of Global Emissions:**

○ **Five years after the Paris agreement,** all states have submitted their national contributions to mitigate and adapt to **climate change**.
○ However, the contributions are **radically insufficient** to reach the temperature limit identified in the Paris Agreement.
○ Besides **India**, only Bhutan, the Philippines, Costa Rica, Ethiopia, Morocco and Gambia were **complying with the accord**.
○ **China** has the **highest GHG emissions** (30%) while the **USA** contributes **13.5%** and the **EU 8.7%**.

➢ **India's Current Emissions:**
  ○ A **2020 UN report** stated that India's per capita emissions are actually **60% lower than the global average**.
  ○ The emissions in the country **grew 1.4% in 2019**, much lower than its **average of 3.3% per year over the last decade**.
  ○ **Emissions Control Measures by India:**
    ● **Bharat Stage (BS) VI Norms:** These are emission control standards put in place by the government to keep a **check on air pollution**.
    ● **National Solar Mission:** It is a major initiative of the Government of India and State Governments to **promote ecologically sustainable growth** while addressing India's energy security challenge.
    ● **National Wind-Solar Hybrid Policy 2018:** It aims to provide a framework for the promotion of large grid-connected **wind-solar photovoltaic** (PV) **hybrid systems for optimal and efficient utilization of wind and solar resources**, transmission infrastructure and land.
    ● All these and many other initiatives helped India in cutting CO_2 **emissions by 164 million kg.**

➢ **Issues in Achieving the Pledged Targets:**
  ○ Most of the nations have been slow to update their **national contributions for reducing emissions for 2025-2030**, however, several have announced **net zero emission targets** in the recent past.
    ● **Net zero-emission** means that all man-made GHG emissions must be removed from the atmosphere through reduction measures, thus reducing the Earth's net climate balance.
  ○ The net-zero targets are **subject to credibility, accountability and fairness checks**.
    ● **Credibility:** The plans and policies of nations

Note:

are not credible enough to meet the long term **net-zero targets** because:

- The **Intergovernmental Panel on Climate Change's 1.5 degrees Celsius Report** indicated that to stay within a reasonable chance, global **CO_2 emissions have to fall by 45% from the 2010 levels by 2030** but **current national contributions are not on track for such a fall**.

- **Accountability:** There is **limited or no accountability** for the long-term net-zero goals and short-term national contributions because:

  - Many **net-zero goals have not yet been embedded in national contributions and long-term strategies** under the Paris Agreement.

  - In any case, **accountability under the Paris Agreement is limited**. States are not obliged to achieve their self-selected targets. There is **no mechanism to review the adequacy** of individual contributions. **States are only asked to provide justifications** for the fairness and ambition of their targets.

  - The **transparency framework does not contain a robust review function**, and the compliance committee is facilitative and limited to ensuring compliance with a shortlist of binding procedural obligations.

- **Fairness:** Issues of fairness and justice, **both between and within generations,** are **unavoidable** because:

  - There is **no mechanism** to check whether the net-zero targets, and pathways to net-zero are fair or how much are states doing in comparison to others and relative to how much they should.

Paris Climate Accord

➢ **Legal Status:** It is a **legally binding international treaty** on **climate change**.

➢ **Adoption:** It was adopted by **196 countries at the Conference of the Parties** (COP 21) in **Paris** in **December 2015**.

➢ **Goal:** To limit global warming to **well below 2° Celsius, and preferably limit it to 1.5° Celsius**, compared to pre-industrial levels.

➢ **Objective:** To achieve the **long-term temperature goal**, countries aim to reach global peaking of GHG emissions as soon as possible to achieve a climate-neutral world by mid-century.

■■■

Note:

History

Highlights

- 64th Mahaparinirvan Diwas
- Indus Valley Diet
- International Bharati Festival 2020

64th Mahaparinirvan Diwas

Why in News

Mahaparinirvan Diwas is observed **every year on 6th December** to commemorate the **death anniversary of Dr. B R Ambedkar.**

➢ **Parinirvana,** regarded as one of the major principles as well as goals of **Buddhism,** is a **Sanskrit term** which means **release or freedom after death.** As per the Buddhist text **Mahaparinibbana Sutta, the death of Lord Buddha** at the age of 80 is considered as the **original Mahaparinirvana.**

➢ Owing to **Ambedkar's status as a Buddhist leader,** his death anniversary is referred to as Mahaparinirvana Diwas.

Key Points

➢ **Birth:** 14th April 1891 in Mhow, Central Province (now Madhya Pradesh).

➢ **Brief Profile:**
  ❍ Dr. Ambedkar was a **social reformer, jurist, economist, author, polyglot orator** and a **scholar of comparative religions.**
    - In 1916, he received a **doctorate degree** from **Columbia University, becoming the first Indian to do so.**
  ❍ He is known as the **Father of the Indian Constitution** and was an independent India's **first law minister.**

➢ **Related Information:**
  ❍ He established a fortnightly **newspaper "Mooknayak" in 1920** which laid the foundations of an **assertive and organised Dalit politics.**

❍ He founded **Bahishkrit Hitkarini Sabha (1923),** devoted to spreading education and culture amongst the downtrodden.

❍ He was appointed by the Bombay Presidency Committee to work in the **Simon Commission** in 1925.

❍ He led the **Mahad Satyagraha in March 1927** to challenge the regressive customs of the Hindus.

❍ The **Kalaram Temple Movement of 1930** formed a pivotal role in the **Dalit movement** in India in which Ambedkar led a protest outside the Kalaram temple which did not allow Dalits to enter the temple premises.

❍ He participated in **all three round-table conferences.**

❍ In 1932, he signed the **Poona pact** with Mahatma Gandhi, which abandoned the idea of **separate electorates** for the **depressed classes** (Communal Award).
  - However, the seats reserved for the depressed classes were increased from **71 to 147** in provincial legislatures and to **18%** of the total in the Central Legislature.

❍ In **1936,** he was **elected to the Bombay Legislative Assembly** as a legislator (MLA).

❍ On 29th August, 1947, he was appointed **Chairman of the Drafting Committee** for the new Constitution.

❍ He accepted Prime Minister Nehru's invitation to become **Minister of Law in the first Cabinet of independent India.**

❍ He **resigned from the Cabinet** in 1951, over differences on the **Hindu Code Bill** (aimed at reforming Hindu society).

❍ In **1956,** he converted to **Buddhism.**

❍ He **passed away** on **6th December 1956.**

❍ He was conferred **Bharat Ratna** in 1990.

Note:

○ **Chaitya Bhoomi** is a memorial to B.R. Ambedkar which is located in Dadar, **Mumbai.**

➤ **Important Works:** Newspaper Mooknayak (1920); The Annihilation of Caste (1936); The Untouchables (1948); Buddha Or Karl Marx (1956), The Buddha and His Dhamma (1956), etc.

➤ **Quotes:**

○ 'Democracy is not merely a form of government. It is primarily a mode of associated living, of conjoint communicated experience. It is essentially an attitude of respect and reverence towards fellow men'.

○ "I measure the progress of a community by the degree of progress which women have achieved".

○ 'Humans are mortal. So are ideas. An idea needs propagation as much as a plant needs watering. Otherwise, both will wither and die'.

Indus Valley Diet

Why in News

As per a study published in the **Journal of Archaeological Science,** the diet of the people of **Indus Valley civilization** had a **dominance of meat,** including extensive eating of beef.

Key Points

➤ The study, "**Lipid residues in pottery from Indus Civilisation in northwest India**'', looks at the food habits of the people on the basis of **lipid residue analysis found in pottery** from sites such as:

○ Uttar Pradesh: Alamgirpur (Meerut)

○ **Haryana:**

● Masudpur, LohariRagho, Rakhigarhi city (Hisar)

● Khanak (Bhiwani), Farmana town (Rohtak)

➤ **Findings**:

○ The study finds the dominance of animal products such as meat of **pigs, cattle, buffalo, sheep and goat, as well as dairy products**, from rural and urban settlements of Indus Valley civilization.

○ Out of domestic animals, **cattle/buffalo** are the most abundant, averaging between **50-60% of the animal bones found,** with **sheep/goat** accounting for **10%** animal remains.

● The high proportions of cattle bones may suggest a **cultural preference for beef consumption**

across Indus populations, supplemented by consumption of mutton/lamb.

○ At Harappa, **90% of the cattle were kept alive** until they were **three or three-and-a-half years**, suggesting that **females** were used for **dairy production**, whereas **males were used for traction.**

○ Previously there have been many studies on the food habit in Indus Valley civilisation, primarily focusing on **crops.**

Indus Valley Civilization

➤ **Time Period:**

○ The Indus Valley Civilization was established **around 3300 BC.** It flourished between **2600 BC and 1900 BC**. It started declining around **1900 BC** and disappeared around **1400 BC.**

➤ This is also called **Harappan Civilization** after the first city to be excavated, **Harappa (Punjab, Pakistan).**

➤ **Geographical Extent**:

○ Geographically, this civilization covered **Punjab, Sindh, Balochistan, Rajasthan, Gujarat and Western Uttar Pradesh**.

● It extended from **Sutkagengor** (in Balochistan) in the West to **Alamgirpur** (Western UP) in the East; and from **Mandu** (Jammu) in the North to **Daimabad** (Ahmednagar, Maharashtra) in the South. Some Indus Valley sites have also been found in as far away as Afghanistan.

➤ **Important Sites**:

○ **Kalibangan** (Rajasthan), **Lothal, Dholavira, Rangpur, Surkotda** (Gujarat), **Banawali** (Haryana), Ropar (Punjab).
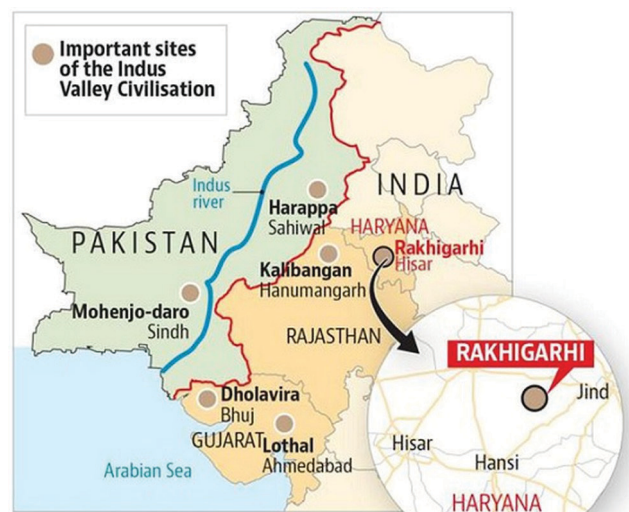
Note:

○ **In Pakistan**: **Harappa** (on river Ravi), **Mohenjodaro** (on Indus River in Sindh), **Chanhudaro** (in Sindh).

➤ **Some Important Features:**

○ The Indus Valley cities show a level of sophistication and advancement **not seen in other contemporary civilizations.**

○ **Urban Features**:

● Most cities had **similar patterns**. There were two parts: **a citadel and the lower town** showing presence of hierarchy in society.

● Most cities had a **Great Bath.**

● There were also **granaries, 2-storied houses made of burnt bricks**, **closed drainage lines**, **excellent stormwater, and wastewater management system, weights for measurements, toys, pots**, etc.

● A large number of **seals** have been discovered.

○ **Agriculture**:

● The first civilization to **cultivate cotton.**

● Animals were domesticated like **sheep, goats, and pigs**.

● Crops were **wheat, barley, cotton, ragi, dates, and peas**.

○ **Trade** was conducted with the **Sumerians (**Mesopotamia).

○ **Metal Products** :

● These were produced including those with **copper, bronze, tin, and lead. Gold and silver** were also known.

● **Iron** was not known to them.

○ **Religious Beliefs**:

● **No structures** like temples or palaces have been found.

● The people worshipped **male and female deities**.

● A seal which was named **'Pashupati Seal'** has been excavated and it shows an image of a **three-eyed figure**.

○ **Pottery**:

● Excellent pieces of **red pottery designed in black** have been excavated.

● Faience was used to make **beads, bangles, earrings, and vessels**.

○ **Art Forms:**

● A statuette named '**Dancing Girl**' has been found from **Mohenjodaro** and is believed to be 4000 years old.

● A figure of a **bearded Priest-King** has also been found from **Mohenjodaro**.

○ Lothal was a **dockyard.**

○ Disposal of the dead was by **burial in wooden coffins.**

○ The Indus Valley script has **not yet been deciphered.**

International Bharati Festival 2020

Why in News

Recently, the Prime Minister has addressed the virtual **International Bharati Festival 2020**, organised by the **Vanavil Cultural Centre**, Tamil Nadu.

➤ The event celebrates the **138th birth anniversary** (11th December 2020) of Tamil poet and writer **Mahakavi Subramanya Bharati**.

➤ Scholar **Seeni Viswanathan** has received the **Bharathi Award for 2020**.

○ Bharathi Award was **instituted in 1994 by Vanavil Cultural Centre**.

○ **Every year**, it is being conferred on eminent persons who have **done laudable service in any field of social relevance** and thus worked towards the fulfilment of Bharati's dreams.

Key Points

➤ **Subramanya Bharati:**

○ **Birth:** 11th December 1882, in Ettayapuram, Madras Presidency.

○ **Brief Profile:**

● An outstanding **Indian writer of the nationalist period** (1885-1920) who is regarded as the "**Father of Modern Tamil Style**".

● He is **also known as 'Mahakavi Bharathiyar'**.

● His **strong sense of social justice** drove him to fight for self-determination.

○ **Involvement During Nationalist Period:**

● After 1904, he **joined the Tamil daily newspaper** *Swadesamitran*, which led to his **involvement in the extremist wing of the Indian National Congress** (INC) **party**.

- In order to proclaim its revolutionary passion, Bharathi had the **weekly newspaper named 'India'** printed in red paper.
  - It was the **first paper in Tamil Nadu to publish political cartoons**.
- He also **published and edited a few other journals like** "**Vijaya**".
- He **attended the annual sessions of INC** and discussed national issues with extremist leaders like **Bipin Chandra Pal**, **B.G. Tilak** and **V.V.S. Iyer**.
  - His participation and activities in **Benaras Session** (1905) and **Surat Session** (1907) of the INC impressed many national leaders for his patriotic enthusiasm.
- He published the sensational "**Sudesa Geethangal**" in **1908**.
- He was **forced to flee to Puducherry** (earlier known as **Pondicherry**), a French colony, where he **lived in exile from 1910 to 1919**.
- Bharati's reaction to the **Russian Revolutions of 1917**, in a **poem entitled** "*Pudiya Russia*" (known as the **New Russia** in English), offers a fascinating example of the poet's political philosophy.

- ○ **Important Works:**
  - *Kaṇṇan pāṭṭu* (1917; Songs to Krishna), *Panchali sapatham* (1912; Panchali's Vow), *Kuyil pāṭṭu* (1912; Kuyil's Song), *Pudiya Russia* and *Gnanaratham* (Chariot of Wisdom).
  - Many of his English works were collected in **Agni and Other Poems** and **Translations and Essays and Other Prose Fragments** (1937).
- ○ **Death:** 11th September 1921.
- ➢ **Significance in Present Times:**
- ○ The poet's definition of progress **had a central role for women**.
  - He wrote women should walk with their head held high, looking people in the eye.
  - The government is inspired by this vision and is working to ensure women-led empo-werment.
- ○ He believed in a **healthy mix between the ancient and the modern**, indicating a need **to develop a scientific temper**, **a spirit of inquiry** and **march towards progress**.

Note:

Art & Culture

Highlights

● *Hampi Stone Chariot*

Hampi Stone Chariot

Why in News

The **Archaeological Survey of India (ASI)** has taken steps to protect the **stone chariot** inside **Vittala Temple complex** at the **UNESCO World Heritage site of Hampi.**

➤ **ASI**, under the **Ministry of Culture**, is the premier organization for the archaeological research and protection of the cultural heritage of the nation.

Key Points

➤ **Hampi Chariot:**
   ○ It is **among three famous stone chariots in India**, the other two being in **Konark (Odisha)** and **Mahabalipuram (Tamil Nadu)**.

   ○ It was **built in the 16th century** by the orders of **King Krishnadevaraya**, a Vijayanagara ruler.
      ● **Vijayanagara rulers** reigned from **14th to 17th century CE.**
   ○ It is a **shrine dedicated to Garuda**, the official vehicle of Lord Vishnu.

➤ **Vittala Temple:**
   ○ It was built in the **15th century** during the rule of **Devaraya II**, one of the rulers of the **Vijayanagara Empire**.
   ○ It is **dedicated to Vittala** and is also called **Vijaya Vittala Temple**.
      ● Vittala is said to be **an incarnation of Lord Vishnu.**
   ○ **Dravidian style** adorns the built of the complex, which is further enhanced with elaborate carvings.

➤ **Hampi:**
   ○ It comprises mainly the **remnants of the Capital City of Vijayanagara Empire.** It is located in the **Tungabhadra basin** in central **Karnataka.**
   ○ It was **founded by Harihara and Bukka in 1336**.
   ○ Classified as a **World Heritage Site** by UNESCO (1986), it is also the **"World's Largest Open-air Museum"**.
   ○ **Famous places** include Krishna temple complex, Narasimha, Ganesa, Hemakuta group of temples, Achyutaraya temple complex, Vitthala temple complex, Pattabhirama temple complex, Lotus Mahal complex, etc.
   ○ The **Battle of Talikota** (1565 CE) led to a massive destruction of its physical fabric.
      ● Battle of Talikota, **confrontation in the Deccan region** of southern India between the forces of the **Hindu King of Vijayanagar** and the **four allied Muslim sultans** of Bijapur, Bidar, Ahmadnagar, and Golconda.

Vijayanagara Empire

➤ Vijayanagara or "city of victory" was the name of both a city and an empire.
➤ The empire **was founded in the fourteenth century (1336 AD)** by **Harihara and Bukka** of the **Sangama dynasty.**
➤ It **stretched** from the river Krishna in the north to the extreme south of the peninsula.
➤ Vijayanagar Empire was ruled by **four important dynasties** and they are:
   ○ Sangama
   ○ Saluva
   ○ Tuluva
   ○ Aravidu
➤ **Krishnadevaraya** (ruled 1509-29) of the **Tuluva dynasty** was the most famous ruler of Vijayanagar. His rule was characterised by expansion and consolidation.

Note:

○ He is credited with building some fine temples and adding impressive **gopurams** to many important south Indian temples. He also founded a suburban township near Vijayanagar called **Nagalapuram** after his mother.

○ He composed a work on statecraft in Telugu known as the **Amuktamalyada**.

➢ **Dravidian architecture** survives in the rest of Southern India spread through the patronage of the Vijayanagara rulers.

➢ Vijayanagara architecture **is also known** for its adoption of elements of **Indo Islamic Architecture** in secular buildings like the Queen's Bath and the Elephant Stables, representing a highly evolved multi-religious and multi-ethnic society.

Dravidian Architecture

➢ **Two broad orders** of temples in the country are known - **Nagara in the north** and **Dravida in the south**. At times, the **Vesara style of temples** as an independent style created through the selective mixing of the Nagara and Dravida orders is mentioned by some scholars.

➢ **Features of Nagara and Dravida Orders of Temples:**

○ Unlike the nagara temple, the dravida temple is **enclosed within a compound wall**. The front wall has an entrance gateway in its centre, which is known as a **gopuram**.

○ The shape of the main temple tower known as **vimana** in Tamil Nadu is like a stepped pyramid that rises up geometrically **rather than the curving shikhara of North India**.

● In the South Indian temple, the word 'shikhara' is used only for the crowning element at the top of the temple which is usually shaped like a small stupika or an octagonal cupola - this is equivalent to the **amlak and kalasha of North Indian temples**.

○ Whereas at the entrance to the **North Indian temple's garbhagriha**, it would be usual to find images such as mithunas and the river goddesses, Ganga and Yamuna, in the **south** one will generally find sculptures of fierce **dvarapalas or the door-keepers** guarding the temple. It is common to find **a large water reservoir, or a temple tank,** enclosed within the complex.

➢ **Examples:**

○ **Nagara Style:** Kandariya Mahadeva Temple (Khajuraho), Madhya Pradesh

○ **Dravidian Style:** Brihadeshwara Temple and Mahabalipuram Temple, Tamil Nadu.
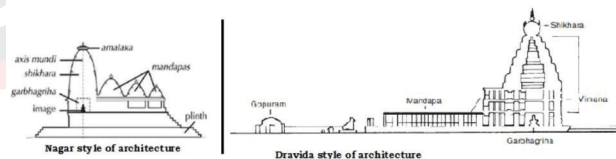
Nagar style of architecture | Dravida style of architecture

■■■

Geography

Highlights

- *Cyclone Burevi*
- *Recovery from Coal Mining in Meghalaya's Moolamylliang*
- *New Height for Mount Everest*
- *El Niño & Drought*

Cyclone Burevi

Why in News

Recently **cyclone Burevi** has made a landfall on Sri Lanka's Northern and Eastern provinces, before heading towards south India.

➢ This comes days after **Cyclone Nivar** hit the Puducherry coast.

Key Points

➢ **Named by:**
   ○ Maldives
➢ **Burevi vs Nivar:**
   ○ Cyclone Burevi would **not strengthen beyond the intensity of a cyclonic storm** because of **upwelling** caused by Nivar.
   ○ Upwelling is the process in which **cooler waters from lower ocean surfaces are pushed towards upper ocean surfaces.**
   ○ In the absence of warm sea surface conditions, any cyclone, in this case Burevi, will **not get enough fuel to intensify** further while at sea.
   ○ Further, interaction with land mass has slowed its movement and intensity.

Tropical Cyclone

➢ A tropical cyclone is an intense circular storm that originates **over warm tropical oceans** and is characterized by low atmospheric pressure, high winds, and heavy rain.
➢ A characteristic feature of tropical cyclones is the **eye**, a central region of clear skies, warm temperatures, and low atmospheric pressure.
➢ Storms of this type **are called** hurricanes in the North Atlantic and eastern Pacific and typhoons in SouthEast Asia and China. They are called tropical cyclones in the southwest Pacific and Indian Ocean region and Willy-willies in north-western Australia.

➢ Storms rotate **counterclockwise in the northern hemisphere** and **clockwise in the southern hemisphere.**

➢ The **conditions** favourable for the formation and intensification of tropical storms are:
   ○ Large sea surface with **temperature higher than 27° C.**
   ○ Presence of the Coriolis force.
   ○ Small variations in the vertical wind speed.
   ○ A pre-existing weak low- pressure area or low-level-cyclonic circulation.
   ○ Upper divergence above the sea level system.

Recovery from Coal Mining in Meghalaya's Moolamylliang

Why in News

Moolamylliang, a village in **Meghalaya's East Jaintia Hills district**, is making progress in becoming a greener place amid abandoned pits from the **rat-hole mining**.

Key Points

➢ **Background:**
   ○ The **Jaintia Coal Miners and Dealers' Association** claims there are around 60,000 coal mines across 360 villages in East Jaintia Hills district.
   ○ Moolamylliang used to be one such village until the **National Green Tribunal** (NGT) **banned** hazardous rat-hole coal mining in Meghalaya in **April 2014** and set a time limit for transporting the coal already mined till that time.

Note:

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○ Though the NGT **ban did not stop illegal mining** in the district, it **helped Moolamylliang reform**.

➢ **Coal Mining in Northeast:**

○ In the northeast, coal mining is part of a larger trend which is the **decimation of natural resources**.

● For example, there is large-scale **deforestation going on in the Garo and Khasi Hills** of Meghalaya, besides **limestone mining** in the **Jaintia Hills**.

● Assam, which has lost most of its once extensive forest cover, sees **poaching in the Dima Hasao region**, **coal mining** in Upper Assam, and **sand/ stone mining** from river beds.

○ There are three notable **peculiarities of coal mining in the Jaintia Hills** (and elsewhere in Meghalaya).

● Being a tribal state where the **6th Schedule applies**, **all land is privately owned**, and hence coal mining is done by private parties. The schedule **does not explicitly refer to mining**.

● The **sizable coal deposits** in the state, mostly in the Jaintia Hills, **occur in horizontal seams only** a few feet high that run through the hills which is why **rat-hole mining is practised instead of open cast mining**.

● **Most of the labour** (including children) comes from Nepal, the **poorer areas** of Assam, and Bangladesh. In Meghalaya, the non-tribal is a second-class citizen, as is the poor tribal, which explains the **general lack of concern even within the State about the trapped miners**.

○ **Rat-hole Mining:**

● It is a term used for a **hazardous and arduous mining technique** where miners crawl into winding underground tunnels that are just 4-5 feet in diameter to extract coal from the deep seams with a pickaxe.

○ **Open Cast Mining:**

● It is a **surface mining technique** of extracting rock or minerals from the earth by their removal from an open-air pit, sometimes known as a **borrow**.

➢ **Concerns:**

○ **Ecological Issues:** Unsustainable mining in hilly areas **contaminates the farmlands** and **turns the streams acidic**, leading to the **loss of biodiversity and local heritage**.

○ **Health Issues:** The prevalence of mining in an area **causes various diseases** like fibrosis, pneumoconiosis and silicosis in workers as well as locals.

○ **Child Labour and Trafficking:** Majority of the workers involved in 'rat-hole' mining are children. They are suited for this job because of their small anatomy that fits small mine tunnels. Rat-hole mining has **encouraged child trafficking** apart from **engaging with immigrants** from many states.

○ **Corruption: Police officials often collaborate with mine owners** in states where the open cast mining and rat hole mining are the norms.

➢ **Measures:**

○ The administration tried to make coke factories and cement plants in the vicinity contribute to **earth rejuvenation programmes** in the area under their **Corporate Social Responsibility** (CSR).

○ Among the projects being pursued is **low-cost rainwater harvesting** for **recharging the area** that has become dry because of coal mining.

○ Making Moolamylliang a **base camp for tourists to explore caves, canyons and waterfalls** in parts of East Jaintia Hills that have escaped the impact of mining, will **boost tourism and bring in revenue**.

○ Since the 6th Schedule does not explicitly refer to mining, **environmental activists are calling for the coal trade to come under central mining and environmental laws**.

Government Initiatives Related to Mining

➢ In **April 2018**, the Ministry of Coal launched the **Unlocking Transparency by Third Party Assessment of Mined Coal** (UTTAM) **Application** for coal quality monitoring.

➢ National Mineral Policy (NMP) was approved in **2019**, which emphasises on themes such as sustainable mining, boosting exploration, encouraging the use of state-of-the-art technology and skill development.

➢ In **September 2019**, **100% FDI under the automatic approval route was allowed** for the sale of coal and coal mining activities including associated processing infrastructure.

➢ In **January 2020**, the Parliament passed the **Mineral Laws (Amendment) Bill, 2020**.

○ It amends the **Mines and Minerals (Development and Regulation) Act, 1957** and the **Coal Mines (Special Provisions) Act, 2015**.

Note:

- The **1957 Act** regulates the mining sector in India and specifies the requirement for obtaining and granting mining leases for mining operations.
- The **2015 Act** provides for allocation of coal mines and vesting of the right, title and interest in and over the land and mine infrastructure together with mining leases to successful bidders with a view to ensure continuity in coal mining operations and production of coal.
○ The Bill **permits commercial coal mining for local and global firms** without imposing any end-user restrictions, also it extends the validity of clearances for mining leases expiring in 2020.

New Height for Mount Everest

Why in News

Nepal and China have announced the **revised height of Mount Everest as 8,848.86 metres**. The new height is **86 cm more** than the previous measurement.

Key Points

➢ The new height of **8,848.86 meters** replaced the long-associated **8,848 metre-height,** which was, as per a measurement carried out by the **Survey of India in 1954.**

➢ The common declaration meant that the **two countries have shed their long-standing difference** in opinion about the mountain's height — 8,844 m claimed by China and 8,847 m by Nepal.

  ○ Resolving the **three-metre difference**, attributed to China calculating the **"rock height" underneath the snow** and **Nepal using the "snow height" which included the snowcap,** was the aim of a joint project.

➢ Everest is also known as **Sagarmatha** in **Nepal** and **Mount Qomolangma** in **China.**

➢ The mountain lies on the border between **Nepal and Tibet** and the summit can be accessed from both sides.

➢ **Related Information:**

  ○ It gets its English name from **Sir George Everest,** a colonial-era geographer who served as the **Surveyor General of India** in the mid-19th century.

  ○ It **was first scaled in 1953** by the Indian-Nepalese **Tenzing Norgay** and New Zealander **Edmund Hillary**.

○ **First Survey of Everest:**
- The first effort was carried out in **1847** by a team led by **Andrew Waugh**, **Surveyor General of India.**
  - The survey was based on trigonometric calculations and is known as the **Great Trigonometric Survey of India.**
- The team discovered that **'Peak 15'** (as Mount Everest was referred to then) was the highest mountain, contrary to the then-prevailing belief that **Mount Kanchenjunga** (8,582 m and the 3rd highest peak in the world now) was the highest peak in the world.
  - **Mount K2**, at **8,611 metres** above sea level, is the **second highest mountain** in the world.

El Niño & Drought

Why in News

In a recent study by **Indian Institute of Science's** (IISc) **Centre for Atmospheric and Oceanic Sciences** (CAOS), it has been found that **El Niño** was **not the only cause for droughts** during the Summer **Monsoon** in the Indian subcontinent.

➢ **El Niño** is a recurring climate event during which **abnormally warm equatorial Pacific waters pull moisture-laden clouds** away from the **Indian subcontinent**.

➢ It is the usual **suspect** for **failing Indian summer monsoons** between **June and September**.

Key Points

➢ **Findings of the Study:**

  ○ 43% of the droughts that occurred during the Indian summer monsoon season in the past century may have been driven by **atmospheric disturbances** from the **North Atlantic region**.

  ○ These **droughts** occurred during years **when El Niño was absent.**

➢ **Cause of Drought:**

  ○ A sudden and steep drop in rainfall in late August that was linked to an **atmospheric disturbance in the mid-latitude region over the North Atlantic Ocean**, creating a **pattern of atmospheric currents** that move over the Indian subcontinent and **derail the monsoon**.

**Atmospheric Circulations that Impact Monsoon**

➢ **Indian Ocean Dipole:**
- ❍ IOD is defined by the **difference in sea surface temperature between two areas** (or poles, hence a dipole), a **western pole** in the **Arabian Sea** (western Indian Ocean) and an **eastern pole** in the eastern Indian Ocean **south of Indonesia**.
- ❍ IOD develops in the equatorial region of Indian Ocean **from April to May** peaking in October.
- ❍ With **positive IOD**, winds over the Indian Ocean blow from east to west (from Bay of Bengal towards the Arabian Sea). This results in the **Arabian Sea** (the western Indian Ocean near the African Coast) becoming much **warmer and eastern Indian Ocean around Indonesia becoming colder and dry**.
- ❍ In the **negative IOD**, **the reverse happens** making, Indonesia much warmer and rainier.

- ❍ **Indian Ocean Dipole Effect:**
  - ● It was demonstrated that a **positive IOD index** often negated the effect of El Nino, resulting in increased Monsoon rains in several El Nino years like 1983, 1994 and 1997.
  - ● Two poles of the IOD were independently and cumulatively affecting the number of rains for the Monsoon in the Indian subcontinent.
- ❍ **Impact of IOD on Cyclogenesis:**
  - ● Positive IOD results in **more cyclones than usual in the Arabian Sea**.
  - ● Negative IOD results in **stronger than usual Tropical Cyclones** in the Bay of Bengal. Cyclonic activity in the Arabian Sea is **suppressed**.
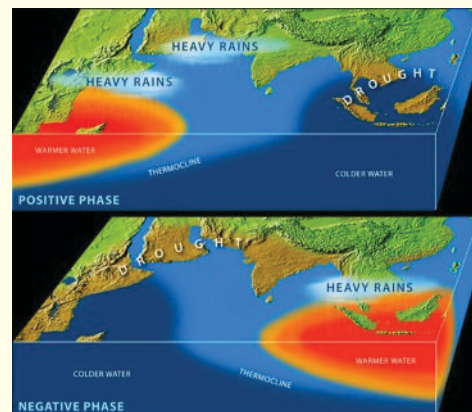
➢ **Madden-Julian Oscillation:**
- ❍ MJO is an **eastward-moving band of rain clouds** that travels around the globe-spanning 12,000–20,000 km across the tropical oceans returning to its initial starting point in 30 to 60 days.
- ❍ In its journey, it interacts with **surface waters** of the Indo-Pacific ocean, the **largest pool of warm water in the globe**.
- ❍ The MJO consists of **two parts, or phases:**
  - ● One is the **enhanced rainfall** (or convective) phase and the other is the **suppressed rainfall phase**.
- ❍ Strong MJO activity often **dissects the planet into halves:**
  - ● One half within the **enhanced convective phase** and the other half in **the suppressed convective phase**. These two phases produce opposite changes in clouds and rainfall and this entire dipole propagates eastward.
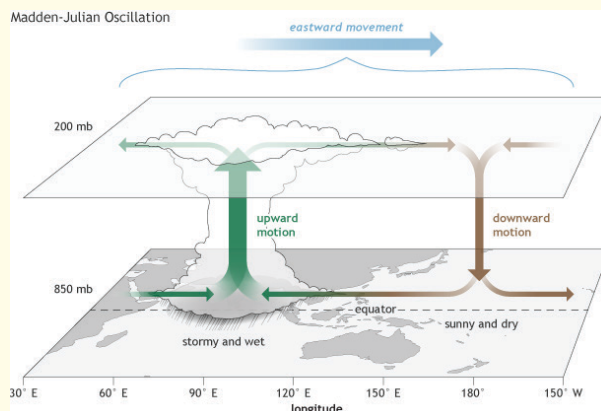
➢ **Effects of MJO on Global Weather Phenomenon:**
- ❍ It can modulate the **timing and strength of monsoons**.
- ❍ It **influences tropical cyclone** numbers and strength in nearly all ocean basins.
- ❍ It can result in **jet stream changes** that can lead to cold air outbreaks, extreme heat events, and flooding rains over North America.

Note:

➢ **Change in Drought Pattern:**
  ○ **El Niño Year Drought:**
    ● The **rainfall deficit** begins **mid-June** and spreads throughout the country.
  ○ **Normal Year Drought:**
    ● There is normal rainfall during the monsoon season but a **sudden and steep decline was observed in August**.
      ▪ An unusual **atmospheric disturbance** in the **mid-latitudes** (between 23° and 66° latitudes in north and south) **was the cause for it**.
      ▪ The disturbance emerges from **winds in the upper atmosphere** interacting with a **cyclonic circulation** above abnormally **cold North Atlantic waters**.
      ▪ The resulting wave of air currents, called **a Rossby wave**, **moves from the North Atlantic** towards the **Tibetan plateau** and **hits the Indian subcontinent** around **mid-August**, **suppressing rainfall and causing drought-like conditions**.

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Note:

Social Issues

Highlights

- World AIDS Day 2020
- Rise in NREGS Demand
- Assistance to Disabled Persons Camp
- Global Teacher Prize 2020
- Covid-19 and Extreme Poverty: UNDP
- Initiatives to Eliminate Manual Scavenging
- Virtual Aadi Mahotsav
- United Nations Population Award 2020

- Lancet Citizens' Commission for Universal Health Coverage
- Surgery and Ayurveda
- Truths and Hate Speech: SC
- Emergency Use Approval: Covid-19 Vaccines
- Child Marriage and Pandemic
- Global Health Estimates 2019: WHO
- Human Rights Day

World AIDS Day 2020

Why in News

World AIDS Day is observed on **1st December every year** all over the world.

Key Points

➢ It was founded in **1988** by the **World Health Organization** (WHO) and was the first ever global health day with a motto of raising public awareness about **Acquired ImmunoDeficiency Syndrome** (AIDS).

  ○ AIDS is a pandemic disease caused by the infection of **Human Immunodeficiency Virus** (HIV), which damages the human immune system.

  ○ In **2019**, 6,90,000 people died from HIV-related causes and 1.7 million people were newly infected, with nearly 62% of these new infections occurring among key populations and their partners.

➢ **Theme for 2020:** "Global solidarity, resilient HIV services."

  ○ On World AIDS Day 2020, WHO is calling on global leaders and citizens to rally for "global solidarity" to **overcome the challenges posed by Covid-19 on the HIV response**.

  - **HIV prevention, testing, treatment and care services are all being disrupted** particularly in countries with fragile health systems.

  - Slowing progress means the world will be missing the "**90-90-90" targets for 2020**, which were to ensure that: **90%** of people living with HIV are

aware of their status, **90%** of people diagnosed with HIV are receiving **treatment**, and **90%** of all people receiving treatment have achieved **viral suppression**.

  - Any slowing down in provision of these services will leave many vulnerable populations at greater risk of HIV infection and AIDS-related deaths and missing these intermediate targets will make it difficult to **achieve the target of elimination of AIDS by 2030**.

  ○ In **2020**, the **International Year of the Nurse and the Midwife**, it is a call for more protection and support to these health workers who have long been on the frontline of HIV service delivery.

➢ **Significance:**

  ○ It reminds the public and government that **HIV has not gone away** and there is still a **vital need to raise money, increase awareness, fight prejudice and improve education**.

  ○ It is an **opportunity to show solidarity** with the millions of people living with HIV worldwide.

Rise in NREGS Demand

Why in News

A recent analysis of data available up to November on the **National Rural Employment Guarantee Scheme** (NREGS) portal shows that demand for work has been at all time high.

Note:
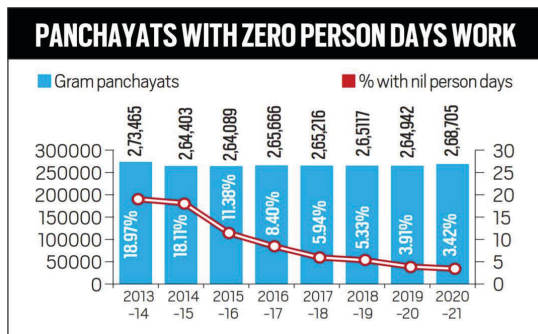
Key Points

➤ The **NREGS** is a **demand-based scheme** and has emerged as a **safety net during the pandemic for jobless migrant workers** returning to their villages

➤ Despite a progressive relaxation in **Covid-19** curbs to revive the economy, **96% gram panchayats** have logged work under the scheme in the financial year (2020-21) as compared to previous seven years.

➤ The number of gram panchayats generating **nil person days of work** (panchayats with zero person days work) during the current financial year **are at an eight-year low** of only **3.42% of the 2.68 lakh gram panchayats across the country**.

  ❍ In 2019, the number of gram panchayats generating nil person days during the entire period **was 3.91% of the total 2.64 lakh gram panchayats**.

➤ Over **96% of gram panchayats** across the country have **registered demand for work** under NREGS from April till November-end.

➤ **Over 6.5 crore households**, covering 9.42 crore individuals, have availed NREGS till November 2020, which is an **all-time high**.

  ❍ Over 265.81 crore person days have been generated, which is **higher than** 265.44 crore generated in **2019**.

  ❍ 1.98 crore households availed the scheme in October 2020, which is **82% higher than** 2019.

  ❍ **Highest number of demand** for work came from **Tamil Nadu, West Bengal, Uttar Pradesh and Madhya Pradesh**.

➤ The **wage expenditure** has also reached an **all-time high of Rs. 53,522 crore** during this period.

➤ **Tamil Nadu** has **reported the highest figure of households** that availed the NREGS across the country, since July and has been **followed by West Bengal**.

  ❍ These two states were not covered under the **Garib Kalyan Rojgar Abhiyaan**.

National Rural Employment Guarantee Scheme

➤ The **Mahatma Gandhi National Rural Employment Guarantee Act, 2005** was notified by the Government of India in September, 2005 and was made **effective in February 2006**. Under it, the **NREGS was introduced**.

➤ The Act aims at enhancing the livelihood security of people in rural areas by **guaranteeing hundred days of wage employment in a financial year to a rural household whose adult members** (at least 18 years of age) volunteer to do unskilled work.

➤ The central government bears the **full cost of unskilled labour**, and **75% of the cost of material** (the rest is borne by the states).

➤ It is a **demand-driven, social security and labour law** that aims to enforce the **'right to work'**.

➤ The **Ministry of Rural Development** in association with state governments, monitors the implementation of the scheme.

Garib Kalyan Rojgar Abhiyaan

➤ It was launched in **June 2020** to **empower and provide livelihood opportunities to the returnee migrant workers and rural citizens** who had **returned to their home states** due to the **lockdowns**.

➤ It worked in mission mode for **125 days** with an outlay of **Rs. 50,000 crore.**

➤ A total of 116 districts across six states, namely **Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha** were chosen for the campaign.

  ❍ These districts covered the **maximum number** (about 2/3) of such **migrant workers who had returned**.

  ❍ The chosen districts include 27 **Aspirational Districts**, districts which are affected by poor socio-economic indicators. These are aspirational in the context, that improvement in these districts can lead to the overall improvement in human development in India. It is a NITI Aayog's Programme.

Assistance to Disabled Persons Camp

Why in News

Recently, the Minister of Social Justice and Empowerment has virtually inaugurated an **Assistance**

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to Disabled Persons (ADIP) Camp for **free distribution of assistive aids and devices to** *Divyangjan* or *Divyang*.

➤ These are Hindi words meaning the '**one with a divine body**'. The Prime Minister decided that **persons with disabilities** should no longer be referred to as **disabled persons** or *viklang* (someone with **non-functional body parts**).

Key Points

➤ The camp was organized by the **Artificial Limbs Manufacturing Corporation of India** (ALIMCO), **Kanpur**.

  ❍ ALIMCO is a **not-for-profit Central Public Sector Undertaking** (PSU) established in **1972** and it works under the aegis of the **Department of Empowerment of Person with Disability** (DEPwD).

➤ **Assistance to Disabled Persons Scheme:**

  ❍ It has been in operation **since 1981**.

  ❍ **Definition:**

    ● The scheme follows the definitions of various types of disabilities as given in the **Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) (PWD) Act 1995**.

    ● The PWD Act was replaced by the **Right of Persons with Disabilities Act 2016**.

  ❍ **Objective:**

    ● To assist the needy disabled persons in **procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances** that can promote their **physical, social and psychological rehabilitation** by reducing the effects of disabilities and enhance their economic potential.

  ❍ **Grants:**

    ● Grants-in-aid are released to **various implementing agencies** (Artificial Limbs Manufacturing Corporation of India, National Institutes, Composite Regional Centres, District Disability Rehabilitation Centres, State Handicapped Development Corporations, NGOs, etc.) **for purchase and distribution of aids and assistive devices**.

  ❍ **Assistance:**

    ● **Aids/appliances which do not cost more than Rs. 10,000** are covered under the Scheme for single disability. However, in **some cases the limit would be raised to Rs.12,000**. In the case

of **multiple disabilities**, the **limit will apply to individual items separately** in case more than one aid/appliance is required.

    ● **Full cost of aid/appliance** is provided if the **income is up to Rs. 15,000 per month** and **50% of the cost of aid/appliance** is provided if the income is **between Rs. 15,001 to Rs. 20,000 per month**.

➤ **Other Related Government Initiatives:**

  ❍ **Right of Persons with Disabilities Act 2016:**

    ● "**Person with disability**" means a person with long term **physical, mental, intellectual or sensory impairments** which, in interaction with barriers, hinders his full and effective participation in society equally with others.

  ❍ **Accessible India Campaign: Creation of Accessible Environment for PwDs:**

    ● A nation-wide flagship campaign for achieving universal accessibility that will enable PwDs to gain access for equal opportunity and live independently and participate fully in all aspects of life in an inclusive society.

  ❍ **DeenDayal Disabled Rehabilitation Scheme:**

    ● Under the scheme, **financial assistance** is provided to NGOs for providing various services to PwDs, like special schools, vocational training centres, community-based rehabilitation, pre-school and early intervention etc.

  ❍ National Fellowship for Students with Disabilities:

    ● It aims to increase opportunities for students with disabilities for pursuing higher education and grants **200 fellowships per year** to students with disability.

  ❍ **Unique Disability Identification Project:**

    ● It aims to create a national database for PwDs and issuing **Unique Disability Identity** (UDID) **Card** along with disability certificate.

    ● Once the project covers all persons with disabilities, UDID Cards will be made mandatory for availing various government benefits.

  ❍ **Assistance to Disabled Persons for Purchase/ fitting of Aids and Appliances:**

    ● It aims at helping the disabled persons by bringing suitable, durable, scientifically-manufactured, modern, standard aids and appliances within their reach.

Note:

- ❍ **International Day of Persons with Disabilities:**
  - ● It is celebrated worldwide on **3rd December** and was proclaimed in **1992** by **United Nations General Assembly** resolution 47/3.
  - ● It aims to **promote the rights and well-being of persons with disabilities in all spheres of society and development** and to increase awareness of the situation of persons with disabilities in every aspect of political, social, economic and cultural life.
- ❍ **Initiatives for Mental Health:**
  - ● **National Mental Health Programme**, which was launched in **1982** to improve the status of mental health in India.
  - ● **KIRAN: Mental Health Rehabilitation Helpline** for addressing mental health issues, coordinated by the National Institute for the Empowerment of Persons with Multiple Disabilities (NIEPMD), Tamil Nadu and National Institute of Mental Health Rehabilitation (NIMHR), Madhya Pradesh.

Global Teacher Prize 2020

Why in News

Ranjitsinh Disale, a primary teacher from **Maharashtra's Solapur**, has won the **Global Teacher Prize 2020.**

Key Points

- ➢ **Global Teacher Prize:**
  - ❍ It is a **1 million dollar award** presented **annually** to **an exceptional teacher** who has made an outstanding contribution to their profession.
  - ❍ **Founder: Varkey Foundation,** which is a global charitable foundation focused on improving the standards of education. The award is **organised in partnership with UNESCO.**
  - ❍ **Objective:**
    - ● It serves to underline the **importance of educators** and the fact that, throughout the world, **their efforts deserve to be recognised and celebrated**.
    - ● It **seeks to acknowledge the impacts of the very best teachers** not only on their students but on the communities around them.
      - ■ An **inadequate education is a major factor behind the social, political, economic and**

health issues faced by the world today. Education has the power to reduce poverty, prejudice and conflict.

- ➢ **Ranjitsinh Disale's Contribution:**
  - ❍ He changed a dilapidated school to a school which went on to become the **first in Maharashtra** to introduce **Quick Response (QR) Codes**.
    - ● A **QR code** is a type of barcode that contains a matrix of dots. It can be scanned using a QR scanner or a smartphone with a built-in camera.
  - ❍ He not only **translated the class textbooks into his pupils' mother tongue**, but also **embedded them with unique QR codes** to give students access to audio poems, video lectures, stories and assignments.
  - ❍ He is also **passionate about building peace between young people** across conflict zones. His **'Let's Cross the Borders' project** connects young people from India and Pakistan, Palestine and Israel, Iraq and Iran and the USA and North Korea.
- ➢ **Impact of Disale's Efforts:**
  - ❍ There are now **no reported teenage marriages in the village** and **100% attendance of girls at the school.**
  - ❍ The state government announced in 2017 that they would **introduce QR coded textbooks across the state for all grades**.
    - ● In **2018,** it was announced that **all NCERT textbooks** would have embedded **QR Codes.**

Some Indian initiatives to Improve Education Sector
- ➢ **National Education Policy 2020:**
  - ❍ The **teacher must be at the centre** of the fundamental reforms in the education system.
  - ❍ The new education policy must help recruit the very best and brightest to enter the teaching profession at all levels, by ensuring livelihood, respect, dignity, and autonomy, while also instilling in the system basic methods of quality control and accountability.
- ➢ **Revitalising Infrastructure and Systems in Education (RISE) by 2022:**
  - ❍ Focuses on qualitatively upgrading the research and academic infrastructure in India to global best standards by 2022.
- ➢ **UGC's Learning Outcome-based Curriculum Framework (LOCF)**

Note:

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○ LOCF guidelines, issued by UGC in 2018, aim to specify what graduates are expected to know, understand and be able to do at the end of their programme of study. This is to make students an active learner and teacher a good facilitator.

➤ **Global Initiative for Academics Network (GIAN):**
○ The programme seeks to invite distinguished academicians, entrepreneurs, scientists, experts from premier institutions from across the world, to teach in the higher educational institutions in India.

➤ **All India Survey on Higher Education (AISHE):**
○ The main objectives of the survey are to identify & capture all the institutions of higher learning in the country; and collect the data from all the higher education institutions on various aspects of higher education.

➤ **e-Pathshala:**
○ It was launched in 2015 with an aim to promote self-learning among the school students.
○ The portal hosts various school teachers, researchers, experts, parents, and most importantly students who can access the facility of resolving their queries.

Global Initiative

➤ **Global Education Monitoring Report :** It is released by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** which aims to monitor progress towards the education targets in the **Sustainable Development Goals (SDG-4).**

Covid-19 and Extreme Poverty: UNDP

Why in News

A new study from the **United Nations Development Programme** (UNDP) has found that an **additional 207 million people could be pushed into extreme poverty by 2030** due to the severe long-term impact of the **coronavirus pandemic**, bringing the total number of the world's extremely poor to more than a billion.

➤ The study is part of a long-standing partnership between the **UNDP** and the **Pardee Center for International Futures** at the University of Denver (USA).

➤ The study assesses the impact of **different Covid19 recovery scenarios** on the **Sustainable Development Goals** (SDGs), evaluating the multidimensional effects of the pandemic over the next decade.

Key Points

➤ **Findings:**
○ Under a '**Covid Baseline' scenario** (based on current mortality rates and the most recent growth projections by the **International Monetary Fund** - IMF), **44 million people could be pushed into extreme poverty by 2030** as a result of the pandemic.
  • The World Bank defines "extreme poverty" as **living on less than 1.90 USD per person per day.**
○ Under a **'High Damage'** scenario, where the recovery is protracted, **Covid-19** is likely to push an additional **207 million people** into extreme poverty by 2030.
  • It could increase the **female poverty headcount** by **an additional 102 million**.
  • The '**High Damage**' scenario anticipates that 80% of the Covid-19 induced economic crisis would persist in 10 years' time due to **loss in productivity, preventing a full recovery to the growth trajectory** seen before the pandemic.

➤ **Suggestions**:
○ A focused set of **Sustainable Development Goals** (SDGs) **investments over the next decade** in social protection/welfare programmes, governance, digitalisation, and a green economy could not only **prevent the rise of extreme poverty** but actually exceed the development trajectory the world was on before the pandemic.
  • This ambitious, SDGs Push scenario would lift an additional **146 million people out of extreme poverty, narrow the gender poverty gap,** and **reduce the female poverty headcount** by 74 million.
○ The concerted SDG interventions combine **behavioural changes through both governments and citizens**, which are as follows:
  • Improvement in **effectiveness and efficiency** in governance.
  • Changes in **consumption patterns** of food, energy and water.

Note:

- Global **collaboration** for climate action.
- Additional **investments** in Covid-19 recovery.
- Need for improved **broadband access and technology** innovation.

Initiatives to Eliminate Manual Scavenging

Why in News

Recently, the government has announced **two major initiatives for ending the hazardous** practise of **manual cleaning of septic tanks and sewer lines** and making the mechanised cleaning must.

➢ The **Ministry of Social Justice and Empowerment** will **amend the law** for making machine cleaning mandatory, whereas the **Ministry of Housing and Urban Affairs** has launched the **Safaimitra Suraksha Challenge**.

Key Points

➢ **Amending the Law:** Introduction of **the Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020** as a part of the Social Justice and Empowerment Ministry's **National Action Plan**.
  ○ The plan aims to **modernise existing sewage system** and coverage of non-sewered areas; setting up of faecal sludge and septage management system for **mechanised cleaning of septic tanks**, transportation and treatment of faecal sludge; equipping the municipalities, and setting up of Sanitation Response Units (SRUs) with **helplines**.

➢ **Changes Brought by the Bill:**
  ○ **Mechanised Cleaning:** Completely mechanise sewer cleaning and provide better protection at work and compensation in case of accidents.
  ○ **Penalty:** Make the law banning manual scavenging more stringent by increasing the imprisonment term and the fine amount.
    - Currently, engaging any person for hazardous cleaning of sewers and septic tanks by any person or agency is punishable with **imprisonment of up to five years or a fine of up to Rs. 5 lakh or both**.
  ○ **Funds:** They will be provided **directly to the sanitation workers** and not to the municipalities or contractors **to purchase the machinery**.

➢ **Safaimitra Suraksha Challenge:**
  ○ **Launch:** The challenge was launched among **243 major cities** on **World Toilet Day** (**19th November**).
  ○ It **aims** to prevent hazardous cleaning of sewers and septic tanks and promote their mechanized cleaning.
    - The Government launched this challenge for all states to **make sewer-cleaning mechanised by April 2021**, if any human needs to enter a sewer line in case of unavoidable emergency, proper gear and oxygen tanks, etc. are to be provided.
  ○ **Eligibility:** The state capitals, urban local bodies and smart cities will be eligible to participate.
  ○ **Prize:** Cities will be awarded in three sub-categories, with a population of more than 10 lakhs, 3-10 lakhs and up to 3 lakhs, with total prize money of Rs. 52 crores to be given to winning cities across all categories.

Manual Scavenging

➢ **Definition:** Manual scavenging is defined as "the manual removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers".

➢ **Reasons for the Prevalence:**
  ○ **Indifferent Attitude:** A number of independent surveys have talked about the **continued reluctance on the part of state governments** to admit that the practice prevails under their watch.
  ○ **Issue due to Outsourcing:** Many times local bodies outsource sewer cleaning tasks to private contractors. However, many of them fly-by-night operators, do **not maintain proper rolls of sanitation workers**.
    - In case after case of workers being asphyxiated to death, these contractors have denied any association with the deceased.
  ○ **Social Issue:** The practice is **driven by caste, class and income divides**.
    - It is **linked to India's caste system** where so-called lower castes are expected to perform this job.
    - The law has ended manual scavenging as a form of employment, however, the **stigma and discrimination** associated with it still linger on, which **makes it difficult for liberated manual scavengers to secure alternative livelihoods**.

Note:

➢ **Concerns:**
- ❍ As per the **National Commission for Safai Karamcharis** (NCSK)**,** a total of **631 people have died** in the country **while cleaning sewers and septic tanks in the last 10 years**.
- ❍ Despite the **introduction of several mechanised systems** for sewage cleaning, **human intervention** in the process **still continues**.

➢ **Suggestions:**
- ❍ **Proper Identification:** States need to accurately enumerate the workers engaged in cleaning toxic sludge.
- ❍ **Empowering Local Administration**: With **Swachh Bharat Mission** identified as a top priority area by the **15th Finance Commission**, and funds available for smart cities and urban development providing for a strong case to address the problem of manual scavenging.
- ❍ **Social Sensitisation:** To address the social sanction behind manual scavenging, it is required first to acknowledge and then understand how and why manual scavenging continues to be embedded in the caste system.
- ❍ **Need For a Stringent Law:** If a law creates a statutory obligation to provide sanitation services on the part of state agencies, it will create a situation in which the rights of these workers will not hang in the air.

➢ **Related Initiatives:**
- ❍ **Article 21 of the Constitution** guarantees 'Right to Life' and that also with dignity.
- ❍ In **1989**, the **Prevention of Atrocities Act** became an integrated guard for sanitation workers; more than 90% of people employed as manual scavengers belonged to the Scheduled Caste. This became an important landmark to free manual scavengers from designated traditional occupations.
- ❍ In **1993**, the Government of India enacted the **Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act** which prohibited the employment of manual scavengers for manually cleaning dry latrines and also the construction of dry toilets (that do not operate with a flush).
- ❍ The **Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013**

prohibits construction or maintenance of insanitary latrines, and employment of any person for manual scavenging or hazardous cleaning of sewers and septic tanks.
- ● It also **provides measures for rehabilitation** of persons identified as manual scavengers by a Municipality.
- ❍ In **2014**, a **Supreme Court** order made it mandatory for the government to identify all those who **died in sewage work since 1993** and provide **Rs. 10 lakh** each as compensation to their families.

Virtual Aadi Mahotsav

Why in News

The **Ministry of Tribal Affairs** has launched the **virtual edition of Aadi Mahotsav** - Madhya Pradesh.

➢ The **next focus state** would be Gujarat, followed by West Bengal.

Key Points

➢ **Aadi Mahotsav:**
- ❍ It is a **national tribal festival** and a **joint initiative** of the **Ministry of Tribal Affairs** and the **Tribal Cooperative Marketing Development Federation of India (TRIFED)**. It **commenced in 2017** and is **held annually.**
- ❍ It is an attempt **to familiarise the people** with the rich and diverse craft, **culture of the tribal communities** across the country, in **one place.**
- ❍ In **2019**, the festival was held in **New Delhi** and featured an exhibition-cum-sale of tribal handicrafts, art, paintings, fabric, jewellery, etc.

➢ **Virtual Edition of Aadi Mahotsav**:
- ❍ This year, TRIFED has **moved the event online** and will be **hosted on the Tribes India E-Marketplace**.
- ❍ It will **bring the spotlight on all the major tribes one-by one**.

Tribal Cooperative Marketing Development Federation of India

➢ **Formation:** It was established in 1987 under the Multi-State Cooperative Societies Act, 1984 by the Government of India as a National level Cooperative body.

Note:

- **Organisation:** It is a national-level apex organization functioning under the **administrative control of the Ministry of Tribal Affairs.**
  - It has its **head office in New Delhi.**
- **Objectives:** Socio-economic development of tribal people, empowerment of tribal people with knowledge, tools and information and their capacity building.
- **Initiatives and Involvement:**
  - TRIFED, under the **brand name Tribes India**, markets the handcrafted products directly procured from the tribals in India through its 73 brick and mortar outlets all over India. Tribes India has its **own e-commerce platform.**
  - **TRIFOOD Scheme** is a joint initiative of the Ministry of Food Processing Industry, Ministry of Tribal Affairs and TRIFED and it promotes value addition to Minor Forest Produce (MFP).
  - It has organised the **Van Dhan Internship Programme**, to enhance the output of the Van Dhan Yojana.
  - TRIFED helps in **implementation of the scheme** 'Mechanism for Marketing of MFP through **Minimum Support Price** (MSP) and Development of Value Chain for MFP' to ensure fair returns to forest dwelling **Scheduled Tribes** (STs) and other traditional forest dwellers.
    - MSP for MFP and Van Dhan program is in line with the **"The Scheduled Tribes and Other Traditional Forest Dwellers (Forest Rights Act, 2006)"**, a key forest legislation passed for securing protection & livelihood of poor tribals and concerns with the rights of forest-dwelling communities to land and other natural resources.
  - It has also launched a transformational **Tech For Tribals program** in partnership with Institutes of National Importance (INIs) to develop tribal entrepreneurship.

United Nations Population Award 2020

Why in News

Recently, **HelpAge India** has been presented the **UN Population Award for 2020** in the **institutional category**.

- **Bhutan's Queen Mother Gyalyum Sangay Choden Wangchuck** has been awarded the United Nations Population Award in the **individual category** for 2020 for her work on sexual health and ending gender violence.

Key Points

- **United Nations Population Award:**
  - **Each year,** the Committee for the United Nations Population Award honours **an individual and/ or institution** in recognition of outstanding **contributions to population and reproductive health issues** and solutions.
  - The Award was **established by the General Assembly in 1981**, and was **first presented in 1983**. It **consists of** a gold medal, a diploma and a monetary prize.
  - The **United Nations Population Fund** (UNFPA) serves as its **secretariat.**
- **HelpAge India:**
  - It is a **leading charity in India** working with and **for disadvantaged elderly** for nearly 4 decades. It was set up in 1978 and is registered under the Societies' Registration Act of 1860.
  - For the **first time** in the history of the UN Population Award, the honour is being **conferred on an Indian institution.**
    - **Only two Indians have been awarded** in the past four decades since the award was established in 1981: former Prime Minister **Indira Gandhi in 1983** and industrialist-philanthropist **J.R.D.Tata in 1992.**

Lancet Citizens' Commission for Universal Health Coverage

Why in News

Recently, the **Lancet Citizens' Commission on Reimagining India's Health System** has been launched **online** which is a step towards achieving **Universal Health Coverage** (UHC) in India.

Key Points

- **Lancet Citizens' Commission on Reimagining India's Health System:**
  - **Participants**: It is a **first-of-its-kind participatory,**

Note:

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countrywide initiative, in collaboration with world's leading health journal **The Lancet** and **the Lakshmi Mittal and Family South Asia Institute,** Harvard University.

- ○ **Objective:** To enable **participatory public engagement** to develop a citizens' blueprint for the implementation of UHC.
- ○ **Mission:**
  - To **lay out the path to achieving UHC** in India in the coming decade, working with all stakeholders.
  - To formulate a **roadmap for realising a resilient health system** that offers comprehensive, accountable, accessible, inclusive, and affordable quality health care to all citizens in India.
  - To **gather insights from across India** through grassroots surveys, public consultations and online discussions.
  - To **build partnerships and work closely with academic institutions, civil society and other stakeholders** to catalyse dialogue and knowledge sharing across fields.
- ○ **Focus:** Will be on the **architecture** of India's health system.
- ○ **Principles**: The Commission will be guided by **four principles** which are:
  - UHC covers all health concerns.
  - Prevention and long-term care are key.
  - The concern is financial protection for all health costs.
  - Aspiring for a health system that can be accessed by all who enjoy the same quality.
- ➢ **Universal Health Coverage:**
  - ○ **UHC** means that **all individuals and communities receive the health services** they need without suffering financial hardship. It **includes the full range of essential, quality health services from health promotion to prevention, treatment, rehabilitation and palliative care.**
  - ○ **Goal of UHC**: As stated in the **United Nations Sustainable Development Goals** (SDG 3) is one of the most significant commitments to **equitable quality healthcare for all.**
  - ○ **Benefits of UHC:**
    - **Enables everyone to access** the services that address the most significant causes of disease and death, and ensures that the quality of those

services is good enough to improve the health of the people who receive them.
    - **Protects people** from the financial consequences of paying for health services out of their own pockets and reduces the risk of people getting pushed into poverty because unexpected illness requires them to use up their life savings, sell assets, or borrow – destroying their futures and often those of their children.
- ➢ **Other Related Initiatives:**
  - ○ **Ayushman Bharat:**
    - It is a flagship initiative that attempts to move away from the sectoral and segmented approach of service delivery to a **comprehensive need-based health care service.**
    - It has been launched by the government with an **aim to move towards a provision of universal healthcare in the country.**
  - ○ **POSHAN Abhiyaan:** It aims to ensure service delivery and interventions by use of technology, behavioural change through convergence and lays-down specific targets to be achieved across different monitoring parameters.

Surgery and Ayurveda

Why in News

Recently, a government notification listed out **specific surgical procedures** that a postgraduate **medical student of Ayurveda** must be practically trained to acquaint with, as well as to independently perform.

- ➢ The notification has been criticised by the **Indian Medical Association (IMA)**.
- ➢ IMA is a **national voluntary organisation of Doctors of Modern Scientific System of Medicine**, which looks after the interest of doctors as well as the well being of the community at large.

Key Points

- ➢ **History of Surgery in Ayurveda:**
  - ○ The **Rigveda** is the earliest account of ancient Indian civilization which mentions that **Ashwini Kumaras known as Dev Vaidya were the chief surgeons** of Vedic periods, who had performed rare legendary surgical operations**.**

- ❍ There are many Granthas and Samhitas dealing with Ayurveda; among them, **Charak Samhita, Sushrutaa Samhita,** and **Ashtanga Sangraha are the three main pillars of Ayurveda.**
  - ● **Charak Samhita and Ashtanga Samhita** mainly deal with **medicine knowledge** while **Sushrutaa Samhita** deals mainly with **surgical knowledge**.
  - ● **Sushruta is the father of surgery**, his works are compiled as Sushrutaa Samhita. He described 60 types of upakarma for treatment of wounds, 120 surgical instruments and 300 surgical procedures.
  - ● Sushruta considered **surgery the first and foremost branch of medicine** and stated that surgery has the superior advantage of producing instantaneous effects by means of surgical instruments and appliances and hence is the highest in value of all the medical tantras.

➢ **The Current Debate:** It revolves around allowing postgraduate students in Ayurveda undergoing **'Shalya' (general surgery) and 'Shalakya' (dealing with eye, ear, nose, throat, head and neck, oro-dentistry)** to perform **58 specified surgical procedures.**

➢ **Arguments in Favour:**
  - ❍ There are **two branches of surgery** in Ayurveda, **Shalya Tantra** and **Shalakya Tantra.** All **postgraduate students** of Ayurveda **have to study** these courses, and some go on to specialise in these, and become **Ayurveda surgeons.**
  - ❍ Postgraduate education in Ayurveda is guided by the **Indian Medical Central Council (Post Graduate Education) Regulations.**
    - ● The 2016 regulations **allow postgraduate students** to specialise in Shalya Tantra, Shalakya Tantra, and Prasuti evam Stree Roga (Obstetrics and Gynecology).
    - ● Students of these three disciplines are **granted MS (Master in Surgery in Ayurveda) degrees.**
  - ❍ The process of education, internship and learning for Ayurveda students is **similar to that of Modern Medicine students.**
    - ● Medico-legal issues, surgical ethics and informed consent is also part of the course apart from teaching Sushruta's surgical principles and practices.
  - ❍ For several surgeries, **Ayurvedic procedures almost exactly match those of modern medicine**, however there is significant divergence in post-operative care.
  - ❍ **National Institute of Ayurveda** in Jaipur, claims that at least **1,000 major surgeries are performed every year at the hospital.**
  - ❍ As per the Ayurveda practitioners, the latest notification just **brings clarity to the skills that an Ayurveda practitioner possesses.**
    - ● A patient is usually not clear whether an Ayurvedic practitioner has the necessary skill to perform one of these operations, after the notification, they know exactly what an Ayurveda doctor is capable of.

➢ **Objections:**
  - ❍ **IMA** doctors claim that the new notification gives the impression that the **skills or training of the Ayurveda doctor in performing modern surgeries are the same as those practising modern medicine** which is **misleading** and an **encroachment** into the jurisdiction and competencies of modern medicine.
  - ❍ Just because Ayurveda institutions prescribe textbooks from modern medicine, or that they carry out surgeries with the help of practitioners of modern medicine, is not reason enough to allow this encroachment.
  - ❍ IMA doctors have asked the **Central Council of Indian Medicine (CCIM**- functions under the **Ministry of Ayush**) to explain, with proof, how each of the procedures mentioned in Ayurveda literature is equivalent to the modern surgical procedures.
  - ❍ Surgery involves **technical expertise developed through many workshops to standardise training and impart it**. The infrastructure of training, research and exchange of knowledge in modern medicine is much better evolved than in Ayurveda.
    - ● Government-funded Ayurvedic colleges are **not equipped with the necessary infrastructure, skilled manpower and supporting staff** to impart quality training.

➢ **Gaps in Healthcare Infrastructure:**
  - ❍ According to research earlier this year by **Brookings Institute**, a US-based policy organization, the country has only **0.55 beds per 1,000 people**.
  - ❍ According to a **government statement** in Parliament in 2019, **there is only one modern medicine doctor for every 1,445 Indians.**

Note:

- The **World Health Organisation**'s norm is **one doctor per 1,000 people.**
- The shortage of allopathic doctors, including surgeons is compounded by the **concentration of medical colleges in Southern States**, as well as the **unwillingness of doctors to serve in rural areas** despite measures such as compulsory rural internships.

➤ **Government initiative to resolve the problem:**
  ○ **AYUSH Health and Wellness Centres (AYUSH HWCs)** is a component of the **Ayushman Bharat.**

Suggestions

➤ The government has to take steps to **improve healthcare service however it should make sure that safety standards should not be compromised** while inducting Ayurveda practitioners to perform surgery.

➤ Government should rethink and introduce **bridge courses** as mentioned in the **National Medical Commission (NMC) Bill 2017** which should be aimed to serve an important part of a broader effort to empower and better utilise the capabilities of **Ayush** practitioners for healthcare delivery.

➤ Government needs to explore creative ways of addressing this gap by **evidence-based approaches, such as task-sharing, supported by efficient and quality referral mechanisms.**

➤ India should achieve **Medical pluralism** which is already a reality in several countries like China, Japan, etc.

➤ The need of the hour is an adequate investment, for creating a health system that can withstand any kind of public health emergencies, deliver universal health coverage and meet the targets of the **Sustainable Development Goals.**

Truths and Hate Speech: SC

Why in News

In the context of **discussing the limits of free speech** and **what may tantamount to hate speech**, the **Supreme Court** (SC) has recently held that "Historical truths must be depicted without in any way disclosing or encouraging hatred or enmity between different classes or communities."

➤ The **FIRs were filed against a TV anchor** for alleged remarks on the **sufi saint Khwaja Moinuddin Chishti** in a news show.

Key Points

➤ **On 'True Facts':**
  ○ Elaborating on the point about **truth or true facts being a defence in cases of free speech**, the SC cited its ruling in **K A Abbas versus Union of India case 1970**, which was about **censorship**.
    - The order said that there is **no bar in showing carnage or bloodshed which have historical value**, and depiction of such scenes may be permissible, if handled delicately **as a part of an artistic portrayal** of confrontation.
  ○ The likelihood **must be judged from a healthy and reasonable standard**, thereby accepting the position that **historical truth may be a relevant and important factor**.
    - However, historical truth **must be depicted without in any way disclosing or encouraging hatred or enmity** between different classes or communities.
  ○ The court also referred to the ruling in **Ebrahim Suleiman Sait versus M C Mohammed and Another case 1980**.
    - The order held that **speaking truth was not an answer to the charge of corrupt practice** under **Section 123 (3A) of the Representation of the People Act 1950**.
    - What was relevant was **whether the speech had promoted or had sought to promote feelings of enmity** or hatred.

➤ **Free Speech and the Marginalised:**
  ○ There may be a **possibility of divergence between truth and popular belief**, and the bench held that in many ways, **free speech has empowered those who were marginalised and discriminated**, and thus it would be wholly incorrect and a mistake to assume that free speech is an elite concept and indulgence.

➤ **Hate Speech:**
  ○ The **hate speech should have no redeeming purpose**, which means that 'the speech **primarily carries no meaning other than hatred** towards a particular group'.
    - This is necessarily **subjective and requires examination of good faith and good motives** on the part of the speaker.
  ○ Speaking on **dignity in the context of hate speech**, the court held that **one must condemn and check any**

Note:

attempt at dissemination of discrimination on the basis of race, religion, caste, creed or regional basis.

- ❍ The court pointed out that the **object of criminalising hate speech is to protect the dignity and to ensure political and social equality** between different identities and groups regardless of caste, creed, religion, sex, gender identity, sexual orientation, linguistic preference, etc.
  - ● **Hate speech has not been defined in any law in India**. However, legal provisions in certain legislations prohibit select forms of speech as an exception to freedom of speech.

- ➢ **Self-Regulation:**
  - ❍ Everyone must **act with the objective for promoting social harmony and tolerance** by proscribing hateful and inappropriate behaviour, which can be achieved by self-restraint, institutional check and correction, as well as self-regulation or through the mechanism of statutory regulations, if applicable.

- ➢ **Political Speech:**
  - ❍ The **political speech relating to government policies requires greater protection** for preservation and promotion of **democracy**.
    - ● The bench held that **dissent and criticism of the elected government's policy**, when puissant, deceptive or even false **would be ethically wrong, would not invite penal action.**
    - ● **Government should be left out** from adjudicating what is true or false, good or bad, valid or invalid as these aspects should be left for open discussion in the public domain.

- ➢ **Intent and Purpose:**
  - ❍ The court clarified that **after these observations, persons of influence or even common people should not fear the threat of reprisal and prosecution**, if they discuss and speak about controversial and sensitive topics relating to religion, caste, creed, etc **as the question is primarily one of intent and purpose**.

Emergency Use Approval: Covid-19 Vaccines

Why in News

Recently, three vaccine developers have made applications to the **Central Drug Standard Control Organisation**

(CDSCO), seeking **emergency use approval** for their candidate **Covid-19 vaccines.**

- ➢ The vaccine for which the developers are seeking approval are still **under trial**.

Key Points

- ➢ **Candidates for Covid-19 vaccines:**
  - ❍ **COVISHIELD:** By a Pune-based Serum Institute of India.
    - ● Phase-III trials going on.
  - ❍ **COVAXIN:** By Bharat Biotech, a Hyderabad-based company.
    - ● Phase-III trials going on.
  - ❍ **BNT162b2:** By US pharmaceutical major Pfizer in collaboration with BioNTech.
    - ● No trials in India so far.

- ➢ **Regulatory Provisions for Approval of Vaccines in India:**
  - ❍ Clinical trials of new drugs and vaccines, and their approvals, are governed by the **Drugs and Clinical Trials Rules, 2019.**

- ➢ **Emergency Provisions:**
  - ❍ There is nothing such as **emergency use approval** in Indian rules, however the **2019 rules** provide for **"Accelerated Approval Process"** in several situations that would include the one like the current **pandemic.**
  - ❍ In such situations, there is a **provision** for granting approval to a drug that is still in **clinical trials** provided the product is of **meaningful therapeutic benefit.**
  - ❍ **Accelerated approval** may also be granted to a new drug if it is intended for the treatment of a **serious, or life-threatening condition, or disease of special relevance to the country, and addresses unmet medical needs.**
  - ❍ A new drug, or a vaccine, can be considered for approval if **remarkable effectiveness** is reported even from **phase-II trials.**
  - ❍ In such cases, **additional post licensure studies** may be required.
  - ❍ The approval granted to drugs or vaccines that are still in **clinical trials** is temporary, and valid only for **one year.**

Clinical Trial

- ➢ A clinical trial is a **systematic study to generate**

data for discovering or verifying the clinical and **pharmacological profile** (including pharmacodynamic and pharmacokinetic) or **adverse effects** of a new drug on humans.

➢ **Phases of Clinical Trials:**

❍ Clinical trials are carried out in **four phases**.

❍ **Phase I or clinical pharmacology trials or "first in man" study:** This is the first time where the new drug is administered to a small number, a minimum of **2 healthy, informed volunteers** for each dose under the close supervision of a doctor.

● The purpose is to determine **whether the new compound is tolerated by the patient's body and behaves in the predicted way**.

❍ **Phase II or exploratory trials:** During this phase, the medicine is administered to a group of approximately **10-12 informed patients in 3 to 4 centers to determine its effect and also to check for any unacceptable side effects.**

❍ **Phase III or confirmatory trials:** Purpose is to **obtain sufficient evidence about the efficacy and safety of the drug in a larger number of patients**, generally in comparison with a standard drug and/ or a placebo as appropriate. In this phase, the group is between **1000-3000 subjects**.

❍ **Phase IV trials or post-marketing phase:** Phase of surveillance after the medicine is made available to doctors, who start prescribing it. The effects are monitored on thousands of patients to help identify any unforeseen side effects.

❍ **Regulatory Mechanism in India:**

● Clinical trials in India are governed by the **following acts: Drugs and Cosmetics Act, 1940, Medical Council of India Act, 1956 and Central Council for Indian Medicine Act, 1970.**

● Prerequisites of conducting a clinical trial in India are:

■ Permission from the **Drugs Controller General, India (DCGI)**.

■ Approval from the respective **Ethics Committee** where the study is planned.

■ Mandatory registration on the **The Indian Council of Medical Research (ICMR)** maintained website.

Central Drugs Standard Control Organisation (CDSCO)

➢ **CDSCO** is under Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India is the **National Regulatory Authority (NRA) of India.**

➢ The **Drugs & Cosmetics Act, 1940** and **Rules 1945** have entrusted various responsibilities to central & state regulators for regulation of drugs & cosmetics.

➢ Under the **Drugs and Cosmetics Act, CDSCO** is responsible for approval of Drugs, **Conduct of Clinical Trials.**

➢ Further **CDSCO** along with state regulators, is jointly **responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine etc.**

Child Marriage and Pandemic

Why in News

According to a report published by **ChildLine India** the pandemic and the subsequent lockdown have proved to be **new drivers of child marriages** in rural Madhya Pradesh.

Key Points

➢ **Important Findings by ChildLine India:**

❍ Madhya Pradesh recorded **46 child marriages** between **November 2019 and March 2020,** a figure that jumped to **117 in just three months of the lockdown from April to June 2020.**

❍ Across India **5,214 child marriages** were reported in the first **four months of lockdown between March to June.**

➢ **Causes:**

❍ **Age Factor**:

● Some parents consider the age period of **15-18 as unproductive, especially for girls,** so they start finding a match for their child during this age period.

● **Underaged girls are more prone to child marriage than boys**.

■ The **Right To Education Act** makes education free and compulsory up to the age of 14 only. **Research shows** that after a girl is taken out of school at the age of 15, there is a **strong possibility of her getting married at an early age**.

- ❍ **Insecurity**:
  - Law and Order are still not able to provide a **secure environment for the girls in adolescent age,** so some parents get their girl child married at a **young age**.
- ❍ **Lack of Education:**
  - Girls are often seen with limited economic roles. Women's work is confined to the household and is not valued.
  - In addition, there is the **problem of dowry**. Despite the fact that dowry has been prohibited for five decades (**Dowry Prohibition Act, 1961),** it is still common for parents of girls in India to give gifts to the groom and /or his family either in cash or kind.
- ❍ **Causes for Increase during Pandemic:**
  - **Economic pressures** due to the pandemic have pushed poor parents to marry off girls early.
  - With **no schools, safety of children, particularly girls,** was a major reason for **increase in violence against children and child marriages**.
- ➢ **Impact:**
  - ❍ Child Marriage is associated with **higher rates of Sexually Transmitted Infections including HIV.**
  - ❍ **Delays Demographic Dividend**:
    - **Child Marriage contributes to larger families** and in turn, population growth. This delays demographic dividend that would have come from reduced fertility and investment in education.
  - ❍ Children married at a young age **do not understand the responsibilities of marriage**. This results in a lack of understanding among family members. Hence, **disturbs the institution of the family**.
- ➢ **Impact on Child Bride:**
  - ❍ **Violation of rights**:
    - Married at a young age, girls get deprived of their **basic rights**. Some of the basic rights as mentioned in the Convention on the Rights of Child include **Right to Education, Right to Rest and Leisure, Right to Protection from Mental or Physical Abuse including Rape and Sexual Exploitation.**
  - ❍ **Poor Socialization:**
    - Child Brides often have to **give up their education** due to household responsibilities. It is said that if the women of a house are educated, she, in turn, educates her family. But if she is uneducated, she **loses on to the opportunity to educate her own children.**
- ❍ **Disempowerment:**
  - Since child brides are not able to complete their education, they **remain dependent and underpowered** which acts as a big **hurdle** towards achieving **gender equality**.
- ❍ **Health Issues:**
  - Devastating repercussions on the **health of Child Brides**, who are neither physically nor emotionally ready to become wives and mothers.
  - According to research, the **risk of maternal mortality** is highest for adolescent girls in the 15 years of age.
  - Also, they have **23% greater risk of disease** onset including heart attack, diabetes, cancer, and stroke. They also face a high risk of **psychiatric disorders.**
- ➢ **Government Initiatives to Prevent Child Marriages**:
  - ❍ The **Child Marriage Restraint Act of 1929** restricts the practice of child marriage.
  - ❍ **The Special Marriage Act, 1954** and the **Prohibition of Child Marriage Act, 2006** prescribe **18 and 21 years as the minimum age of consent for marriage** for women and men respectively.
  - ❍ The **Prohibition of Child Marriage Act, 2006** was enacted to address and fix the shortcomings of the Child Marriage Restraint Act.
  - ❍ **Union Ministry for Women and Child Development** set up a **committee** to examine matters pertaining to age of motherhood, imperatives of lowering **Maternal Mortality Ratio** and the improvement of nutritional levels among women. **The Committee is headed by Jaya Jaitely**.

Childline India foundation

- ➢ It is a **non-government organisation** (NGO) in India that operates a telephone helpline called Childline, for children in distress.
- ➢ It was India's first **24-hour, toll free, phone outreach** service for children
- ➢ CHILDLINE works for the protection of rights of all children aged **0 to 18**. Their special focus is on all children in need of care and protection, especially the more vulnerable sections.

Note:

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- The Committee was proposed in the **Union Budget 2020-21**.
- ➢ Prevention of Child Marriage is a part of **SDG 5** which deals with **gender equality and empowerment of all women and girls.**

Global Health Estimates 2019: WHO

Why in News

Recently, the **World Health Organization** (WHO) has released the **Global Health Estimates 2019**.

- ➢ These estimates provide a **comprehensive and comparable assessment of mortality and loss of health** due to diseases and injuries for all regions of the world.
- ➢ The new data of the estimates cover the period from **2000 to 2019**.
- ➢ These are in consonance with the report **Ten Threats to Global Health in 2019** of **WHO**.

Key Points

- ➢ **Top Ten Causes of Death:** Ischaemic heart disease, Stroke, Chronic obstructive pulmonary disease, Lower respiratory infections, Neonatal conditions, Trachea, Bronchus and lung cancers, Alzheimer disease and other dementias, Diarrhoeal diseases, Diabetes mellitus, Kidney diseases.
- ➢ **Non-communicable Diseases:** Makeup **7 of the world's top 10 causes** of death, **an increase** from 4 of the 10 leading causes in **2000**.
    - ○ **Heart Disease**: It now represents **16% of total deaths** from all causes and the number of **deaths from heart disease increased by more than two million** to nearly 9 million.
    - ○ **Alzheimer's Disease** and Other Forms of Dementia: Ranked **3rd** in both the Americas and Europe.
        - ● **Globally, women are disproportionately affected as 65%** of deaths from Alzheimer's and other forms of dementia are of women.
    - ○ **Diabetes:** Deaths from **diabetes increased by 70%** globally with an **80%** rise in death among males.
        - ● In the **Eastern Mediterranean**, deaths from diabetes have **more than doubled** and represent the greatest percentage increase of all WHO regions.

- ➢ **Communicable Diseases:** 6 of the top 10 causes of death in low-income countries are still communicable diseases, including **Malaria** (6th), **Tuberculosis** (8th) and **Acquired Immunodeficiency Syndrome** (AIDS) (9th).
    - ○ **Pneumonia** and Other Lower Respiratory Infections: These were the deadliest group of communicable diseases and together **ranked as the 4th** leading cause of death.
        - ● However, **lower respiratory infections were claiming fewer lives than in the past**, with the global number of deaths decreasing by nearly half a million.
        - ● The reduction is **in line with a general global decline in the percentage of deaths caused by communicable diseases**.
    - ○ **Acquired Immunodeficiency Syndrome:** It dropped from the **8th leading cause of death to the 19th**, reflecting the success of efforts to prevent infection, test for the virus and treat the disease over the last two decades.
        - ● It remains the **4th leading cause of death in Africa**, the number of deaths has dropped by more than half, falling from over 1 million to 435 000 in Africa.
    - ○ **Tuberculosis:** It is no longer in the global top 10, falling from **7th place to 13th**, with a **30%** reduction in global deaths.
        - ● However, it remains among the **top 10 causes of deaths** in the **African and South-East Asian regions**, where it is the 8th and 5th leading cause respectively.
- ➢ More **non-communicable diseases** (NCDs) **are now causing deaths worldwide**, there has been a global decline in deaths from **communicable diseases**, which however still remain a **major challenge in low- and middle-income countries**.
- ➢ **Longevity:** The estimates confirm the **growing trend for longevity as in 2019**, people were living more than 6 years longer than in 2000.
    - ○ The global average of longevity was **73 years in 2019 compared to nearly 67 in 2000.**
    - ○ The new projections state that people are living longer but with more **disability**, which is on a rise.
- ➢ **Suggestions:**
    - ○ Need for an **intensified global focus on preventing and treating cardiovascular diseases, cancer, diabetes and chronic respiratory diseases**, as well

Note:

as tackling injuries, in all regions of the world, as set out in the agenda for the **Sustainable Development Goals** (SDGs).

○ Rapidly **step up prevention, diagnosis and treatment of non-communicable diseases**.

○ Urgency to improve primary health care **equitably and holistically**.

● **Strong primary health care** is clearly the **foundation on which everything rests**, from combating NCDs to managing a global pandemic.

○ **Urgent investment** in data and health information systems to **support timely and effective decision-making**.

Indian Initiatives to Improve Health Sector

➢ **Ayushman Bharat:** It is a flagship initiative that attempts to move away from the sectoral and segmented approach of service delivery to a **comprehensive need-based health care service**.

➢ **POSHAN Abhiyaan:** It aims to **ensure service delivery and interventions** by use of technology, behavioural change through convergence and lays-down specific targets to be achieved across different monitoring parameters.

➢ **National Digital Health Mission:** It is a complete **digital health ecosystem**. The **digital platform** will be launched with four key features viz. **health ID, personal health records, Digi Doctor and health facility registry**.

Human Rights Day

Why in News

Human Rights Day is **observed every year on 10th December**.

➢ It marks the day when the **United Nations General Assembly** (UNGA) adopted the **Universal Declaration of Human Rights** (UDHR), in **1948**.

○ The UDHR **established a set of common basic values** both with regard to the view of human beings and to the relationship between the state and the individual.

➢ **2020 Theme:** Recover Better-Stand Up for Human Rights.

Key Points

➢ **Human Rights:**

○ These are **rights inherent to all human beings**, **regardless** of race, sex, nationality, ethnicity, language, religion, or any other status.

○ These **include** the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more.

○ **Nelson Mandela** has stated, "**To deny people their human rights is to challenge their very humanity**".

➢ **International Conventions and Bodies Related to Human Rights:**

○ **Universal Declaration of Human Rights:**

● The **30 rights and freedoms** include civil and political rights, like the right to life, liberty, free speech and privacy and economic, social and cultural rights, like the right to social security, health and education, etc.

■ **India** took an active **part in the drafting of the UDHR**.

● The declaration is **not a treaty**, so it does not directly create legal obligations for countries.

● The **UDHR**, together with the **International Covenant on Civil and Political Rights** (ICCPR) and its two **Optional Protocols** (on the complaints procedure and on the death penalty) and the **International Covenant on Economic, Social and Cultural Rights** and its Optional Protocol, form the so-called **International Bill of Human Rights**.

○ **Other Conventions:**

● These include the **Convention on the Prevention and Punishment of the Crime of Genocide** (1948), the **International Convention on the Elimination of All Forms of Racial Discrimination** (1965), the **Convention on the Elimination of All Forms of Discrimination against Women** (1979), the **Convention on the Rights of the Child** (1989) and the **Convention on the Rights of Persons with Disabilities** (2006), among others.

■ **India** is a **party to all these conventions**.

○ **Human Rights Council:**

● It is an **inter-governmental body** within the UN system, responsible for strengthening the promotion and protection of human rights.

● It is made up of **47 UN Member States** which are **elected by the UNGA**.

● Its most innovative feature, is the **Universal**

Note:

Periodic Review, which involves a **review of the human rights records of all 192 UN member states once every four years**.

- The **Office of the High Commissioner for Human Rights** (OHCHR) serves as its **secretariat**.

○ **Amnesty International:**

- An **international organisation** of volunteers who campaign for human rights. It brings out independent reports on the violation of human rights all over the world.

Human Rights in India

➤ **Enunciated in the Constitution:**

○ Since its inception, the Indian Constitution incorporated most of the rights enumerated in the Universal Declaration in two parts, the **Fundamental Rights and the Directive Principles of State Policy**.

- **Fundamental Rights:** Articles **12 to 35** of the Constitution, include the Rights to equality, freedom, against exploitation, freedom of religion, cultural and education, constitutional remedies, etc.

- **Directive Principles of State Policy:** Article **36 to 51** of the Constitution include Rights to social security, work, free choice of employment, protection against unemployment, equal pay for equal work, existence worthy of human dignity, free and compulsory education, equal justice and free legal aid and the principles of policy to be followed by the State.

➤ **Statutory Provisions:**

○ **Protection of Human Rights Act, 1993** (amended in 2019) provided for the **constitution of a National Human Rights Commission** (NHRC) at the Union level, which steers State Human Rights Commission (SHRCs) in States and Human Rights Courts (HRC) for better protection of human rights and for matters connected therewith or incidental thereto.

➤ **Related Recent Events:**

○ The human rights situation in Jammu and Kashmir following the dilution of **Article 370** and the passage of the **Citizenship (Amendment) Act** (CAA), **2019** have brought renewed international focus on India's human rights practice.

○ Since 2014, the government has **cancelled the registration of more than 14,000 NGOs under the Foreign Contribution (Regulation) Act** (FCRA), **2010**. It has also mainly targeted its own critics.

○ Scores of **hate crimes against Muslims and other religious groups**, ethnic groups, including Dalits and Adivasi (indigenous tribal people), as well as caste and gender-based crimes, took place across the country in 2019.

○ The **Freedom in the World 2020 report ranked India at the 83ʳᵈ position**, along with Timor-Leste and Senegal. India's **score fell by four points to 71**, the **worst decline** among the world's 25 largest democracies.

➤ **Measures Taken During Pandemic:**

○ During the **Covid-19 pandemic**, the government ensured the **right to food** of every person through the **Pradhan Mantri Garib Kalyan Yojana**, so that no one would stay hungry.

○ **Wages have been increased under MGNREGA** for the empowerment of workers in rural areas. The government **directly transferred money to the accounts of migrant labourers** to ensure the protection of their rights.

■■■

Note:

Security

Highlights

- *BSF Raising Day*
- *National Maritime Domain Awareness Centre*
- *Steps to Counter Maoist Threat*

BSF Raising Day

Why in News

56th 'Raising Day' event of the **Border Security Force** (BSF) was held on **1st December 2020** in **New Delhi**.

Key Points.

➤ The BSF was raised in **1965 after the India-Pakistan war**.

➤ It is one of the **five Central Armed Police Forces** of Union of India under the administrative control of the **Ministry of Home Affairs (MHA).**

  ❍ Other Central Armed Police Forces are: Assam Rifles (AR), Indo-Tibetan Border Police (ITBP), Central Industrial Security Force (CISF), Central Reserve Police Force (CRPF), National Security Guards (NSG) and Sashastra Seema Bal (SSB).

➤ The 2.65-lakh force is deployed along the **Pakistan and Bangladesh borders**.

  ❍ It is deployed on **Indo-Pakistan International Border, Indo-Bangladesh International Border, Line of Control (LoC) along with Indian Army** and in **Anti-Naxal Operations.**

➤ It has an **air wing, marine wing, an artillery regiment, and commando units**.

  ❍ BSF has been **defending Sir Creek in Arabian Sea and Sundarban delta in the Bay of Bengal** with its state of art fleet of Water Crafts.

  ❍ BSF has an instrumental role in helping state administration in maintaining Law and Order and conduct of **peaceful election**.

  ❍ BSF has been crusading against **natural calamity** to save precious human lives as and when warranted.

➤ It contributes dedicated services to the **UN peacekeeping Mission** by sending a large contingent of its trained manpower every year.

➤ It has been termed as the **First Line of Defence of Indian Territories**.

National Maritime Domain Awareness Centre

Why in News

The Navy's **Information Management and Analysis Centre** (IMAC), the nodal agency for maritime data fusion set up after the **26/11 Mumbai terror attacks**, will soon become a **National Maritime Domain Awareness** (NDMA) Centre.

Key Points

➤ **Background:** One of the areas for enhancing coastal security is Maritime Domain Awareness (MDA), which is extremely challenging since **India is located in one of the busiest maritime traffic regions of the world.**

  ❍ The **Indian Ocean Region (IOR)** is the commercial highway for large traffic and critical for the prosperity of many nations. Hence, **threats** such as maritime terrorism, piracy, trafficking, illegal fishing etc. are required to be kept subdued at all times.

➤ **Maritime Domain Awareness:**

  ❍ It is defined by the **International Maritime Organization** (IMO) as the effective understanding of **anything associated with the maritime domain** that could impact the security, safety, economy, or environment.

  - The **maritime domain is defined** as all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all maritime-related activities, infrastructure, people, cargo, and vessels and other conveyances.

Note:

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○ Earlier this year in March, India joined the **Indian Ocean Commission (IOC) as Observer**. The Commission is an **important regional institution in Western/African Indian Ocean.**

○ Previously in 2018, **the Information Fusion Centre – Indian Ocean region (IFC-IOR)** was set up within the premises of the IMAC **to coordinate with regional countries on maritime security and act as a regional repository of maritime data.**

➢ **Proposed NDMA Centre:**

○ It will be a **multi-agency centre** and **provide information** to various stakeholders, from the fisheries department to local policing authorities on **development or movements across the coast**. This will make sure that any risk, especially transnational can be prevented.

➢ **Information Management and Analysis Centre (IMAC):**

○ It is the **main centre of the Indian Navy for coastal surveillance and monitoring.** It is located in **Gurugram** (Haryana) and became **operational in 2014**.

○ It is a **joint initiative** of Indian Navy, Coast Guard and Bharat Electronics Ltd. and **functions under the National Security Adviser (NSA).**

○ It is the nodal center of the **National Command Control Communications and Intelligence Network** (NC3I Network).

○ **Functions:** It tracks vessels on the high seas and gets data from the coastal radars**,** white shipping agreements, Automatic Identification Systems (AIS) transponders fitted on merchant ships, air and traffic management systems and global shipping databases. Its functions in line with the principles listed under '**Security and Growth of All in the Region (SAGAR)**'.

● **White Shipping Agreement:**

■ The white shipping information refers to an **exchange of relevant advance information on the identity and movement of commercial non-military merchant vessels.**

■ Ships are classified into **white (commercial ships), grey (military vessels)**, and **black (illegal vessels)**.

● **Automatic Identification System:** It is an automated tracking system installed on all commercial vessels of specific tonnage.

■ After the 26/11 terror attack, all fishing vessels **more than 20m long were mandated to have AIS transponders installed**, while efforts are on to have such a system on under 20m fishing vessels as well.

○ **Recent Initiatives by IMAC**:

● In 2019, it conducted a coastal security workshop for **BIMSTEC** countries.

● During the **MT New Diamond** (vessel) **fire incident off the coast of Sri Lanka**, IFC-IOR played a key role in the early mobilization of resources that resulted in a quick reaction.

> **National Command Control Communications and Intelligence Network**
>
> ➢ The Indian Navy has established the NC3IN linking 51 stations, including 20 of the Navy and 31 of the Coast Guard, with a nodal Information Management and Analysis Centre (IMAC).
>
> ➢ The NC3I generates **a seamless real-time picture of the nearly 7,500-km long coastline**.

Steps to Counter Maoist Threat

Why in News

To speed up the implementation of the **Road Requirement Plan for extremism-affected areas**, Chhattisgarh has suggested the Center to divide the remaining contracts into small packets so that local contractors can take up the jobs.

Key Points

➢ **Road Requirement Plan for Left Wing Extremism** (LWE) **Affected Areas**:

○ This Scheme is being **implemented by the Ministry of Road Transport and Highways** for **improving road connectivity** in 34 LWE affected districts of 8 States.

○ **8 States** are Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh.

○ This scheme **envisaged construction of 5,422 km roads lengths** in LWE affected States.

➢ **Present Issue**:

○ **90%** of the 5422 km Road Requirement Plan stands completed, but progress remains a **problem in Chhattisgarh.**

Note:

- Of the **419 km** of roads remaining across four states, **Chhattisgarh accounts for 360 km.**
  - ○ **Proposed Solution:**
    - **Chhattisgarh** proposed to the Centre to **break up the contracts into small portions** so that local contractors can take up the jobs.
    - When local people take up the contracts, they are in a better position to get the work done.
- ➤ **Left Wing Extremism (LWE):**
  - ○ **LWE** organizations are the **groups that try to bring change through violent revolution.** They are **against democratic institutions and use violence** to subvert the democratic processes at ground level.
  - ○ These groups **prevent the developmental processes in the least developed regions of the country and try to misguide the people** by keeping them ignorant of current happenings.
  - ○ Left Wing Extremists are popularly known as **Maoists** worldwide and as **Naxalites** in India.
- ➤ **Other Government Initiatives to fight LWE:**
  - ○ **Greyhounds:** It was raised in 1989 as an elite anti-naxal force.
  - ○ **Operation Green Hunt:** It was started in 2009-10 and massive deployment of security forces was done in the naxal-affected areas.
  - ○ **LWE Mobile Tower Project:** To improve mobile connectivity in the LWE areas, the Government in 2014, approved installation of mobile towers in LWE affected States.
  - ○ **Aspirational Districts Programme:** Launched in 2018, it **aims to rapidly transform the districts** that have shown relatively lesser progress in key social areas.

- ○ **SAMADHAN:**
  - It stands for
    - S - Smart Leadership,
    - A - Aggressive Strategy,
    - M - Motivation and Training,
    - A - Actionable Intelligence,
    - D - Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas),
    - H - Harnessing Technology,
    - A - Action plan for each Theatre, and
    - N- No access to Financing.
  - This doctrine is the **one-stop solution for the LWE problem.** It encompasses the **entire strategy of government from short-term policy to long-term policy** formulated at different levels.

Suggestions

- ➤ Though the number of incidents of LWE violence has come down in the recent past, continued efforts and focus are needed in eliminating such groups.
- ➤ Government needs to ensure two things; **security of the peace-loving people** and the **development of the naxalism-affected regions**.
- ➤ Centre and states should continue with their **coordinated efforts** in **development and security** both where Centre should play a supportive role with state police forces taking the lead.
- ➤ Government needs to undertake **technological solutions** such as the use of **drones** to minimize loss of lives of security personnel.

■■■

Note:

Key Points

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Summary

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