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Polity and Governance

Highlights

- Secrecy of Ballot
- Amendments in Postal Ballot System
- Speaker and Anti-Defection Law
- National People's Party
- Custodial Violence
- Civil Services Board
- Garib Kalyan Rojgar Abhiyaan
- Increased Funding for Panchayats
- Assessment of Saansad Adarsh Gram Yojana
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- Global Education Monitoring Report 2020: UNESCO

Secrecy of Ballot

Why in News

In a recent judgement, the **Supreme Court** has held that **secrecy of ballot** is the cornerstone of free and fair elections.

- The choice of a voter should be free which is ensured by the secret ballot system in a democracy.

Key Points

- **Highlights of the Judgement:**
 - The SC held that the principle of secrecy of ballots is an important postulate of **constitutional democracy** and referred to **Section 94 of the Representation of People Act (RPA) 1951**.
 - The section upholds the **privilege of the voters to maintain confidentiality** about their choice of the vote.
 - The law must protect the right of voters to the secrecy of the ballot. Even a remote or distinct possibility that a voter can be forced to disclose for whom she/he has voted would act as a positive constraint and a check on the freedom to exercise the franchise.
 - However, a voter can also **voluntarily waive the privilege of non-disclosure**.

- The privilege ends when the voter decides to waive it and decides voluntarily to disclose their vote.
- The court held that voters can neither be prevented from disclosing nor can be subjected to a complaint by anyone.

➤ Background:

- The judgment came on an appeal against the **Allahabad High Court** decision, setting aside the voting of a **no-confidence motion** in a Zila panchayat in Uttar Pradesh in 2018.
 - A **no-confidence motion** or **vote of no-confidence** or a **no-trust vote** can be sought to express that there is no longer confidence in the government.
- Allahabad HC found that some of the panchayat members had violated the rule of secrecy of the ballot.
 - The SC referred to **Section 28(8) of the Uttar Pradesh Kshetra Panchayat and Zila Panchayat Adhiniyam, 1961** and ordered a re-vote of the motion within the next two months, by the secret ballot system.
 - This provision states that a motion of no confidence shall be put to vote in the prescribed manner by secret ballot.
- **Restoring Secrecy of Ballot:**
 - Secrecy of ballot has become a **notional concept** after the introduction of **Electronic Voting Machines (EVMs)**.

Note:



Representation of the People Act 1951

- The holding of **free and fair elections** is the sine-qua-non of democracy. To ensure the conduct of elections in free, fair and in an impartial manner, the constitution-makers incorporated **Part XV (Articles 324-329)** in the constitution and empowered Parliament to make laws to regulate the electoral process.
- The **Election Commission of India (ECI)** is the watchdog of free and fair elections in the country and **Article 324** of the Constitution provides for its establishment.
- In this context, the Parliament has enacted the **Representation of the People Act (RPA), 1950** and **Representation of the People Act, 1951**.
- **Key provisions of the RPA 1951:**
 - It regulates the actual conduct of elections and by-elections.
 - It provides administrative machinery for conducting elections.
 - It deals with the registration of political parties.
 - It specifies the qualifications and disqualifications for membership of the Houses.
 - It provides provisions to curb corrupt practices and other offences.
 - It lays down the procedure for settling doubts and disputes arising out of elections.
- Since voters believe that only they themselves and their trusted ones know who they voted for which is not true actually because **EVMs give a near accurate idea of voting patterns**.
- Each EVM is used for about 1,400 electors and votes cast in the **EVMs are individually counted and tallied booth-wise**.
- Before the introduction of EVMs, **ballot papers were often mixed** to prevent intimidation of voters by disclosure of voting patterns.
- The idea of voting patterns gives an **advantage to political parties** which can be neutralised if **totalisers** are deployed to count votes in a constituency.
- **Totaliser:**
 - It is a mechanism which **allows votes from 14 booths to be counted together**.

- This result obtained is **without disclosure of votes polled by candidates at particular voting booths/stations**, which will allay the fears of voters against any pre-poll intimidation or post-poll victimisation by any candidate.

Amendments in Postal Ballot System

Why in News

Recently, the Law Ministry has **reduced the age limit for senior citizens** who opt for postal ballot in the Lok Sabha and Assembly elections.

Key Points

- Now, the **voters aged above 65 years or a Covid-19 suspect** can opt for postal ballot.
- Earlier, in 2019, the Law Ministry had **amended the Conduct of Election Rules to allow persons with disabilities** and those **who are 80 years of age or above** to opt for postal ballot during Lok Sabha and Assembly elections.
- Voters of Bihar will be the first to benefit from the amended rules, since Bihar will be the first state to have assembly polls after the coronavirus outbreak in India.

Postal Ballots System

- Ballot papers are **distributed electronically** to electors and are returned to the election officers via post.
- Currently, only the following voters are allowed to cast their votes through postal ballot:
 - **Service voters** (armed forces, the armed police force of a state and government servants posted abroad),
 - **Voters on election duty,**
 - **Voters above 80 years of age or Persons with Disabilities (PwD),**
 - Voters under **preventive detention**.
- The exception to the above-mentioned category of voters is provided under Section 60 of the **Representation of the People Act, 1951**.

Note:

Speaker and Anti-Defection Law

Why in News

The ruling party crisis in Manipur has raised questions on the **Speaker's powers to disqualify** under the Constitution.

Key Point

➤ Background:

- In 2017, Bharatiya Janata Party (BJP) formed the government in Manipur after seven legislators of Congress joined the BJP.
- The Congress party asked the Speaker to disqualify these seven, but the petitions were kept pending.
 - According to **paragraph 2(1)(a) of the Tenth Schedule of the Constitution, an elected member of the house shall be disqualified from being a member if they win the election as a candidate of one party and then join another.** The power for this disqualification is vested in the Speaker, who is usually a nominee of the ruling party.
- Recently, a crisis in the ruling party emerged because **the four MLAs (out of seven MLAs, who had in 2017 jumped to BJP)** once again pledged their votes to the Congress and the rest three were disqualified.

➤ Role of Supreme Court:

- Citing the 2016 **SA Sampath Kumar vs Kale Yadaiah and Others case** relating to the disqualification of a Telangana MLA, the Supreme Court directed the Speaker of Manipur to rule on the **disqualification within three months.**
- The Supreme Court also questioned, "why a Speaker- who is a member of a particular political party and an insider in the House, should be the sole and final arbiter in the cases of disqualification of a political defector".
- The Speaker did not take a call on the disqualifications.
- After, the Manipur High Court also passed similar orders relying on the SC verdict, the Speaker finally ruled on the petitions.
 - The High Court also reasoned that since the remedy under Tenth Schedule is an alternative to moving courts and if the remedy is found

to be ineffective due to deliberate inaction or indecision on the part of the Speaker, the court will have jurisdiction.

➤ Speaker and Issue of Impartiality:

- The **office of Speaker** has been criticised time and again for being an **agent of partisan politics** especially in context of **power for the disqualification.**
- The Supreme Court in **Jagjit Singh versus State of Haryana (2006)** highlighted the similar allegations about the confidence on the **role of Speaker** in the matters of impartiality.
- In the **Kihoto Hollohan versus Zachillhu case (1992)**, one of the judges observed that the suspicion of bias on the Speaker's role could not be ruled out as his/her election and tenure depends on the majority will of the House (or specifically of the ruling party).

➤ Suggestions:

- The Supreme Court has held that the **Parliament** consider taking a relook at the powers of the Speakers citing instances of partisanship.
 - It has suggested independent **tribunals** to decide on disqualification.
- In Britain, the Speaker is strictly a non-party person. There is a convention that the Speaker has to resign from his party and remain politically neutral. .
 - Hence, this mechanism can be adopted whereby Speakers need to renounce all political affiliations, membership and activity once they have been elected to the office.

Disqualification under the Tenth Schedule

- The **Anti-Defection Law** was passed in **1985 through the 52nd amendment** to the Constitution. It added the **Tenth Schedule to the Indian Constitution.** The main intent of the law was to combat 'the evil of political defections'.
- According to it, **a member of a House belonging to any political party** becomes disqualified for being a member of the House, if:
 - he voluntarily gives up his membership of such political party; or
 - he votes or abstains from voting in such House contrary to any direction issued by his political party without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.

Note:



Exceptions to the**Disqualification on the Ground of Defection**

- If a member **goes out of his party as a result of a merger of the party** with another party. A merger takes place **when two-thirds of the members** of the party have agreed to such merger.
- If a member, after **being elected as the presiding officer of the House, voluntarily** gives up the membership of his party or rejoins it after he ceases to hold that office. This exemption has been provided in view of the dignity and impartiality of the office.

Powers of Speaker**with regard to Anti-Defection Law**

- Any question **regarding disqualification** arising out of defection is to be decided by the presiding officer of the House.
- After the *Kihoto Hollohan case (1992)*, the Supreme Court declared that the decision of the presiding officer is not final and can be questioned in any court. It is subject to judicial review on the grounds of malafide, perversity, etc.

Way Forward

- **Impartiality, fairness and autonomy in decision-making** are the hallmarks of a robust institution. It is the freedom from interference and pressures which provide the necessary atmosphere where one can work with an absolute commitment to the cause of neutrality (as a Constitutional value).
- At a time when India's rank has fallen in the latest **Democracy Index (2019)**, it is expected from Parliament to take steps to **revamp and strengthen** the institution of the **Speaker**.
- Further, the structural issues regarding the manner of appointment of the Speaker and his tenure in office needs an urgent redressal.

National People's Party**Why in News**

Political troubleshooting is going on in Manipur after the four MLAs of **National People's Party (NPP)** along with few others had withdrawn support from the ruling government recently.

Key Points➤ **National People's Party:**

- The NPP got the status of national party in 2019, after it was **recognised as a state party in four states** — Arunachal Pradesh, Manipur, Nagaland and Meghalaya.
- It is the **eighth party to get the recognition** — after INC, BJP, BSP, NCP, CPI, CPI(M) and Trinamool Congress. It is also the **first party from Northeast India** to be recognised as a national party.

➤ **Types of Parties:**

- The **Election Commission of India** lists political parties as **"national party", "state party" or "registered (unrecognised) party"**.
- The conditions for being listed as a national or a state party are specified under the **Election Symbols (Reservation and Allotment) Order, 1968**.

➤ **National Party:**

- **For recognition as a national party**, a party has to satisfy these conditions:
 - 6% valid votes polled in any four or more states at a general election to the Lok Sabha or to the State legislative assembly; and, in addition, it wins four seats in the Lok Sabha from any state or states.
 - 2% of all Lok Sabha seats in the last such election, with MPs elected from at least three states.
 - Recognition as a **state party in at least four states**.

➤ **State Party:**

- **For recognition as a state party**, any **one of five conditions** needs to be satisfied:
 - Two seats plus a 6% vote share in the last Assembly election in that state.
 - One seat plus a 6% vote share in the last Lok Sabha election from that state.
 - 3% of the total Assembly seats or 3 seats, whichever is more.
 - One of every 25 Lok Sabha seats (or an equivalent fraction) from a state.
 - An 8% state-wide vote share in either the last Lok Sabha or the last Assembly polls.

➤ **Loss of Recognised Status:**

- Once recognised as a national or a state party, a political party loses its given status **only if it fails**

Note:

to fulfil any of the conditions for two successive Assembly and two successive Lok Sabha elections.

- That means a party retains that status irrespective of its performance in the next elections.

Sl. No.	Name of the Party (Abbreviation)	Symbol Reserved
1.	Bahujan Samaj Party (BSP)	Elephant (<i>In all States/U.T.s except in Assam</i>)
2.	Bharatiya Janata Party (BJP)	Lotus
3.	Communist Party of India (CPI)	Ears of Corn and Sickle
4.	Communist Party of India (Marxist) (CPM)	Hammer, Sickle and Star
5.	Indian National Congress (INC)	Hand
6.	Nationalist Congress Party (NCP)	Clock
7.	All India Trinamool Congress (AITC)	Flowers and Grass
8.	National People's Party (NPP)	Book

Custodial Violence

Why in News

The recent death of a father-son duo from Tamil Nadu, allegedly **due to custodial violence**, has sparked anger across India.

- Custodial violence primarily refers to violence in police and judicial custody. It includes death, rape and torture.

Key Points

- **Data Related to Violence in Custody:**
 - According to **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.
- Except in Uttar Pradesh, Madhya Pradesh, Chhattisgarh and Odisha, no policeman was convicted for such deaths across the country.
- 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.
- **Reasons for Low Conviction:** Most of custodial deaths were attributed to reasons other than custodial torture, which included suicide and death in hospitals during treatment.
- **Reasons Behind Custodial Violence:**
 - **Absence of Strong Legislation:** India does not have an anti-torture legislation and is yet to criminalise custodial violence, while action against culpable officials remains illusory.
 - The Indian state either denies the existence of torture in the country or defends its resistance to enact a law by claiming there are sufficient provisions in the domestic legal framework to prohibit and penalise torture.
 - These claims however remain superficial and without any such protections.
 - **Institutional Challenges:** The entire prison system is inherently opaque giving less room to transparency.
 - Prison access is not provided without prior permission such as depositing "Rs. 1 lakh in the name of the superintendent of the concerned jail" before entry.
 - Excessive scrutiny is done of all recorded or documented material in the prison.
 - India also fails in bringing the much **desired Prison Reforms** and prisons continue to be affected by poor conditions, overcrowding, acute manpower shortages and minimal safety against harm in prisons.
 - **Excessive Force:** The use of excessive force including torture to target marginalised communities and control people participating in movements or propagating ideologies which the state perceives as opposed to its stature.

Note:

- **Not Adhering to International Standard:** Although India has signed the **United Nations Convention against Torture** in 1997 its ratification still remains.
 - While Signing only indicates the country's intention to meet the obligations set out in the treaty, Ratification, on the other hand, entails bringing in laws and mechanisms to fulfil the commitments.
- **Constitutional and Legal Provisions:**
 - **Protection from torture** is a fundamental right enshrined under Article 21 (Right to Life) of the Indian constitution.
 - The **right to counsel** is also a fundamental right under Article 22(1) of the India constitution.
 - Section 41 of **Criminal Procedure Code (CrPC)** was amended in 2009 to include safeguards under 41A, 41B, 41C and 41D, so that arrests and detentions for interrogation have reasonable grounds and documented procedures, arrests are made transparent to family, friends and public, and there is protection through legal representation.

Suggestions

- **India should ratify the UN Convention Against Torture:** It will mandate a systematic review of colonial rules, methods, practices and arrangements for the custody and treatment of persons subjected to any form of arrest, detention or imprisonment.
 - It will also mean that exclusive mechanisms of redress and compensation will be set up for the victim besides institutions such as the Board of Visitors.
- **Police Reforms: Guidelines should also be formulated** on educating and training officials involved in the cases involving deprivation of liberty because torture cannot be effectively prevented till the senior police wisely anticipate the gravity of such issues and clear reorientation is devised from present practices.
- **Access to Prison:** Unrestricted and regular access to independent and qualified persons to places of detention for inspection should also be allowed.
 - CCTV cameras should be installed in police stations including in the interrogation rooms.
 - Surprise inspections by Non-Official Visitors (NOVs) should also be made mandatory which would act as a preventive measures against custodial torture which has also been suggested by Supreme Court

in its landmark judgment in the **DK Basu Case** in 2015.

- **Implementation of Law Commission of India's 273rd Report:** The report recommends that those accused of committing custodial torture – be it policemen, military and paramilitary personnel – should be criminally prosecuted instead of facing mere administrative action establishing an effective deterrent.

Civil Services Board

Why in News

Recently, Punjab government has set up a three-member **Civil Services Board (CSB)** for transfers and postings of the Indian Administrative Service (IAS) officers in the state.

Key Points

- **CSB:**
 - The **CSB is headed by the Chief Secretary of a state** and has senior most additional chief secretary or chairman, Board of Revenue, Financial Commissioner or an officer of equivalent rank and status as member.
 - The CSB **provides for the state to follow Centre's guidelines on giving a fixed tenure of at least two years** for cadre officers.
 - If anyone recommends the transfer of the officers before the completion of tenure, then the board will examine and effect it. The **final authority** in this regard is **the Chief Minister**.
- **Benefits:**
 - If the officials have a fixed tenure they **will be able to provide better administration**.
 - They will also **feel safe and try to stick to the rules** instead of pleasing political bosses.
 - Every official requires 3-6 months to get into the routine at his/her new place of posting. If they stay there for two years, it would mean **better delivery and stable tenure to people**.
- **Issues Involved:**
 - If the tenure of bureaucrats is fixed, it **may create functional and administrative problems**.
 - The officers may overstep the authority and jurisdiction of the state government.

Note:

- It may make them less answerable and accountable to legislators.
- With the fixed tenure rule, **the political executives feel their influence has been reduced to nothing**, since all the powers to examine a recommendation for a transfer lies with the CSB.
- The bureaucrats feel the urge to go to courts for effective implementation of guidelines **in letter and spirit**.
 - E.g. Haryana had the CSB in place but the guidelines are not followed there.
- **Background:**
 - The Punjab government's notification is based on a 2014 order issued by the Central government. The order was aimed at **providing stability of tenure and checking political interference**.
 - Punjab is the 20th state to adopt the CSB.
 - In October 2013, the **Supreme Court had also mandated minimum tenure for bureaucrats**, to insulate the bureaucracy from political interference and to put an end to frequent transfers of civil servants by political bosses.
 - Frequent and arbitrary transfers of officers before completion of a reasonable tenure on any post have always been considered as a major reason for the **declining standards of administration**.
 - IAS officers like Ashok Khemka, Durga Sakthi Nagpal and Kuldip Narayan, among others, have allegedly been victims of arbitrary suspensions and transfers.
- **Coverage:** A total of **116 districts** across **six states**, namely **Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand** and **Odisha** (where maximum migrant workers have returned) have been chosen for the campaign.
 - These districts are estimated to **cover about 2/3 of such migrant workers**.
 - The chosen districts **include 27 Aspirational Districts**.
 - **Aspirational Districts** are those districts in India 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**.
- **Implementation:** It will involve **intensified and focused implementation of 25 different types of works** to **provide employment** to the migrant workers on one hand and **create infrastructure in the rural regions** of the country on the other hand.
 - The workers will help build gram panchayat bhawans and **anganwadi centres**, national highway works, railway works and water conservation projects, among others across six states.
- **Participants:** **12 different Ministries/Departments**, namely, Rural Development, Panchayati Raj, Road Transport and Highways, Mines, Drinking Water and Sanitation, Environment, Railways, etc. will be coordinating for the implementation of the scheme.
- **Connectivity:** The villages will join this programme through the **Common Service Centres (CSCs)** and **Krishi Vigyan Kendras (KVKs)** maintaining the norms of **social distancing** in the wake of the **pandemic**.

Garib Kalyan Rojgar Abhiyaan

Why in News

The Government of India has decided to launch a **rural public works scheme 'Garib Kalyan Rojgar Abhiyaan'** through video-conferencing from village **Telihar** in **Khagaria district of Bihar** on 20th June 2020.

Key Points

- **Beneficiaries:** The scheme will empower and provide livelihood opportunities to the **returnee migrant workers and rural citizens** who have returned to their home states due to the **Covid-19** induced **lockdown**.
- **Duration and Outlay:** This campaign will work in **mission mode for 125 days** with an outlay of **Rs. 50,000 crore**.

Common Service Centres

- Common Services Centres are a strategic cornerstone of the **National e-Governance Plan (NeGP)**.
- It was approved in **May 2006** to introduce e-governance on a massive scale under the **National Common Minimum Programme**.
- **Objective:** To provide high quality and cost-effective video, voice and data content and services, in the areas of e-governance, education, health, telemedicine, entertainment as well as other private services.
- A **highlight** of the CSCs is that it **offers web-enabled e-governance services in rural areas**, including application forms, certificates and utility payments such as electricity, telephone and water bills.

Note:

Krishi Vigyan Kendras

- It is an integral part of the **National Agricultural Research System (NARS)**.
 - India has **one of the largest** national agricultural research systems in the world. It consists of **scientists, technical staff, administration support staff** and auxiliary staff.
 - Such a large number of research and other personnel are required because India is blessed with a **variety of agro-climatic conditions** and it **conducts research on all aspects of agriculture** to suit these diversified conditions.
- The first KVK was established in **1974 at Puducherry**.
- **Aim:** Assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations.
- KVKs also produce quality technological products (seed, planting material, bio-agents, livestock) and make it available to farmers.
- The KVK scheme is **100% financed by the Government of India** and **funds are sanctioned** to Agricultural Universities, **Indian Council of Agricultural Research (ICAR)** institutes, related Government Departments and **Non-Government Organizations (NGOs)** working in Agriculture.
- These are crucial to fulfilling the target of **doubling farmers' income by 2022**.

Increased Funding for Panchayats

Why in News

Recently, in a meeting with the **15th Finance Commission**, the **Panchayati Raj Ministry** has pitched for a **fivefold increase in funding** for rural local bodies.

- The Ministry asked for Rs 10 lakh crore to be allocated for the 2020-21 to 2025-26 period, in comparison to the Rs 2 lakh crore allocated under the 14th Finance Commission.

Key Points

- **Allocations had tripled** between the 13th and 14th Commissions and the **utilisation rate** for FC grants between 2015 and 2019 stands at **78%**.

Finance Commission

- It is a **constitutional body**, that **determines the method and formula for distributing the tax proceeds between the Centre and states and among the states** as per the constitutional arrangement and present requirements.
- Under **Article 280 of the Constitution**, the **President of India** is required to constitute a **Finance Commission** at an interval of **five years or earlier**.
- The **1st Finance Commission** was set up in **1951** and there have been fifteen so far.
- The **15th Finance Commission** was constituted by the President of India on **27th November 2017**, against the backdrop of the **abolition of the Planning Commission** and the **introduction of the Goods and Services Tax (GST)**.
 - The 15th Finance Commission is **headed by N.K. Singh**.
- In **November 2019**, the Union Cabinet approved the 15th Finance Commission to submit its **first report for the first fiscal year 2020-21** and to **extend its tenure** to provide for the presentation of the final report covering Financial Years 2021-22 to 2025-26 by **30th October, 2020**.
- The 2.63 lakh panchayats across the country have **29 functions under their ambit**, according to the **11th Schedule of the Constitution**.
 - **Road construction, its maintenance and drinking water supply** are the major projects carried out by panchayats using FC grants.
 - **Seventy-Third Amendment Act, 1992:**
 - Granted constitutional status and protection to the **Panchayati Raj** institutions.
 - For this purpose, the Amendment added a new **Part-IX** entitled as 'the panchayats' and a new 11th Schedule containing 29 functional items of the panchayats.
- During the **Covid-19**, panchayats gained importance as crucial nodal points as they **ran isolation centres, medical camps and contact tracing**.
 - However, a major challenge during the **pandemic and lockdown** was that most panchayats could not provide cooked food at short notice.
 - The Ministry has proposed to set up **community kitchens** in each panchayat, operated by local **self-help groups (SHGs)**.

Note:



- The role of panchayats also becomes important because now the **Garib Kalyan Rojgar Abhiyan** will also depend on them to generate employment for newly returned migrant workers.

Assessment of Saansad Adarsh Gram Yojana

Why in News

Recently, a study by the Ministry of Rural Development has observed that the **Saansad Adarsh Gram Yojana (SAGY)** has not been able to achieve the desired objectives and has failed to make a significant impact.

- The study was conducted as part of the **Fifth Common Review Mission (CRM)** for 'independent assessment' of the progress of various programmes and schemes of the Ministry of Rural Development.

Key Points

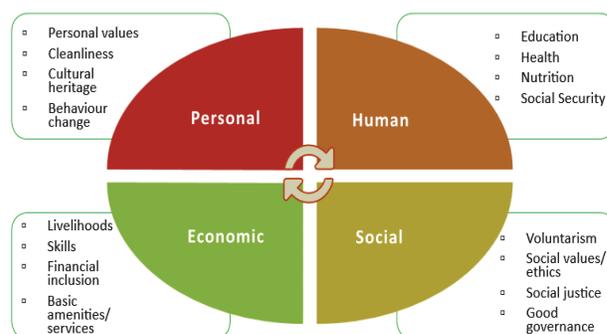
- **Study/Assessment:** The study was conducted by a team comprising retired bureaucrats, academics and research organisations etc. The team visited around 120 villages, in 21 districts across eight states.
- **Major Findings:**
 - **Low selection of Panchayats:** Since the launch of the scheme only 1,855 gram panchayats have been selected across five phases, with only seven in Phase 5.
 - **Lack of Interest and Funds:** Model villages under the scheme are hit by lack of interest and funds. In many of SAGY villages, the MPs did not give any significant fund from **Members of Parliament Local Area Development Scheme (MPLADS)**. For example,
 - In Arood village of Khandwa district in Madhya Pradesh, out of 118 activities planned in 2014, only about 60% have been achieved and the rest are pending for lack of funds.
 - **Lack of Political Will:** The concept of SAGY has not percolated down to field officials due to lack of accountability and political will.
 - **Issues with Declaration:** Even villages declared as Adarsh Grams in some districts were found yet to be declared **Open Defecation Free**.
 - **Limited Impact:** In some cases, where MPs have been proactive, some infrastructure development has taken place but the scheme has not made any perceptible impact.

- **Low Convergence of MGNREGA with MPLAD:** Lesser convergence of **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** with MPLAD was observed in few villages.
- **Rural Roads:** The study expressed concern over the quality of roads constructed under schemes of state governments and maintenance of rural roads under central **Pradhan Mantri Gram Sadak Yojana (PMGSY)**.

Saansad Adarsh Gram Yojana

- SAGY is a village development project which was launched on **11th October, 2014** on the birth anniversary of **Jai Prakash Narayan**.
- **Goal:**
 - Under the Yojana, Members of Parliament (MPs) are responsible for developing the socio-economic and physical infrastructure of **three villages each by 2019** and a total of **eight villages each by 2024**.
- **Process:**
 - **Gram Panchayat:** The basic unit for development.
 - **Lok Sabha MP:** Chooses a Gram Panchayat from within his/her constituency.
 - **Rajya Sabha MP:** Chooses a Gram Panchayat from the rural area of a district of his/her choice in the State from which he/she is elected.
 - **Nominated MPs:** Choose a Gram Panchayat from the rural area of any district in the country.
 - The MPs engage with the community, facilitate the Village Development Plan and mobilise the necessary resources particularly from **Corporate Social Responsibility (CSR)** and philanthropies.
 - MPs also fill up critical gaps in the plan using the Member of Parliament Local Area Development Scheme (MPLADS) funds.

Holistic development through SAGY



Note:

- **Positive Impact:** Progress of work was better in the Gram Panchayats where the MP has taken keen interest and allocated substantial amounts from MPLAD. **For example:**
 - A village in Bhilwara, Rajasthan was found to be very urbanised due the various development schemes taken up at the initiative of the Ex-MP.
- **Recommendations:**
 - **Need to Enhance Impact:** The report recommended that the Ministry of Rural Development may review the scheme for enhancing its impact.
 - **Uniform Norms:** It has urged the Centre to frame a 'National Rural Road Policy' to ensure uniform norms of construction and maintenance, irrespective of whether the road belongs to a state scheme or PMGSY.
 - **Additional Funds:** The Centre should examine if the **Finance Commission** can provide funds for maintenance of rural roads, as many states have requested that the Centre should share the cost of maintenance.

Extension to OBC Sub-Categorisation Commission

Why in News

Recently, the Union Cabinet has approved a six-month extension to the commission appointed to examine **sub-categorisation of Other Backward Classes** (OBCs), up to 31st January 2021.

Key Points

- **Commission:**
 - **Headed by Justice (Retd.) G Rohini**, the commission was constituted under **Article 340 of the Constitution** with the approval of the President on **2nd October 2017**.
 - Article 340 deals with the **appointment of a commission** to investigate the conditions of backward classes.
 - It had been constituted to **complete the task of sub-categorising 5000-odd castes in the central OBC list** so as to **ensure more equitable distribution of opportunities** in central government jobs and educational institutions.

- In 2015, the **National Commission for Backward Classes** (NCBC) had recommended that OBCs should be **categorised into extremely backward classes, more backward classes and backward classes**.
 - The benefits of the **reservation** in OBCs are being cornered mostly by the dominant OBC groups over the years so there is a need to recognise sub-quotas for the extremely backward classes within the OBCs.
 - NCBC has the authority to examine complaints and welfare measures regarding socially and educationally backward classes.
- **Mandate:**
 - **Examine the uneven distribution of reservation benefits** among different castes in the central OBC list. For example, certain castes were left out of the ambit because of a difference in spelling in a State.
 - **Work out mechanism and parameters for sub-categorisation of OBCs**, to identify castes, sub-castes and communities and classify them into sub-categories.
 - **Submit a comprehensive report** after consultation with various stakeholders so that **Census 2021** can include comprehensive data on OBCs.
- **Work Done:**
 - It has met representatives of state governments, state backward classes commissions, community associations etc. apart from obtaining caste-wise data of OBCs in higher educational institutions and recruits in central departments, public sector banks and financial institutions.
- **Expenditure:**
 - The expenditure related to the administration costs will be continued to be borne by the **Department of Social Justice and Empowerment**.
- **Reasons for Extension:**
 - The Commission would **require more time to submit its report** since the repetitions, ambiguities, inconsistencies and errors of spelling or transcription etc. appearing in the existing Central List of OBCs need to be cleared.
 - Apart from that, the **nationwide lockdown** and restrictions on travel imposed in the wake of **Covid-19 pandemic** slowed down the commission's performance.

Note:



➤ Possible Outcomes:

- The commission may make recommendations which will benefit the communities in the existing list of OBCs which have not been able to get any major benefit of the OBCs reservation scheme for appointment in central government posts and for admission in central government educational institutions.

Article 340 of the Indian Constitution

- The President may by order appoint a Commission consisting of such persons as he thinks fit to investigate the conditions of socially and educationally backward classes within the territory of India.

OBC Reservation

- The Kalelkar Commission, set up in 1953, was the first to identify backward classes other than the Scheduled Castes (SCs) and Scheduled Tribes (STs) at the national level.
- The Mandal Commission Report, 1980 estimated the OBC population at 52% and classified 1,257 communities as backward.
 - It recommended increasing the existing quotas, which were only for SC/ST, from 22.5% to 49.5% to include the OBCs.
- The central government reserved 27% of seats in union civil posts and services for OBCs [Article 16(4)]. The quotas were subsequently enforced in central government educational institutions [Article 15 (4)].
 - In 2008, the Supreme Court directed the central government to exclude the creamy layer (advanced sections) among the OBCs.
- The 102nd Constitution Amendment Act, 2018 provided constitutional status to the National Commission for Backward Classes (NCBC), which was previously a statutory body under the Ministry of Social Justice and Empowerment.

BharatNet Project

Why in News

Recently, the Department for Promotion of Industry and Internal Trade (DPIIT) ordered the scrapping of a Rs 1,950 crore tender for the BharatNet project in Tamil Nadu.

Department for Promotion of Industry and Internal Trade

- It comes under the aegis of the Ministry of Commerce and Industry.
- It was established in 1995 and has been reconstituted in the year 2000 with the merger of the Department of Industrial Development.
- In February 2019, it was renamed to the existing one from the previous name, Department of Industrial Policy & Promotion (DIPP).

Key Points

- BharatNet is a flagship mission implemented by Bharat Broadband Network Ltd. (BBNL).
 - It is a Special Purpose Vehicle (SPV) set up by the Government of India under the Companies Act, 1956 with an authorized capital of Rs 1000 crore.
 - Initially, it was under the Ministry of Communications and Information Technology, which was bifurcated into the Ministry of Communications and the Ministry of Electronics and Information Technology in July 2016.
 - Currently, it is being implemented by the Department of Telecommunication under the Ministry of Communications.
- National Optical Fibre Network (NOFN) was launched in October 2011 and was renamed as Bharat Net Project in 2015.
- National Optical Fibre Network:
 - It was envisaged as an information superhighway through the creation of a robust middle-mile infrastructure for reaching broadband connectivity to Gram Panchayats.
 - The Ministry of Communications has launched the National Broadband Mission that will facilitate universal and equitable access to broadband services across the country, especially in rural and remote areas.
 - Aim:
 - To facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet and other services to rural India.
 - To connect all the 2,50,000 Gram panchayats in the country and provide 100 Mbps connectivity to all gram panchayats.

Note:

- To achieve this, the existing unused fibres (**dark fibre**) of public sector undertakings (PSUs) (BSNL, Railtel and Power Grid) were utilised and incremental fibre was laid to connect to Gram Panchayats wherever necessary.
- **Non-discriminatory access** to the NOFN was provided to all the service providers like Telecom Service Providers (TSPs), Cable TV operators and content providers to launch various services in rural areas.
- The entire project is being **funded by the Universal Service Obligation Fund (USOF)**, which was set up for improving telecom services in rural and remote areas of the country.
- **Implementation:**
 - The project is a **Centre-State collaborative project**, with the states contributing **free Rights of Way for establishing the Optical Fibre Network**.
 - The **three-phase implementation** of the BharatNet project is as follows:
 - **First Phase:** Provide one lakh gram panchayats with broadband connectivity by laying underground **optic fibre cable (OFC)** lines by December 2017.
 - **Second Phase:** Provide connectivity to all the gram panchayats in the country using an optimal mix of underground fibre, fibre over power lines, radio and satellite media. It is to be completed by March 2019.
 - **Third Phase:** From 2019 to 2023, a state-of-the-art, future-proof network, including fibre between districts and blocks, with ring topology to provide redundancy would be created.

Dark fibre

- It is an **unused optical fibre** that has been laid but is not currently being used in fibre-optic communications. Since fibre-optic cable transmits information in the form of light pulses, a 'dark' cable refers to one through which light pulses are not being transmitted.
- Companies lay **extra optical fibres in order to avoid cost repetition** when more bandwidth is needed.
- It is also known as **unlit fibre**.
- The **participation of states became important in the second phase** which involved laying of OFC over electricity poles. This was a new element of the

BharatNet strategy as the mode of **connectivity by aerial OFC has several advantages**, including lower cost, speedier implementation, easy maintenance and utilization of existing power line infrastructure.

National Statistics Day

Why in News

This year, the **Statistics Day (29th June)** will be celebrated virtually, in view of the travel and safety advisories on account of the global **Covid-19 pandemic**.

Key Points

- Every year, the Statistics Day is celebrated on 29th June, the **birth anniversary of Prof. Prasanta Chandra Mahalanobis**, to recognise his invaluable contribution in establishing the **National Statistical System**.
- **Theme for 2020:**
 - **SDG-3** (Ensure healthy lives and promote well-being for all at all ages) and **SDG-5** (Achieve gender equality and empower all women and girls).
 - It carries forward the theme for 2019 which was '**Sustainable Development Goals (SDGs)**'.
- **New Releases and Launch:**
 - The updated version of the **Report on Sustainable Development Goals-National Indicator Framework (NIF) Progress Report 2020** will be released during the event.
 - The **Indian Statistical Services Cadre Management Portal** will also be launched.
 - The winners of **Prof. P C Mahalanobis National Award** and **Prof. P. V. Sukhatme Award 2020** will be declared during the event.
 - In 2019, the **Ministry of Statistics and Programme Implementation** instituted Prof. P C Mahalanobis National Award in official statistics for recognizing outstanding achievement of official statisticians in central government, state governments and institutions.
 - The Ministry also recognises the outstanding contribution for high-quality research work in the field of **applied and theoretical statistics benefitting the official statistical system** through the Prof. C R Rao and Prof. P V Sukhatme awards, awarded in alternate years.

Note:

Prasanta Chandra Mahalanobis (1893-1972)

- He is considered the **father of modern statistics in India**, founded the **Indian Statistical Institute (ISI)**, shaped the **Planning Commission** (which was **replaced by the NITI Aayog** on 1st January 2015) and pioneered methodologies for large-scale surveys.



- He introduced innovative techniques for conducting large-scale sample surveys, calculated acreages and crop yields, using the method of random sampling.
- He also devised a **statistical method called 'Fractile Graphical Analysis'**, used to **compare socio-economic conditions of varied groups**.

➤ **Timeline:**

- **1930:** Proposed the **Mahalanobis Distance** for the first time, which is a measure of comparison between two data sets.
 - The formula is used to find the distance between a point and a distribution, based on measurements in multiple dimensions. It is widely used in the field of cluster analysis and classification.
- **1932:** Founded the ISI in **Kolkata (formerly Calcutta)** which was declared as an **institute of national importance in 1959**.
- **1933:** Launched '**Sankhya: The Indian Journal Of Statistics**'.
- **1950:** Established the **National Sample Survey** and set up the **Central Statistical Organisation** to coordinate statistical activities.
- **1955:** Became a member of the Planning Commission and continued in that capacity till 1967.
 - He was instrumental in formulating **India's second five-year-plan (1956-1961)**, which laid the blueprint for **industrialisation and development in India**.
- **1968:** Honoured with the **Padma Vibhushan**.
 - He was also conferred a large number of awards by international organisations.

Navigating the New Normal: NITI Aayog

Why in News

The **National Institution for Transforming India (NITI Aayog)**, in partnership with several other stakeholders has launched a **behaviour change campaign** called '**Navigating the New Normal**', and its website.

**Key Points**

- The campaign has two parts:
 - **Covid-safe behavioural norms:** The first is a web portal, containing resources informed by **behavioural science and the use of nudge and social norms theory**, related to Covid-safe behavioural norms during the ongoing Unlock phase, and
 - **Wearing of Masks:** The second is a media campaign focused on the **wearing of masks**.
- The portal focuses on easy implementation of **four key behaviours** in the unlock phase: mask-wearing (essential focus), social distancing, Hand hygiene, and not spitting in public.
- **Citizens Role:** It aims at desired social behaviour in which the **enforcement burden shifts from the Government to the citizens**.
- **Sector Specific:** The website will have sector-specific collaterals and guidelines for health, nutrition, and public transport (in metro cities).
- **International Examples:** Japan and South Korea have made 'mask-wearing' a socially accepted norm.
- **Recent Examples/Initiatives in India:**
 - Recently, **Meghalaya** has issued a new health protocol which also lays emphasis on the **Behaviour Change Model for living with Covid-19**.

Note:



- The **Economic Survey 2019** too lays out an ambitious agenda for behavioural change by applying the principles of behavioural economics to several issues, including gender equality, a healthy and beautiful India, savings, tax compliance and credit quality.

Behavioural Science

- Behavioural science is a method of analysis that applies psychological insights into human behaviour to explain their decision-making
- In reality, decisions made by people often deviate from the classical principles. Drawing on the psychology of human behaviour, science provides insights to 'nudge' people towards desirable behaviour.

Nudge Theory

- According to Nudge theory, people, rather than being forced, can be **encouraged and influenced** to pursue or desist from certain actions through nudges.
- It does not talk about penalizing people if they do not behave in a particular manner, rather it encourages them to make desirable decisions.
- It believes that **Humans are not-so-rational and often need encouragement or intervention** — a nudge — to get going and do what's best for the country or society at large.
- American economist **Richard Thaler has won the 2017 Nobel Prize** in economics for his contributions to behavioural economics.

Limitations of Behavioural Science

- **Continuous Efforts vs One-time Action** - Give It Up campaign for LPG subsidy was a comparatively easy policy as it requires only a one-time action of affluent households, whereas task is very difficult in case of living with Covid-19, Beti Bachao, Beti Padao and SBM, as **it requires continuous effort** to dislodge mind-sets that prevailed for decades.
- **Specific Targeting is Required:** In order to make this campaign a success, focus must be on special areas of concern such as small factories and poor labourers, who comprise a large part of the vulnerable population. **Example:** Advertising campaigns such as the Beti Bachao Beti Padhao scheme did not target specific states where child sex ratios were already skewed (although it was effective in Haryana, which also has a very poor sex ratio).

- **Case of Confirmation Bias:** The applications of behavioural insights appeared to be a result of **confirmation bias** (to the extent that past policies were viewed with a behavioural lens).

R&D Portal for Mining: SATYABHAMA

Why in News

The Ministry of Mines has launched a portal "**SATYABHAMA (Science and Technology Yojana for Atmanirbhar Bharat in Mining Advancement)**" with an aim to promote research and development in the mining and minerals sector.

Key Points

- The Portal has been launched to increase efficiency and effectiveness of the **Science and Technology Programme Scheme**, under which the Ministry of Mines promotes research in applied geosciences, mineral exploration, mining and allied areas, mineral processing, optimum utilization and conservation of the mineral resources of the country.
- This portal will allow **online submission of project proposals** along with **monitoring** of the same and utilisation of funds.
- The portal has been designed, developed and implemented by the **National Informatics Centre (NIC)**.
- The portal is also integrated with **NGO Darpan Portal of NITI Aayog**.
 - NGO-DARPAN is a platform that provides space for interface between Non-Government organizations (NGOs)/Voluntary Organizations (VOs) in the country and key Government Ministries/Departments/Government Bodies.

First Bell: Kerala

Why in News

- Recently, the Kerala Government has started a **virtual class initiative** called '**First Bell**'.
- The **virtual classes** for state school students are being organised so that education is imparted amid Covid-19 crisis.

Note:

Key Points

- Classes are being streamed on **Kerala Infrastructure and Technology for Education (KITE) VICTERS channel** which is a free, public-run television channel available on cable networks, direct-to-home services and over the internet.
- The **modules** for different classes have been prepared by agencies under the General Education Department such as the State Council of Educational Research and Training, KITE, **Samagra Shiksha Kerala (SSK)**, and the State Institute of Educational Technology.
- **Challenges:** The classes were **started on trial mode from 1st June, 2020**. The online classes brought to focus the **digital divide** in the state.
 - Kerala has around 45 lakh students following state board syllabus. However, a survey revealed that **2.61 lakh students don't have access to TV or smartphone**, making them out of the network of online classes. Such students were in most destitute families mainly in remote villages and tribal areas.

YUKTI 2.0: Platform for Higher Education Institutes

Why in News

The **Ministry of Human Resource Development** has launched an initiative '**YUKTI 2.0**' to help systematically assimilate technologies having commercial potential and information related to incubated startups in higher education institutions.

- YUKTI 2.0 is an **extension of 'YUKTI (Young India combating Covid with Knowledge, Technology and Innovation) Portal'** which was launched to identify ideas relevant in **Covid pandemic**.

Key Points

- **Creation of Database:** The Ministry has invited students, faculty members, startups and other stakeholders of higher education institutions to register on the YUKTI portal and share their technologies and innovations.
- **Importance of Database:**
 - Database shared will be showcased to the investor community such as businessmen, farmers and industrialists i.e. students will be able to sell their ideas.

- It will help the government to identify bottlenecks and formulate appropriate policies to strengthen the innovation ecosystem in the country.
- Further, it will offer solutions to the problems faced by the country.
- **In Line with Atmanirbhar Bharat:** YUKTI 2.0 will also help in fostering the culture of innovation and entrepreneurship in academic institutions.
- **Other Initiatives to Boost Innovation:**
 - **Institutions of Eminence (IoE) Scheme** is a government's scheme to provide the regulatory architecture for setting up or upgrading of 20 Institutions (10 from public sector and 10 from the private sector) as world-class teaching and research institutions.
 - Various amendments have been made in the **Prime Minister's Research Fellowship Scheme** to boost research in the country.
 - Through the **Atal Innovation Mission**, the government has established Atal Tinkering Laboratories (ATLs) in schools across the country. The objective of this scheme is to foster curiosity, creativity and imagination in young minds.

Global Education Monitoring Report 2020: UNESCO

Why in News

Recently, the **Global Education Monitoring Report, 2020** was released by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)**.

- It highlighted that **Covid-19** has worsened the inequalities in education systems worldwide.

Key Points

- **Global Findings:**
 - During the height of school closures in April 2020, almost 91% of students around the world were out of school.
 - About 40% of low and lower middle income countries have not supported learners at risk of exclusion during this crisis, such as the poor, linguistic minorities and learners with disabilities.
 - Education systems responded with distance learning solutions, all of which offered less or more imperfect substitutes for classroom instruction.

Note:



- Poorer countries opted for radio and television (TV) lessons, 55% of low-income, 73% of lower-middle-income and 93% of upper-middle-income countries adopted for online learning platforms for primary and secondary education.
- Combating the situation, 17% of low and middle-income countries are planning to recruit more teachers, 22% to increase class time and 68% to introduce remedial classes when schools reopen.
- **India Specific Findings:**
 - India has used a mix of all three systems (radio, TV and online platforms) for educational continuity.
- **Challenges:**
 - **Governments increasingly rely on technology** but the **digital divide limits** the approach because not all students and teachers have access to an adequate internet connection, equipment, skills and working conditions to take advantage of available platforms.
- **School closures interrupt support mechanisms for various disadvantaged students.**
 - Resources for **blind and deaf students** may not be available outside schools.
 - **Children with learning disabilities** or those who are on the **autism** spectrum may struggle with independent work in front of a computer or the disruption of daily school routines.
 - **Poor students** who depend on school for free meals or even free sanitary napkins have suffered.
- Cancellation of examinations in many countries, including India, may result in scoring dependent on teachers' judgements of students instead, which could be affected by stereotypes of certain types of students.
- Higher drop-out rates are also a concern because, during an earlier **Ebola** epidemic in Africa, many older girls never returned to school once the crisis was over.



Note:

Economic Scenario

Highlights

- Co-operative Banks Under RBI Supervision
- Liquidity Measures Extended for Banks
- Increase in Money Supply
- Rise in Net Financial Assets
- Electricity (Amendment) Bill 2020
- Indian Gas Exchange: IGX
- World Investment Report: UNCTAD
- 4% Contraction in Growth: ADB
- New Purchasing Power Parities: ICP 2017
- Country of Origin Made Mandatory on GeM
- Initial Public Offer: LIC
- Turant Customs
- Interest Subvention Scheme for Shishu Loan Accounts
- PM Formalization of Micro Food Processing Enterprises Scheme
- Anti-dumping Duty on Steel Imports
- National Institute of Public Finance and Policy

Co-operative Banks Under RBI Supervision

Why In News

Recently, the Central government approved an **Ordinance** to bring **all urban and multi-state co-operative banks** under the direct supervision of the **Reserve Bank of India (RBI)**.

Key Points

➤ Reason:

- The decision comes after several instances of **fraud and serious financial irregularities**, including the major scam at the **Punjab and Maharashtra Co-operative (PMC) Bank** in 2019.
- Till now, all the co-operative banks **came under dual regulation of the RBI and the Registrar of Co-operative Societies**, resulting in regulatory and supervisory lapses at many of these banks.
 - The RBI had no powers to draw up an enforceable scheme of reconstruction of a co-operative bank.
 - However, from now onwards the urban and multi-state co-operative will come under the direct supervision of RBI.

➤ Benefit:

- The move will **empower the RBI to regulate** all urban and multi-state co-operative banks **on the lines of commercial banks**.
 - Earlier, the **Supreme Court pronounced** that co-operative banks come within the definition of 'Banks' under the Banking Regulation Act, 1949 for the purposes of the Sarfaesi Act, 2002.
 - The Sarfaesi Act is an effective tool for bad loans (**Non-Performing Assets**) recovery.
- It will also provide **more security to depositors**.
 - In India there are 1482 urban co-operatives banks and 58 multi-state co-operative banks.
 - These banks have a depositor base of 8.6 crore, who have saved a huge amount of Rs. 4.84 lakh crore with these banks.
- **Issues Involved:**
 - The **rural co-operative banks will continue to remain under the dual regulation** of RBI and Registrar of Co-operative Societies.
 - The rural co-operative banks face the same issue of misgovernance and fraud, like urban co-operatives banks.

Co-operative Banking

- A **Co-operative bank** is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank. It is **distinct from commercial banks**.

Note:



- They are broadly **classified into Urban and Rural co-operative banks** based on their region of operation.
- They are registered under the **Co-operative Societies Act of the State concerned** or under the **Multi State Co-operative Societies Act, 2002**.
- The Co-operative banks are also **governed by the**
 - Banking Regulations Act 1949.
 - Banking Laws (Co-operative Societies) Act, 1955.
- **Features of Co-operative Banks:**
 - **Customer Owned Entities:** Co-operative bank members are both customer and owner of the bank.
 - **Democratic Member Control:** These banks are owned and controlled by the members, who democratically elect a board of directors. Members usually have equal voting rights, according to the cooperative principle of “one person, one vote”.
 - **Profit Allocation:** A significant part of the yearly profit, benefits or surplus is usually allocated to constitute reserves and a part of this profit can also be distributed to the co-operative members, with legal and statutory limitations.
 - **Financial Inclusion:** They have played a significant role in the financial inclusion of unbanked rural masses. They provide cheap credit to masses in rural areas.

Liquidity Measures Extended for Banks

Why in News

Recently, the **Reserve Bank of India (RBI)** has extended the relaxation relating to **Marginal Standing Facility (MSF) scheme** till 30th September 2020.

- It has also extended the relaxation relating to maintenance of **Cash Reserve Ratio (CRR)** up to 25th September 2020.
- This was done in view of the hardships being faced by banks in terms of social distancing at work and consequent strain on reporting requirements.

Key Points

- **Marginal Standing Facility:**
 - The RBI, as a temporary measure, had increased the borrowing limit of scheduled banks under the

MSF scheme from 2% to 3% of their deposits with effect from 27th March 2020.

- Earlier, the above relaxation was granted till 30th June 2020.
- **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.
- Banks borrow from the RBI by pledging government securities at a rate higher than the **repo rate** under **Liquidity Adjustment Facility (LAF)**.
 - Repo rate is the rate at which the **RBI lends money to commercial banks** against the securities in the event of any shortfall of funds.
 - Loans provided at repo rate are provided for a specified period with an obligation that the bank will repurchase the securities back at a predetermined rate.
- **Differences between Repo Rate and MSF:**
 - Repo rate is the rate at which RBI lends money to **commercial banks**, while MSF is a rate at which RBI lends money to **scheduled banks**.
 - The repo rate is given to banks that are looking to meet their short-term financial needs. While, the MSF is meant for lending **overnight to banks**.
 - Lending at repo rates involves a **repurchase agreement** of securities. While it is not so in MSF.
 - Under MSF, banks are also allowed to use the securities that come under **Statutory Liquidity Ratio (SLR)** in the process of availing loans from RBI.
 - Under SLR, commercial **banks are mandated by RBI to maintain a stipulated proportion of their deposits in the form of liquid assets** like cash, gold and unencumbered (free from debt) securities.
- **Cash Reserve Ratio:**
 - On 27th March 2020 the minimum daily maintenance of the CRR was reduced from 90% of the prescribed CRR to 80%.
 - The above facility was available till 26th June 2020.
 - CRR is the amount of **liquid cash that banks have to maintain with the RBI**, as a percentage of their total deposits.

Note:

Scheduled Banks

- Any bank which is listed in the **2nd schedule of the RBI Act, 1934** is considered a scheduled bank.
- The banks included in this category **should fulfil two conditions:**
 - The paid up capital and collected fund of the bank should not be less than Rs 5 lakh.
 - Any activity of the bank shall not adversely affect the interests of the depositors.

Commercial Banks

- It refers to both scheduled and non-scheduled commercial banks which are regulated under the **Banking Regulation Act, 1949**.

Liquidity Adjustment Facility

- It 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.
- **Reverse repo rate** is the rate at which the RBI borrows money from commercial banks within the country.

Increase in Money Supply

According to recent **Reserve Bank of India (RBI)** data, the uncertainty caused by the **Covid-19 pandemic** has led to a surge in money supply.

Key Points

- **RBI Data:**
 - Since the end of March, 2020 **currency held by the public** increased by 8.2%.
 - **M3 money supply (refer explanation below)** increased by 6.7% in the first five months of 2020 compared with the same period last year. This is the highest growth in seven years.
 - **Currency in circulation**, which measures money with the public and in banks, has also surged.
 - However, the **savings and current account deposits decreased** by 8%. Gross capital formation also fell by 7% in the March, 2020 quarter.
- **Reason:**
 - The recent increase reflects **higher cash withdrawals** by depositors to meet needs during the lockdown period and also to safeguard themselves against salary cuts or job losses.

Impact:

- A rise in money supply usually is seen as a leading indicator of growth in consumption and business investments, but due to Covid-19 pandemic, the rise this time is unlikely to bolster either.
- People have curtailed their discretionary spending as they're not sure of their permanent income.
- Lenders too are unwilling to take risks as slowing discretionary spending slows demand for manufactured and industrial goods.

Money Supply:

- The **total stock of money in circulation among the public** at a particular point of time is called **money supply**.
 - It needs to be noted that total stock of money is different from total supply of money.
 - Supply of money is only that part of total stock of money which is held by the public at a particular point of time.
- The circulating money involves the **currency, printed notes, money in the deposit accounts** and in the **form of other liquid assets**.
- RBI publishes figures for four alternative measures of money supply, viz. M1, M2, M3 and M4.
 - **M1** = CU + DD
 - **M2** = M1 + Savings deposits with Post Office savings banks
 - **M3** = M1 + Net time deposits of commercial banks
 - **M4** = M3 + Total deposits with Post Office savings organisations (excluding National Savings Certificates)
- CU is **currency (notes plus coins)** held by the public and **DD is net demand deposits held by commercial banks**.
- The word 'net' implies that only deposits of the public held by the banks are to be included in money supply.
 - The interbank deposits, which a commercial bank holds in other commercial banks, are not to be regarded as part of money supply.
- M1 and M2 are known as **narrow money**. M3 and M4 are known as **broad money**.
- These gradations are in **decreasing order of liquidity**.
 - M1 is **most liquid and easiest for transactions** whereas M4 is least liquid of all.

Note:



Key Terms

- **Gross capital formation** refers to the 'aggregate of gross additions to fixed assets (that is fixed capital formation) plus change in stocks during the counting period.'
 - Fixed asset refers to the construction, machinery and equipment.
- **Currency in circulation** includes notes in circulation, rupee coins and small coins.
- **Currency with the public** is arrived at after deducting cash with banks from total currency in circulation.
 - M3 is the most commonly used measure of money supply. It is also known as **aggregate monetary resources**.

Rise in Net Financial Assets

Why in News

According to the Reserve Bank of India's recent **Quarterly Estimates of Households' Financial Assets and Liabilities**, net financial assets of Indian households rose to 7.7% of the **Gross Domestic Product (GDP)** in the Financial Year (FY) 2019-20.

Key Points

- **Net Financial Assets:**
 - **Net Financial Assets** are the difference between **Gross Financial Assets (GFA)** (deposits and investments) and **Financial Liabilities** (borrowings).
 - The net financial assets jumped from Rs. 13.73 lakh crore in FY 2018-19 (7.2% of GDP) to Rs. 15.62 lakh crore (7.7% of the GDP) in FY 2019-20.
 - The GFA rose marginally from Rs. 21.23 lakh crore in FY 2018-19 to Rs. 21.63 lakh crore in FY 2019-20.
 - The **financial liabilities witnessed a sharp decline** from Rs. 7.5 lakh crore to Rs. 6.01 lakh crore in the same period, thereby contributing to the rise in net financial assets.
 - In the first quarter of FY 2020-21, RBI also expects a **spike in net financial assets of households** on account of a **sharp drop in lockdown induced consumption**.

- Studies show households tend to save more during a slowdown and income uncertainty.
- **Decline in Borrowing:**
 - The rise in net financial assets was **accompanied by decline in bank borrowings by households**.
 - The decline in bank borrowing by households is a **reflection of slowdown in the economy and risk aversion of banks**.
- **Savings:**
 - In value terms GFA has increased marginally from Rs. 21.23 lakh crore in FY 2018-19 to Rs 21.63 lakh crore FY 2019-20.
 - The overall savings have not grown in proportion. However, the **household savings in bank deposits as a percent of GDP declined** to 3.4% in FY 2019-20 compared to FY 2018-19 where it stood at 3.8%.
 - The decline in household savings is because banks reduced their interest rates following sharp cut in repo rate by the RBI over the last 18 months.
 - A repo rate is the rate at which RBI lends to commercial banks.
 - Between January 2019 and March 2020, RBI cut the repo rate by 210 basis points from 6.5% to 4.4%. In May, 2020 RBI reduced it further to 4%.
 - **Small saving instruments** that continued to offer higher rates than bank deposits witnessed a higher deployment of household savings as their share as percent of GDP increased from 1.1% to 1.3% in the same period.
 - Savings into life insurance funds and mutual funds as a percent of GDP also declined from 2.2% in FY 2018-19 to 1.9% in FY 2019-20.
- **Issues Involved:**
 - There is a possibility that households may use their savings due to lags in the pickup of economic activity post Covid-19 lockdown.
 - This may cause the financial surplus (savings) of households to decrease in coming days.
 - This may decrease the investment, which may further add to the economic slowdown.

Note:

Electricity (Amendment) Bill 2020

Why in News

Recently, the Central government has introduced the **Electricity (Amendment) Bill 2020** to amend various provisions in the Electricity Act 2003.

Key Points

➤ Rationale Behind Amendment:

- To address critical issues weakening the commercial and investment activities in the electricity sector.
 - The current challenges plaguing the Indian power sector is derived from negligence in addressing the structural issues.
 - These include operational and financial inefficiencies of power generation, transmission and distribution utilities, access and quality of power supply, political interference, lack of private investments, inadequate public infrastructure and lack of consumer participation.
- Bringing transparency and accountability to protect the interest of consumers and ensuring healthy growth of the power sector.

➤ Key Objectives:

- Ensure consumer centricity,
- Promote Ease of Doing Business,
- Enhance sustainability of the power sector,
- Promote green power,

➤ Key Amendments:

- **National Selection Committee:** Instead of the separate Selection Committee (for appointment of Chairperson and members of State Electricity Regulatory Commissions-SERCs), there is a proposal to set up a National Selection Committee.
 - However, the Central Government is also considering to continue with the existing separate Selection Committees for each state – but make them Standing Selection Committees so that there is no need for constituting them afresh every time a vacancy occurs.
 - The only difference is that it will now be proposed to be presided by the Chief Justice of the High Court of the state.

- **Introduction of Direct Benefit Transfer:** Direct Benefit Transfer will be beneficial for both the State Governments and as well as Distribution Companies.
 - It will be beneficial for the State Government because it will ensure that the subsidy reaches the people who are actually entitled and the State Government gets clear accounts of the amount given as subsidy.
 - It will benefit the distribution company by making sure that the subsidies due are received as per the number of beneficiaries.
- **National Renewable Energy Policy:** India is a signatory to the **Paris Climate Agreement**. It is therefore proposed to have a separate policy for the development and promotion of generation of electricity from renewable sources of energy.
 - The policy prescribes a minimum percentage of purchase of electricity from renewable sources of production. It seeks to give special attention to hydro power.
- **Sustainability:**
 - **Cost Reflective Tariff:** There had been the issue of lazy attempts from the commissions in adopting the tariffs determined, causing issues of cost escalation.
 - To address this problem, the Amendment has prescribed a period of 60 days to adopt the determined tariffs. Failing such a timeline of 60 days, the tariff would be deemed to be accepted.
 - **Payment Security:** It is proposed to empower Load Dispatch Centres to oversee the establishment of adequate payment security mechanisms before dispatch of electricity, as per contracts.
 - Late payment of dues of generating and transmission companies have reached unsustainable levels. This impairs the finances of the Gencos and Transcos and also increases the **Non Performing Assets** of the Banks.
- **Ease of Doing Business:**
 - **Establishment of Electricity Contract Enforcement Authority (ECEA):** It is an Authority headed by a retired Judge of the High Court with powers to execute their orders as decree of a civil court.
 - The Authority will enforce performance of contracts related to purchase or sale or

Note:

transmission of power between a generating company, distribution licensee or transmission licensee.

- Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs) do not have powers to execute their orders as decree of a civil court.
 - **Cross Subsidy:** The Bill provides for the SERCs to reduce cross subsidies as per the provisions of the Tariff Policy.
- **Miscellaneous:**
 - **Strengthening of the Appellate Tribunal (APTEL):** It is proposed to increase the strength of APTEL to at least seven to facilitate quick disposal of cases.
 - To be able to effectively enforce its orders, it is also proposed to give it the powers of the High Court under the provisions of the Contempt of Courts Act.
 - **Penalties:** In order to ensure compliance of the provisions of the Electricity Act and orders of the Commission, section 142 and section 146 of the Electricity Act are proposed to be amended to provide for higher penalties.
 - **Cross Border Trade in Electricity:** Provisions have been added to facilitate and develop trade in electricity with other countries.
 - **Distribution sub-licensees:** To improve quality of supply, an option is proposed to be provided to Discoms to authorise another person as a sub-license to supply electricity in any particular part of its area, with the permission of the State Electricity Regulatory Commission.
- **Issues Involved:**
 - Cost reflective tariff has been a concern for states like Telangana which provide free electricity to the farming sector.
 - Formation of ECEA has also been criticized as a move towards centralization of power.
 - Recognition of franchisees and sub- licensees might open the sector to private players.

Indian Gas Exchange: IGX

Why in News

Recently, India launched its **first gas exchange** which has been named as the **Indian Gas Exchange (IGX)**.

Key Points

- **IGX:**
 - The IGX is a **digital trading platform** that will allow buyers and sellers of natural gas to trade both in the **spot market and in the forward market for imported natural gas** across three hubs — Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh.
 - The **spot market** is a public financial market in which financial instruments or commodities are traded for immediate delivery.
 - A **forward market** is an over-the-counter marketplace that sets the price of a financial instrument or asset for future delivery.
 - However, domestically produced natural gas will not be sold on the exchange.
 - The price of domestically produced natural gas is decided by the government.
- **Benefits:**
 - IGX is expected to facilitate transparent price discovery in natural gas, and facilitate the growth of the share of natural gas in India's energy basket.
 - It removes the requirement for buyers and sellers to find each other to ensure a fair price deal.
 - Shorter and longer contracts period will allow buyers and sellers greater flexibility.
 - The exchange allows much shorter contracts. i.e. for delivery on the next day, and up to a month. Ordinarily contracts for natural gas supply are as long as six months up to a year.
- **India's Import Dependence:**
 - The natural gas imports are set to become a larger proportion of domestic gas consumption as India moves to **increase the proportion of natural gas** in the energy basket from 6.2% in 2018 to 15% by 2030.
 - Also, India's **domestic production of gas has been falling** over the past two fiscals as current sources of natural gas have become less productive.
 - Domestically produced natural gas **currently accounts for less than half of India's natural gas consumption**. While imported natural gas accounts for the other half.
- **Regulations:**
 - Currently, the pipeline infrastructure necessary for the transportation of natural gas is controlled by the companies that own the network.

Note:

- State-owned **Gas Authority of India Limited (GAIL)** owns and operates India's largest gas pipeline network, spanning over 12,000 km.
- **Government Initiatives:**
 - The Indian gas market has multiple price bands for assets including **pre-NELP (New Exploration Licensing Policy), NELP**, High Temperature and High Pressure (HTHP) and Deepwater and Ultra Deep Water blocks.
 - India has **long-term gas contracts with many countries** like Qatar, Australia, Russia and the US, and has **made investments abroad in strategic assets** in Mozambique, Russia and other countries.
 - India has taken **various ongoing projects** to strengthen the gas infrastructure in the country like **Urja Ganga, Eastern India grid, Indradhanush project** in the North-east, **Dhamra-Dahej pipeline**, coal gasification and the Coal Bed Methane (CBM) policy.

World Investment Report: UNCTAD

Why in News

Recently, the **United Nations Conference on Trade and Development (UNCTAD)** released the **World Investment Report 2020**.

- The World Investment Report focuses on **trends in Foreign Direct Investment (FDI)** worldwide, at the regional and country levels and emerging measures to improve its contribution to development.

Key Points

- **Global Scenario:**
 - According to the report, global FDI flows are forecast **to decrease by up to 40% in 2020**, from their 2019 value of \$1.54 trillion.
 - This would **bring global FDI below \$1 trillion for the first time since 2005**. The FDI is projected to decrease by a further 5% to 10% in 2021.
 - **Developing economies are expected to see the biggest fall** in FDI because they rely more on investment in Global Value Chain (GVC) based industries, which have been severely hit due to **Covid-19 pandemic**.

- They have **also not been able to put in place the same economic support measures as developed economies**.
- However, the investment flows are **expected to slowly recover by the start of 2022**.
- Global FDI flows rose modestly in 2019, following the sizable declines registered in 2017 and 2018.
 - The rise in FDI was due to the waning of impact of the 2017 tax reforms in the United States.
- **India's Investment Scenario:**
 - India jumped from **12th position in 2018 to 9th position in 2019** among the world's largest FDI recipients.
 - In 2019, the FDI inflows into India jumped over 20% to \$51 billion.
 - The report also observed that FDI into **India may decline sharply in 2020** because of the impact of the **Covid-19 pandemic** and the consequent **lockdown** measures, supply chain disruptions and economic slowdown.
 - In India the number of greenfield investment announcements declined by 4% in the first quarter of financial year 2020-21. The Mergers and acquisitions (M&A) also contracted by 58%.
 - A greenfield investment is a type of FDI in which a parent company creates a subsidiary in a different country, building its operations from the ground up.
 - However, the report mentioned that **India's large market will continue to attract market-seeking investments to the country**.

UNCTAD

- The United Nations Conference on Trade and Development (UNCTAD) was established in 1964 to promote development-friendly integration of developing countries into the world economy.
- UNCTAD is a **permanent intergovernmental body headquartered at Geneva in Switzerland**.
- Some of the **reports** published by it are:
 - Trade and Development Report
 - World Investment Report
 - The Least Developed Countries Report
 - Information and Economy Report
 - Technology and Innovation Report
 - Commodities and Development Report

Note:



- India's professional services and the digital economy could see a faster rebound as global **venture capital firms and technology companies continue to show interest in India's market through acquisitions.**
- Investors concluded deals worth over \$650 million in the first quarter of 2020, mostly in the digital sector.

4% Contraction in Growth: ADB

Why in News

According to the **Asian Development Outlook (ADO)** released by the **Asian Development Bank (ADB)**, the Indian economy is expected to contract by 4% during the current financial year (2020-21).

- Earlier, in April 2020, ADB had projected India's economy to grow at 4% in 2020-21.
- The ADO analyzes economic and development issues in developing countries in Asia. This includes forecasting the inflation and growth rates of countries throughout the region, including China and India.

Key Points

- **Reasons for Contraction:**
 - Global health emergency created by the **Covid-19 pandemic.**
 - After the introduction of lockdowns in late March 2020, economic activity in South Asia came to standstill.
 - The lockdown also disrupted the supply chain.
 - The **Gross Domestic Product (GDP)** slowed to 3.1% in the last quarter (Jan-March) of the financial year 2019-20. It is the slowest since early 2003.
 - The overall economic growth slowed to 4.2% in 2019-20 as both exports and investment started to contract.
 - The **Purchasing Managers' Index** fell to all-time lows in April 2020.

THE PROJECTIONS

for India's economy during 2020-21 (%), unless specified

OECD	-3.7 to -7.3
Bernstein	-7.0
Goldman Sachs (for '20)	-5.0
Nomura	-5.0
Fitch Ratings	-5.0
ICRA	-5.0
CRISIL	-5.0
India Ratings	-2.1 to 1
CII	-0.9 to 1
Moody's Investors Service	-4.0
World Bank	-3.2
IMF	1.9
Asian Development Bank	-4.0

Source: Respective entities

- Migrant workers have gone home to their villages after losing their jobs in the cities and will be slow to return to cities to work again.

➤ Growth Projections for Developing Asia:

- Developing Asia refers to a group of over 40 countries, including India, that are members of the ADB. Growth of 0.1% is expected.
 - This is down from the 2.2% forecast in April 2020 and would be the slowest growth for the region since 1961.
 - However, China is expected to record a positive growth of 1.8% in 2020-21.

➤ No V-shaped Recovery:

- Even as lockdowns are slowly eased and select economic activities restart, economies in Asia and the Pacific will continue to feel the blow of the Covid-19 pandemic this year.
- Despite a higher growth outlook for the region in 2020-21, there will not be a **V-shaped recovery.**

➤ Issues Involved:

- The Covid-19 pandemic may see multiple waves of outbreaks in the coming period. This may lead to an increase in sovereign debt and worse to a financial crisis.
- There is also the risk of renewed escalation in **trade tensions** between the United States and China.

Asian Development Bank

- ADB is a regional development bank established on 19th December 1966.
- It has 68 members. India is a **founding member.**
- As of 31 December 2019, ADB's five largest shareholders are **Japan and the United States (each with 15.6% of total shares), the People's Republic of China (6.4%), India (6.3%), and Australia (5.8%).**
- It aims to promote social and economic development in Asia and the Pacific.
- It is headquartered in **Manila, Philippines.**

New Purchasing Power Parities: ICP 2017

Why in News

Recently, the **World Bank** has released new **Purchasing Power Parities (PPPs)** for the **reference year 2017**, under

Note:



drishti

International Comparison Program (ICP) that adjusts for differences in the cost of living across economies of the world.

International Comparison Program

- It is the **largest worldwide data-collection initiative**, under the guidance of the **United Nations Statistical Commission (UNSC)**.
- The **main objectives** of the ICP are to:
 - Produce PPPs and comparable **Price Level Indices (PLIs)** for participating economies.
 - Convert volume and per capita measures of **Gross Domestic Product (GDP)** and its expenditure components into a common currency using PPPs.

Purchasing Power Parities

- It is the rate at which the currency of one country would have to be converted into that of another country to buy the same amount of goods and services in each country.
- The PPP exchange rates are constructed to ensure that the same quantity of goods and services are priced equivalently across countries.
- PPP exchange rates are used to convert the national **poverty** lines from some of the poorest countries in the world to determine the **Global Poverty Line**.
 - For **poverty estimation in India**, the **Tendulkar committee** computed **poverty lines** for 2004-05 at a level that was equivalent, in PPP terms, to Rs 33 per day.
 - **Poverty Line:** The conventional approach to measuring poverty is to specify a minimum expenditure (or income) required to purchase a basket of goods and services necessary to satisfy basic human needs and this minimum expenditure is called the poverty line.

Price Level Indices

- It is the ratio of a PPP to its corresponding market exchange rate.
- It is used to compare the price levels of economies.

Gross Domestic Product

- It is the single standard indicator used across the globe to indicate the health of a nation's economy.
- It is the sum of private consumption, gross investment in the economy, government investment, government spending and net foreign trade (difference between exports and imports).

Key Points

- **India is a co-chair of the ICP Governing Board** along with Statistics Austria **for the ICP 2017 cycle**.
 - India has participated in almost all ICP rounds **since its inception in 1970**.
 - The **Ministry of Statistics and Programme Implementation** is the **National Implementing Agency (NIA)** for India, which has the **responsibility of the planning, coordinating and implementing** national ICP activities.
- The ICP 2017 results, revised results for 2011 and estimates of annual PPPs for the period 2012-2016 are **available on the ICP website and the World Bank's Databank and Data Catalog**.
- The **next ICP comparison** will be conducted for the **reference year 2021**.
- **Global Status:**
 - **Values:**
 - Globally, **176 economies participated** in the 2017 cycle of ICP.
 - The PPPs of Indian Rupee per USD at the GDP level is now 20.65 in 2017 from 15.55 in 2011.
 - The Exchange Rate of USD to Indian Rupee is 65.12 from 46.67 during the same period.
 - The PLI of India is 47.55 in 2017 from 42.99 in 2011.
 - **Rankings:**
 - In 2017, India retained and consolidated its global position, as the third-largest economy and accounted for 6.7% of global GDP in terms of PPPs.
 - China was in first position with 16.4% and the USA at the second position with 16.3%.
 - India is also the third-largest economy in terms of its PPP-based share in Global Actual Individual Consumption (AIC) and **Global Gross Fixed Capital Formation (GCF)**.
 - **Regional Status (Asia-Pacific):**
 - Regionally, **22 economies participated** in the Asia-Pacific.
 - In 2017, India retained its regional position as the second-largest economy and accounted for 20.83% of Regional GDP in terms of PPPs.
 - China stands first with 50.76% and Indonesia is in third position with 7.49%.

Note:

Actual Individual Consumption

- It consists of goods and services actually consumed by individuals, irrespective of whether these goods and services are purchased and paid for by households, by government or by non-profit organisations.
- India is also the second-largest economy in terms of its PPP-based share in Regional AIC and Regional GFCF.

Country of Origin Made Mandatory on GeM

Why in News

Recently, **Government e-Marketplace (GeM)**, a Special Purpose Vehicle under the **Ministry of Commerce and Industry**, has made it mandatory for sellers to enter the **Country of Origin** while registering all new products on GeM.

- GeM has taken this significant step to promote **Make in India** and **Atmanirbhar Bharat** initiatives.

Key Points

- **Provisions:**
 - **Indication of the Local Content:** GeM has enabled a provision for the indication of the percentage of local content in products.
 - Now, the **Country of Origin** as well as the **local content percentage** is visible in the marketplace for all items.
 - **Make in India Filter:** This new filter has been enabled on the portal so that the **buyers** can choose to buy only those products that meet the minimum 50% local content criteria.
 - They can also switch on a new Make in India filter to see products that match their preferences on local content.
- **Significance of GeM:**
 - **Promotion of the 'Make in India' Initiative:** Since its inception, GeM has continuously worked towards promotion of the **'Make in India'** initiative.
 - **Entry of Small Local Sellers:** The Marketplace has facilitated entry of small local sellers in public procurement, while implementing 'Make in India' and **MSME** purchase preference policies of the Government in the true sense.

Government e-Marketplace

- GeM is a **one-stop National Public Procurement Portal to facilitate online procurement** of common use Goods and Services required by various Central and State Government Departments/Organizations/Public Sector Undertakings (PSUs).
- It was launched in **2016 to bring transparency and efficiency** in the government buying process.
- It operates under the **Ministry of Commerce and Industry**.
- The procurement of goods and services by Ministries and the **Central Public Sector Enterprises (CPSEs)** is mandatory for goods and services available on GeM.
- It also provides the **tools of e-bidding and reverse e-auction to facilitate** the government users achieve the best value for their money.
- At present, GeM has more than 15 lakh products, around 20,000 services and more than 40,000 government buyer organizations.

- **Transparent and Cost-effective Procurement:** GeM is enabling quick, efficient, transparent and cost-effective procurement, especially when government organizations require products and services urgently to fight against the Covid-19 pandemic.
- **Promotion of Atmanirbhar Bharat:** GeM has been promoting the Atmanirbhar Bharat policy, introduced in the wake of the **Covid-19 pandemic**, meant to encourage self-reliance and boost small Indian manufacturers.

Initial Public Offer: LIC

Why in News

The Central government has started the process to launch the Initial Public Offer (IPO) of Life Insurance Corporation (LIC).

- LIC is **fully owned by the government**. It was set up in 1956.
- It has the **biggest share in India's insurance business**.

Key Points

- **LIC IPO:**
 - The IPO is **expected to be the biggest in the Indian capital markets** given the size and scale of LIC.

Note:

Initial Public Offer

- IPO is the selling of securities to the public in the **primary market (a type of capital market)**.
 - **Primary market** deals with new securities being issued for the first time. It is also known as the new issues market.
 - It is **different from the secondary market** where existing securities are bought and sold. It is also known as the stock market or stock exchange.
- Under IPO, an unlisted company makes **either a fresh issue of securities** or an **offer for sale of its existing securities** or **both for the first time to the public**.
 - Through an IPO, an unlisted company can get listed on the stock exchange.
- It is generally used by new and medium-sized firms that are looking for funds to grow and expand their business.
 - The LIC's total assets had touched an all-time high of Rs. 31.11 lakh crore in 2018-19.
 - The government is seeking some exemption related to the LIC IPO from the **Securities and Exchange Board of India (SEBI)**.
- **Benefit:**
 - It will help the government **to meet its rising fiscal deficit**.
 - The rating agency S&P has estimated India's government (centre and states) fiscal deficit to rise to 11% of GDP in FY21 from 7.8% in FY20.
 - An IPO **will bring transparency into affairs of LIC** since it will be required to inform its value and other market-related developments on time to the stock exchanges.
 - It also **gives an opportunity for retail investors to participate** in the wealth creation of LIC.
 - Listing of companies on stock exchanges **disciplines the company** since it comes under greater scrutiny. It also **provides access to financial markets**, thus raising the company's value.
- **Issues Involved:**
 - LIC is currently dealing with huge non-performing assets.
- **Background:**
 - In the Budget 2020-21, the government had **announced plans for IPO of LIC** and a proposal to **sell the government's equity in the stressed IDBI**

Bank to private, retail and institutional investors through the stock exchange.

- LIC is also a majority shareholder in IDBI Bank.
- The government expects to raise Rs. 90,000 crore through stake sale in LIC and IDBI Bank, and another Rs. 1.2 lakh crore through other **disinvestments**.
- Earlier, in 2017, the government had listed the shares of General Insurance Corporation and New India Assurance through IPOs.

Turant Customs

Why in News

The **Central Board of Indirect Taxes and Customs (CBIC)** unveiled a Secure QR coded Shipping Bill that would be electronically sent to exporters.

- This will enable end to end paperless exports under **'Turant Customs'**.

Key Points

- This step has been taken by CBIC for fulfilling its commitment to a **Faceless, Paperless, and Contactless Customs** under the umbrella of its **"Turant Customs"** programme.
 - The launch of paperless documentation on exports is a sequel to a similar initiative that was begun for imports w.e.f. 15th April 2020.
- **Benefits:** These reforms are based on enhanced use of digital technology to reduce the time and costs for the importers, exporters and other stakeholders, thereby improving India's ranking in the **World Bank's "Trading Across Borders" parameter of its Ease of Doing Business (EoDB) index**.
 - India improved to rank 80 on **"Trading Across Borders"** parameter as compared with 146 in 2018.
 - This was possible due to reforms like **Single Window Interface for Facilitating Trade, e-Sanchit (e-Storage and computerised handling of indirect tax documents)**, and **Direct Port Delivery**.
- **Other Recent Initiatives:** Ministry of Finance (Central Board of Indirect Taxes and Customs) also launched two Information Technology (IT) initiatives - **ICEDASH and ATITHI**.
 - **ICEDASH** – For improved monitoring of customs clearance of imported goods.
 - **ATITHI** – For facilitating arriving international passengers.

Note:



Central Board of Indirect Taxes and Customs

- CBIC is a part of the Department of Revenue under the Ministry of Finance.
- The Central Board of Excise and Customs (CBEC) was **renamed as the Central Board of Indirect Taxes and Customs (CBIC) in 2018** after the roll out of **Goods and Services Tax (GST)**.
- CBIC deals with the tasks of formulation of policy concerning levy and collection of Customs, Central Excise duties, Central Goods & Services Tax and Integrated GST, prevention of smuggling.

Interest Subvention Scheme for Shishu Loan Accounts

Why in News

The government has approved a **2% interest subsidy scheme for Shishu loan account holders** under the **Pradhan Mantri Mudra Yojana (PMMY)**.

- The Scheme will help small businesses tide over difficulties created by the lockdown following **Covid-19 outbreak**.

Pradhan Mantri Mudra Yojana

- PMMY is a scheme launched by the government in **2015** for providing **loans up to Rs. 10 lakh to the non-corporate, non-farm small/micro enterprises**.
- **MUDRA**, which stands for **Micro Units Development & Refinance Agency Ltd.**, is a financial institution set up by the Government to provide funding to the non-corporate small business sector through various last mile financial institutions like Banks, **Non-Banking Financial Companies (NBFCs)** and Micro Finance Institutions (MFIs).
 - MUDRA does not lend directly to micro entrepreneurs / individuals.
- Under the aegis of PMMY, **MUDRA has created three products** i.e. 'Shishu', 'Kishore' and 'Tarun' as per the stage of growth and funding needs of the beneficiary micro unit.
 - **Shishu**: Covering loans upto Rs. 50,000/-
 - **Kishore**: Covering loans above Rs. 50,000/- and upto Rs. 5 lakh
 - **Tarun**: Covering loans above Rs. 5 lakh and upto Rs. 10 lakh
- Loans under this scheme are **collateral free loans**.

Key Points

- **In Line with Atmanirbhar Abhiyan:**
 - The **2% Interest Subsidy Scheme** is in line with the measures announced relating to Micro, Small and Medium Enterprises (MSMEs) under the **Atmanirbhar Bharat Abhiyan**.
- **Eligibility:**
 - The scheme will be extended to loans which meet the following criteria: **outstanding as on 31st March, 2020; and not in Non-Performing Asset (NPA) category**, as per the **Reserve Bank of India (RBI)** guidelines on 31st March 2020 and during the period of operation of the Scheme.
 - The interest subsidy would be payable for the months in which the accounts are not in NPA category including for the months that the account becomes a performing asset again, after turning NPA.
 - The scheme will incentivize people who will make regular repayments of loans.
- **Implementation:**
 - The Scheme will be implemented through the **Small Industries Development Bank of India (SIDBI)** and will be in **operation for 12 months**.
 - SIDBI was set up on 2nd April, 1990 under an Act of the Parliament.
 - It acts as the Principal Financial Institution for Promotion, Financing and Development of the Micro, Small and Medium Enterprise (MSME) sector as well as for coordination of functions of institutions engaged in similar activities.
 - For borrowers, who have been allowed a **moratorium** by their respective lenders, as permitted by RBI under the '**Covid-19 Regulatory Package**', the Scheme would commence post completion of the moratorium period till a period of 12 months i.e. from 1st September 2020 till 31st August, 2021. For other borrowers, the scheme would commence w.e.f. 1st June, 2020 and will last till 31st May, 2021.
- **Cost to the Government:** The estimated cost of the Scheme would be approximately **Rs. 1,542 crore**.
- **Background:**
 - The ongoing Covid-19 crisis and the consequent lockdown has led to severe disruption of business for micro and small enterprises which are funded through Shishu Mudra loans.
 - Small businesses typically function on thin operating margins, and the current lockdown has had a

Note:

severe impact on their cash flows, jeopardizing their ability to service their loans.

- This could lead to default in repayment and have a resultant impact on access to institutional credit in future.
- As on 31st March 2020, about 9.37 crore loan accounts under the Shishu category of PMMY with a total loan amount of about Rs 1.62 Lakh crore, were outstanding.

PM Formalization of Micro Food Processing Enterprises Scheme

Why in News

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

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

Key Points

- **Features:**
 - **One District One Product (ODOP) Approach:**
 - The States would identify food products for districts keeping in view the existing clusters and availability of raw material.
 - The ODOP could be perishable produce based or cereal-based or a food item widely produced in an area. **E.g.** mango, potato, pickle, millet-based products, fisheries, poultry, etc.
 - **Other Focus Areas:**
 - Waste to wealth products, minor forest products and **Aspirational Districts**.
 - **Capacity building and research:** Academic and research institutions under MoFPI along with State Level Technical Institutions would be provided support for training of units, product development, appropriate packaging and machinery for micro-units.
 - **Financial Support:**
 - Existing individual micro food processing units desirous of upgrading their units can avail credit-linked capital subsidy at 35% of the eligible

project cost with a maximum ceiling of Rs.10 lakh per unit.

- Support would be provided through credit-linked grants at 35% for development of common infrastructure including common processing facility, lab, warehouse, etc. through FPOs/SHGs/cooperatives or state-owned agencies or private enterprise.
- A seed capital (initial funding) of Rs. 40,000-per **Self Help Group (SHG)** member would be provided for working capital and purchase of small tools.
- **Duration:** It will be implemented over a period of **five years from 2020-21 to 2024-25**.
- **Funding Details:**
 - It is a **centrally sponsored scheme** with an **outlay of Rs.10,000 crore**.
 - The expenditure under the scheme would be shared in **60:40 ratio between Central and State Governments**, in **90:10 ratio with North Eastern and the Himalayan States**, **60:40 ratio with UTs with the legislature** and **100% by Centre for other UTs**.
- **Need:**
 - The unorganized food processing sector comprising nearly 25 lakh units contributes to **74% of employment** in the **food processing sector**.
 - Nearly **66% of these units are located in rural areas** and about **80% of them are family-based enterprises** supporting livelihood of rural households and minimizing their migration to urban areas. These units largely fall within the category of micro-enterprises.
 - The unorganised food processing sector faces a number of challenges which limit their performance and their growth. The **challenges** include lack of access to modern technology & equipment, training, access institutional credit, lack of basic awareness on quality control of products; and lack of branding & marketing skills etc.

Anti-dumping Duty on Steel Imports

Why in News

Recently, India imposed anti-dumping duty on imports of certain types of **steel products** from China, Vietnam and South Korea.

Note:



Key Points

- **Dumping:**
 - In international trade practise, dumping happens when a country or a firm **exports an item at a price lower than the price of that product in its domestic market.**
 - Dumping **impacts the price of that product in the importing country**, hitting margins and profits of local manufacturing firms.
 - **Anti-dumping duty is imposed to rectify the situation** arising out of the dumping of goods and its trade distortive effect.
- **Imposition of Anti-dumping Duty:**
 - The anti-dumping duty was imposed after the **Directorate General of Trade Remedies (DGTR)**, in its probe, found that the steel products imported in India from these three countries were below its associated normal value, which resulted in dumping.
 - The duty has been **imposed for five years** with a view to guard domestic manufacturers from cheap imports from these countries.
 - Earlier, a provisional duty was imposed in October 2019 on these products from these three countries, which expired in April 2020.
 - According to global trade norms, including the **World Trade Organization (WTO)** regime, a country is allowed to impose tariffs on such dumped products **to provide a level-playing field to domestic manufacturers.**
 - The duty is imposed only after a thorough investigation by a quasi-judicial body, such as DGTR, in India.
- **Different from Countervailing Duty:**
 - Anti-dumping duty is different from countervailing duty. The latter is imposed in order **to counter the negative impact of import subsidies** to protect domestic producers.
 - Countervailing Duties (CVDs) are tariffs levied on imported goods to offset subsidies made to producers of these goods in the exporting country.

- CVDs are meant to level the playing field between domestic producers of a product and foreign producers of the same product who can afford to sell it at a lower price because of the subsidy they receive from their government.

Directorate General of Trade Remedies

- It is the **apex national authority** under the **Ministry of Commerce and Industry** for administering all trade remedial measures including anti-dumping, countervailing duties and safeguard measures.
- It provides trade defence support to the domestic industry and exporters in dealing with increasing instances of trade remedy investigations instituted against them by other countries.

National Institute of Public Finance and Policy

- It is **India's premier economic think tank** and a centre for research in public economics and policies.
- **Formation:** NIPFP is an **autonomous body** set up jointly by the Ministry of Finance, the erstwhile Planning Commission, and several state governments. It was founded in **1976**. It is registered under the Societies Registration Act, 1860.
- **Governing Body:**
 - It includes the Revenue Secretary, Economic Affairs Secretary and the Chief Economic Advisor from the Union Finance Ministry and representatives from NITI Aayog, RBI and three state governments.
 - It also includes three distinguished economists, members of sponsoring agencies and other invitees.
 - It is involved in **appointing the Chairman and the Director.**
 - The usual **tenure of a chairman is four years**, which can be extended.
- **Location:** New Delhi.
- **Urjit Patel**, former **Reserve Bank of India** (RBI) Governor, has been appointed as its chairman recently.



Note:

International Relations

Highlights

- AIB Loan for India
- Iran Blocking Sites Access: IAEA
- China to Join UN Arms Trade Treaty
- USA Sanctions Against the International Criminal Court
- Russia-India-China Grouping
- Financial Action Task Force
- Victory Day Parade
- Tariff Exemption on Bangladesh Exports: China
- Senkaku Islands
- 70 Years of Korean War
- UN 75 Declaration
- Kholongchhu Hydropower Project
- USA Extends Ban on Work Visas
- 36th ASEAN Summit

AIIB Loan for India

Why in News

Recently, the **Asian Infrastructure Investment Bank (AIIB)** has approved a **\$750 million loan** to India to strengthen the country's battle against the adverse impact of **Covid-19 pandemic** on poor and vulnerable households.

- Earlier, it had approved **\$500 million for 'Covid-19 Emergency Response and Health Systems Preparedness Project'** initiated by India.

Key Points

- **\$750 million loan:** It is co-financed by the AIIB and the **Asian Development Bank**.
- **Aim:**
 - It aims to ensure **economic resilience** to prevent long-term damage to productive capacity, including human capital.
 - The support will go towards **bolstering economic aid for businesses**, including for the **informal sector**, **expanding social safety nets** for the needy, and strengthening the **country's health care systems**.
- **Loan by AIIB to India:**
 - AIIB's sovereign loans to India amounts to **\$3.06 billion**.
 - The current loan will be the **second** for India under **AIIB's Covid-19 Crisis Recovery Facility**.
 - The Crisis Recovery Facility has been formed in response to urgent economic, financial and

public health pressures and to support a quick recovery after the current crisis (Covid-19).

- It will offer **\$5-10 billion of financing** to public and private entities **over 18 months** i.e. from April 2020 to October 2021.
- The funding is done either with the **World Bank or ADB**.

➤ Loan by ADB to India:

- It has assured Indian government of \$2.2 billion support to fight against the Covid-19 pandemic.
- Earlier, it had provided a **\$1.5 billion loan** to India.

Asian Infrastructure Investment Bank

- The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia.
- It is established by the **AIIB Articles of Agreement (entered into force 25th December 2015)** which is a multilateral treaty.
- **Headquarters: Beijing, China**
- **Members:**
 - 102 members.
 - **India joined AIIB in 2016** as a regional member of the Bank.
 - Further, fourteen of the **G-20 nations** are AIIB members including France, Germany, Italy and the United Kingdom.
- China is the largest shareholder in AIIB with a 26.06% voting power, followed by India with a 7.62% voting power.

Note:



Iran Blocking Sites Access: IAEA

Why in News

In two unreleased reports, the **Vienna-based International Atomic Energy Agency (IAEA)** has expressed **serious concerns** after **Iran has been blocking inspections of two suspect locations** for more than four months.

Key Points

- Although IAEA **did not publicly name these sites**, it held that **Iran's enriched uranium stockpile has exceeded the agreed limit.**
 - According to the IAEA, Iran may have used the sites for **processing and converting uranium ore** in 2003.
- Iran **denied** the reports and hinted that queries were **based on fabricated information from intelligence services.**
 - Iran has **always denied** that it has ever sought to develop a nuclear weapon, insisting that its **programmes have been peaceful.**
- It comes amid rising **tensions between Iran and the USA**, which pulled out of the 2015 international agreement.

Iran Nuclear Program and JCPOA

- In **2015**, Iran with the **P5+1 group** of world powers - **the USA, UK, France, China, Russia, and Germany** agreed on a long-term deal on its nuclear programme.
- The deal was named as **Joint Comprehensive Plan of Action (JCPOA)** and in common parlance as **Iran Nuclear Deal.**
- Under the deal, Iran agreed to **curb its nuclear activity** in return for the **lifting of sanctions** and access to global trade.
- The agreement **allowed Iran to accumulate small amounts of uranium for research** but it **banned the enrichment of uranium**, which is used to make reactor fuel and nuclear weapons.
- Iran was also required to **redesign a heavy-water reactor** being built, whose spent fuel would **contain plutonium suitable for a bomb** and to **allow international inspections.**
- In May 2018, the **USA abandoned the deal** criticising it as flawed and **reinstated and tightened its sanctions.**

- The USA held that it would attempt to force all countries to stop buying Iranian oil and put pressure on Iran to negotiate a new nuclear accord.
- The top Iranian general **Qassem Soleimani** (the commander of the Al-Quds Force of Iran's Islamic Revolutionary Guard Corps, IRGC) **was assassinated** by the USA during his visit to Iraq. This escalated tensions in the international arena.
- Amid rising tensions, Britain, France and Germany declared that Iran was violating the 2015 pact and launched a **dispute mechanism** that could eventually see the matter referred back to the Security Council and the reimposition of UN sanctions.
- Since sanctions were tightened, Iran has been **steadily breaking some of its commitments to pressure** the remaining signatories to find a way to **provide sanctions relief.**

China to Join UN Arms Trade Treaty

Why in News

Recently, **China** has decided to join the **United Nations Arms Trade Treaty (UN-ATT)** to regulate its arms sales.

Key Points

- China held that it has always strictly controlled the export of military products and joining the treaty is an important step towards its **efforts to enhance peace and stability** in the world and **support multilateralism.**
 - China said that it only exports military products to sovereign countries and not to non-state actors.
- **Background:**
 - China's move comes after the **USA announced to pull out of the ATT in 2019.**
 - The reason given was that the **treaty amounts to international gun control** which is a **threat to the USA's second amendment right to bear arms.**
 - The USA also held that the **treaty fails to truly address the problem of irresponsible arms transfers** because other **top arms exporters like Russia and China were not signatories** to it that time (till now, Russia has neither signed it nor made any announcement to sign it).

Note:

United Nations Arms Trade Treaty

- The UN-ATT regulates the international trade in conventional arms, from small arms to battle tanks, combat aircraft and warships, and controls the flow of weapons into conflict zones.
- It entered into force on 24th December 2014.
- The treaty requires member countries to keep records of international transfers of weapons and to prohibit cross-border shipments that could be used in human rights violations or attacks on civilians.
- State parties to the treaty may seek assistance in its implementation and the UN Trust Facility Supporting Cooperation on Arms Regulation (UNSCAR) was launched to help in that.
 - UNSCAR is a voluntary, flexible multi-donor trust fund to kick-start advocacy, universalisation and implementation of the ATT.
 - It aims to:
 - Mobilize resources to support the ratification/ accession and implementation of relevant international instruments on arms regulations.
 - Improve the effectiveness of assistance through coordination, monitoring and matching of resources.
 - Promote increased sustainability through more predictable sources of funding.
- In May 2020, USA announced to exit the Open Skies Treaty (OST).
- In August 2019, the USA along with Russia withdrew from the Intermediate-Range Nuclear Forces Treaty, 1987.
- The Stockholm International Peace Research Institute (SIPRI) in its annual report 'Trends in World Military Expenditure, 2019' highlighted that China is the second-largest arms producer in the world after the USA.

India's Stand on ATT

- From the beginning of the ATT process, India has maintained that such a treaty would make a real impact on illicit trafficking in conventional arms and their illicit use especially by terrorists and other unauthorised and unlawful non-state actors.
- India has been an active participant in the ATT negotiations and stressed consistently that the ATT

should ensure a balance of obligations between exporting and importing states.

- For India, the underlying principle is that member states have a legitimate right to self-defence and its own belief that there is no conflict between the pursuit of national security objectives and the aspiration of the ATT.
- However, India has not signed the Treaty on the grounds that it is weak on terrorism and non-state actors and these concerns find no mention in the specific prohibitions of the Treaty.
- Further, India cannot accept that the Treaty is used as an instrument in the hands of exporting states to take unilateral force majeure measures against importing states parties without consequences.

USA Sanctions Against the International Criminal Court

Why in News

Recently, the USA has authorised sanctions against International Criminal Court (ICC) officials involved in investigations into possible war crimes by USA troops and its allies.

Key Points

- Sanction:
 - Under it, any individual who has been directly engaged in any effort by the ICC to investigate, arrest, detain or prosecute any USA personnel without the consent of the USA or have attempted the same against the USA ally, may be subject to sanctions.
 - It has broadened the visa restrictions on ICC officials or anyone who has sponsored, or provided financial, material or technological support to them.
 - The restrictions also extend to the officials' family members.
 - The economic sanctions would be decided on a case-by-case basis.
 - Israel supported the decision as it accused the ICC of fabricating charges against the country.
- USA's Stand:
 - The USA has considered the ICC a threat to USA sovereignty and announced the strict punitive

Note:



measures that are generally reserved for use against **terror groups and those accused of abusing human rights**.

- It has called the 123 nations-strong tribunal a '**kangaroo court**'.
- It blamed the ICC office for financial corruption and maladministration.
- It has also blamed Russia for manipulating the ICC in its favour.
- **ICC's Stand:**
 - The ICC supported its officials and called the sanction as an **unacceptable attempt to interfere with the rule of law**.
 - It said the **sanction represents an attack against the interests of victims** of atrocity crimes.
- **Reactions Against the Sanction:**
 - The United Nations (UN) had taken serious note about the USA order.
 - The European Union (EU) called the USA decision a matter of serious concern.
 - **The international NGO Human Rights Watch** has observed that by penalising war crimes investigators, the USA is openly siding with those who commit and cover up human rights abuses.

Background

- The Bill Clinton administration (1993-2001) was involved in **Rome Statute negotiations**, and signed the **document in 2000**.
 - **The Rome Statute** of the International Criminal Court (International Criminal Court Statute) is the **treaty** that established the ICC.
- However, the next president, **George W. Bush in 2002 had unsigned** the Statute and signed into law the **American Service-Members' Protection Act** to protect the **USA nationals from the ICC's reach**.
- The USA adopted a positive approach towards the forum during several instances— in 2005 it did not veto a **UN Security Council** request to the ICC to investigate crimes during the **Darfur crisis** (Sudan) and in 2011 voted for Libya's referral to the court.
 - It also provided critical support in transferring suspects from Africa to the ICC for trial.
- However, in the **UN General Assembly** in 2018, the USA decided that it would not support or recognize the International Criminal Court.

International Criminal Court

- It is a **permanent judicial body created by the 1998 Rome Statute of the International Criminal Court** (its founding and governing document) and began functioning on 1st July 2002 when the Statute came into force.
- **Headquarter:** The Hague, Netherlands.
- **Members:**
 - 123 nations are States Parties to the Rome Statute and recognise the ICC's authority.
 - The **USA, China, Russia and India** are not members.
- The forum was **established as a court of last resort to prosecute offences** that would otherwise go unpunished and has jurisdiction over **four main crimes: genocide, crimes against humanity, war crimes and the crime of aggression**.
- **Difference between ICC and ICJ:**
 - Unlike the **International Court of Justice (ICJ)**, the **ICC is not part of the United Nations system**, with the UN-ICC relationship being governed by a separate agreement.
 - The **ICJ**, which is among the UN's 6 principal organs, mainly **hears disputes between nations**. It was established in 1945 and is seated at The Hague (Netherlands). Judge Dalveer Bhandari (India) is a member of the Court.
 - **The ICC**, on the other hand, **prosecutes individuals** and its authority extending to offences committed in a member state or by a national of such a state.
- According to it, the ICC has no jurisdiction, no legitimacy, and no authority.
- In 2020, the **ICC asked for a formal probe** into alleged **atrocities committed during the Afghanistan War between 2003 and 2014** leading to possible charges against the USA military and its **Central Intelligence Agency** officials.

Russia-India-China Grouping

Why in News

Recently, the Ministry of External Affairs has announced that it will participate in the virtual meeting of the **Russia-India-China (RIC) grouping** scheduled to be held on 23rd June 2020.

Note:

- It can be noted that the RIC was also a platform for the first meeting between India and China in New Delhi after the end of **Doklam standoff**.

Key Points

- **Special Session:** This special session of the RIC has been called by the current Chair- Russia to commemorate the **75th anniversary of the victory in the second world war over Nazism** and creation of the **United Nations (24th October, 2020)**.
 - It will also discuss the current situation of the **global pandemic** and the challenges of global security, financial stability and RIC cooperation in that context.
- **India's Stand:** Indian decision to go ahead with the ministerial level exchange has created an opening for de-escalation of tension along the **Line of Actual Control (LAC)**.
- **China's Stand:** While confirming the participation in the meeting, China has also agreed to control the situation in the border areas.
- **Russia's Stand:** Russia indicated that it would support '**constructive dialogue**' over the tension in eastern Ladakh as Russia is trusted by both India and China.
- **Regional Connectivity:**
 - Regional connectivity projects such as the **International North South Transport Corridor (INSTC)** involving India, Russia and Iran are expected to figure in the agenda.
 - INSTC is a **multi-modal transportation** established in 2000 in St. Petersburg by Iran, Russia and India for the purpose of promoting transportation cooperation among the member states.
 - This corridor **connects the Indian Ocean and the Persian Gulf to the Caspian Sea via the Islamic Republic of Iran** and then is connected to St. Petersburg and North Europe via the Russian Federation.
- **No Bilateral Issues:** However, the focus of the meeting will be on global coronavirus pandemic and no bilateral issues will be discussed.

RIC Group

- RIC is a strategic grouping that first took shape in the late 1990s under the leadership of Yevgeny Primakov, a Russian politician as a **counterbalance to the Western alliance**.

- The group was founded on the basis of **ending its subservient foreign policy guided by the USA and renewing old ties with India and fostering the newly discovered friendship with China**.
- Together, the RIC countries occupy over 19% of the global landmass and contribute to over **33% of global GDP**.

Relevance of RIC for India

- **Strategic Balance:** Along with JAI, India would do well to give RIC the same importance. The groupings like the Quad and the JAI essentially revolve around the Indo Pacific and will confine India to being only a maritime power when it is actually both a maritime and continental power.
- **Forum for Cooperation:** Even though India, China and Russia may disagree on a number of security issues in Eurasia, there are areas where their interests converge, like, for instance, on Afghanistan. RIC can ensure stable peace in Afghanistan and by extension, in Central Asia.
 - Regular RIC interactions could also help the three countries **identify other issues** where they have congruent views like the volatile situation in West Asia.
- **Creation of New Order:** Contribute to creating a new economic structure for the world. The USA apparently wants to break down the current economic and political order. While the existing structure is not satisfactory, the RIC could offer some suggestions which could be acceptable to the USA.
- **Governance over Arctic:** With the Northern Sea Route opening up due to climate change, the RIC has a common interest in ensuring that it is not left to the West and Russia alone and that India and China also have major say in rules governing the Arctic route.
- **Other Aspects:** They could work together on disaster relief and humanitarian assistance.

Concerns

- India has traditionally avoided taking sides in international politics, especially between the great powers, preferring its traditional non-alignment. However, **China's hostile attitude towards India** in recent years is increasingly forcing India to confront.
- This makes it difficult to see how engagements through platforms such as RIC, are going to alter the **basic conflictual nature of relations** between India and China.

Note:



- Even though **Russia** has remained an old friend for India, it is increasingly under **stress to follow China's dictates**. For example, earlier it openly opposed the **Indo-Pacific concept at the Raisina Dialogue**.
- On issues such as Jammu and Kashmir, which China raised at the UN Security Council, Russia preferred taking a middle position and not supporting India's stand entirely .

Way Forward

- India is committed to protect its sovereignty and territorial integrity in the border areas and RIC would give the platform for resolution of differences (along the Indo-China Border) through dialogue.
- Moreover, the RIC forms the core of both the **Shanghai Cooperation Organisation (SCO)** and the **BRICS** as greater cooperation between China, India and Russia would lead to strengthening of both SCO and BRICS.
- The RIC is a significant multilateral grouping, because it brings together the three largest Eurasian countries which are also incidentally geographically contiguous. RIC, hence provides a worthwhile platform to discuss issues like West Asia, Afghanistan, climate change, terrorism, regional connectivity, tensions on Korean Peninsula, etc.

Financial Action Task Force

Why in News

Recently, India has attended the virtual 32nd special **Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG)** plenary meeting, under the aegis of the **Financial Action Task Force (FATF)**.

- Officials of National Investigation Agency (NIA), Enforcement agencies submitted details on terror-funding.
- The FATF's virtual plenary meet is scheduled to be held on 24th June 2020.

Key Points

- **FATF'S View on Crime amid Covid-19:**
 - The FATF which is actively monitoring the impact of the pandemic on measures to combat illicit financing, released a paper on "**Covid-19-related Money Laundering and Terrorist Financing Risks and Policy Responses**".

- It observed an increase in the **Covid-19 related crimes, including fraud, cyber-crime, misdirection or exploitation of government funds** or international finance assistance.

➤ India and FATF:

- Ahead of the crucial meet on 24th June, India plans to share more evidence with the key FATF members on the narco-terror cases linked to Pakistan-based syndicates, through which funds are allegedly being supplied to the terrorists operating in Jammu and Kashmir.
- The Enforcement Directorate and the National Investigation Agency have been probing several such cases.

➤ Status of Pakistan:

- Pakistan, which **continues to remain on the 'grey list' of FATF**, had earlier been given the deadline till the June 2020 to ensure compliance with the 27-point action plan against terror funding networks and money laundering syndicates, or face 'black listing'.
- However, owing to the **Covid-19 pandemic**, the deadline has been shifted to October 2020.

Eurasian Group on Combating Money Laundering and Financing of Terrorism

- It is a **regional body** comprising nine countries: India, Russia, China, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and Belarus.
- It is an **associate member of the FATF**.

Financial Action Task Force

- It is an **inter-governmental body** established in 1989 during the **G7 Summit** in Paris.
- The objectives of the FATF are to **set standards and promote effective implementation** of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- Its **Secretariat** is located at the **Organisation for Economic Cooperation and Development (OECD)** headquarters in Paris.
- **Member Countries:** it consists of **thirty-seven** member jurisdictions.
 - **India** is one of the members.
- **FATF has two lists:**

Note:

- **Grey List:** Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.
- **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.
- The **FATF Plenary is the decision making body of the FATF.** It meets three times per year.

Victory Day Parade

Why in News

India has decided to send a contingent of 75 personnel from its three armed forces to participate in Russia's **75th World War II Victory Day Parade** on 24 June, 2020.

Key Points

- The Russian parade is held every year on **Victory Day (May 9)**, which marks the **surrender of Nazi Germany in 1945**.
 - This year it was delayed because of the **Covid-19**.
- The victory day parade honours the heroism and sacrifices made by the Russian and other friendly people.
- India's participation in the parade will be a mark of tribute and solidarity with the people of Russia.
- Earlier in January 2020, Russia had invited India to take part in the victory day parade.

India-Russia Defence Cooperation

- Defence remains the most significant aspect of India's relations with Russia with both sides looking to **encourage joint manufacturing of equipment** under India's **Make-in-India programme** and **through transfer of technology**.
- After the **Vladivostok summit in 2019**, both the countries had recognized the requirement of an institutional arrangement for **reciprocal provision of logistic support and services for the armed forces**.
 - They had also agreed to prepare a framework for cooperation on it.

- During the **5th India Russia military industry conference** held during the **Defexpo 2020 in Lucknow (Uttar Pradesh)**, companies from both the countries signed various Memorandum of Understanding (MoUs) to develop a range of defence equipment.
- In 2019, despite the threat of U.S. sanctions, India went ahead with the decision to purchase the **S-400 missile defence system**, worth over \$5 billion.
- Both the countries continue to **encourage military to military cooperation** through **military political dialogue and joint military exercises**.
 - In 2019, India and Russia carried out a second **joint tri-service exercise INDRA**.
 - In 2019, India also took part in **Exercise TSENTR 2019** of the Russian Armed Force.
- Despite Russia's deep military and political ties with China, and its own relations with the U.S., India continues to look at Russia as a key partner.

World War II

- World War II, started in **Europe in 1939** and assumed the character of a world war. It was fought between **Allied and Axis powers**.
- The **Allied powers** were represented by Great Britain, USA, France etc. While the **Axis powers were led by Germany, Italy and Japan**.
- The war came to an end in **September 1945**.
- **Cause of War:**
 - Treaty of Versailles of 1920.
 - Aggressive Policy of expansion by the fascist powers (Germany and Italy).
 - Appeasement policy by Western powers towards fascist powers to fight against Communist Soviet Union.
 - Rise of Japan as imperialist power.
 - Rome-Berlin-Tokyo Axis.
- **Consequences of the War:**
 - **Killing of Jews** in concentration camps.
 - **Atomic attacks** on the Japanese cities of **Hiroshima and Nagasaki in 1945**.
 - Division of the world into **two power blocs** – the Communist Bloc headed by Soviet Union and the Western Bloc headed by the USA.
 - Beginning of the **Cold War** which continued till the disintegration of Soviet Union in 1991.
 - Foundation of **United Nation Organisations** in 1945.

Note:

Tariff Exemption on Bangladesh Exports: China

Why in News

Recently, China has announced tariff exemption for 97% of exports from Bangladesh.

Key Points

- **Background:** Bangladesh had written to China to exempt its export items from tariffs in the background of the economic hardship triggered by the **Covid-19 pandemic**.
- **The Latest Move:**
 - China considered Bangladesh's request and has granted the tariff exemption to Bangladesh on account of its **Least Developed Countries (LDCs)** status.
 - The Chinese move has been described as a major success in the China-Bangladesh relationship.
- **Benefits to Bangladesh:**
 - The move will help Bangladesh to remove the economic impact of the pandemic and also emerge as a possible beneficiary alongside Vietnam and Chile of the **U.S.-China trade war**.
 - The supply chain disruption caused by the U.S.-China trade war is likely to be filled by a boost in export of tariff-exempted goods from Bangladesh.
 - It will also help Bangladesh to reduce its trade deficit with China.
 - As a result of the latest announcement, a total of 8256 goods from Bangladesh will be exempted of Chinese tariffs.
 - Earlier, Bangladesh used to receive tariff-exemption for 3095 items under the **Asia Pacific Trade Agreement (APTA)**.
- **Concerns for India:**
 - China's heavy investment in India's neighbourhood has increased its dominance in the Indian Ocean.
 - Despite having cultural and historical relations with India, its neighbours are siding with China on diplomatic issues.
 - Nepal is redrawing its map to include some Indian territories, presumably under a nudge from China.
 - Earlier, Maldives and Sri Lanka have also expressed anti-India sentiment under the influence of China.

Asia Pacific Trade Agreement

- Asia Pacific Trade Agreement (APTA), previously the Bangkok Agreement, is a **preferential tariff arrangement** that aims at promoting intra-regional trade through the exchange of mutually agreed concessions by member countries.
- Its current Members are Bangladesh, China, India, Republic of Korea, Lao PDR and Sri Lanka.

Least Developed Countries

- LDCs are low-income countries designated by the **United Nations**, confronting severe structural impediments to sustainable development.
- They are highly vulnerable to economic and environmental shocks and have low levels of human assets.

India-China Rivalry and Bangladesh

- Bangladesh has benefitted from the India-China rivalry. It has used the rivalry to increase its investment and strengthen its security.
- **Trade:**
 - In 2015, China became Bangladesh's top trading partner, knocking India out of the position it had held for 40 years.
 - As a member of **China's Belt and Road Initiative**, Bangladesh has seen an influx of Chinese investment in recent times.
 - To counter Chinese dominance in Bangladesh, India announced \$5 billion in loans for Bangladesh in 2017, which is the largest amount ever invested by India in Bangladesh.
- **Security:**
 - China has become Bangladesh's top source for arms imports; and Bangladesh likewise is China's second-largest arms export destination in the world, behind Pakistan.
 - Most recently, in 2017 the Bangladesh Navy took delivery of two Chinese submarines at a minimum price.
 - To counter this, India has expressed its interest in offering submarine training for the Bangladesh Navy.

Issues in India-Bangladesh Relation

- India's **hegemonic posture** and **coercive tactics** has created deep resentment among ordinary Bangladeshis, especially when contrasted with **China's model of noninterference in domestic affairs along with lavish spending**.

Note:

- India's domestic policy on the **National Register Citizens (NRC)** and the **Citizenship Amendment Act (CAA)**, both of which directly impact Bangladesh, has generated some unpleasantness in the relationship.

Senkaku Islands

Why in News

Recently, a **local council in southern Japan** has approved a bill to **change the name of an area containing Senkaku Islands** from Tonoshiro to Tonoshiro Senkaku.

- Senkaku Islands are known as the **Diaoyus by China and Tiaoyutai by Taiwan**.
- The islands are **disputed with China and Taiwan**.

Key Points

- **Japan's Stand:**
 - **Resolving Administrative Confusion:** The **name change is aimed at resolving administrative confusion** between a locale in downtown Ishigaki, which shares the name "Tonoshiro" similar to the island.
 - **Increased Chinese Presence:** It is also done in response to the increased Chinese presence in the waters close to the Senkakus. In a move to protect territorial integrity, Japan has decided to change the name.
 - **Support of the USA:** The United States has a mutual defense treaty with Japan. If Japanese territory is attacked by a foreign power, the United States is obligated to defend it.
- **China's Stand:**
 - **China's Territorial Sovereignty:** Bill by Japan is a serious provocation to China's territorial sovereignty. The move is illegal.
 - **Four-Principle Consensus:** Urged Japan to abide by the spirit of the four-principle consensus, avoid creating new incidents on the Diaoyu Islands issue, and take practical



actions to maintain the stability of the East China Sea situation.

- A four-point principle on improving China-Japan ties was approved in 2014 to develop a mutually beneficial relationship based on common strategic interests.
- **Risk of a Crisis:** Changing the administrative designation would only make the dispute more complicated and bring more risks of a crisis
- **Taiwan's Stand:**
 - It also protested the move and claimed that the islands are part of its territory, and the **sovereignty of Tiaoyutai islands belongs to the country** and any move attempting to alter this fact is invalid.
- **Overall Impact:**
 - **Asia's next military flashpoint:**
 - Japan is not the only territorial and maritime dispute that China has long had with many of its neighbours.
 - It has island and maritime border disputes with Taiwan, Brunei, Indonesia, Malaysia, Philippines and Vietnam in the **South China Sea** and its extension.
 - Hence, **Japan's move can strengthen the other countries territorial and maritime claims**.
- **Significance for India:**
 - The development from Japan came just after the violent clash between Indian and Chinese troops over the **Line of Actual Control in Ladakh's Galwan Valley**.
 - Given the trade volume and economic dependency that is the most dominant feature of the bilateral relationship, it would be crucial for India to act wisely.
 - By supporting the **Japanese move, India can diplomatically strengthen** its position over Galwan Valley.
 - However, Taiwan's engagement in the dispute is significant as it has supported India over the galwan valley but opposes the move of Japan.
 - China has also augmented its naval power to strengthen its overall presence in the Indian Ocean. The move of Japan would give an opportunity to India to have a strategic edge over its presence in the Indian Ocean.

Note:



The Senkakus Island Chain Dispute

- The **Senkaku Islands dispute, or Diaoyu Islands dispute**, concerns a **territorial dispute** over a group of **uninhabited islands** known as the **Senkaku Islands in Japan, the Diaoyu Islands in China and Tiaoyutai Islands in Taiwan**.
- Eight uninhabited islands lie in the East China Sea. They have a total area of about 7 sq km and lie northeast of Taiwan.
- **Importance:** Islands are close to strategically important shipping lanes, offer rich fishing grounds and are thought to contain oil deposits.
- The Senkakus island chain has been administered by Japan since **1972, but its legal status has remained disputed** until now.
- Both Japan and China claim ownership of these islands.
- **Japan's Claim:**
 - After **World War II**, Japan renounced claims to a number of territories and islands including Taiwan in the 1951 Treaty of San Francisco.
 - But under the treaty the Nansei Shoto islands came under US trusteeship and were then returned to Japan in 1971.
 - Japan says that Senkaku islands are part of the Nansei Shoto islands and hence they also belong to Japan.
 - Besides, China raised no objections to the San Francisco deal. Only since the 1970s, when the issue of oil resources in the area emerged, that Chinese and Taiwanese authorities began pressing their claims.
- **China's Claim:**
 - These Islands have been part of its territory since ancient times, serving as important fishing grounds administered by the province of Taiwan.
 - When Taiwan was returned in the Treaty of San Francisco, China said the islands – as part of it – should also have been returned.

70 Years of Korean War

Why in News

Recently, North and South Korea have separately marked the **70th anniversary** of the start of the Korean War.

Key Points

- The root of the conflict lies in the **Japanese occupation of Korea between 1910-1945**.
- When Japan was defeated in the **Second World War**, the Allied forces agreed to establish a '**four-power trusteeship over Korea**' at the **Yalta Conference (1945)**.
- However, the USSR invaded Korea and took control of the north while the south remained under the rest of the allies, mainly the USA. The division of the two regions was along the **38th parallel north**, which still continues to be the official border dividing the two Koreas.
- In 1948 the Republic of Korea (South Korea) and the Democratic People's Republic of Korea (North Korea) was established.
- Efforts were made to resolve the conflict and unite the Korean peninsula, but with the advent of the **Cold War** chances of reunification were lost.
- As both tried to enhance their reach, territorially and ideologically, the **Korean Conflict emerged between the two nations**.

Korean War

- On 25th June 1950, North Korea, backed by the USSR, launched an attack on South Korea and occupied most of the country.
- In response, the United Nations force led by the USA, retaliated.
- In **1951 the USA forces led by Douglas MacArthur crossed the 38th parallel** and triggered the **entry of China in support of North Korea**.
- To prevent further escalation peace talks began later in 1951.
- On 27th July 1953, the **Korean Armistice Agreement** was signed between the **United Nations Command, the Korean People's Army and the Chinese People's Volunteer Army**.
 - It led to an official ceasefire **without a Peace treaty**. Thus, the war officially never ended.
 - Exchange of Prisoners of war (PoWs).
 - Establishment of **Korean Demilitarised Zone (DMZ)**, a strip of land running across the Korean Peninsula to serve as a buffer zone between North Korea and South Korea.
 - The Korean DMZ intersects but does not follow the 38th parallel north.

Note:

- South Korea did not sign the armistice as it refused to accept it.
- However, in December 1991, North and South Korea signed a pact agreeing to refrain from aggression.

Current Dynamics

- In recent years North Korea has accelerated its nuclear programme by **increasing its nuclear stockpile**, withdrawn from the **Non-Proliferation Treaty (NPT)** and has tested nuclear explosives multiple times.
- USA has deployed **THAAD (Terminal High Altitude Area Defence)** in **South Korea** to counter increasing missile adventurism of North Korea.
- North Korea recently **demolished the Inter-Korean Liaison Office in Kaesong**, which was established in 2018. In the absence of formal diplomatic relations, the building functioned as a de facto embassy and provided a direct communication channel for the two nations.

UN 75 Declaration

Why in News

Recently, a **commemorative declaration marking the 75th anniversary** of the signing of the **United Nations (UN) Charter** was delayed as member states could not reach an agreement on phraseology.

Key Points

- **The Five Eyes (FVEY)**, Australia, Canada, New Zealand, the UK and the USA, **along with India, objected to the use of a phrase** 'shared vision of a common future', which is **associated with China**.
 - The Five Eyes network is an **intelligence sharing alliance** between these five countries.
- The **'silence' process** was broken at the request of the UK's Ambassador to the UN, who wrote a letter on behalf of the six countries to the President of the 74th General Assembly, suggesting alternative wording.
 - **Silence process** is a procedure by which a resolution passes if no formal objections are raised within a stipulated time.
- However, **China, on behalf of itself and Russia, Syria and Pakistan raised objections** to the silence being broken.

75th United Nations Day

- The United Nations will celebrate its **75th anniversary on 24th October 2020**.
 - To mark its 75th anniversary in 2020, the UN is igniting a **people's debate: UN75**.
 - Through UN75, it will encourage people to put their opinions together to define how enhanced international cooperation can help realize a better world by 2045.
- Each year on 24th October, the UN celebrates its anniversary. UN Day marks the anniversary **of the entry into force of the UN Charter and the founding of the Organization in 1945**.
- The name 'United Nations' was coined by **United States President Franklin D. Roosevelt**.
- The **main organs of the UN are**:
 - the General Assembly
 - the Security Council
 - the Economic and Social Council
 - the Trusteeship Council
 - the International Court of Justice
 - the UN Secretariat

Demand of Reforms at United Nations

- **Security Council Reforms:** In **UNSC**, the permanent member countries (P5) have made the UN defunct in maintaining peace and order. Therefore, veto powers of P5 and composition of UNSC must be made more representative of the current world order.
 - The P5 countries include China, France, Russia, the UK and the USA.
 - **Multilateralism:** International relations today are characterized by the power relationships of the USA, China, Russia, India and Europe.
 - A new model of the UN must be formulated, as current world order has changed from bipolar to unipolar to multi polar today.
 - **Democratisation of UN:** Developing countries like India are proposing reforms that seek to democratize the UN, such as **UNSC reforms, UN peacekeeping reforms**.
 - **Financial Reforms:** This holds the key to the future of the UN and without sufficient resources, the UN's activities and role would suffer.
- The current impasse comes at a time when China's relationships with a number of countries, including India, Australia and the USA are strained.

Note:

- Given the impasse, the UN General Assembly President has suggested an **alternatively phrased declaration**, which he has placed under the silence procedure.

Kholongchhu Hydropower Project

Why in News

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



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

Key Points

- **Description:**
 - The **Kholongchhu project** is one of four additional projects agreed in 2008, as a part of India's commitment to help Bhutan create a **total 10,000 MW** of installed capacity by 2020.
 - The **600 MW run-of-the-river project** is located on the lower course of the **Kholongchhu river** in eastern Bhutan's **Trashiyangtse district**.
 - The project is expected to be completed in the **second half of 2025**.
 - The project will be constructed as a **50:50 joint venture**.
- **Significance:**
 - **Concession Period:** The Government of India will provide, as a grant, the equity share of the Bhutanese DGPC in the JV Company. Once the project is commissioned, the JV partners will run it for 30 years, called the **concession period**, after which the full ownership will transfer to the Bhutan government, which will receive power from the project as a royalty.
 - **Bilateral Cooperation:** The tapping of hydropower in Bhutan would pave a way for successful **bilateral cooperation and mutual engagement** between India and Bhutan.

- **Strategic Interest:** Being a member of **BIMSTEC**, Bhutan holds geostrategic importance for India. The shared sense of support and help in terms of such development projects between the two countries **can help India** in executing its **Act East-Look East Policy**.
- **Energy Trade:** The project would act as a milestone in generation of energy and related trade.
 - The project would aid in a clean and stabilising power source for India and also contribute to its renewable energy targets.
- **Employment Opportunities:** Commencement of construction activities of the project will create economic and employment opportunities in **Bhutan**.
 - India needs to focus on the youth of Bhutan, as it is the youth only which would take the people-to-people contact forward in the future.
- **Economic Growth:** The plant would drive economic growth and hence **socio-economic development** would be facilitated in Bhutan.
- **Concerns:**
 - **Power Tariffs:** The project which started in 2014 was on halt since December 2016 over India's new power tariff guidelines on **Cross Border Trade of Electricity - CBTE**, until the government amended its guidelines after negotiations with the Bhutan government.
 - **Power tariff revision** which includes **the increase in the operations and maintenance charges** may become a bone of contention.
 - **Risk of the JV-model:** Another issue is regarding the risk of the JV-model for the project as Bhutan had expressed concern over a greater financial risk due to project delays.
 - The delays had an impact on Bhutan's growth, as well as its exports and revenues. For example, the **World Bank** has attributed the decline in the **country's growth rate directly to delays in hydropower construction** and the dip in electricity generation.
 - However, India has maintained that it prefers the more commercial model as it not only shares the risk, but also makes Indian PSUs show greater accountability on time and cost, as they become investors rather than contractors.

Note:

India Bhutan Hydropower Projects

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

USA Extends Ban on Work Visas

Why in News

Recently, the USA has decided to **extend the 60-day ban on immigrant and non-immigrant worker visas** till the end of 2020.

- The **ban is effective immediately** so the processing of **all new H-1B, H-2B, J and L visa** categories stands suspended.
 - There will be an exemption for professors and scholars on J visas as well as for some food industry workers needing an H-2B visa.

Key Points

- **Work Visas:**
 - The IT revolution, **arrival of internet and low-cost computers** in developing nations like India has given rise to the number of people who are **willing to work at relatively low costs** in the USA which is a win-win situation for both the employer and the employee.
 - The USA administration **issues a certain number of visas each year to fill a vacuum of highly-skilled low-cost employees** in IT and other related domains.
 - These visas allow companies from outside the USA to send employees to work on client sites.
 - **H-1B Visa:**
 - These are issued to skilled workers and the most popular among Indian IT companies.
 - H-1B is for people in Specialty Occupation and requires a higher education degree or its equivalent.
 - **H-2B Visa:** These are issued to seasonal workers in the landscaping and hospitality industries.

- **L-1 Visa:** It allows companies to transfer highly skilled workers to the USA for a period of up to seven years.
- **H-4 Visas:** It is for dependents of H-1B visa holders.
- **J-1 Visas:** It is for students on work-study summer programmes.
- **Reasons Behind the Suspension:**
 - The move intends to **protect the domestic workers** who had been impacted due to a contraction in the economy in the wake of the **Covid-19 pandemic**.
 - The overall unemployment rate in the USA nearly quadrupled between February and May of 2020, producing some of the most extreme unemployment rates ever recorded.
 - The **entry of additional workers** through the H-1B, H-2B, J, and L non-immigrant visa programmes presents a significant threat to employment opportunities for domestic workers by **undercutting their jobs**.
 - However, the USA held that post-ban, under normal circumstances, properly administered temporary worker programs can provide benefits to the economy.
- **People Affected:**
 - The new rule would **apply only to those who are outside the USA and do not have a valid non-immigrant visa** as of 23rd June and an official travel document other than a visa to enter the country. They will not be allowed to enter the USA until 31st December 2020.
- **People not Affected:**
 - No impact on **lawful permanent residents of the USA** and **foreign nationals who are spouses or child of an American citizen**.
 - **Foreign nationals seeking to enter the USA to provide temporary labour or services essential to the food supply chain** are also exempted from the latest proclamation.
- **Impact on Indian IT Companies:**
 - **Indian IT companies are amongst the biggest beneficiaries** of the USA H-1B visa regime and corner a huge share of the total number of visas every year.
 - As of 1st April 2020, the **US Citizenship and Immigration Services (USCIS)** had received about **2.5 lakh H-1B work visa applications** and **67% of that was applied by Indians**.

Note:

- It will significantly **impact the margins and worker wages of Indian IT companies which send thousands of low-cost employees** to work on client sites in the USA.
- Though the large Indian IT companies in the USA have cut down their dependency on H-1B and other worker visas by hiring as much as 50% of staff locally, they **still rely on these visas to keep costs in check**.
- **Overall Impact on India:**
 - Although it is desired that the USA revokes the ban but if it does not, then India may still have some positive impacts.
 - **Probable Increase in Remittances:** With this ban, already employed skilled workers from India may get higher salaries which in turn would increase inflow of remittances.
 - **Addressing Brain Drain:** Newly graduated skilled workers would seek opportunities in India itself, thereby addressing the issue of brain drain.
 - **Enhanced Self Reliance:** India desperately needs the skilled workforce to work within the country in order to become more self-reliant (under **Atmanirbhar Bharat**) and to realise the dream of **Make in India** and the **5 trillion dollar economy**.

Criticism

- The move has been criticised for being **misguided and harmful to the USA's own economy**. It has the **potential to do permanent damage** to the USA's reputation of attracting the best and the brightest.
- The ban on issuing visas will **harm employers, families, universities, hospitals, communities and delay America's economic recovery**.
- Without highly skilled immigrants, the industry will slow down and the economy will worsen affecting the timeline for a treatment and cure of Covid-19 as well.
 - The H-1B programme in particular plays a crucial role in addressing the shortage of healthcare professionals while also providing other key sectors of economy with talent from around the world to not only fill jobs but create new ones.
- **Legal immigration is a positive for the American economy** and visa programs allow American companies to secure qualified, legal labour throughout the world which will not be the same after the move.

36th ASEAN Summit

Why in News

Recently, the **36th Association of Southeast Asian Nations (ASEAN) Summit** was held via video conference to focus on the **Covid-19 pandemic** response, post-pandemic recovery and further cooperation with partner countries.

- The **theme** for the Summit was **"Cohesive and Responsive ASEAN"**.
- The Summit was **chaired by Vietnam** which is also **holding the chairmanship** of ASEAN currently.

Key Points

- **ASEAN Covid-19 Response Fund:**
 - The summit has decided to establish the ASEAN Covid-19 response fund with a reserve for medical supplies to meet urgent needs during epidemics.
 - A special ASEAN meeting convened in April to tackle the pandemic had failed to agree on an emergency fund.
 - It has also decided to build the **ASEAN standard procedures of epidemic response** in case of health emergencies.
- **Crippling Economies:**
 - The Summit has stated that the **ASEAN region's economy** is expected to **contract for the first time in 22 years**.
 - It has also focussed on the crippling cost of the coronavirus, which has ravaged the **economies of tourism and export-reliant** countries such as **Thailand and Vietnam**.
- **South China Sea Issue:**
 - The Summit noted concerns over **land reclamations and recent developments** in the **South China Sea**.
 - China claims most of the resource-rich South China Sea but is also **contested by Vietnam, the Philippines, Malaysia and Taiwan**.
 - **Vietnam had also accused China of sinking its trawler**. This incident had prompted the USA to warn that China is trying to exploit the pandemic situations of other states to expand its unlawful claims.
 - The **USA is not a claimant to any territories in the South China Sea** but has sent its navy to patrol the area in support of freedom of

Note:

Association of Southeast Asian Nations

- ASEAN is a regional grouping that promotes economic, political, and security cooperation.
- It was established in **1967 in Bangkok, Thailand**, with the signing of the ASEAN Declaration (**Bangkok Declaration**) by the **founding fathers of ASEAN**, namely **Indonesia, Malaysia, Philippines, Singapore and Thailand**.
- It consists of **ten** members namely, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.
- Chairmanship of ASEAN **rotates annually**, based on the alphabetical order of the English names of Member States.



- ASEAN countries have a total population of 650 million people and a combined **Gross Domestic Product (GDP)** of \$2.8 trillion.
- The group has played a central role in Asian economic integration, signing six free-trade agreements with other regional economies and helping spearhead negotiations for what could be the world's largest free trade pact.

navigation, while China had slammed this move as an interference in regional affairs by an outside power.

- Both Vietnam and Philippines lodged protests with **China** after it **unilaterally** declared the **creation of new administrative districts on islands**.
 - Also, in April China has **officially named 80 islands** and other geographical features in the disputed waters to which Vietnam and the Philippines also have competing claims.
- The Summit has also called on parties to refrain from **escalating tensions and abide by responsibilities** under international laws.



Note:



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Science and Technology

Highlights

- Private Sector Participation in Space
- Gateway Lunar Orbiting Outpost
- Micius: A Quantum-Enabled Satellite
- Global Partnership on Artificial Intelligence
- Covaxin Approved for Human Clinical Trials
- Dexamethasone Drug
- Antiviral Drug Umifenovir
- Kala-azar Disease
- World Sickle Cell Day 2020
- I-Lab: Mobile Testing Facility
- The Paper Microscope: Foldscope
- Raw Material Uncertainties for Rechargeable Batteries: UNCTAD
- HAM Radio

Private Sector Participation in Space

Why in News

Recently, the Union Cabinet has approved the creation of the **Indian National Space Promotion and Authorization Centre (IN-SPACE)** to provide a level playing field for private companies to use Indian space infrastructure.

- This is part of reforms aimed at giving a **boost to private sector participation** in the entire range of space activities.

Key Points

- **IN-SPACE:** It will act as a **single-point interface** between **Indian Space Research Organisation (ISRO)**, and everyone who wants to participate in space-related activities, or use India's space resources.
 - It will also hand-hold, promote and guide the private industries in space activities through encouraging policies and a friendly regulatory environment.
- **Indian National Space Promotion Board:** It would be set up to strengthen the Department of Space and for the promotion of the private space entrepreneurs or non-government space entrepreneurs,
- **Role of ISRO:** The overall idea is to let ISRO concentrate on essential activities like research and development, planetary exploration, and strategic use of space, while freeing itself from ancillary or routine work which could easily be done by private industry.

- **Demand Driven Model:** By the support of **New Space India Limited (NSIL)**, It would endeavour to reorient space activities from a **'supply driven' model to a 'demand driven' one**, thereby ensuring **optimum utilisation** of the nation's space assets.
 - The main objective of NSIL is to scale up industry participation in Indian space programmes in comparison to **IN-SPACE** which gives emphasis on the participation of the private sector.

Significance

- **Level Playing Field for Private Companies:** IN-SPACE will provide a level playing field for private companies to use Indian space infrastructure.
- **Research and Development Activities:** These reforms will allow ISRO to focus more on new technologies, exploration missions and **human spaceflight programme**.
 - Some of the planetary exploration missions will also be opened up to the private sector through an **'announcement of opportunity'** mechanism.
- **Fruitful Dissemination of Space Technologies:** Allowing industries and others like students, researchers or academic bodies greater access to space assets would lead to a much better utilisation of India space resources.
- **Socio-economic use of Space Assets:** The proposed body would attempt to enhance the activities, including access to space assets data and activities
- **Global Technology Powerhouse:** It will enable Indian Industry to be an important player in the global space

Note:



economy. With this, there is an opportunity for **large-scale employment in the technology sector** and India becoming a global technology powerhouse.

New Space India Limited

- NSIL is a **Central Public Sector Enterprise** of the Government of India.
- It was established in 2019 under the administrative control of the **Department of Space**.
- **Headquarter: Bengaluru**
- NSIL is the **commercial arm of Indian Space Research Organisation (ISRO)** with the primary responsibility of enabling Indian industries to take up high technology space related activities and is also responsible for promotion and commercial exploitation of the products and services emanating from the space industry.
- NSIL is incorporated to carry forward the industry production of space systems and the ISRO's efforts in realising **Polar Satellite Launch Vehicles (PSLV)** from industry.
- NSIL differs from ISRO's existing commercial arm **Antrix Corporation**:
 - Antrix will handle **ISRO's commercial deals for satellites** and launch vehicles with foreign customers.
 - NSIL will deal with capacity building of **local industry for space manufacturing**.

Gateway Lunar Orbiting Outpost

Why in News

Recently, the **National Aeronautics and Space Administration (NASA)** has finalised the contract to design the **Habitation and Logistics Outpost (HALO)** for its Gateway Lunar Orbiting Outpost.

- **HALO support** is a part of **NASA's Artemis program** that aims to send the **first woman** and the next man to the **Moon by 2024**.

Key Points

- **Habitation and Logistics**
 - It refers to the **pressurised living quarters where astronauts will spend their time** while visiting the Gateway.

- These quarters will be **about the size of a small apartment and will provide augmented life support** together with Orion spacecraft.

➤ The Gateway:

- NASA has targeted the **completion of the Gateway for 2026**, while work on the spaceship is already underway.
- The **Gateway can be used at least once per year** and astronauts can not stay around the year like they do on the **International Space Station (ISS)**.
- Once docked to the Gateway, astronauts will be able to **stay there for three months at a time**.
 - Compared to the ISS, **the Gateway is much smaller**.

➤ Significance:

- It will act as an **airport**, where **spacecraft bound for the lunar surface of Mars can refuel or replace parts** and resupply things like food and oxygen, allowing astronauts to **take multiple trips** to the **Lunar surface and exploration** of new locations across the Moon.
- By studying the **geology of the Earth, the Moon and Mars** and the ways in which they are similar and different from each other, it would give a **sight about how planets and planetary systems form**.
- Significantly, Gateway **would work as a science platform to look back** at the Earth, observe the Sun, and get unobstructed views of the vast universe.

Gateway Lunar Orbit Outpost

- The Gateway is a **small spaceship that will orbit the Moon**, meant for astronaut missions to the Moon and later, for **expeditions to Mars**.
- It will act as a **temporary office and living quarters for astronauts**, distanced at about 250,000 miles from Earth.
- The spaceship will have **living quarters, laboratories for science and research and docking ports** for visiting spacecraft.
- One of the most **unique features** of the Gateway is that it can be **moved to other orbits around the Moon** to conduct more research.
- It is expected to play a major role in NASA's Artemis program, after 2024.
- While the project is led by NASA, the Gateway is meant to be developed, serviced and utilized in

Note:

collaboration with commercial and international partners: Canada (**Canadian Space Agency**), Europe (**European Space Agency**) and Japan (**JAXA**).

Artemis

- It is a crewed spaceflight program of 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.
- It is a key step towards the long-term goal of establishing a sustainable presence on the Moon, laying the foundation for private companies to build a lunar economy and eventually sending humans to Mars.

Orion Spacecraft

- It is being developed by **NASA**.
- It is a **powerful, advanced launch vehicle** for a new era of human exploration beyond Earth's orbit.
- It is designed to take astronauts to deep space destinations such as the Moon and Mars.

Micius: A Quantum-Enabled Satellite

Why in News

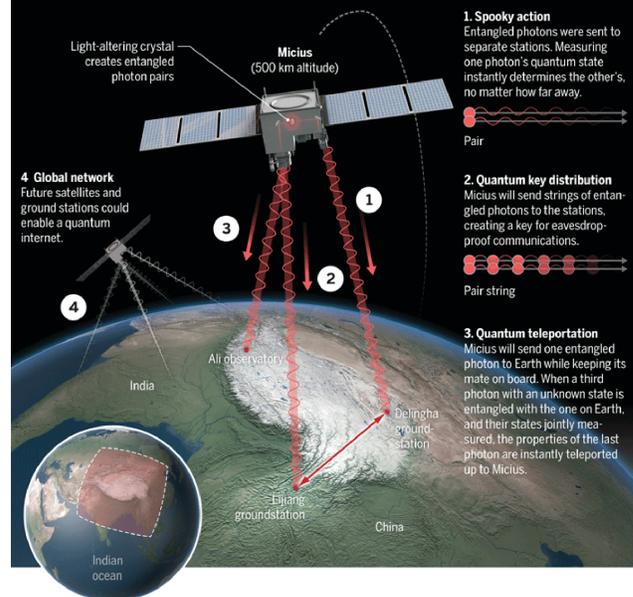
Recently, **satellite Micius** has sent **light particles to Earth** to establish the world's most secure communication link.

Key Points

- **Micius:**
 - It is the **world's first quantum communications satellite**, launched by **China** in 2016.
 - The satellite serves as the **source of pairs of entangled photons**.
 - Entangled photons are **twinned light particles** whose **properties remain intertwined** no matter how far apart they are.
 - If one of the photons is manipulated, the other will be similarly affected at the very same moment.
 - It is this **property that lies in the heart of the most secure forms of quantum cryptography** (the study of concepts like encryption and decryption).

Quantum leaps

China's Micius satellite, launched in August 2016, has now validated across a record 1200 kilometers the "spooky action" that Albert Einstein abhorred (1). The team is planning other quantum tricks (2-4).



- If one of the entangled particles is used to create a key for encoding messages, only the person with the other particle can decode them.

Recent Developments:

- Micius has **successfully brought entanglement-based quantum cryptography to its original ground stations 1,200 km apart** by sending simultaneous streams of entangled photons to the ground stations to establish a direct link between the two of them.
- The satellite provided entangled photons as a convenient resource for the quantum cryptography and the two ground stations then used them according to their agreed protocol.
- **None of the communication went through Micius** (i.e behaved like a blind transmitter) providing the ground stations a **robust and unbreakable cryptographic protection** without the need to trust the satellite.
- Until now, this had never been done via satellite or at such great distances.
- It has not been specified how the messages were transmitted in this instance but in theory it could be done by optical fibre, another communications satellite, radio or any other agreed method.
- Scientists have started using quantum encryption for **securing long-range communication** and Micius has been at the **forefront of quantum encryption** for several years.

Note:

- **Quantum Race:**
 - The **disclosure of internet surveillance by western governments prompted China** to boost quantum cryptography research in order to create more secure means of communication.
 - The launch of Micius and quantum communication systems with its help have been **compared to the effect Sputnik had on the space race** in the 20th century.
 - Sputnik was the **first artificial Earth satellite** launched by the **Soviet Union** into an **elliptical low Earth orbit** on **4th October 1957**.
 - Any country could **theoretically trust Micius** to provide entangled photons to secure its communications but the **satellite is a strategic resource** that other countries would **want to replicate** giving further boost to the quantum race which **has political and military implications** that are hard to ignore.

Global Partnership on Artificial Intelligence

Why in News

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

Key Points

- **Objective:** GPAI is an international and multi-stakeholder initiative to guide the responsible development and use of AI, based on human rights, inclusion, diversity, innovation, and economic growth.
- **Functions:**
 - Bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities.
 - Bring together leading experts from industry, civil society, governments, and academia to conduct research and pilot projects on AI.
 - It will initially **comprise four working groups** focused on responsible AI, data governance, the future of work, and innovation and commercialisation.
- **Founding Members:** Australia, Canada, the European Union, France, Germany, India, Italy, Japan, the Republic

of Korea, Mexico, New Zealand, Singapore, Slovenia, the United Kingdom and the United States.

- **Organisation:**
 - GPAI will be supported by a Secretariat, to be hosted by **Organization for Economic Cooperation and Development (OECD)** in Paris, as well as by two Centers of Expertise- one each in Montreal (Canada) and Paris (France).
 - GPAI will be able to take advantage of the OECD's expertise on AI policy and its leadership in setting out the first international standard for trustworthy AI – the OECD Principles on Artificial Intelligence.
 - The OECD will also be a Permanent Observer to the GPAI's governing bodies.
- **Background:** Born out of the Canadian and French G7 Presidencies in 2018 and 2019, GPAI was officially proposed by France and Canada at the Biarritz Summit in August 2019.

Recent Initiatives by India in the Field of AI

- India has recently launched **National AI Strategy and National AI Portal** and have also started leveraging AI across various sectors such as education, agriculture, healthcare, e-commerce, finance, telecommunications, etc.
- The **National AI strategy** was released in 2018 by NITI Aayog. It is termed '**AIForAll**' as it is focused on leveraging AI for inclusive growth in line with the Government policy of Sabka Saath Sabka Vikas.
- **Responsible AI for Youth Programme:** It is aimed at imparting education and skills in AI to students in government schools.

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.
- **Example:** Facebook's list of suggested friends for its users, self-driving cars, etc.
- AI automates processes and reduces human error but the principal limitation of AI is that it learns from the data. This means any inaccuracies in the data will be reflected in the results.

Note:



Organization for Economic Cooperation and Development

- It was formed in **1961**. It has **37 member countries**. **India is not a member but one of the key partners** of the organisation.
- It is an international organisation, having a goal to shape policies that foster prosperity, equality, opportunity and well-being for all.
- **PISA** is the OECD's programme for international student assessment.
 - India will participate in the PISA test 2021.
- It is **headquartered at Paris, France**.
 - The **Financial Action Task Force (FATF)** Secretariat is located at OECD headquarters.

G7

- It is a bloc of **industrialised democracies** - Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

Covaxin Approved for Human Clinical Trials

Why in News

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

- Covaxin is an **inactivated vaccine** developed by the company **Bharat Biotech** in collaboration with the **Indian Council of Medical Research (ICMR)**.

Key Points

- Clinical trials in humans are classified into **three phases: phase I, phase II and phase III** and in certain countries formal regulatory approval is required to undertake any of these studies.
- The **phase I** clinical studies carry out initial testing of a vaccine in small numbers (e.g. 20) of healthy adults, to test the properties of a vaccine, its tolerability, and, if appropriate, clinical laboratory and pharmacological parameters. Phase I studies are primarily **concerned with safety**.
- **Phase II** studies involve larger numbers of subjects and are intended to provide preliminary information

about a vaccine's ability to produce its desired effect (usually immunogenicity) in the target population and its general safety.

- Extensive **phase III** trials are required to fully assess the protective efficacy and safety of a vaccine. The phase III clinical trial is the pivotal study on which the **decision on whether to grant the licence is based** and sufficient data have to be obtained to demonstrate that a new product is safe and effective for the purpose intended.
- An application for market authorization may be submitted to the National Regulatory Authority (NRA) on the basis of the data from phase III testing and if approved, the vaccine then becomes commercially available in that particular country.
 - The **Central Drugs Standard Control Organisation (CDSCO)** under Directorate General of Health Services, Ministry of Health & Family Welfare is the **National Regulatory Authority (NRA) of India**.
- According to the **World Health Organisation (WHO)**, out of 200 Covid-19 vaccine candidates, **15 have entered clinical trials**.
 - **AstraZeneca** is the world's leading Covid-19 vaccine candidate and has reached the final stage in terms of development. It is being developed by researchers at the **University of Oxford (UK)**.
 - **US Firm Moderna's vaccine (MRNA-1273)** will go into phase III clinical trials in July.

Dexamethasone Drug

Why in News

Recently, scientists administering the **World Health Organisation's recovery trial** have reported that **dexamethasone reduced Covid-19 deaths in severe patients**.

- Dexamethasone is a **cheap and widely available steroid drug**.

Key Points

- **Highlights of the Research:**
 - The drug was given **either orally or through an IV** (intravenous).
 - After 28 days, it had **reduced deaths by 35%** in patients who needed treatment **with breathing machines** and **by 20%** in those **only needing supplemental oxygen**.

Note:

- The drug is **not helpful for less ill patients** and for those **who do not need respiratory support**.
- According to the estimates, this drug can **prevent one death for every eight patients** treated while on breathing machines and **one for every 25 patients on extra oxygen** alone.
- **Drug Mechanism:**
 - **Multi-system Inflammatory State** is a Covid-19 related illness that causes **inflammation of the blood vessels** leading to **low blood pressure**, affecting the entire body as it causes a build-up of fluid in the lungs and other organs.
 - The inflammation **can be fatal** so steroids and other anti-inflammatory drugs are used to reduce it.
 - Dexamethasone is **not anti-viral but works to modulate the immune response** of the body when confronted by a viral infection such as Covid-19.
- **Benefits:**
 - The **survival benefit is clear and large** in severe patients.
 - It is **highly affordable, easy to make, can be scaled up quickly** and **only needs a small dosage**.
 - It is a **cheaper** option than **tocilizumab**, an injectable, which is also being tested.
- **Concerns:**
 - The **WHO advises** that steroids **should not be used early in a course of illness** because they **can slow the time until patients clear the virus**.
 - **Excessive use** of steroids can lead to **adverse reactions** like major mood swings, aggression and irritability, delusions, kidney/liver damage, increased blood pressure, etc.
- **India's Reaction:**
 - **Indian doctors have welcomed** the research as good news for Covid-19 patients on ventilators.
 - The drug is **affordable and easily available in India**.
 - Earlier, the **Indian Council for Medical Research (ICMR)** revised the protocol for clinical management of Covid-19 and **allowed the use of remdesivir, tocilizumab and Convalescent Plasma Therapy (CPT)** on certain groups of patients.
 - **Remdesivir reduced hospital stays** for very sick Covid-19 patients but **has not been shown to improve recovery** itself.

- **Other Findings from the Research:**
 - Earlier, the same study showed that the **malaria drug hydroxychloroquine** was **not working against the coronavirus**.
 - The study enrolled more than 11,000 patients in England, Scotland, Wales and Northern Ireland who were given either standard of care or that plus one of the treatments mentioned below:
 - Dexamethasone.
 - **HIV combo drug lopinavir-ritonavir**.
 - Antibiotic azithromycin.
 - Anti-inflammatory drug tocilizumab.
 - Plasma from people who have recovered from Covid-19 that contains antibodies to fight the virus.

Antiviral Drug Umifenovir

Why in News

The **Central Drug Research Institute (CDRI), Lucknow**, a constituent lab of the **Council of Scientific and Industrial Research (CSIR)**, has received permission for carrying out **Phase III trials** for the use of **Umifenovir** against **Covid-19**.

- These trials will be **randomised, double-blind, placebo-controlled** that will test the **efficacy, safety and tolerability of the drug**.

Key Points

- **Safe:** Umifenovir has already been used for the treatment of influenza in China and Russia and therefore is safe. It recently came into prominence due to its potential use for Covid-19 patients. The clinical trial is to evaluate its efficacy in Indian patients.
- **Strengthens Immune System:** It acts by preventing entry of the virus into human cells and also by priming the immune system.
- **Indigenously Developed:** All the raw materials for the drug are indigenously available and if the clinical trial is successful, Umifenovir can be a safe, efficacious, affordable drug against Covid-19.
- **Potential Prophylactic Use:** It has the potential for prophylactic use. A prophylactic is a medication or a treatment designed and used to prevent a disease from occurring.
- **CSIR's Efforts Against Covid-19:**

Note:

Randomised,**Double-blind, Placebo-controlled Trials**

- **Randomized trials** mean that subjects are randomly assigned to placebo and intervention groups. Placebo is anything which looks like real treatment but it is actually not. **For example-** sugar pills and saline injections.
- **Double-blind** means that neither the patients nor the researchers know who is getting a placebo and who is getting the treatment. This ensures that the result of trials are not affected by the biases of researchers and patients.
- **Placebo-controlled** refers to a control group receiving a placebo. This sets it apart from studies that simply give participants treatment and record the results.
 - Here, a control group is given a placebo while another group is given the drug (or other treatment) being studied. That way, researchers can compare the drug's effectiveness against the placebo's effectiveness.
- The CSIR is evaluating **Mycobacterium W (Mw)** for faster recovery of hospitalised Covid-19 infected patients.
- The clinical trial of the **Favipiravir drug** has also been allowed by the **Drug Controller General of India** (DCGI).

Kala- azar Disease

Why in News

Recently, a team of researchers from the National Centre for Cell Science (NCCS), Pune have found **new biomolecules to fight drug resistance in Kala- azar (visceral leishmaniasis)**.

- NCCS is an autonomous organisation under the Department of Biotechnology, Government of India.
- It was established to facilitate cell biology research in the country.

Key Points

- **Resistance to Drug:** The only drug available against leishmaniasis, **miltefosine**, is rapidly losing its effectiveness because of **emerging resistance to this drug** due to a decrease in its accumulation inside the parasite.

Leishmaniasis

- It is a **neglected tropical disease** affecting almost 100 countries including India.
 - Neglected tropical diseases are a diverse group of communicable diseases that prevail in tropical and subtropical conditions in 149 countries.
- It is **caused by a parasite called Leishmania**, which is transmitted through the bite of sand flies.
- There are **three types of leishmaniasis**:
 - **Visceral leishmaniasis**, which affects multiple organs and is the most serious form of the disease.
 - **Cutaneous leishmaniasis**, which causes skin sores and is the most common form.
 - **Mucocutaneous leishmaniasis**, which causes skin and mucosal lesions.
- Visceral leishmaniasis, which is commonly known as Kala-azar in India, is fatal in over 95% of the cases, if left untreated.
- **Responsible Proteins:** A protein called 'P4ATPase-CDC50', is responsible for intake of the drug by the parasite, and another protein, called 'P-glycoprotein', is responsible for throwing this drug out from within the parasite's body.
- A decrease in the activity of the former protein, and an increase in the activity of the latter **results in less accumulation of miltefosine inside the parasite's body**, thus causing it to become resistant to the drug.
- While exploring ways to tackle miltefosine resistance, the researchers worked with one of the species of Leishmania that causes infection, called Leishmania major.
- They **tried to manipulate these transporter proteins** in the species in a manner that would result in **increased uptake of the drug and decrease in its being thrown out** of the parasite's body.
- They used computational methods to design small molecules, called **peptides**, that could very specifically interact with the transporter proteins of Leishmania major alone, and not interfere with human proteins in any way.
 - A **peptide** is a short chain of **amino acids**.
 - Amino acids are organic compounds that combine to form proteins.

Note:

World Sickle Cell Day 2020

Why in News

Recently, **World Sickle Cell Day 2020** was observed in India to increase awareness about the Sickle Cell Disease (SCD) at the national level.

- The day is recognised by the United Nations and celebrated every year on **19th June**.
- The United Nations General Assembly adopted a resolution recognising sickle cell disease as a public health problem on 22th December, 2008.

Key Points

➤ Sickle Cell Disease

- It is an **inherited blood disease** which is most common among people of African, Arabian and Indian origin.
- It is a **group of disorders that affects hemoglobin**, the molecule in red blood cells that delivers oxygen to cells throughout the body.
- People with this disease have atypical hemoglobin molecules called hemoglobin S, which can distort red blood cells into a sickle, or crescent shape. This blocks blood flow and oxygen from reaching all parts of the body.
- **Symptoms:** It can cause severe pain, referred to as sickle cell crises. Infections and fatigue are other symptoms.
 - People with sickle cell disorders are also at a risk of complications such as stroke, acute chest syndrome, blindness, bone damage, etc.
 - Over time, people with sickle cell disorders can experience damage to organs including the liver, kidney, lungs, heart and spleen. Death can also result from complications of the disorder.

- **Treatment:** Medication, blood transfusions and rarely a bone-marrow transplant.

➤ Related Data:

- According to **Global Burden of Disease (GBD)**—a global research programme that estimates mortality and burden from major diseases across the globe—the prevalence and incidence of sickle cell

disease in India in 2017 and 2018 was **1,104,634 and 195,166**, respectively.

- The disease in India occurs predominantly in eastern Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh, western Odisha and in pockets of the Nilgiri Hills in north Tamil Nadu and Kerala. The disease is prevalent among tribal communities (including children).

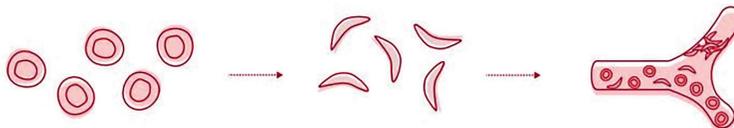
➤ Challenges:

- **Social Stigma:** It reduces the effectiveness of screening programmes as people don't want to go to health authorities.
- **Prevalence among Tribal Population:** Access to care for SCD in the tribal regions of India is limited.
- **School Drop Out:** Children with sickle cell disease often have to drop out from school.
- **Policy Issue:** The delayed implementation of the **2018 draft policy on haemoglobinopathies**.
 - The policy aims to provide evidence-based treatment for patients and reduce the number of new-born children with sickle cell disease through initiatives such as the **Sickle Cell Anaemia Control Program**, screening and prenatal diagnosis.

➤ Initiatives by India:

- **Initiative by the Ministry of Tribal Affairs:** In order to collect real time data and provide relevant information related to Sickle Cell, the government has **launched a new portal** which will act as a catalyst in creating awareness.
 - The portal will have real time data through a dashboard along with registration facility, information about the disease and various government initiatives undertaken.

What is Sickle Cell Disease?



SCD is a blood disorder

Sickle Cell Disease (SCD) is an **inherited blood disorder** that affects red blood cells. Normal red blood cells are round and flexible, which lets them travel through small blood vessels to deliver oxygen to all parts of the body.

Causing misshapen blood cells

SCD causes red blood cells to **form into a crescent shape**, like a sickle.

Creating painful complications

The sickle-shaped red blood cells break apart easily, clump together, and stick to the walls of blood vessels, **blocking the flow of blood**, which can cause a range of serious health issues.

Note:

- The Ministry has also initiated an '**Action Research**' project under which Yoga dependent lifestyle is promoted to reduce the complications in the patient suffering from this disease.
- **Expanded Screening:** Certain states, such as Chhattisgarh and Gujarat, have expanded their screening programmes from hospital to school-based screenings. Extrapolating such screening efforts and implementation strategies to other states will help map the prevalence of the disease.

I-Lab: Mobile Testing Facility

Why in News

Recently, the government has launched the **country's first mobile I-Lab (Infectious disease diagnostic Lab) for last mile Covid-19 testing access.**

- It has been created by a team from the **Andhra Pradesh MedTech Zone Limited (AMTZ)** under the **National Biopharma Mission.**

Key Points

- The **Department of Biotechnology (DBT - Ministry of Science & Technology)** under the **Covid-Command strategy** has supported building of mobile testing labs (I-Labs) through AMTZ.
- The Lab belongs to the **BioSafety Level (BSL-II)** category.
 - BSLs are ranked from **one to four** and are categorised on the basis of the organisms that the researchers are dealing with. The organisms include viruses, bacteria, fungi, parasites, etc.
 - BSL-I is considered to be the least hazardous, while BSL-IV poses the maximum safety risk. Each level builds on the previous category, adding more layers of constraints and barriers.
- It will be deployed in interior, inaccessible parts of the country and has the capability to perform **25 RT-PCR tests** a day, **300 ELISA tests** a day and additional tests for **TB, HIV** as per **CGHS (Central Government Health Scheme)** rates.
 - **RT-PCR and ELISA tests** have been approved by the **Indian Council of Medical Research (ICMR)** for Covid-19.
 - **CGHS** provides comprehensive medical care to central government employees and pensioners enrolled under the scheme. Rates of different procedures are decided under the Scheme.

Andhra Pradesh MedTech Zone Limited

- Incorporated in **2016**, it is Asia's first **medical equipment manufacturing ecosystem**, uniquely dedicated for Medtech and supported by various Ministries.
- The Department of Biotechnology (DBT) along with the AMTZ has initiated the **DBT-AMTZ COMManD (Covid Medtech Manufacturing Development) Consortia** to address the shortage of critical healthcare technologies in India and move progressively towards a stage of self-sufficiency.

National Biopharma Mission

- The National Biopharma Mission (NBM) is an **industry-academia collaborative mission** for accelerating biopharmaceutical development in the country.
- It was **launched in 2017** at a total cost of Rs.1500 crore and is 50% co-funded by World Bank loan.
- It is being **implemented by the Biotechnology Industry Research Assistance Council (BIRAC)**.
 - BIRAC is a Public Sector Enterprise, set up by the Department of Biotechnology (DBT).
- Under this Mission, the Government has launched **Innovate in India (i3) programme** to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the biopharma sector.
- It has a focus on following **four verticals**:
 - **Development:** Development of product leads for Vaccines, **Biosimilars** and Medical Devices that are relevant to the public health need by focussing on managed partnerships.
 - **Upgrade:** Upgradation of shared infrastructure facilities and establishing them as centres of product discovery/discovery validations and manufacturing.
 - **Capacity Building:** Developing human capital by providing specific training.
 - **Industry-Academy Linkages:** Developing technology transfer offices to help enhance industry academia inter-linkages.

The Paper Microscope: Foldscope

Why in News

Recently, some doctors have explored and validated

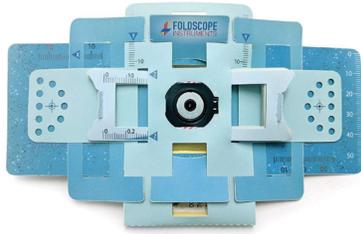
Note:

the clinical utility of **foldscope** in the diagnosis of diseases using various patient samples.

Key Points

➤ Foldscope:

- It is an **affordable microscope** that can be made from simple components, including a **sheet of paper and a lens**. It cost less than a Rs. 100 to make a Foldscope.
- Upon assembly, the device can hold a specimen slide for observation, and this **specimen can be viewed via a mobile phone camera** attached to it.
- It is **portable and durable**, and performs on par with conventional microscopes.
- It was **developed by Manu Prakash** and is part of the “**frugal science**” movement which aims to make cheap and easy tools available for scientific use in the developing world



➤ Benefits:

- Foldscope can be **used to diagnose diseases** like oral health, urinary tract infection (UTI), leishmaniasis, schistosomiasis, and monitor kidney stones.
- It can be **employed in public healthcare centres for primary diagnosis** or as **personal health monitoring devices**.
- Apart from the medical field **it can also be used in agriculture**, to detect various types of microorganisms which affect the crops and animals.

Raw Material Uncertainties for Rechargeable Batteries: UNCTAD

Why in News

Recently, the **United Nations Conference on Trade and Development** (UNCTAD) released a report ‘**Commodities at a glance: Special issue on strategic battery and minerals**’.

- The report facilitated **research into battery technologies** that depended less on critical raw materials and had the potential to provide **higher energy density**.

- **Energy density** is the amount of energy that can be stored in a given mass of a substance or system, i.e. a **measure of storage of energy**.

Key Points

- **Uncertain Supply:** The report highlighted that the **supply of raw materials to produce rechargeable batteries is uncertain**.

- **Lithium, natural graphite** and **manganese** are critical raw materials for the manufacture of rechargeable batteries.

➤ Rising Demand:

- **Integration of EVs:** There has been a **rapid growth in demand for rechargeable batteries** due to the gradual integration of **electric vehicles** (EVs) in global transportation.

- The sales of electric cars have increased by 65% in 2018 from 2017 to 5.1 million vehicles and it will reach 23 million in 2030.

- **Increased Use of Raw Material:** With the increasing number of EVs, the **demand for rechargeable batteries and the raw materials used** in them have also **increased**.

- The worldwide market for cathodes for **lithium-ion batteries** was estimated at \$7 billion in 2018 and is expected to reach \$58.8 billion by 2024.

- The **demand for raw materials** used to manufacture rechargeable batteries will **grow rapidly** as **other sources of energy lose their importance**.

➤ Concerns:

- **Limited Suppliers:** The **security of supplies** is a concern for all stakeholders because the **production of the raw materials is concentrated in a few countries**.

- Over **60% of the world’s Cobalt** is mined in the **Democratic Republic of the Congo** while over **75% of global Lithium** is mined in **Australia and Chile**.

- **Prone of Volatility:** Any disruption to supply might lead to **tighter markets, higher prices and increased costs** of rechargeable batteries.

- In 2018, the demand for cobalt surged by 25% from 2017 to 125,000 tonnes, of which 9% accounted for the EV battery sector.

- Cobalt demand would reach 185,000 tonnes by 2023, with about 35% accounting for the EV battery sector, the report said.

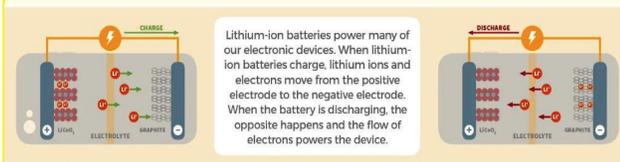
Note:



- Growth in demand for lithium had been significant since 2015, increasing by 13% per year.

Li-ion Batteries

- A lithium-ion battery or Li-ion battery is a **type of rechargeable battery**.
- Li-ion batteries use an **intercalated** (Intercalation is the reversible inclusion or insertion of a molecule into materials with layered structures) **lithium compound** as one electrode material, compared to the metallic lithium used in a non-rechargeable lithium battery.
- The battery **consists of electrolyte**, which allows for ionic movement and the two electrodes are the constituent components of a lithium-ion battery cell.
- Lithium ions move from the negative electrode to the positive electrode during discharge and back when charging.
- They are **one of the most popular types of rechargeable batteries used for military, EVs and aerospace applications**.



HAM Radio

Why in News

Recently **HAM (amateur) radio operators** have volunteered to help a special task force that has been constituted in Bengaluru to ensure that citizens placed under home quarantine follow the protocol for it.

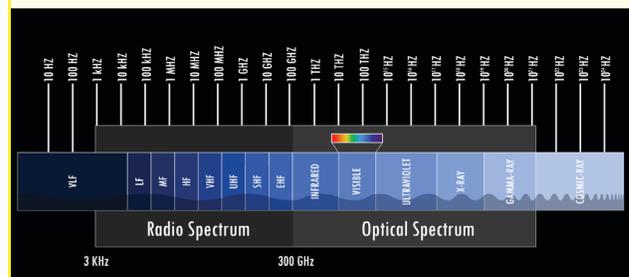
Key Points

- Amateur radio, also called ham radio, is a **noncommercial two-way radio communications**. They use **many frequency bands** across the radio spectrum.
- HAM radio is a real-time communication network. This is much like wireless communication which is **quick and transparent**.

- Amateur Radio operators set up and operate organized communication networks locally for governmental and emergency officials, as well as non-commercial communication for private citizens **affected by the disaster**.
- Amateur Radio operators are most likely to be active after disasters that damage regular lines of communications due to power outages and destruction of telephone, cellular and other infrastructure-dependent systems.

Radio Waves

- Radio waves have the longest wavelengths in the **electromagnetic spectrum**.
- These were discovered by **Heinrich Hertz** in the late **1880s**.
- These are produced by the accelerated motion of charges in conducting wires. They are used in radio and television communication systems.
- They are generally in the frequency range from **500 kHz to about 1000 MHz**.
- The AM (Amplitude Modulated) band is from 530 kHz to 1710 kHz. The **FM (Frequency Modulated)** radio band extends from 88 MHz to 108 MHz.
- **Higher frequencies** up to 54 MHz are used for **short wave bands**. TV waves range from 54 MHz to 890 MHz.
- **Cellular phones** use radio waves to transmit voice communication in the **Ultra High Frequency (UHF)** band.
- Radio-wave communications signals travel through the air in a straight line, reflect off of clouds or layers of the ionosphere, or are relayed by satellites in space.



Note:

Environment and Ecology

Highlights

- Largest Decline in Arctic Sea Ice
- Land Use Changes & Zoonoses
- Assessment of Climate Change over the Indian Region: MoES
- Forest Fires
- Olms in Postojna Cave of Slovenia
- International Horseshoe Crab Day
- World Crocodile Day
- Smuggling of Exotic Macaws
- Gee's Golden Langur
- Fishing Cats
- Money Laundering and the Illegal Wildlife Trade
- Increased Ozone Pollution
- Gynandromorphism
- Uganda Submitted REDD+ Results
- Pollinator Week
- Coccolithophores: Ancient Marine Algae
- Land Transfer of Gangotri National Park

Largest Decline in Arctic Sea Ice

Why in News

The **National Centre of Polar and Ocean Research (NCPOR)** has observed the **largest decline in the Arctic Sea ice in the last 41 years**.

- The decline in the Arctic Sea ice is due to **global warming** — leading to **localised increase in evaporation, air humidity, cloud cover and rainfall**.

Sea Ice

- Sea ice arises as seawater freezes. Because **ice is less dense than water**, it floats on the ocean's surface.
- Sea ice covers about 7% of the Earth's surface and about 12% of the world's oceans.

Key Points

- **Increased Rate of Sea Ice Decline:**
 - In the last 40 years (1979-2018), the sea ice has been declining at **4.7% per decade**, while the current declining rate was found to be **13% in July 2019**.
 - Thus, it has been noted that the volume of ice formation during winters is **unable to keep pace** with the volume of ice loss during summers.
 - Additionally, it has been predicted that if this trend continues, there would be **no ice left in the Arctic Sea by 2050**.

Impacts:

- The decrease of the Arctic Sea ice area and the increase in the duration of summer and autumn seasons **affected the local weather and climate** over the Arctic Ocean and its marginal seas.
- Being a sensitive indicator of climate change, the loss of ice cover in the Arctic Sea may affect **other components of the climate system** such as reduction of heat, water vapour, and other material exchange between the atmosphere and the sea.
- The northern hemisphere experienced **record high-temperature rise**, especially during the spring and summer months.

National Centre of Polar and Ocean Research

- National Centre of Polar and Ocean Research (NCPOR) was established as an autonomous Research and Development Institution of the **Ministry of Earth Sciences** in 1998.
- It is located in **Goa**.
- Earlier known as National Centre for Antarctic and Ocean Research (NCAOR), NCPOR is India's premier R&D institution responsible for the country's research activities in the **Polar and Southern Ocean realms**.
- It is the **nodal agency** for planning, promotion, coordination and execution of the entire gamut of **polar and southern ocean scientific research** in the country as well as for the associated logistics activities.

Note:



Land Use Changes & Zoonoses

Why in News

According to the **United Nations Convention to Combat Desertification (UNCCD)**, the **land use change**, which prepares the ground for **zoonoses** like **Covid-19**, should be reversed.

- Land use change promotes zoonoses like Covid-19 as the interaction and physical distance between animals and humans get closer.

Key Points

- **Land Use Change:**
 - **Land use change** is a process which **transforms the natural landscape** by direct human-induced land use **such as settlements, commercial and economic uses and forestry activities**.
 - It impacts the overall environment in terms of **greenhouse gas emission, land degradation and climate change**.
- **Data Analysis:**
 - Land use change can be a **factor in CO₂ (carbon dioxide) atmospheric concentration**, and is thus a contributor to **global climate change**.
 - It **represents almost 25%** of total global emissions.
 - According to the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), over **70 % of all natural, ice-free land** in the world is affected by human use.
 - This could further rise to **90% by 2050**.
 - The land degradation affects **3.2 billion people** worldwide.
 - **Ecosystem services** e.g. forest, agriculture, grassland tourism etc. worth \$10.6 trillion are lost due to land degradation annually.
 - According to the **Food and Agriculture Organization** of the **United Nations**, by 2050, over 500 million hectare area of new agricultural land will be needed to meet the global food demand.
- **Possible Reasons:**
 - **Population Growth:** Fast population growth and the consequent high pressure on resources have an adverse effect on the existing natural resources of the land area.

- **Encroachment of Land:** Substantial increase in demand for food has resulted in an expansion of croplands by encroaching on uncultivated areas including forest, shrub and wetlands.
 - According to the **Intergovernmental Panel on Climate Change (IPCC)** report on climate change and land, agricultural land for food, animal feed and fibre is behind the land use change.
- **Use of Forest Resource:** Continuous and exhaustive thinning of forestry resources for diverse uses, particularly for construction, firewood and agricultural tools led to the degradation of forest cultivated land.

United Nations

Convention to Combat Desertification

- **Established in 1994**, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management.
- It is the only convention stemming from a direct recommendation of the Rio Conference's Agenda 21.
- **Focus Areas:** The Convention **addresses specifically the arid, semi-arid and dry sub-humid areas**, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.
- From India, **the Ministry of Environment, Forest and Climate Change** is the nodal Ministry for this Convention.

World Day to Combat Desertification and Drought 2020

- June 17 is observed worldwide as **World Day to Combat Desertification and Drought**.
- **Theme: Food, Feed, Fibre** which seeks to educate individuals on how to reduce the impact of food consumption.
- According to the United Nations, 2020 Desertification and Drought Day focuses on the links between consumption and land.
- This year's 'global observance event' is being hosted virtually by the Korea Forest Service.

Zoonoses

- It is any disease or infection that is naturally transmissible from vertebrate animals to humans.
- Animals thus play an essential role in maintaining zoonotic infections in nature.
- Zoonoses may be bacterial, viral, or parasitic.

Note:

- **Grazing at Cultivated Land:** Farmers often abandon and leave the cultivated land for grazing purposes due to the declining of its **soil fertility status**.
- **Destruction of Wetlands:** The conversion of the wetland to the cultivated and settlement land leads to the destruction of wetlands.
- **Solutions:**
 - **Climate Smart Land Management Practices:** According to a report by IPCC on land use, **increased food productivity, improved cropland management, livestock management, agroforestry, increased soil organic carbon content and reduced post-harvest losses** would help in ecosystem conservation and land restoration .
 - These management practices could deliver up to \$1.4 trillion in increased crop production.
 - **Forest Management:** Improved fire management and improved grazing land can help in land restoration.
 - **Restore and Rehabilitate:** To achieve **Land Degradation Neutrality (Sustainable Development Goal target 15.3)**, additional commitments in the land use sector, namely to restore and rehabilitate 12 million hectares of degraded land per year could help close the emissions gap by up to 25% in the year 2030.
 - The restoration of these **areas as part of building back better to avoid future zoonoses** would bring other crucial benefits, particularly mitigating climate change.

Assessment of Climate Change over the Indian Region: MoES

Why in News

Recently, the **first Assessment of Climate Change over the Indian Region** has been published by the **Ministry of Earth Sciences (MoES)**.

- It is **India's first-ever national forecast on the impact of global warming** on the subcontinent in the coming century.
- These projections, based on a climate forecasting model developed at the **Indian Institute of Tropical Meteorology (IITM)**, Pune, will be **part of the next report of the Intergovernmental Panel on Climate Change (IPCC)**, expected to be ready in **2022**.

- This is a **significant step for climate science and policy in India** because existing projections are put in the context of historical trends in land and ocean temperatures, monsoon rainfall, floods, droughts and Himalayan warming and glacier loss.

Key Points

- **Temperature:**
 - In a **worst-case scenario**, average surface air temperatures over India could **rise by up to 4.4°C** by the end of the century as **compared to the period between 1976 and 2005**.
 - The worst-case scenario is defined by the **Representative Concentration Pathway (RCP) 8.5** that calculates a radiative forcing of 8.5 watt per square metre due to the rising **greenhouse gas (GHG) emissions** in the atmosphere.
 - **Radiative forcing or climate forcing** is the difference between sunlight energy absorbed by the Earth (including its atmosphere) and the energy that it radiates back into space.
 - Under an **intermediate scenario of RCP 4.5**, the country's **average temperature could rise by up to 2.4°C**.
 - The rise in temperatures will be even **more pronounced in the Hindu Kush-Himalayan region** where the **average could reach 5.2°C**.
 - The region is **already highly vulnerable** to climate-related variability in temperatures, rainfall and snowfall.
 - **By 2100**, the **frequency of warm days and warm nights** might also **increase by 55% and 70% respectively**, as compared to the period 1976-2005 under the RCP 8.5 scenario.
 - The **incidences of heat waves** over the country could also **increase by three to four times**. Their **duration of occurrence might also increase** which was already witnessed by the country in 2019.
 - **Between 1900 and 2018**, the **average temperatures of India rose by 0.7°C**.
 - This rise in temperatures has been largely attributed to **global warming** due to GHG emissions and land use and land cover changes.
 - However, it has also been **slightly reduced by the rising aerosol emissions** in the atmosphere that have an **overall cooling characteristic**.

Note:



- The **latest global climate change assessments** indicate a **rise in worldwide average surface air temperatures by 5°C** by the end of the century if human activities keep emitting GHGs at the current rate.
 - The **global average temperature** in the last century has **gone up by 1.1°C**, according to the latest estimates by the IPCC.
- Even if the **Nationally Determined Contributions (NDCs)** declared by countries under the **Paris Agreement 2015** are met, the global average temperature **could rise by around 3°C**, which could be disastrous.
- **Rainfall:**
 - Another significant highlight of the assessment is the **projected variability in the rainfall**, especially during the **monsoon season which brings 70% of the rainfall received** by India and is one of the **primary drivers of its rural agrarian economy**.
 - Monsoon rainfall could **change by an average of 14% by 2100 that could go as high as 22.5%**. It is **not mentioned** if this change will be an **increase or a decrease but still represents variability**.
 - **Overall rainfall during the monsoon season has decreased by 6%** between 1950 and 2015.
 - In the past few decades, there has been an **increased frequency of dry spells** during the monsoon season that has **increased by 27%** between 1981-2011, as compared to 1951-1980.
 - The **intensity of wet spells has also increased** over the country, with central India receiving **75% more extreme rainfall events** between 1950 and 2015.
 - **For example:** Monsoon seasons of 2018 and 2019 where dry spells were broken by extremely heavy rainfall spells, creating a flood and **drought** cycle in many regions in India.

Forest Fires

Why in News

Recently, the **National Green Tribunal** has directed the Kerala Forest Department to submit its report in one month, on the steps taken to **prevent forest fires** and **implement the National Action Plan on Forest Fire** in the State.

Key Points

- **Forest Fires:**
 - Fire can play a vital role in keeping the forests healthy, recycling nutrients, helping tree species regenerate, removing invasive weeds and pathogens, and maintaining habitat for some wildlife.
 - As populations and demands on forest resources have grown, **the cycle of fire has spun out of balance**.
 - Forest fires have become an **issue of global concern**. In many countries, wildfires are burning larger areas, and fire seasons are growing longer due to global warming.
 - Globally, **forest fires release billions of tons of CO₂ into the atmosphere**, while hundreds of thousands of people are believed to die due to illnesses caused by exposure to smoke from forest fires and other landscape fires.
- **Reasons for Forest Fires:**
 - **Thunderstorms** are the most likely natural cause for forest fires.
 - The dry deciduous forests in central and southern India **face 5 to 6 months of dry period** and are vulnerable to fires.
 - The reasons are mainly **manmade**, particularly in cases where people visit forests and leave burning bidis, cigarette stubs or other inflammable materials.
 - A major reason for forest fires in north-east India is **slash-and-burn cultivation**, commonly called jhum cultivation.
 - The north-east has tropical evergreen forests which are not likely to catch fire easily on their own like the dry deciduous forests of central and southern India.
- **India's Initiative to Tackle Forest Fire:**
 - **National Action Plan on Forest Fires (NAPFF):**
 - It was launched in 2018 to minimise forest fires by informing, enabling and empowering forest fringe communities and incentivising them to work with the State Forest Departments.
 - The plan also intends to substantially reduce the vulnerability of forests across diverse forest ecosystems in the country against fire hazards.
 - It also aims to enhance capabilities of forest personnel and institutions in fighting fires and swift recovery subsequent to fire incidents.

Note:

- **Forest Fire Prevention and Management Scheme:**
 - The Forest Fire Prevention and Management Scheme (FPM) is the only centrally funded program specifically dedicated to assist the states in dealing with forest fires.
 - The **FPM replaced the Intensification of Forest Management Scheme (IFMS)** in 2017.
 - Funds allocated under the FPM are according to a center-state cost-sharing formula, with a 90:10 ratio of central to state funding in the Northeast and Western Himalayan regions and a 60:40 ratio for all other states.
 - It also provides the states to have the flexibility to direct a portion of the **National Afforestation Programme (NAP)** and **Mission for Green India (GIM)** funding toward forest fire work.
- India has set ambitious policy goals for improving the sustainability of its forests.
 - As part of the **National Mission for Green India** under India's **National Action Plan on Climate Change**, the government has committed to increase forest and tree cover.
 - Under its **Nationally Determined Contribution**, India has committed to bringing 33% of its geographical area under forest cover and to create additional sinks of 2.5 billion to 3 billion tons worth of CO₂ stored in its forests by 2030.

Olms in Postojna Cave of Slovenia

Why in News

Recently, three **Olms** have been put on display in **Slovenia's Postojna Cave**, where they hatched in 2016 in a rare successful breeding.

Key Points

- **Description:**
 - The Olms are **eyeless (skin covered eyes) pink animals** also known as the "**baby dragon**" and "**human fish**" for its pale skin-like colour.
 - They feed on **detritus and endemic cave vertebrates** and hide in crevices or bottom sediment when disturbed. They **can survive without food for up to 10 years**.

- A long-lived species that only matures to a sexual stage after the age of 12-15 years and **reproduces very slowly**.
- It can live a century and breeds only once a decade usually in laboratories throughout Europe or deep in caves away from people.
- They have a **powerful sensory system** of smell, taste, hearing and electrosensitivity.

Threats:

- The olm requires **clean water**, and is therefore **vulnerable to water pollution**.
- Consequently, the major threats to the olm are pollution and habitat disturbance from land use changes occurring above the cave systems.



Habitat:

- They are found in large subterranean **aquatic karst systems** formed in **limestone and dolomite rocks**, and may be found in cave entrances.

Karst Topography

- Any **limestone or dolomitic region** showing typical landforms produced by the action of groundwater through the processes of solution and deposition is called Karst topography.
- It is named after the typical topography developed in limestone rocks of Karst region in the **Balkans adjacent to Adriatic sea**.
 - The name of this type of topography comes from the **Karst region in Yugoslavia**, karst topography can be found all over the world.
- The karst topography is also characterised by **erosional and depositional landforms**. Karst landscapes feature **caves, underground streams and sinkholes** on the surface. Where erosion has worn away the land above ground, steep rocky cliffs are visible.



Note:



- They are an entirely aquatic species and prefer waters ranging from 5-15°C.
- Found in Bosnia and Herzegovina, Croatia, Italy, Slovenia and France.

International Horseshoe Crab Day

Why in News

Recently, the **International Union for Conservation of Nature (IUCN)**'s has decided to observe the **first-ever International Horseshoe Crab Day on 20th June 2020**.

Key Points

➤ Horseshoe Crab:

- It is a **marine chelicerate arthropod** living in **shallow coastal waters on soft sandy or muddy bottom** and **spawns** (release or deposit eggs) **mostly on intertidal beaches at summer spring high tides**.
 - **Subphylum Chelicerata** is a division within the **Phylum Arthropoda** containing animals such as spiders, scorpions, harvestmen, mites and ticks. Like all arthropods, they have a **segmented body and segmented limbs** and a **thick chitinous cuticle called an exoskeleton**.
- It is regarded as a marine '**living fossil**'.
- There are **four extant horseshoe crab species**:
 - The American horseshoe crab (*Limulus polyphemus*) along the **eastern coast of the USA** and in the **Gulf of Mexico**.
 - The tri-spine horseshoe crab (*Tachypleus tridentatus*)
 - The coastal horseshoe crab (*Tachypleus gigas*)
 - The mangrove horseshoe crab (*Carcinoscorpius rotundicauda*)
 - The last three are **Indo-pacific species** found in the coastal waters of **India, southeast Asia, China and Japan**.
- **Odisha is their largest habitat in India**.



➤ Importance:

- They have **existed since the time of the dinosaurs** and are important **ecosystem engineers and predators of small organisms**.
- Their large **hard shell serves as a microhabitat** for many other species such as sponges, mud crabs, mussels and snails.
- They are a **critical link to world health, biodiversity and hold cultural importance** across the globe.

➤ Threats:

- **Overharvesting** for use as **food, bait and biomedical testing**.
- **Habitat Destruction**:
 - Habitat loss from coastal reclamation and development.
 - **Shoreline alterations** that are engineered to protect beaches from erosion and sea level rise due to climate change also **affect their spawning habitats**.
- Poachers **kill them for their meat** which is popularly believed to have **aphrodisiac qualities**.
- Trade in horseshoe crabs is rampant in many Indian states as it is believed that consumption of horseshoe crab **meat can lengthen a person's lifespan**, even though there is no scientific evidence to support this.
- Its **carapace** (hard upper shell) is **crushed** and mixed with water to prepare a paste, which is **applied onto scars**.

➤ Conservation:

- It is in the **Schedule IV of the Wildlife Protection Act 1972**, under which the catching and killing of a horseshoe crab is an offence.
- **IUCN Status**:
 - **American horseshoe crab: Vulnerable.**
 - **Tri-spine horseshoe crab: Endangered.**
 - The two other species are not listed yet.

World Crocodile Day

Why in News

World Crocodile Day is celebrated on **17th June**. The day is a **global awareness campaign** to highlight the plight of endangered crocodiles and alligators around the world.

Note:

Crocodylian Species in India

➤ Mugger or Marsh Crocodile:

○ Description:

- The **mugger** is an egg-laying and hole-nesting species.
- The mugger is also known to be dangerous.

○ Habitat:

- It is mainly restricted to the Indian subcontinent where it may be found in a number of freshwater habitat types including rivers, lakes and marshes. However, it can even be found in coastal saltwater lagoons and estuaries.
- It is already **extinct in Bhutan and Myanmar**.



○ Threats:

- Habitat destruction, fragmentation, and transformation, fishing activities and use of crocodile parts for medicinal purposes.

○ Protection Status:

- IUCN List of Threatened Species: **Vulnerable**
- CITES: **Appendix I**
- Wildlife Protection Act, 1972: **Schedule I**

➤ Estuarine or Saltwater Crocodile:

○ Description:

- It is considered as the Earth's largest living crocodile species.
- The **estuarine crocodile** is infamous globally as a known **man-eater**.



○ Habitat:

- It is found in Odisha's **Bhitarkanika National Park**, the **Sundarbans** in West Bengal and the Andamans and Nicobar Islands.
- It is also found across Southeast Asia and northern Australia.

○ Threats:

- Illegal hunting, habitat loss, and antipathy toward the species because of its reputation as a man-eater continue to put pressure on the population.

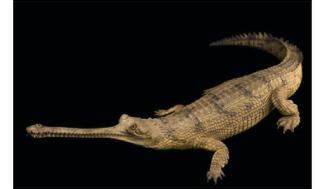
○ Protection Status:

- IUCN List of Threatened Species: **Least Concern**
- CITES : **Appendix I** (except the populations of Australia, Indonesia and Papua New Guinea, which are included in Appendix II).
- Wildlife Protection Act, 1972 : **Schedule I**

➤ Gharial

○ Description:

- **Gharials**, sometimes called gavials, are a type of Asian crocodilian distinguished by their long, thin snouts which resembles a pot (ghara in Hindi).
- Gharials are a type of Crocodilians that also includes crocodiles, alligators, caimans, etc.
- The population of Gharials are a good indicator of clean river water.
- The gharial is known to be a relatively harmless, fish-eating species.



○ Habitat:

- The gharials are mostly found in fresh waters of the himalayan rivers.
- The **chambal river** in the northern slopes of the Vindhya mountains (Madhya Pradesh) is known as the primary habitat of gharials.
- Other himalayan rivers like ghagra, gandak river, Girwa river, Ramganga river and the Sone river are secondary habitats for gharials.

○ Threats:

- Illegal sand mining, poaching, increased river pollution, dam construction, massive-scale fishing operations and floods.

○ Protection Status:

- IUCN List of Threatened Species: **Critically Endangered**
- CITES : **Appendix I**
- Wildlife Protection Act, 1972 : **Schedule I**

Human-Crocodile Conflict

➤ Reasons:

- An encroachment of humans on the river banks and marshy areas with an increased urbanisation is one of the foremost reasons for increasing human-crocodile conflict in these areas.

Note:



- **Hotspots:**
 - Vadodara in Gujarat, Kota in Rajasthan, Bhitarkanika in Odisha and the Andaman and Nicobar Islands are considered as the human-crocodile conflict hotspots in India.
- **Possible Solutions:**
 - Considering the importance of crocodiles in maintaining the balance in the ecosystem, **raising awareness among local people** with the **possible relocation** of crocodiles are some of the feasible options for the protection of the species.

Indian Crocodile Conservation Project

- The Crocodile Conservation Project was launched in **1975** in different States.
- The Gharial and Saltwater crocodile conservation programme was first implemented in Odisha in early 1975 and subsequently the Mugger conservation programme was initiated.
- As a result of the programme, the estimated number of the saltwater crocodiles **increased from 96 in 1976 to 1,640 in 2012** in India.

Smuggling of Exotic Macaws

Why in News

Recently, the **Directorate of Revenue Intelligence (DRI)** has busted a wildlife syndicate which was involved in smuggling of exotic macaws from Bangladesh.

- The joint operation was carried out in coordination with the **Wildlife Crime Control Bureau (WCCB)** and the Customs Department at the Kolkata airport.

Key Points

- **Joint Operation:**
 - The cargo containing 22 exotic birds which had been smuggled in through the Bongaon area of Indo-Bangla border, were seized at Kolkata airport.
 - The birds were identified as **Hyacinth macaw, Pesquet's parrot, Severe macaw and Hahn's macaw**.
 - The seized macaws are **protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, with **hyacinth macaw** being accorded the highest protection.
- **Provisions Related to Illegal Wildlife Trade:**

- Illegally imported birds are **confiscated under Section 111 of the Customs Act, 1962** which is read with the **CITES provisions and the Foreign Trade Policy (Import-Export Policy) of India**.

Hyacinth Macaw

- **Scientific Name:** *Anodorhynchus hyacinthinus*.
- It is a parrot native to **central and eastern South America**.
- With a length of about one meter, it is **longer than any other species of parrot**.
- It is the largest macaw and the **largest flying parrot species**.
- **Threat:** Habitat loss and the trapping of wild birds for the pet trade have taken a heavy toll on their population in the wild.
- **Protection Status:**
 - **International Union for Conservation of Nature's Red List: Vulnerable**
 - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix I**



Wildlife Crime Control Bureau

- It is a **statutory multi-disciplinary body**, established by the Government of India under the **Ministry of Environment, Forests and Climate Change**, to **combat organized wildlife crime** in the country.
- The Bureau has its **headquarters in New Delhi**.

Directorate of Revenue Intelligence

- It is India's **chief anti-smuggling intelligence, investigations and operations** agency.
- It works under the **Central Board of Indirect Taxes and Customs (CBIC)**, Ministry of Finance.
- It is **headed by a Director-General of the rank of Special Secretary** to the Government of India.
- DRI works to secure **India's national and economic security** by preventing the outright smuggling of **firearms, gold, narcotics, fake Indian Currency notes, antiques, wildlife and environmental products**.
- Moreover, it also works to prevent the proliferation of black money, commercial frauds and trade-based money laundering.
- **Headquarters:** New Delhi.

Note:

- Also, Sections 48 and 49 of the **Wildlife Protection Act** prohibit trade or commerce in wild animals, animal articles or trophies.
- **Concerns:**
 - The possibility of spread of **zoonotic diseases** on account of smuggling in such exotic species is increasingly becoming a global concern against the backdrop of **Covid-19**.
 - Illegal wildlife trade was ranked the **fourth largest transnational organised crime globally**, after the smuggling of narcotics, counterfeit goods and human trafficking.
 - West Bengal and northeast India are vulnerable to cross-border wildlife smuggling because of their proximity to the Bangladesh and Myanmar borders and to Thailand.
 - Over the recent years, the DRI has seized a range of endangered species, including a black-and-white ruffed lemur, **hoolock gibbons**, palm civets, Indian star tortoise, etc.
 - Another major concern has been the smuggling of elephant tusks and ivory products.
 - Many international organisations involved in wildlife crime use the **Indo-Bangladesh Border** for various other illegal activities, such as **smuggling of drugs, commercial goods, and even gun-running, apart from the illegal movement of foreign currency**.

Gee's Golden Langur

Why in News

Primatologists have observed that the threat of **electrocution and inbreeding** is increasing among the Gee's Golden Langur.

Key Points

- **Scientific Name:** *Trachypithecus geei*
- **About:** Golden langurs can be most easily recognized by the color of their fur, after which they are named.
 - It has been noted that their fur changes colors according to the seasons as well as geography (region they live in).



- The color of the young also differs from adults in that they are almost pure white.
- They are highly dependent on trees, living in the upper canopy of forests. They are also known as **leaf monkeys**.
- **Habitat:** It is endemic to western Assam, India and southern Bhutan.
 - Their habitat is restricted to the region surrounded by **four geographical landmarks**: the foothills of Bhutan (North), Manas river (East), Sankosh river (West) and Brahmaputra river (South).
- **Threats:**
 - **Restricted Habitat:** As mentioned above, their habitat is restricted by natural boundaries further increasing the threat of extinction.
 - **Habitat Fragmentation:** Their habitat in Assam has fragmented drastically especially after a thrust on rural electrification and massive deforestation.
 - **Inbreeding:** Obstructions such as wires and gaps in the forest due to felling, have increased the threat of inbreeding among golden langurs.
- **Conservation Efforts/Status:**
 - The **Central Zoo Authority, New Delhi** entrusted the state zoo with the project for the conservation breeding of golden langur in Assam in 2011.
 - In 2019, Bhutan recorded a drop of 62% in the population of golden langurs over the 2009 census.
 - The recorded estimation in Assam in 2009 was 5,140. This year's census could not be completed due to the **Covid-19 induced lockdown**.
- **Protection Status:**
 - **IUCN List of Threatened Species:** Endangered.
 - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix I.
 - **Wildlife Protection Act, 1972:** Schedule I.

Fishing Cats

Why in News

The Odisha Government has started a two-year conservation project for **Fishing Cats** in **Bhitarkanika National Park**.

- Like several other rare species, little is known about **fishing cats** in the wild.

Note:



Key Points

- **Scientific Name:** *Prionailurus viverrinus*
- **Description:**
 - It is twice the size of a house cat.
 - The fishing cat is **nocturnal (active at night)** and apart from fish also preys on frogs, crustaceans, snakes, birds and scavenges on carcasses of larger animals.
 - The species breed all year round.
 - They spend most of their lives in areas of dense vegetation close to water bodies and are excellent swimmers.
- **Habitat:** In India, fishing cats are mainly found in the mangrove forests of the Sundarbans, on the foothills of the Himalayas along the Ganga and Brahmaputra river valleys and in the Western Ghats.
- **Threats:**
 - **Habitat Destruction:** A major threat for fishing cats is the destruction of wetlands, their preferred habitat.
 - **Shrimp Farming:** Shrimp farming is another growing threat to **mangrove habitats** of the fishing cat.
 - **Hunting:** This unique cat also faces threats from hunting for meat and skin.
 - **Ritual Practices:** Tribal hunters indulge in ritual hunting practices throughout the year.
 - **Poaching:** It is also occasionally poached for its skin.
 - **Poisoning:** Indiscriminate trapping, snaring and poisoning.
- **Protection Status:**
 - **IUCN Red List:** **Vulnerable**
 - Despite multiple threats, the fishing cat was recently downlisted to 'Vulnerable' from 'Endangered' in the IUCN Red List species assessment.
 - **CITES:** **Appendix II**
 - **Indian Wildlife Protection Act, 1972:** **Schedule I**
- **Conservation Efforts:**
 - The **Fishing Cat Project**, launched in **2010** started raising awareness about the Cat in West Bengal.
 - In 2012, the **West Bengal** government officially declared the **Fishing Cat** as the **State Animal** and



the Calcutta Zoo has two big enclosures dedicated to them.

- In Odisha, many NGOs and wildlife conservation Societies are involved in Fishing Cat research and conservation work.

Money Laundering and the Illegal Wildlife Trade

Why in News

Recently, the **Financial Action Task Force (FATF)** has released the **first global report** on the **Illegal Wildlife Trade (IWT)** namely, '**Money Laundering and the Illegal Wildlife Trade**'.

- The report comes amid increasing **international concern** that the crime could lead to more **zoonotic diseases** in the future.
- The report has also described IWT as a "**global threat**", which also has links with other organised crimes like modern slavery, **drug trafficking** and arms trade.

Key Points

- **Transnational Organised Crime:**
 - The parties involved in the IWT are usually engaged in other major transnational organised crime that fuels **corruption, threatens biodiversity**, and can have significant public health impacts.
 - The illegal trade is estimated to generate revenues of **up to \$23 billion a year**.
 - According to the **2016 UN World Wildlife Crime report**, criminals are illegally trading products **derived from over 7,000 species of wild animals and plants** across the world.
- **Origin and Route of IWT:**
 - Usually, the **countries that are rich in biodiversity** and/or where there may be **weaker law enforcement oversight** and criminal justice are treated as source countries for IWT.
 - Similarly, most parties involved in such crime transit the wildlife through other countries to blur the exact end destination.
 - Transit countries typically include **trade and transport hubs** or **countries with higher levels of corruption**. The laundering of the proceeds occurs across source, transit and destination countries.

Note:

➤ **Methods Used for IWT:**

- It has been observed that the criminals are relying on '**established**' methods to launder proceeds from IWT, including **mobile or social media-based payments, third party payments** and the **placement and layering of funds** through the formal financial sector.
- The **accounts of innocent victims** are also used for high-value payments to avoid and **evade detection**.
- IWT also uses **shell and front companies** to conceal payments and launder their money.
 - Shell company is an inactive company used as a vehicle for various financial manoeuvres or kept dormant for future use in some other capacity.
 - A front organization is any entity set up by and controlled by another organization, such as, organized crime groups, banned organizations, religious or political groups, advocacy groups or corporations.
- Also, **legitimate pet stores and private zoos, farms or parks** are often used to facilitate the illicit pet trade in many countries (such as Asia and the Americas) and are used to justify trading, breeding or otherwise exploit protected wildlife.
- Additionally, the role of **online marketplaces and mobile, social media-based payments and darknets** have facilitated the fast and movement of illegally traded animals.

➤ **Link with Zoonotic Diseases:**

- The spread of **zoonotic diseases** underlines the importance of ensuring that wildlife is traded in a **legal, safe and sustainable manner** and that countries remove the profitability of illegal markets.
- The exact connection between the **trading of pangolins and its scales to the Covid-19 outbreak** is yet to be established but it has been noted that the **price of pangolins has increased between 100% to 600% mark-up**.
 - Further, India has also been a source country for illegal **pangolin** trading.

Challenges with IWT

- The lack of the **required knowledge, legislative basis and resources** to assess and combat the threat posed by the funds generated through the illegal trade is one of the major issues with IWT. This limited focus on the financial side of IWT has largely prevented

jurisdictions from being able to identify and sanction IWT networks.

- IWT makes **other industries more vulnerable to misuse** which includes traditional medicine, décor and jewellery and fashion.

Recommendations

- The countries should consider implementing the good practices which include providing all relevant agencies with the **necessary mandate and tools**; and **cooperating** with other countries, international bodies and the private sector.
- The legislative changes are necessary to **increase the applicability of anti-money laundering laws** to the illegal wildlife trade-linked offences.
 - India amended the **Prevention of Money Laundering Act** in 2012 removing a value threshold, of Rs 30 lakh and above, that was earlier applicable to the wildlife trade predicates.
- It has suggested treating **IWT as money laundering offences** since the proceeds enter the global market through money laundering and also money laundering offences carry more severe penalties in many countries.

Increased Ozone Pollution

Why in News

Recently, the **Centre for Science and Environment (CSE)** has observed an **increase in ozone (a harmful pollutant) levels** in the several cities of the country.

- The analysis is based on **Central Pollution Control Board (CPCB)** data from **22 cities in 15 States**.
- It has also observed that the **particulate matter and nitrous oxide levels fell** during the lockdown to control **Covid-19 outbreak**.

Key Points

- **Ozone Gas:**
 - The '**good**' ozone present in the earth's ozone layer **protects human beings from harmful Ultraviolet (UV) radiation** whereas the **ground level ozone** is **highly reactive** and can have adverse impacts on human health.
 - Even **short-term exposure** of an hour is dangerous for those with **respiratory conditions and asthma**. Thus, an **8-hour average** is considered for **ozone** instead of the 24-hour average for other pollutants.

Note:



- Ozone is **not directly emitted** by any source but is formed by **photochemical reactions** between oxides of nitrogen (NO_x), other volatile organic compounds (VOCs) and gases in the air under the influence of sunlight and heat.
 - Ozone pollution is thus also a **clear indicator of vehicular pollution**, which results in higher concentration of NO_x.
- **Concept of Summer Pollution:**
 - The ozone is primarily a “**sunny weather problem**” in India as the **presence of sunlight has a direct impact** on formation of ground level ozone.
 - **Heat acts as a catalyst**, facilitating photochemical reactions. Hence, higher concentrations of ozone are seen during the summer months.
 - Additionally, the **intense heat waves** are one of the factors responsible for **increased ozone levels** in the country.
 - Usually, the ozone levels tend to spike when winter conditions subside, and its presence is felt most during the day. At night, ozone levels tend to deplete, before spiking again during the afternoon, when sunlight is available.
 - Thus, the characteristics of summer pollution include high winds, intermittent rains, thunderstorms, high temperature and heat waves.
- **Particulate Pollution:**
 - It has been observed that the particulate pollution has been **dropped dramatically** during the lockdown.
 - Also, an average **PM 2.5 levels** during the lockdown for all cities were found to be **lower than the average** for the same period in 2019.
 - However, with lockdown relaxed, pollution started to increase. As soon as lockdown 4.0 came in with more relaxation and traffic returned on roads, the average NO₂ levels increased rapidly from the cleanest lockdown phase.

Gynandromorphism

Why in News

Recently, a rare **biological phenomenon** i.e. **Gynandromorphism** has been spotted in a **dragonfly**, the **Scarlet Skimmer (*Crocothemis servilia*)**, which is found in the Kole wetlands, Kerala.

Key Points

- Gynandromorphism is a characteristic of an organism that **contains both male and female tissues and characteristics**. Such organisms are also called **gynandromorphs**.
- The term is derived from the Greek words (**gyne = woman; aner = man and morphe = form**).
- The phenomenon has been documented in birds, crustaceans and butterflies.
- **Reason:**
 - Gynandromorphs are usually born due **genetic aberration**.
 - Genetic aberrations are **chromosomal disorder or mutation** which is due to a missing, extra, or irregular portion of chromosomal DNA.
- **Importance of the Study of gynandromorphism:**
 - It helps in finding the genetic diversity in related species which further contributes to the conservation and preservation.
 - It also aids in discovery of disease and other changes in the specific species due to factors like climate change and ecological evolutions.
 - Further, the study of gynandromorphs could offer clues as to why some human diseases strike one gender more than the other.

Kole Wetlands

- Kole Wetlands is a wetland lying in **Thrissur District in Kerala**.
- It gives **40% of Kerala's rice requirement** and acts as a natural drainage system.
- It is a part of **Vembanad-Kole wetlands**, a Ramsar site.

Dragonfly

- A dragonfly is an insect belonging to the order Odonata, class Insecta.
- Adult dragonflies are characterized by large, multifaceted eyes, two pairs of strong, transparent wings, sometimes with coloured patches, and an elongated body.
- They are ecologically significant as they act as bioindicators.
 - **Bioindicators** are living organisms such as plants, plankton, animals, and microbes, which are used to **assess the health of the natural ecosystem** in the environment.

Note:



Blue morpho butterflies (top left, a male blue morpho butterfly and top middle, a female; the others are gynandromorphic)

Uganda Submitted REDD+ Results

Why in News

Recently, **Uganda** has become the **first African country** to submit results for **Reducing Emissions from Deforestation and forest Degradation (REDD+)** to the **United Nations Framework Convention on Climate Change (UNFCCC)**.

Key Points

- **Uganda's REDD+ Results:** There is a 44% reduction in the country's rate of deforestation annually between 2015 and 2017.
 - The results submission by Uganda to the UNFCCC has paved the way for **potential results-based payments to the country**.
 - It will help Uganda to receive funds through the **Green Climate Fund's** forest conservation scheme.
- **Significance for Africa:** The submission of the results are a significant development on REDD+ for Africa. This will encourage other African countries to reduce carbon emissions by decreasing deforestation and forest degradation.
- **India and REDD+:**
 - The **Paris agreement on climate change** called upon **country Parties** to take action to implement and support REDD+.

REDD+

- **Reducing Emissions from Deforestation and Forest Degradation (REDD+)** is a mechanism developed by **Parties to the United Nations Framework Convention on Climate Change (UNFCCC)** in 2005.
- Most of the key REDD+ decisions were completed by 2013, with the final pieces of the rulebook finished in 2015.
- The **"Plus"** in REDD+, lays out the various ways in which countries have defined the three activities: **conservation, the sustainable management of forests and enhancement of forest carbon stock**.
- It aims to achieve **climate change mitigation by incentivizing forest conservation**.
- It has three phases — **Readiness, Implementation and Result-based actions**.
 - **Readiness phase** involves the development of national strategies or action plans, REDD+ mitigation actions, and capacity building.
 - **Implementation** is about enacting REDD+ actions and national strategies that could involve further capacity building, technology development and transfer.
 - **Results-based payments** comprise the final REDD+ phase.
 - It provides **financial incentives to developing countries** that prove they stopped deforestation during a certain period of time. This is done through rigorous UN-backed technical evaluations.
 - The **Green Climate Fund (GCF)** established at **Conference Of Parties (COP)-17** to function as the financial mechanism for the UNFCCC, is currently financing REDD+ programs.
 - **Brazil** was the first country to receive \$96.5 million under the results-based payments.
- India has communicated in its **Nationally Determined Contribution (NDC)** under Paris Agreement, that it will capture 2.5 to 3 billion tonnes of Carbon dioxide through additional forest and tree cover by 2030.
- In this regard, India has prepared its **"National REDD+ Strategy"**.
 - Introduced in 2018 by the Ministry of Environment, Forest and Climate Change, the strategy seeks to **address drivers of deforestation and forest degradation** and also develop a roadmap for

Note:

enhancement of forest carbon stocks and achieving sustainable management of forests through REDD+ actions.

Pollinator Week

Why in News

Pollinator Week is celebrated from **22nd June to 28th June every year**.

- It was initiated by the **non-profit Pollinator Partnership** and the **USA' Senate** in **2007**.

Key Points

- According to the **Food and Agriculture Organization (FAO)**, **bees being the dominant pollinators**, have around 25,000-30,000 species.
- **More than 180,000 plant species**, including 1,200 crop varieties, across the world, **depend on pollinators** to reproduce.
- **Declining Numbers:**
 - Around **40% of invertebrate pollinator species**, particularly bees and butterflies, **face extinction** across the world.
 - In **India**, wild honeybees of the genus **Apis**, including the **Asian bee** and the **little bee**, have declined steadily for the past 30 years.
 - Around **16.5% of vertebrate pollinators** are **threatened** with extinction.



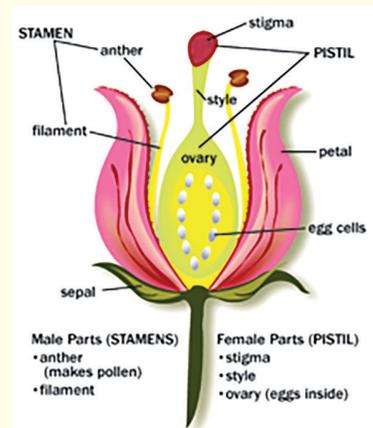
- Of these, 45 species of bats, 36 species of non-flying mammals, 26 species of hummingbirds, seven species of sunbirds and 70 species of passerine birds face extinction.

➤ Reasons for the Decline: Most of them are the result of an increase in human activities:

- Land-use change and fragmentation.
- Changes in agricultural practices including the use of chemical **pesticides**, fungicides and insecticides.
- Change in the **cropping pattern** and crops like the cultivation of **Genetically Modified Organisms (GMOs)** and mono-cropping.
- High environmental **pollution from nitrogen** and heavy metals.
- Growth of **invasive alien species**.
- Higher temperatures associated with **climate change**.

Pollination

- When a **pollen grain** moves from the **anther** (male part) of a flower to the **stigma** (female part), pollination happens and it is the **first step in a process that produces seeds, fruits, and the next generation of plants**.



- This can happen through **self-pollination, wind and water pollination** or through pollinators.

Pollinators

- **Vectors that move pollen within the flower and from flower to flower** are called pollinators.
- They visit flowers to drink nectar or feed off of pollen and transport pollen grains as they move from spot to spot.
- There are **two categories** of pollinators:
 - **Invertebrate pollinators:** Include bees, moths, flies, wasps, beetles and butterflies.
 - **Vertebrate pollinators:** Include monkeys, rodents, lemurs, tree squirrels and birds.

Note:

Coccolithophores: Ancient Marine Algae

Why in News

Recently, the **National Centre for Polar and Ocean Research** (NCPOR) has carried out the study



of **Coccolithophores** (microscopic ancient marine algae) and found that there is a **decrease in the concentration of oceanic calcium carbonate (CaCO₃)** in the southern Indian ocean.

Key Points

- **Coccolithophores** are **single-celled algae** living in the **upper layers of the world's oceans**.
- They **calcify marine phytoplankton** that produce up to 40% of **open ocean calcium carbonate** and are responsible for **20% of the global net marine primary productivity**.
- They **build exoskeletons from individual CaCO₃ plates** consisting of chalk and seashells.
- Though **carbon dioxide (CO₂) is produced** during the formation of these plates, coccolithophores help in removing it from the atmosphere and ocean by **consuming it during photosynthesis**.
- At **equilibrium**, they **absorb more CO₂ than they produce**, which is **beneficial** for the ocean ecosystem.
- **Abundance and diversity enrichment** of coccolithophores in the southern Indian Ocean is **highly dependent on time** and **influenced by** various environmental factors such as **silicate concentrations, calcium carbonate concentration, diatom abundance, light intensity and availability of macro and possibly micronutrient concentrations (marine pollution)**.
 - **Diatoms** are **single-celled algae** which occur after **sea ice breakdown with climate change and ocean acidification**.
 - Diatoms **increase the silicate concentration** in the waters and which in turn **decreases CaCO₃** and **reduces coccolithophores diversity**.

- It will affect the growth and skeleton structure of coccolithophores, with potential significance for the world ocean ecosystem.

- The study points to **climate change** as a **major reason for the altered coccolithophore calcification rate** which is important for bringing positive changes in the marine ecosystem and the **global carbon cycle**.

Land Transfer of Gangotri National Park

Why in News

Recently, the **Uttarakhand State Wildlife Advisory Board** has permitted proposals on the transfer of forest land in **Gangotri National Park** for development of roads.

- The decision comes amid the **row between India and China** along the **Line of Actual Control (LAC)** in **Ladakh**.

Key Points

- **Gangotri National Park is a protected area** and forest land chosen is near the international border with China.

Gangotri National Park

- It was established in **1989** and is situated in **Uttarkashi, Uttarakhand** in the **upper catchment of Bhagirathi River**.
- **Gaumukh** at Gangotri glacier, the **origin of river Ganga**, is located inside the park.
- The park area forms a **viable continuity between Govind National Park and Kedarnath Wildlife Sanctuary**.
- **Flora:** The park is enveloped by dense coniferous forests that are mostly temperate. Chirpine, deodar, fir, spruce, oak and rhododendron are the common vegetation.
- **Fauna:** Various rare and endangered species like bharal or blue sheep, black bear, brown bear, himalayan monal, himalayan snowcock, himalayan tahr, musk deer and snow leopard are found in the park.



Note:

History

Highlights

- Variyamkunnath Kunjahammed Haji
- Founder of Ahom Kingdom: Chaolung Sukapha
- PV Narasimha Rao
- Dr. Joseph Mar Thoma

Variyamkunnath Kunjahammed Haji

Why in News

The year 2021 will mark the **100th year anniversary** of the **Malabar/Moplah uprising of 1921**.

- The freedom fighter **Variyamkunnath Kunjahammed Haji** led the Moplah uprising against the British in Kerala's Malabar region.

Key Points

- **Variyamkunnath Kunjahammed Haji** was born into an **affluent Muslim family sometime in the 1870s** (the exact date is not confirmed) and grew up hearing stories of the torture and injustice done by the British.
- His father, **Moideenkutty Haji**, was **deported and jailed in the Andaman Islands** for his participation in a rebellion against the British.
- Kunjahammed Haji was very much **fascinated by the traditional music-based art forms** like **Daffumutt** and **poems** like 'Malappuram Padappattu' and 'Badr Padappattu' and he used them as an instrument to rally the locals against the British.
 - These poems were on the **exploitation of the peasants by feudal lords** under the British so these were banned later on by the British.
 - Kunjahammed Haji **simultaneously challenged the British and ignited sentiments against them** among the local population.
- Haji was respected for his **scholarship and knowledge in Urdu, Arabic and English**.
- **Leaders of the Khilafat movement and the INC introduced him to the Khilafat cause** and he promised to join them against the atrocities of the British and the landlords.

- Haji decided to take arms against the British and **took the leadership of the Khilafat** and was mostly heard all over **Calicut and south Malabar**.
- Haji **ensured that the movement had a secular character** as he was aware of the strength of Hindu-Muslim unity and ensured people of other faiths were given adequate security.
 - **Britishers cast him as a religious fanatic to create divisions** within the movement and there was a possibility of the movement losing direction and perhaps even resulting in a communal riot.
- As the **rebellion spread across the Ernad and Valluvanad taluks of erstwhile Malabar** district, **Britishers and their loyal escaped**, leaving vast territory under the control of the local rebels.
- The territory was declared an '**independent state**' in **August 1921** with **Haji as its undisputed ruler**.
 - For **nearly six months**, Haji ran a **parallel Khilafat regime** headquartered in **Nilambur**, with its own separate passport, currency and system of taxation.
 - An **extensive army with the participation of Hindu men was built** with the aim of thwarting any attempt by the British to overthrow the Khilafat rule.
 - **Tenants were granted the power over the lands** they cultivated along with tax incentives.
- In **January 1922**, under the **guise of a treaty**, the **British betrayed Haji through his close friend Unyan Musaliyar** and **arrested** him. He was **sentenced to death** along with his compatriots.
- The bodies were **cremated fearing that the grave may become an inspiration** for the rebels and **all the records** connected with the Khilafat raj were **burnt** in order to make the people forget the Mappila khilafat rule of six months.

Note:

Malabar/Moplah Rebellion of 1921

- The Malabar rebellion, also known as the Moplah rebellion, was an **armed revolt** staged by the **Mappila Muslims of Kerala** in **1921**.
- In **August 1920**, **Gandhi** along with **Shaukat Ali** (the leader of the Khilafat movement in India) **visited Calicut** to spread the combined message of **non-cooperation and Khilafat** among the residents of Malabar.
- In response to Gandhi's call, a **Khilafat committee was formed in Malabar** and the **Mappilas**, under their **religious head Mahadum Tungal of Ponnani who pledged support** to the non-cooperation movement.
- During the same time, the **agrarian situation in Malabar was worsening** with the **low-class tenants suffering under the oppressive measures** of the landlords who were patronised by the British.
- In this situation, the **Indian National Congress (INC) reached out to the Mappila cultivators** to actively support both the agrarian reforms and independence.
- The Moplah tenants **agitated against the Hindu landlords** (locally referred to as **janmi**) and the **British government**.
 - Most of their **grievances** were related to the **security of tenure, high rents, renewal fees and other unfair exactions** of the landlords.
- The British government **responded with much aggression**, bringing in Gurkha regiments to suppress it and imposing martial law.
 - **Wagon Tragedy:** A noteworthy event of the British suppression was the wagon tragedy when approximately 60 Mappila prisoners on their way to prison, were suffocated to death in a closed railway goods wagon.
- The **six-month-long rebellion** is often perceived to be **one of the first cases of nationalist uprisings in Southern India**.
 - However, the **real motive of the revolt still remains a highly debated topic** among historians.
 - There are some who call it a case of **religious fanaticism**, there are others who look at it as an **instance of struggle against British authority** and then there are others who perceive the Malabar rebellion to be a **peasant revolt against unfair practices of the landlords**.

Founder of Ahom Kingdom: Chaolung Sukapha

Why in News

Recently, there has been a controversy in **Assam** regarding **Chaolung Sukapha** who founded the **Ahom kingdom**.

- Amidst the ongoing **India-China border tension**, he has been repeatedly referred to as a Chinese invader.

Key Points

- **Chaolung Sukapha:**
 - He was a **13th century ruler** who **founded the Ahom kingdom** that ruled Assam for six centuries. The Ahoms ruled the land till the **province was annexed to British India in 1826** with the signing of the **Treaty of Yandaboo**.
 - **Sir Edward Gait**, in his book '**A History of Assam**', wrote that Sukapha is said to have left a place called **Maulung** (Burma which is now known as Myanmar) in **1215 AD** with eight nobles and some people.
 - He and his people reached Brahmaputra valley and in **1235 AD, finally settled in Charaideo in upper Assam**.
 - Sukapha established his **first small principality in Charaideo**, sowing the seeds of further expansion of the Ahom kingdom.
- **Ahoms:**
 - They **created a new state by suppressing the older political system of the bhuiyans** (landlords).
 - The Ahom state **depended upon forced labour**. Those forced to work for the state were called **paiks**.
 - Ahom society was divided into **clans or khels**. A khel often controlled several villages.
 - Ahoms **worshipped their own tribal gods** but instead of **imposing their own language, religion and rituals** on communities living in Assam, they **accepted the Hindu religion and the Assamese language**.



Note:

- However, the **Ahom kings did not completely give up their traditional beliefs** after adopting Hinduism.
- Ahom society was very sophisticated. Poets and scholars were given land grants and theatre was encouraged. Important works of Sanskrit were translated into the local language.
- **Historical works**, known as **buranjis**, were also written, first in the Ahom language and then in Assamese.
- Most of the Sukapha's people were men who later **married women from communities living in Assam. Inter-marriage also increased assimilation processes.**
- **Significance:**
 - Sukapha successfully **assimilated different communities and tribes.** He developed very amiable relationships with the **tribal communities of Assam especially the Sutias, the Morans and the Kacharis.**
 - He is widely referred to as the architect of '**Bor Asom**' or '**Greater Assam**' because he **consolidated power, culture and religion in the region and managed to group a diverse mix of people** in such a politically sensitive region crisscrossing South Asia and South-East Asia.
 - **Assam celebrates 'Asom Divas' on 2nd December every year** to commemorate Sukapha and his rule.

PV Narasimha Rao

Why in News

Recently, the Telangana Chief Minister launched the **year-long celebrations to commemorate the birth centenary** of former prime minister P V Narasimha Rao.

- The centenary celebrations will highlight the 360-degree personality of P V Narasimha Rao.

Key Points

- PV Narasimha Rao was born on 28th June 1921 in erstwhile Nizam's Hyderabad state.
- He was a freedom fighter, academician, and literary figure. He was also the **9th Prime Minister of India** from 1991 to 1996.



- He published '**SahasraPhan**', a Hindi translation of the famous Telugu Novel '**Veyi Padagalu**'.
- **Economic Reforms:** He sought to dismantle the restrictions imposed under the license raj, reduce red tape and make Indian industries more competitive.
 - He is known for bringing the policy of **economic liberalisation** in India.
 - The economic liberalisation in India is referred to the liberalisation of the country's economic policies.
 - It was initiated in 1991 with the goal of making the economy more market- and service-oriented, and expanding the role of private and foreign investment.
- **Foreign Policy:** In terms of foreign policy, he **established diplomatic relations with Israel.**
 - The **Look East Policy** of India was also initiated during his tenure.
 - He is also known for **reversing decades of unfriendly relations between India and the United States** by bringing them together.
- **Constitutional Reforms:** The **73rd and 74th Constitutional Amendments Act** empowering local bodies **were enacted during his tenure.**

Dr. Joseph Mar Thoma

Why in News

India has celebrated the **90th birthday of Dr. Joseph Mar Thoma**, a reverend father and distinguished member of Mar Thoma Church.

- He is the current Marthoma Metropolitan (higher rank of Bishop) of the Mar Thoma Syrian Church.
- **The Mar Thoma Church** is closely linked with the noble ideals of **Saint Thomas**, the Apostle (each of the twelve chief disciples of Jesus Christ) of Lord Christ.

Key Points

- **The Mar Thoma Church** is also known also as the **Mar Thoma Syrian Church of Malabar.**
- It was founded by Saint Thomas (Mar Thoma), one of the **twelve disciples of Jesus Christ**, and known by the name of the Apostle, in the year AD 52.
- Mar Thoma Syrian Church of Malabar is one of the **oldest denominations** of Christianity.

Note:

➤ It is an autonomous **Oriental Indian church headquartered at Thiruvalla, Kerala**, India, which has over 1.6 million followers across the globe.

➤ **Oriental Indian churches:** The Oriental Orthodox Churches are a group of Christian churches adhering to the ideology that Jesus is a one person in two nature's i.e. divine and human.



Note:



drishti

Geography

Highlights

- Earthquakes and Delhi-NCR
- Mt. Merapi of Indonesia
- Earth's Mantle and Evolution of Life
- Presena Glacier Covered with Tarps
- Ocean Mapping: Seabed 2030 Project
- Annular Solar Eclipse

Earthquakes and Delhi-NCR

Why in News

Recently, the **Wadia Institute of Himalayan Geology (WIHG)** has observed that the recent series of tremors in the **National Capital Region-Delhi (Delhi-NCR)** are not unusual and are indicative of strain energy build up in the region.

- WIHG is an **autonomous institute** of the **Department of Science and Technology**.

Key Points

- An **earthquake cannot be predicted** and the tremors cannot be described as warnings for a big event but the possibility of a stronger and life threatening earthquake cannot be ruled out.
- The **vulnerability** of a region can be understood from the **past seismicity, calculation of strain budget, mapping of active faults** etc.
 - Sometimes, a vulnerable zone remains quiet, experiences small magnitude earthquakes that do not indicate any bigger earthquake or receives a sudden jolt by a big earthquake without any call.
- The Delhi-NCR has been identified as the **second highest seismic hazard zone (Zone IV)** but the recent events in Delhi-NCR cannot be defined as the foreshocks.
 - **Foreshocks:** All small tremors before a major earthquake in a particular region are categorized as foreshocks.
 - Scientifically all these tremors in the Delhi-NCR can be demarcated as the foreshocks only after a big earthquake takes place immediately.

Reasons for Earthquakes in Delhi-NCR

- **Release of Energy:** Release of strain energy through the weak zones or faults which accumulates as a result of **northward movement of Indian plate and its collision with the Eurasian plate**.
- **Movement of Plates:** The **Himalayan seismic belt** is the region where the Indian plate collided with the Eurasian plate and under-thrusted beneath the Himalayan wedge.
- **Proximity to Himalayas:** Delhi-NCR is not very far from the entire north-west and north-east Himalayan belt lies in the **highest seismic potential zone V and IV**, where major to great earthquakes can take place.

Seismic Zones in India

- There are **four seismic zones (II, III, IV, and V)** in India based on scientific inputs relating to seismicity, earthquakes occurred in the past and tectonic setup of the region.
 - Previously, earthquake zones were **divided into five zones** with respect to the severity of the earthquakes but the **Bureau of Indian Standards (BIS)** grouped the country into four seismic zones by unifying the first two zones.
 - BIS is the official agency for publishing the seismic hazard maps and codes.
- **Seismic Zone II:**
 - Area with minor damage earthquakes corresponding to intensities V to VI of MM scale (MM-Modified Mercalli Intensity scale).
- **Seismic Zone III:**
 - Moderate damage corresponding to intensity VII of MM scale.
- **Seismic Zone IV:**
 - Major damage corresponding to intensity VII and higher of MM scale.

Note:

➤ Seismic Zone V:

- Area determined by pro seismically of certain major fault systems and is seismically the most active region.
- Earthquake zone V is the most vulnerable to earthquakes, where historically some of the country's most powerful shocks have occurred.
- Earthquakes with magnitudes in excess of 7.0 have occurred in these areas, and have had intensities higher than IX.

Seismic Waves, Richter Scale and Mercalli scale

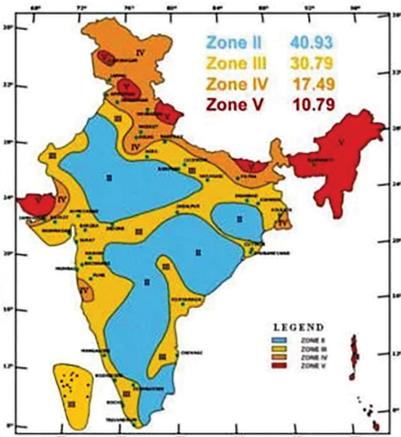
- **Seismic waves** are the vibrations from earthquakes that travel through the Earth and are recorded on instruments called **seismographs**.
 - Seismographs record a zigzag trace that shows the varying amplitude of ground oscillations beneath the instrument.
- The earthquake events are scaled either according to the **magnitude or intensity of the shock**.
 - The **magnitude scale is known as the Richter scale**. The magnitude relates to the energy released during the earthquake which is expressed in absolute numbers, 0-10.
 - The **intensity scale or Mercalli scale** takes into account the visible damage caused by the event. The range of intensity scale is from 1-12.

Seismic Zone

Map of India: -2002

About **59 percent** of the land area of India is liable to seismic hazard damage

Zone	Intensity
Zone V	Very High Risk Zone Area liable to shaking Intensity IX (and above)
Zone IV	High Risk Zone Intensity VIII
Zone III	Moderate Risk Zone Intensity VII
Zone II	Low Risk Zone VI (and lower)



Mt. Merapi of Indonesia

Why in News

Mount Merapi, an active volcano in Indonesia, erupted twice on 21st June, 2020.

Key Points

➤ Mt Merapi:

- **Merapi (Mountain of Fire)** is the most active of Indonesia's 130 active volcanoes.
- It is located near the centre of the island of Java and Indonesia's cultural capital, Yogyakarta.
- Mt Merapi's last significant eruption was in 2010. At that time, more than 300 people were killed and some 2,80,000 residents were forced to evacuate the surrounding areas.

➤ Volcanoes in Indonesia:

- Indonesia is **located on the Pacific Ring of Fire**.
- The Ring of Fire, also referred to as the **Circum-Pacific Belt**, is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes.
- Its length is approximately 40,000 kilometers. It traces boundaries between several tectonic plates—including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.
- 75% of Earth's volcanoes i.e. more than 450 volcanoes are located along the Ring of Fire. 90% of Earth's earthquakes occur along its path, including the planet's most violent and dramatic seismic events.
- The abundance of volcanoes and earthquakes along the Ring of Fire is caused by the **amount of movement of tectonic plates** in the area.
 - Along much of the Ring of Fire, plates overlap at convergent boundaries called **subduction zones**. That is, the plate that is underneath is pushed down, or subducted, by the plate above. As rock is subducted, it melts and becomes magma. The abundance of magma so near to Earth's surface gives rise to conditions ripe for volcanic activity.



Note:

- A significant exception is the border between the Pacific and North American Plates. This stretch of the Ring of Fire is a **transform boundary**, where plates move sideways past one another. This type of boundary generates a large number of earthquakes as tension in Earth's crust builds up and is released.

Earth's Mantle and Evolution of Life

Why in News

According to a study published in the journal '**Nature Communications**', an evolution of the Mantle of the Earth could have not only controlled evolution of the atmosphere, but also evolution of life.

Key Points

➤ Role of Earth's Mantle:

- According to the study, although there were amounts of oxygen before the **Great Oxidation Event (GOE)**, it could not concentrate in the atmosphere.
- This was because of the reaction of oxygen with the large amount of gases ejected by Volcanoes. The **oxygen produced by the early life-forms** combined with things like **hydrogen (for example)**, and was removed from the atmosphere.
 - When volcanoes are active, they send large amounts of gases into the atmosphere. The nature of these gases depends on the nature of the materials in the Earth's mantle.
- As volcanic activity continued, it produced less material that would readily combine with oxygen. Earth's mantle was becoming more and more oxidized.
- With time, the oxygen produced by life-forms could accumulate in the atmosphere. This started the **Great Oxidation Event**, paving the way for complex life.

➤ Great Oxidation Event:

- The atmosphere of the early Earth lacked oxygen. This began to change during what is known as the Great Oxidation Event (GOE).
- It refers to a **series of chemical changes** that geologists and geochemists have observed in rocks that are between **2.5 and 2.3 billion years old**.

Earth's Mantle

- The mantle is the mostly-solid bulk of Earth's interior. It lies between Earth's dense, super-heated core and its thin outer layer, the crust.
- It is about 2,900 kilometers thick and makes up 84% of Earth's total volume.
- The upper portion of the mantle is called the **asthenosphere**. The word astheno means weak. It is considered to be extending upto 400 km. It is the **main source of magma that finds its way to the surface during volcanic eruptions**.
- The **crust and the uppermost part of the mantle are called lithosphere**. Its thickness ranges from 10-200 km.
- The lower mantle extends beyond the asthenosphere. It is in solid state.

Cyanobacteria

- Cyanobacteria are **aquatic and photosynthetic**, that is, they live in the water, and can manufacture their own food. Because they are bacteria, they are quite small and usually unicellular, though they often grow in colonies large enough to see.
- They have the distinction of being the **oldest known fossils**, more than 3.5 billion years old.
- They are important providers of **nitrogen fertilizer** in the cultivation of rice and beans.
- The oxygen atmosphere that we depend on was generated by numerous cyanobacteria during the Archaean and Proterozoic Eras (4.6 billion to 541 million years ago).
- These changes were the result of **oxygen given off by ancient cyanobacteria (blue-green algae)**. Communities of this bacteria lived in shallow seawater and were preserved in rocks as structures called **stromatolites**.
 - Stromatolite means '**layered rock**'. It is a rocky structure created by the activity of colonies of single-celled bacteria, mostly cyanobacteria.
- Oxygen first accumulated in Earth's atmosphere at this time and has been present ever since.
- **Boom of Cyanobacteria and Carbonates:**
 - Prior to the GOE, an increase in tectonic activity produced **new volcanoes** which pumped **big amounts of carbon dioxide** in the air which led to the warming of the climate, increased rainfall, and leading to more minerals washed into the ocean.

Note:

- These phenomena led to the **boom of cyanobacteria and carbonates**. The increase in photosynthesis is attributed to the rise in the population of cyanobacteria and in turn, the carbon present in the atmosphere was buried underground.

Presena Glacier Covered with Tarps

Why in News

Giant sheets of tarpaulin (tarps) are being used to cover **Presena glacier in northern Italy** to slow **melting caused by global warming**.

- It is a part of the conservation project (undertaken by **Italian firm Carosello-Tonale**) which was launched in 2008 — at that point only **30,000 sq metres of the glacier** was covered.

Key Points

- **Covering of the Glacier:**
 - **Tarpaulin sheets (tarps)** are being laid over 1,00,000 sq metres of the Presena glacier.
- **Tarpaulin Sheets:**
 - **Tarpaulin** is a large sheet of strong, flexible and water-resistant material, often coated and made of plastics such as polyethylene.
 - **Geotextile tarpaulins** reflect sunlight, maintain a temperature lower than the external one, and thus preserve as much snow as possible.
- **Concern:**
 - Since 1993, the Presena glacier has **lost more than one third** of its volume.

Presena Glacier

- Situated between the regions of **Trentino and Lombardy in Northern Italy**, the glacier is part of the **Presanella mountain (Alps) group**.
- It has a high altitude natural environment.

Ocean Mapping: Seabed 2030 Project

Why in News

Recently, it was announced that mapping of nearly **one-fifth of the world's ocean floor** has been finished under the **Seabed 2030 Project**.

Key Points

- **Seabed 2030 Project:**
 - Seabed 2030 is a collaborative project between the **Nippon Foundation of Japan** and the **General Bathymetric Chart of the Oceans (GEBCO)**.
 - It was launched at the **United Nations Ocean Conference** in June 2017 and is aligned with the UN's **Sustainable Development Goal (SDG) 14** to conserve and sustainably use the oceans, seas and marine resources.
 - The project aims to bring together all available **bathymetric (measurement of the shape and depth of the ocean floor) data** to produce the definitive map of the **world ocean floor by 2030**.
 - In the past, **satellites and planes carrying altimeter instruments** have been able to provide large swathes of data about the ocean floor.
 - However, the Seabed 2030 Project **aims to obtain higher quality information**, using equipment such as deepwater **hull-mounted sonar systems**, and **Autonomous Underwater Vehicles (AUVs)**.
- **Importance of Study of the Ocean Floor:**
 - **Understanding several natural phenomena**, including ocean circulation, tides, and biological hotspots.
 - Provides **key inputs** for navigation, forecasting disasters, exploration for oil and gas projects, building offshore wind turbines, fishing resources, and for laying cables and pipelines.

General Bathymetric Chart of the Oceans

- GEBCO is the **only** intergovernmental organisation with a mandate to map the entire ocean floor.
- Its aim is to **provide the most authoritative publicly-available bathymetry** of the world's oceans.
- It operates under the joint auspices of the **International Hydrographic Organization (IHO)** and the **Intergovernmental Oceanographic Commission (IOC)** (of **UNESCO**).
 - The IHO is an **intergovernmental organization** that works to ensure all the world's seas, oceans and navigable waters are surveyed and charted.
 - It was established in 1921.
 - **India is its member.**
 - The **IHO Secretariat** is hosted by the Principality of **Monaco**.

Note:



- Ensure a **better understanding of climate change**.
 - Climate change has impacted the flow of ocean currents and has led to sea-level rise.

Annular Solar Eclipse

Why in News

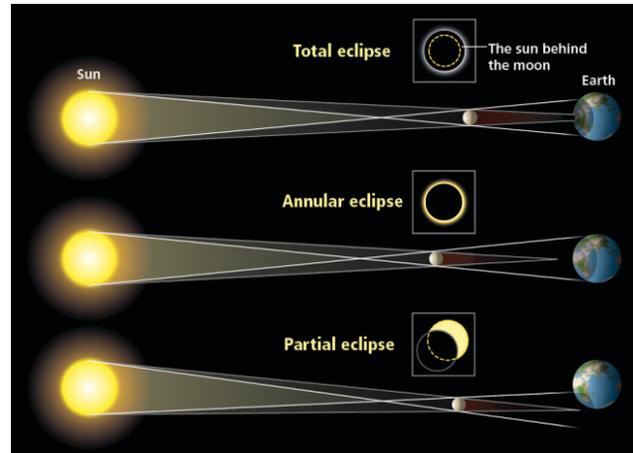
India witnessed an annular solar eclipse on **21th June, 2020**.

Key Points

- A solar eclipse occurs **when the moon passes between the sun and the earth**. When this happens, the moon blocks the light of the sun from reaching the earth. The shadow of the moon is then cast on the earth.
- There are **three types of solar eclipses**:
 - **Partial solar eclipse**: When the sun, moon and earth are **not exactly lined up**.
 - **Total solar eclipse**: When the sun, moon and earth **must be in a direct line**.
 - **Annular solar eclipse**: It is a **particular type of total solar eclipse**. It occurs when the sun, moon and earth are **not only in a straight line but also in the same plane**.

- The **moon also must be farther away from the earth**, which will allow it to not cover the disc of the sun completely, resulting in a narrow band of light around the dark colour of the moon causing the **ring of fire** to be visible.
- Therefore, It is also called the **ring of fire eclipse**.

- The distance between the earth and the moon at the moment of the eclipse can dictate the type of eclipse that will take place.
 - The distance between the earth and the moon is always changing due to the egg-shaped elliptical orbit of the moon.



Note:

Art & Culture

Highlights

- International Day of Yoga
- Kodumanal Excavation
- Talamaddale
- India's Assistance for Pashupatinath Temple
- Ashadhi Bij

International Day of Yoga

Why in News

The International Day of Yoga (IDY) is observed on 21st June.

- The **theme** for the year 2020 is 'Yoga for Health – Yoga at Home', which takes into account the social distancing measures announced by most countries amid **Covid-19 pandemic**.



Key Points

- **Proposed by India:**
 - The idea of IDY was proposed by India during the opening of the 69th session of the United Nations General Assembly (UNGA), held in 2014.
 - The **first Yoga Day celebrations in 2015** at Rajpath in New Delhi created **two Guinness World Records**.
 - It was the **world's largest yoga session** with 35,985 people.
 - **84 nationalities** participated in it.
- **About Yoga:**
 - Yoga is an ancient physical, mental and spiritual practice that **originated in India**.
 - The word '**yoga**' is derived from **Sanskrit** and means to join or to unite, symbolizing the union of body and consciousness.
 - Today it is practiced in various forms around the world and continues to grow in popularity.
- **Initiatives by India:**
 - The **Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH)** in its

'Common Yoga Protocol' has listed Yama, Niyama, Asana, etc. among popular yoga 'sadhanas'.

- The **Beauty & Wellness Sector Skill Council (B&WSSC)** has vocational education courses in Yoga for CBSE schools.
 - B&WSSC is established as a non-profit organization under the aegis of **National Skill Development Corporation**, Ministry of Skill Development and Entrepreneurship.
- About **96,196 candidates have been trained as yoga instructors** and trainers through various skilling initiatives like the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**.
 - PMKVY is the **flagship scheme of the Ministry of Skill Development and Entrepreneurship**.
- Yoga is also a part of the **Fit India Movement**.
 - Fit India Movement is a nation-wide campaign that aims at encouraging people to include physical activities and sports in their everyday lives.

Kodumanal Excavation

Why in News

Recently, the State Department of Archaeology, Chennai has identified **250 cairn-circles** from the **Kodumanal excavation** site in Erode district of Tamilnadu.

- **Cairn-circles** are the **prehistoric stone row** which is a linear arrangement of parallel megalithic standing stones.

Key Points

- This is for the first time that **10 pots and bowls** were discovered from the site. More numbers and bigger

Note:



size of boulders suggests that the grave could be of a village head or the head of the community.

- It also suggests **burial rituals** and the **concept of afterlife** in **megalithic culture**. Believing that the deceased person will get a **new life after death**, **pots and bowls** filled with grains were placed outside the chambers.
- The rectangular chambered cists (a small stone-built coffin-like box) are made of stone slabs, and the entire grave is surrounded by boulders that form a circle.
- Findings from the site also include an animal skull, beads, copper smelting units, the mud walls of a workshop, potteries, and Tamil Brahmi script.
- **Previous Excavations:**
 - The earlier excavations of Kodumanal revealed that **multi-ethnic groups lived in the village**.
 - It also revealed that the site served as a **trade-cum-industrial centre** from 5th century Before Common Era (BCE) to 1st century BCE.



Megaliths Culture

- **Megaliths** refer to large stone structures that were **constructed either as burial sites or as commemorative sites**.
- The burial sites are the sites with actual burial remains, such as **dolmenoid cists (box-shaped stone burial chambers)**, **cairn circles (stone circles with defined peripheries)**, and **capstones (distinctive mushroom-shaped burial chambers found mainly in Kerala)**.
- The megalithic culture lasted from the Neolithic Stone Age to the early Historical Period (2500 BCE to CE 200) across the world.
- In India, the majority of the megaliths are of the Iron Age (1500 BC to 500 BC).

- Megaliths are spread across **peninsular India**, concentrated in the states of **Maharashtra (mainly in Vidarbha)**, **Karnataka**, **Tamil Nadu**, **Kerala**, **Andhra Pradesh** and **Telangana**.
- The chambers containing the mortal remains were usually made of terracotta.

Kodumanal

- It is a village located in the Erode district in the southern Indian state of Tamil Nadu.
- The place is an **important archaeological site**.
- It is located on the northern banks of **Noyyal River**, a tributary of the Cauvery.

Talamaddale

Why in News

- The traditional art of '**talamaddale**', a variant of **Yakshagana theatre**, has gone virtual in times of Covid-19.

Key Points

- In the conventional 'talamaddale,' the artists sit across in a place without any costumes and engage in testing their oratory skills based on the episode chosen.
- It has only spoken words without any dance or costumes. Hence it is **Yakshagana minus dance, costumes and stage conventions**.

Yakshagana

- Yakshagana, traditional theatre form of Karnataka, is based on mythological stories and Puranas.
- The most popular episodes are from the **Mahabharata** i.e. Draupadi swayamvar, Subhadra vivah, Abhimanyu vadh, Karna-Arjun yuddh and from **Ramayana** i.e. Rajyabhishek, Lav-Kush yuddh, Baali-Sugreeva yuddh and Panchavati.
- **Gombeyatta puppet theatre** closely follows Yakshagana.
- Other important forms of theatre in India:
 - **Nautanki (Uttar Pradesh)** which often draws on romantic Persian literature for its themes,
 - **Tamasha (Maharashtra)**,
 - **Bhavai (Gujarat)**,
 - **Jatra (West Bengal)**,

Note:

- **Koodiyaattam**, one of the oldest traditional theatre forms of **Kerala**, is based on Sanskrit theatre traditions,
- **Mudiyettu**, traditional folk theatre form of **Kerala**,
- **Bhaona**, **Assam**,
- **Maach**, Madhya Pradesh,
- **Bhand Pather**, the traditional theatre form of **Kashmir**, etc.

India's Assistance for Pashupatinath Temple

Why in News

- Recently, a **Memorandum of Understanding (MoU)** was signed between India and Nepal for the construction of a sanitation facility at the Pashupatinath Temple, Kathmandu.
 - This comes amid a raging **border row between the two countries**.

Key Points

- The facility will be constructed under the **Nepal-Bharat Maitri: Development Partnership** as a high impact community development scheme by India.
- **Financial Assistance:** India has pledged to extend financial assistance amounting to Rs 2.33 crore.
- **Implemented by:** Kathmandu Metropolitan City.
- **Norms and Completion:** Norms to be laid out by the Government of Nepal and completion within 15 months.

Pashupatinath Temple

- Dedicated to **Lord Shiva**, Pashupatinath is one of the most important religious sites in Asia for devotees of Shiva.
- It is the largest temple complex in Nepal and stretches on both sides of the **Bagmati River**.
- Temples dedicated to several other Hindu and Buddhist deities surround the temple of Pashupatinath.
- Only Hindus are allowed through the gates of the main temple.
- It was conferred the status of a **World Heritage Site** in 1979 by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)**.

- Earlier in 2018, **Nepal-Bharat Maitri Pashupati Dharmashala** was also inaugurated in Kathmandu, Nepal.
- **Significance:** This initiative is another milestone in strengthening cultural ties and people-to-people contacts between the two countries.

Ashadhi Bij

Why in News

The Prime Minister has greeted the people on the special occasion of Ashadhi Bij, the **Kutchi New Year**.

Key Points

- Ashadhi Bij falls on the **second day of Shukla paksha of Ashada month** of Hindu calendar.
- The festival is associated with the **beginning of rains** in the Kutch region of Gujarat.
- During Ashadhi Bij, the moisture in the atmosphere is checked to predict which crop would do best in the coming monsoon.

Traditional New Year

Festivals in India (main)- table heading

- **Chaitra Shukla Pratipada: (NAME) /FEATURES**
 - It marks the beginning of the new year of the **Vikram Samvat** also known as the Vedic (Hindu) calendar.
 - Vikram Samvat is based on the day when the emperor Vikramaditya defeated Sakas, invaded Ujjain and called for a new era.
- **Gudi Padwa and Ugadi:**
 - Celebrated in the month of **Chaitra Shukla Pratipada** as per the Hindu Lunar Calendar.
 - Deccan region including Karnataka, Andhra Pradesh and Maharashtra.
- **Navreh:**
 - It is the lunar New Year that is celebrated in Kashmir. It falls on the very first day of the Chaitra Navratras.
- **Sajibu Cheiraoba:**
 - It is celebrated by Meiteis (an ethnic group in Manipur) which is observed on the first day of Manipur lunar month Shajibu, which falls in the month of April every year.

Note:



➤ Cheti Chand:

- It is celebrated by Sindhi community. Chaitra month is called 'Chet' in Sindhi.
- The day commemorates the birth anniversary of Ishta Deva Uderolal/Jhulelal, the patron saint of Sindhis.

➤ Bihu

- It is celebrated three times a year.
- Rongali or Bohag Bihu is observed in April. Kongali or Kati Bihu observed in October and Bhogali or Magh Bihu observed in January.
- Rongali or Bohag Bihu is the Assamese new year and spring festival.
- The Rongali Bihu coincides with Sikh New Year-Baisakhi.

➤ Baisakhi

- It is celebrated as the Indian thanksgiving day by farmers.
- It also has religious significance for the Sikhs community as the foundation of the Khalsa Panth was laid on this day by Guru Gobind Singh.

➤ Losoong

- Losoong also known as Namsoong is the Sikkimese New Year.
- It is usually the time when the farmers rejoice and celebrate their harvest.
- It is mostly celebrated in the month of December every year with traditional gaiety and colour both by the Lepchas and Bhutias.



Note:



drishti

Social Issues

Highlights

- World Drug Report 2020: UN
- Anti Drug Action Plan for 2020-21
- Jal Jeevan Mission
- India TB Report 2020
- Extension of Food Grain Scheme
- STARS Programme: World Bank
- Sanskritik Sadbhav Mandap: PMJKV

World Drug Report 2020: UN

Why in News

Recently, the **United Nations Office on Drugs and Crime (UNODC)**, in its 2020 **World Drug Report**, has highlighted the possible consequences of the **Covid-19 pandemic** on **Illegal Drug Production, Supply and Consumption**.

- According to it, due to **economic hardship**, people may resort to **illicit activities** linked to drugs to make a living.
- The report further revealed that the **measures** taken by governments to counter the pandemic inevitably had **double-edged consequences** on large-scale drug supply.

Key Points

- **Economic Crisis and Diverted Focus:**
 - There would be reductions in **drug-related budgets** of the governments due to **Covid-19** and overall increase in drug use, with a shift towards **cheaper and more harmful drugs**.
 - Some countries, such as Italy, the Niger and countries in Central Asia, have experienced a **sharp decrease in drug seizures**, as drug traffickers have **diverted their attention to other illegal activities**, including **cybercrime and trafficking in falsified medicines** (in Balkan countries).
 - Other countries, including Morocco and Iran, have reported huge drug seizures, indicating large-scale drug trafficking.
- **Impact of Lockdown:**
 - The **lockdown** could hinder the production and

sale of opiates in major producing countries as the key months for the opium harvest in Afghanistan are March to June.

- The decline in international trade resulting from the pandemic could lead to a shortage in the supply of **acetic anhydride**, a precursor vital to the manufacture of heroin
 - A **shortage of poppy lancers** was observed in the western and southern provinces of the country, mainly due to the closure of a border crossing with Pakistan. However, the shortage of lancers was eventually overcome due to women workers increasingly engaged in the poppy-lancing process, therefore
 - The report also indicated that the **lockdown is increasing demand for cannabis**, given that its production often takes place near consumer markets and traffickers.
 - **Drug trafficking** by air is likely to be completely disrupted by the restrictions on air travel. There are signs of increased use of maritime routes.
 - **Maritime Routes:**
 - The recent heroin seizures in the **Indian Ocean** could be interpreted as an indication of an increase in the use of maritime routes for trafficking heroin to Europe along the 'southern route'.
 - While border measures appear to be hindering trafficking in opiates, large shipments of cocaine are still being trafficked but by alternative means, via sea routes.
- India and Illicit Drug Trade**
- **Major Hub of Illicit Drug Trade:** According to a report by the **United Nations Office on Drugs and Crime**

Note:



(UNODC), India is one of the major hubs of illicit drug trade ranging from age-old cannabis to newer prescription drugs like tramadol, and designer drugs like methamphetamine.

- **Drug Trafficking Routes:** India is in the **middle of two major illicit opium production** regions in the world, the **Golden Crescent (Iran-Afghanistan-Pakistan)** in the west and the **Golden Triangle (South-East Asia)** in the east.

Golden Triangle

- It represents the region coinciding with the rural mountains of **Myanmar, Laos, and Thailand**.
- It is Southeast Asia's main opium-producing region and one of the oldest narcotics supply routes to Europe and North America.

Golden Crescent

- This region of South Asia is a principal global site for opium production and distribution.
- It comprises **Afghanistan, Iran, and Pakistan**.

➤ Associated Challenges:

- **Easy Borders:** The borders are porous and difficult to control in the lower Mekong region so cross-border movements in many places are not significantly hindered by Covid-19 measures.
- **Evolving Ways of Trafficking:** The methods of containerised trafficking, couriers and body-packing have reduced due to shutting down of borders and trade. However, dealers might come up with other ways limiting the impact of reduced trade.
- **Limited Control:** There is limited government control in the Golden Triangle, trafficking would continue at high volumes.

United Nations Office on Drugs and Crime

- It was established in **1997** and was named as a **United Nations Office on Drugs and Crime (UNODC) in 2002**.
- It acts as the **Office for Drug Control and Crime Prevention** by combining the United Nations International Drug Control Program (UNDCP) and the Crime Prevention and Criminal Justice Division of the United Nations Office at Vienna.
- UNODC publishes the **World Drug Report**.

- **Unaffected Supply:** The supply of precursor chemicals is not likely to be disrupted because major organised crime groups source chemicals

through direct diversion from industry and not diversion from illicit overseas trade channels.

Anti Drug Action Plan for 2020-21

Why in News

Recently, on the occasion of **International Day Against Drug Abuse and Illicit Trafficking** an annual **Anti-Drug Action Plan for 2020-21** for 272 districts was launched by the **Ministry of Social Justice and Empowerment**.

- The plan includes **awareness** generation programmes, **identification of drug-dependent population**, focus on treatment facilities and **capacity-building** for service-providers to curb drug abuse and alcoholism.
 - Drug abuse or **substance abuse** is the use of illegal drugs (Heroin, Morphine, Opium etc), or the use of prescription drugs for **purposes other than those for which they are meant to be used**.

Key Points

➤ Action Plan for 2020-21:

- **De-addiction Facilities:** These would be set up in the **"most affected"** 272 districts identified by the **Narcotics Control Bureau** focussing on building up treatment and de-addiction facilities and giving emphasis on reaching the youth and high risk population.
 - The districts mostly belong to **Punjab, Haryana, Delhi, Uttar Pradesh and the North-East**.
- **Drop-in-Centres for Addicts:** The focus will be on setting up drop-in-centres for addicts and also on **peer-led community based outreach programmes** for high risk populations – particularly the youth.
 - These centres will have **provision for screening, assessment and counselling** and would provide linkage to treatment and rehabilitation services for drug dependents.
- **Integrated Rehabilitation Centre for Addicts (IRCA):** Funded by the Ministry, IRCA would reach out to communities to help those affected by **drug addiction**.
- **Drug-Free India Campaign:** The ministry also announced the launch of the **'Nasha Mukta Bharat', or Drug-Free India Campaign** which focuses on community outreach programmes.

Note:

- To step-up the battle against the severe challenge posed by **drug use and alcoholism**, the campaign will focus not just on **institutional support** but also on **community outreach programmes** in the districts identified in coordination.
- **Significance:**
 - **Awareness and Sensitisation:** Apart from celebrity backed **'Say No to Drugs' publicity campaigns**, national level campaigns are planned across schools and higher education campuses to sensitise youngsters, parents and schools about the issue.
 - **Change in the Strategy:** It introduces a new change in the strategy against drugs. So far, India has been focussed on institutions, however the new action plan focuses on work in society at large.
 - **Enhanced Funding:** Ministry would ramp up greater funding for institutions to curb the drug abuse.
- **Background:**
 - **National Survey on Extent and Pattern of Substance Use:** The Ministry of Social Justice and Empowerment, Government of India, conducted a **National Survey on Extent and Pattern of Substance Use in India** through the National Drug Dependence Treatment Centre (NDDTC), **All India Institute of Medical Sciences (AIIMS)**, New Delhi during 2018, which is key to the action plan for 2020-21.
 - It is estimated that about **850,000 Indians inject drugs**, about **460,000 children** and **7.7 million Indians** require help for opioid dependence.
 - As per the survey, the prevalence of **opioids** (a type of drug e.g. Heroin) use in India is **three times** the global average.
- **Challenges to Curb the Drug Menace:**
 - **Related Data:** The findings of the **"Magnitude of Substance Abuse in India"** report 2019, revealed the estimated 16 crore alcohol consumers in the 10-75 years in the country, as many as 19% of them were dependent on alcohol.
 - **Legally Available Drugs:** Such as tobacco is a huge problem which is usually seen as a gateway drug which children take just to experiment with.
 - **Lack of Availability of Rehabilitation Centres:** There is a lack of rehabilitation centres. Also, NGOs operating de-addiction centres in the country, have failed to provide the required kind of treatment and therapy.

- **Smuggling of Drugs:** **Smuggling of drugs** through the states like Punjab, Assam and Uttar Pradesh which share the border with neighbouring countries.
- **Global Initiatives:** The **United Nations** with the aid of its anti-drug abuse arm, **United Nations Office on Drugs and Crime (UNODC)** spreads awareness, urges governments to avoid stimulating the Narco economy and deal with the Illicit trafficking of drugs in the disguise of legal pharmaceutical businesses.

International Day Against Drug Abuse and Illicit Trafficking

- **History:** Also known as **'World Drug Day'**, it is celebrated annually on **26th June** since 1987.
 - The day is also meant to commemorate Lin Zexu's efforts towards the strategic dismantling of the opium trade in Humen, Guangdong in China right before the First Opium War on the Chinese Mainland.
- **Theme 2020:** Better Knowledge for Better Care.
 - It emphasises the need to improve the **understanding of the world drug problem** and how better knowledge will foster greater international cooperation for countering its impact on health, governance and security.

Better knowledge
for better care

Jal Jeevan Mission

Why in News

Recently, the **Jal Shakti Ministry** has announced that the labourers returning to their home states due to **Covid-19**, will be deployed for the **Jal Jeevan Mission**.

- The Jal Jeevan Mission aims for providing **piped drinking water to all rural households by 2024**.
- The **Jal Shakti Ministry** is the nodal ministry for the implementation of the scheme.

Key Points

- The Jal Shakti Ministry has directed various states that returning labour, **especially those working in**

Note:



the construction sector (skilled, unskilled and semi-skilled), may be deployed to expedite the completion of works under the scheme.

➤ **Significance:**

- It is an arrangement that could provide **employment** to the currently **unemployed workers**.
- The mission is being used as a way to ameliorate some of the effects of the **mass migration of inter-State workers** back to their home States in the wake of the Covid -19 **pandemic**.

➤ **Need:**

- **Huge Demand for Work:** It has been created because of **workers returning** to their home states from different parts of the country.
 - It is clear from the fact that allocations under the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** have already been hiked by Rs 40,000 crore over and above the Rs 60,000 crore already allocated.
- **Tap Water Connections:** There is a need for tap water connections in several households under the mission.
 - A revalidation exercise of households and status of tap water found that out of **19.04 crore rural households in the country, 3.23 crore households** had tap connections and **15.81 crore households** have to be provided functional tap connections.
 - Apart from the Rs 11,000 crore in the budget, Rs 12,000 crore has been allocated from extra budgetary allowances, and **50% of the Rs 60,750 crore allocated by the 15th Finance Commission** for rural local bodies is tied to grants for **water bodies and sanitation**.
- **Construction Sector: Skill mapping** by various State governments has shown that a majority of inter-State workers returning home are from the **construction sector**.
 - In Uttar Pradesh alone, 16 lakh out of the **18 lakh migrant labour** mapped till now are from this sector.
 - The State has assured funding of Rs 3,382 crore under the Jal Jeevan Mission which would be utilised in providing employment in rural areas to returning migrants.

Jal Jeevan Mission

- It envisages supply of **55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024**.
- It focuses on **integrated demand and supply-side management of water** at the local level.
 - Creation of local infrastructure for source sustainability measures as mandatory elements, like **rainwater harvesting, groundwater recharge and management of household wastewater for reuse**, would be undertaken in convergence with other government programmes/schemes.
- The Mission is based on a **community approach to water** and includes extensive information, education and communication as key components of the mission.
- JJM looks to **create a jan andolan for water**, thereby making it everyone's priority.
- **Funding Pattern:** The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states and 100% for Union Territories.
- The total allocation to the scheme is over Rs 3 lakh crore.

Jal Shakti Ministry

- The government has created a **new ministry called 'Jal Shakti'** after merging Ministries of Water Resources, River Development and Ganga Rejuvenation along with Drinking Water and Sanitation.
- 'Jal Shakti' Ministry will **encompass issues ranging from providing clean drinking water, international and inter-states water disputes, to the Namami Gange project** aimed at cleaning Ganga and its tributaries and sub-tributaries.
- The Ministry will roll out the government's ambitious plan **'Nal se Jal' scheme under Jal Jeevan Plan** to provide piped water connection to every household in India by 2024.

India TB Report 2020

Why in News

Recently, the **Ministry of Health and Family Welfare** has launched the **annual Tuberculosis (TB) Report 2020**.

Note:

- **Eliminating TB by 2025:** India is committed to **eliminating tuberculosis from the country by 2025**, five years ahead of the global target by the **World Health Organisation(WHO)** i.e. 2030.
 - **National Tuberculosis Elimination Programme:** To align with the ambitious goal, the programme has been renamed from **Revised National Tuberculosis Control Programme (RNTCP) to National Tuberculosis Elimination Programme (NTEP)**.

Key Points

- **State TB Index:** On the basis of the score in State **TB Index Gujarat, Andhra Pradesh and Himachal Pradesh** were the top three best-performing states for tuberculosis control under the category of states with 50 lakh population.
 - **Tripura and Nagaland** were best-performing in the category of states having less than 50 lakh population.
 - **Dadra and Nagar Haveli and Daman and Diu** were selected as the best performing Union Territories.
- **Rising Tobacco Consumption:** It also revealed that Tobacco consumption is rising among Indian TB patients.
 - **8% of TB cases** can be attributable to tobacco usage.
- **HIV Patients and TB:** People **living with HIV are the most vulnerable** among all those TB patient groups which have other comorbidities (rate of death). Hence, the WHO lays social emphasis (through awareness programmes) on them.
 - **HIV-associated TB:** India accounts for **9% of all HIV-associated TB deaths** in the world, the **second-highest number** globally.
 - A total 92,000 HIV-associated TB patients were recorded on an annual basis.
 - Awareness among TB patients about their HIV status has gone up to 81% from 67%.
- **Diabetes Associated TB:** The other such group is patients suffering from **diabetes**. According to the report 20% of all TB cases in India also suffer from diabetes.
 - In 2019, among the notified TB patients under the Revised National TB Control Programme, 64% were screened for Diabetes.
- **Missing Patients:** The report highlighted that the notification of TB is a major hurdle in surveillance of the disease in India.

- Nearly **0.54 million TB cases** are still missing across India.
- **Lower Reporting than WHO:** According to the report, India notified the highest number of **24.04 lakh tuberculosis cases** last year (2018) as **against an estimated 26.9 lakh cases by WHO**, indicating that around three lakh patients missed out from the national TB programme.
 - **Low Fatality:** It stated that 79,144 deaths due to tuberculosis were reported in 2019, which is much lower than the WHO estimate of 4.4 lakh fatalities.
- **Treatment Success Rate:** It is around 70-73% in the last two years. From 2014-2016, it was between 76 and 77%.

Initiatives by India

- **The Nikshay Ecosystem:** It is the National TB information system which is a one-stop solution to manage information of patients and monitor program activity and performance throughout the country.
- **Nikshay Poshan Yojana (NPY):** This scheme is aimed at providing financial support to TB patients for their nutrition.
- **TB Harega Desh Jeetega Campaign: Launched In September 2019** it is showcasing the highest level of commitment for elimination of TB.
- **The Saksham Project:** It is a project of Tata Institute of Social Sciences (TISS) that has been providing psycho-social counselling to DR-TB patients.

Tuberculosis

- TB is caused by **bacteria (*Mycobacterium tuberculosis*)** that most often affect the lungs.
- **Transmission:** TB is spread from person to person through the air. When people with TB cough, sneeze or spit, they propel the TB germs into the air.
- **Symptoms:** Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
- **Treatment:** TB is a treatable and curable disease. It is treated with a standard 6 month course of 4 antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer.
- **Anti-TB medicines** have been used for decades and strains that are resistant to 1 or more of the medicines have been documented in every country surveyed.

Note:

- **Multidrug-resistant tuberculosis (MDR-TB)** is a form of TB caused by bacteria that do not respond to isoniazid and rifampicin, the 2 most powerful, first-line anti-TB drugs. MDR-TB is treatable and curable by using second-line drugs.
- **Extensively drug-resistant TB (XDR-TB)** is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.

Extension of Food Grain Scheme

Why in News

Recently, many states have demanded for the extension of the **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)**.

Key Points

- **Pradhan Mantri Garib Kalyan Anna Yojana:**
 - PMGKAY is a part of **Pradhan Mantri Garib Kalyan Package (PMGKP)** to help the poor fight the battle against **Covid-19**.
 - It was announced for a **three month period (April, May and June)**, covering 80 crore ration cardholders. It will come to an **end on 30th June 2020**.
 - The scheme aimed at providing each person who is covered under the **National Food Security Act** with an **additional 5 kg grains (wheat or rice)** for free, in **addition to the 5 kg of subsidised foodgrain** already provided through the **Public Distribution System (PDS)**.
 - The beneficiaries are also **entitled to 1 kg of pulse for free**, according to regional preferences.
- **Performance of the Scheme:**
 - According to the Union Ministry of Food and Public Distribution, a total of 116.02 lakh metric tonnes (LMT) of food grains have been lifted under the scheme.
 - In April, 93% of the food grains were distributed targeting 74.05 crore beneficiaries.
 - In May, the distribution stood at 91% reaching 72.99 crore beneficiaries
 - In June 2020, 71% of allocated food grains have been distributed to 56.81 crore beneficiaries so far.

- **Sufficient Food Stock:**
 - According to the Central government, the **Food Corporation of India** has 'sufficient stock of food grains'.
 - It has a stock of 266.29 LMT rice and 550.31 LMT wheat as on 28th June.
 - This is excluding the ongoing purchase of wheat and paddy stocks that have not yet reached the godowns.
 - Each month, only about 55 LMT of food grains is required for distribution to ration cardholders.
- **Issues Involved:**
 - There is an **excess of food stocks** along with widespread hunger in the country.
 - Around 200 million **beneficiaries did not get their due** in April 2020, in the distribution of additional food grains and pulses under the scheme.
 - In April 2020, the government also **allowed the conversion of surplus rice into ethanol** for making alcohol-based hand sanitiser.
 - With the **beginning of the monsoon**, there is a danger of **food grains getting rot**.

STARS Programme: World Bank

Why in News

Recently, the **World Bank** has approved the **Strengthening Teaching-Learning and Results for States (STARS) Programme**.

- It will improve the quality and governance of school education in six Indian states of **Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha and Rajasthan** through the **Samagra Shiksha**.

Key Points

- **Expected Beneficiaries:** Around 250 million students (between the **age of 6 and 17**) in 1.5 million schools and over 10 million teachers will benefit from this **USD 500 million** programme.
- **In Line with Previous Assistance:** It will strengthen public school education and support the **country's goal of providing 'Education for All'**, for which the Bank had provided total assistance of more than USD 3 billion prior to this plan as well.
- **Objectives:** STARS will **help improve** learning assessment systems, strengthen classroom instruction

Note:

and remediation, facilitate school-to-work transition and strengthen governance and decentralized management.

- STARS will support India's renewed focus on addressing the learning outcome challenge and help students better prepare for the jobs of the future, through a series of reform initiatives, which include:
 - **Providing Customised Solutions:**
 - Focusing more directly on the delivery of education services at the state, district and sub-district levels by providing customized local-level solutions towards school improvement.
 - **Addressing Specific Demands:**
 - Addressing demands from stakeholders, especially parents, for greater accountability and inclusion by producing better data to assess the quality of learning.
 - Giving special attention to students from vulnerable sections, with over 52% (as a weighted average) of children in the government-run schools in the six project states belonging to vulnerable sections, such as Scheduled Caste (SC), Scheduled Tribe (ST) and minority communities.
 - Delivering a curriculum that keeps pace with the rapidly evolving needs of the job market.
 - **Equipping Teachers:**
 - Equipping teachers to manage this transformation by recognizing that teachers are central to achieving better learning outcomes.
 - **More Investments:**
 - Investing more in developing India's human capital needs by strengthening foundational learning for children in classes 1 to 3 and preparing them with the cognitive, socio-behavioural and language skills to meet future labour market needs.
- **SDGs:** It is in line with the **Sustainable Development Goal for education (SDG 4)** and will help produce better data on learning levels by improving the **National Achievement Survey (NAS)**.
- **PISA:** STARS will assist India in participation in the **Programme for International Student Assessment (PISA)**.
 - PISA is a **worldwide study** by the **Organisation for Economic Co-operation and Development (OECD)** in member and non-member nations.

- It measures **15-year-olds' ability** to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

Success Stories

- India has **successfully achieved gender parity in enrolment in primary education** but that is **not the case in secondary education**. Under STARS, each state is expected to not only stabilize this downward trend but also improve the completion rate for secondary education.
- India has **significantly improved access to education** across the country.
 - **Between 2004-05 and 2018-19**, the number of children going to school increased **from 219 million to 248 million**.
 - However, the **learning outcomes** of students across all age groups continue to **remain below par**.

Challenges

- **Fails to Address Capacity Issues:**
 - Major **vacancies** across the education system **remain unaddressed**.
 - **Without capable and motivated faculty**, teacher education and training cannot be expected to improve.
- **Ignoring Decentralisation:**
 - The World Bank ignores that **decentralising decision-making requires the devolution of funds and real decision-making power**.
 - It **requires** not just **investment** in the capacity of the front-line bureaucracy but also in **increasing their discretionary powers** while fostering social accountability.
- **Excessive use of Information and Communications Technology:**
 - **Technology does not address** most of the **systemic or governance challenges** but it simply by-passes them.
 - Its usefulness depends on whether preconditions for effective use of ICT-systems have been put in place otherwise it only worsens the problems.
- **Over-reliance on measurement by standardised assessments:**
 - The programme **spends money on testing infrastructure for standardised assessments** which is a waste of time and resources.

Note:



- Schools in India need improvement so the money **should be invested in improving the capability** of the system to improve learning.
- **Outsourcing:**
 - Outsourcing to non-state partners not just **takes away discretion** from state actors but also takes away the **sense of accountability and ownership** towards their job.
 - **New private initiatives do not have institutional memories**, nor do they have a **grasp of socio-cultural realities** that play an important part in the delivery process.
 - State structures rely on past experience (institutional memory) to meet new challenges and build additional memories with every new reform they undertake.

Sanskritik Sadbhav Mandap: PMJVK

Why in News

Recently, the **Minister of Minority Affairs** has laid the foundation stone for '**Sanskritik Sadbhav Mandap**' (multi-purpose community centre) at Rampur in Uttar Pradesh.

- It is being constructed under the **Pradhan Mantri Jan Vikas Karyakram (PMJVK)**.

Key Points

- **Restructured: Pradhan Mantri Jan Vikas Karyakram (PMJVK)** is a **restructured and renamed** form of the erstwhile **Multi-sectoral Development Programme (MsDP)**.
 - The scheme was restructured on the recommendation of the **Standing Committee on Social Justice and Empowerment headed by Ramesh Bais**, which submitted its report on '**Implementation of Scheme of Multi-Sectoral Development Programme/ Pradhan Mantri Jan Vikas Karyakram**' on 9th August 2018.
- **Implementation Period:** The restructured scheme is to be implemented during the remaining period of the 14th **Finance Commission** i.e. 31st March 2020.
- **Funding: Centrally Sponsored Scheme.**
- **Background:**

- In the year 2008-09, Government conceived the **Multi-sectoral Development Programme (MsDP)** as a centrally sponsored scheme.
- Initially, the MsDP scheme was launched in the **90 Minority Concentration Districts** of the country.
- To sharpen the focus on the targeted communities, the scheme was restructured during 2013-14 and the unit of planning for implementation was changed to **Minority Concentration Blocks (MCB), Minority Concentration Towns (MCT) and Clusters of Minority Concentration Villages (COV)**.
- **Implementation Region:** The PMJVK will continue to be implemented in MCBs, MCTs and COVs. A new area for implementation of PMJVK has been included namely **Minority Concentration District Headquarters (MCD Hq)**.
 - The identified areas namely MCBs, MCTs, MCD Hqs and COVs for implementation of PMJVK are **collectively known as Minority Concentration Areas (MCA)**.
- **Basis of Selection:** On the basis of a substantial population of minority communities i.e. **25% of the minority population** in the area and **backwardness parameters (literacy rate, female literacy rate, work participation rate and female work participation rate)** along with **basic amenities indicators** in the area concerned which are **below the national average** based on population data of **Census 2011**.
 - As per the **Census 2011**, the percentage of minorities in the country is about **19.3% of the total population of the country**.
 - The population of Muslims are 14.2%, Christians 2.3%, Sikhs 1.7%, Buddhists 0.7%, Jain 0.4% and Parsis 0.006%.
- **Minority Community:** As far as PMJVK is concerned, the communities notified as minority communities under **Section 2 (c) of the National Commission for Minorities Act, 1992** would be taken as Minority Communities.
 - At present **six communities** namely **Muslims, Sikhs, Christians, Buddhists, Zoroastrians (Parsis) and Jains** have been notified as Minority Communities.
- Other schemes which aim at the **inclusive growth of the minority communities:**
 - Seekho Aur Kamao.
 - **Ustad**
 - Garib Nawaz Kaushal Vikas Yojana.

Note:



- Nai Manzil.
- Nai Roshni.
- Begum Hazrat Mahal Girls scholarships.

Minorities in India

- **Constitutional Provisions:** The term “Minority” is **not defined in the Indian Constitution**. However, the Constitution recognises **only religious and linguistic minorities**.
 - **Article 29:** It provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
 - It grants protection to both **religious minorities** as well as **linguistic minorities**.
 - However, the Supreme Court held that the scope of this article is **not necessarily restricted to minorities only**, as use of the word ‘section of citizens’ in the Article that include minorities as well as the majority.
 - **Article 30:** Under the article, all minorities shall have the right to establish and administer educational institutions of their choice.
 - The protection under Article 30 is confined only to minorities (religious or linguistic) and does **not extend to any section of citizens** (as under Article 29).
 - **Article 350-B:** Originally, the Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities. However,

the **7th Constitutional Amendment Act, 1956** inserted Article **350-B in the Constitution**.

- It provides for a **Special Officer for Linguistic Minorities** appointed by the **President of India**.
- It would be the duty of the Special Officer to investigate all matters relating to the safeguards provided for linguistic minorities under the constitution.

➤ Parliamentary Provisions:

- **National Commission for Minorities Act, 1992:** The act defines a minority as “a community notified as such by the Central government”.
- Under this act, the government formed the National Commission for Minorities which consists of a **Chairperson, a Vice-Chairperson and five members**. The five members including the Chairperson shall be from amongst the minority communities.

Minorities Rights Day in India

- The National Commission for Minorities observes the **18th December** as **Minorities Rights Day every year**.
- The day marks the adoption of the “**Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities**” by the **United Nations in 1992**.
 - The declaration states that States shall protect the existence of the National or Ethnic, Cultural, Religious and Linguistic identity of minorities within their respective territories and encourage conditions for the promotion of that identity.



Note:



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Miscellaneous

Highlights

- Axone: Ethnic Cuisine of Northeast India
- World Refugee Day
- Sankalp Parva: Plantation of Trees
- Advanced Torpedo Decoy System: Maareech
- Anthropause Period

Axone: Ethnic Cuisine of Northeast India

Why in News

Recently, **Axone** or **fermented soya bean** has become popular, which is eaten by many **tribal communities** in different parts of Northeast India especially in **Nagaland**.

Key Points

- Axone, **also called akhuni**, is a fermented soya bean of Nagaland, known for its distinctive flavour and smell.
 - It is a **condiment** (a spice, sauce, or preparation that is added to food) used to make pickles, chutney or curries.
- It is prepared and eaten across **Nagaland mainly by the Sumi (also Sema) tribe**.
- It belongs to the broader **phenomena of fermentation** necessary for food preservation in certain ecological contexts.
 - Fermentation gives it a distinct smell and taste.
- **Fermented soya bean is known by different names** in different parts of Northeast India, including Meghalaya and Mizoram, Sikkim, Manipur as well in other South, Southeast and East Asian countries of Nepal, Bhutan, Japan, Korea, China, Myanmar, Vietnam and Indonesia.

Sumi Tribe

- The 'Sumi Naga' is one of the major **ethnic groups in Nagaland**.
- Sumi Nagas mostly inhabit the **central and southern regions** of Nagaland.
- There are also seven Sumi villages in **Tinsukia District of Assam**.
- **Tuluni and Ahuna** are the major festivals.

- It is the one food that **connects the Eastern Himalayas** as a **culturally cross-cutting cuisine**.

World Refugee Day

The **international day** designated by the **United Nations** is celebrated on **20th June every year** and celebrates the strength and courage of people who have been forced to flee their home country to escape conflict or persecution.

- The **United Nations High Commissioner for Refugees (UNHCR)** has released its annual **Global Trends report** before the **World Refugee Day 2020**.
 - **Global Trends** is published every year to count and track the numbers of refugees, internally displaced people, people who have returned to their countries or areas of origin, asylum-seekers, stateless people and other populations of concern to UNHCR.

United Nations High Commissioner for Refugees

- It is a **UN Refugee Agency** and a global organization dedicated to saving lives, protecting the rights and building a better future for refugees, forcibly displaced communities and stateless people.
- It was **created in 1950** to help millions of Europeans who had fled or lost their homes.
- It is headquartered at **Geneva, Switzerland**.

Sankalp Parva: Plantation of Trees

Why in News

The **Ministry of Culture** is celebrating 'Sankalp Parva' to plant trees from **28th June to 12th July 2020**.

Note:



Key Points

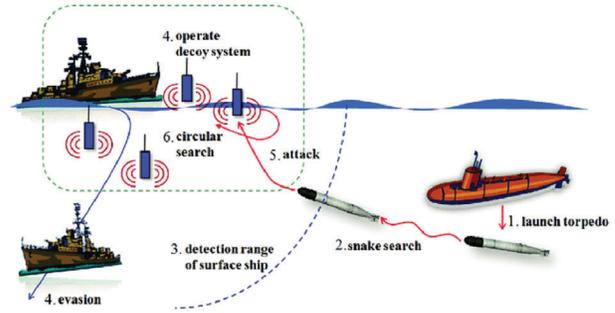
- The Ministry of Culture has **recommended planting five trees** which represent the herbal heritage of the country.
- These trees are: **Bargad, Awla, Pepal, Ashok and Bel**. These are also medicinal plants.
- **Other Initiatives Related to Plantation of Trees:**
 - Recently, the government has announced implementation of the **Nagar Van (Urban Forest) Scheme** which aims to develop 200 Urban Forests across the country in the next five years.
 - The **Compensatory Afforestation Fund (CAF) Act was passed in 2016** to manage the funds collected for compensatory afforestation which till then was managed by Ad hoc **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)**.
 - **Compensatory afforestation** means that every time forest land is diverted for non-forest purposes such as mining or industry, the user agency pays for planting forests over an equal area of non-forest land, or when such land is not available, twice the area of degraded forest land.
 - The **National Medicinal Plants Board (NMPB, under the Ministry of AYUSH)** intends to establish herbal gardens of various types to popularize the usefulness of commonly available and frequently used medicinal plants among the various stakeholders.
 - The Jajpur district administration in Odisha has made **plantation a mandatory precondition for granting licenses for eight services** including society registration, license for minor minerals, setting up crusher units, purchase of new vehicles, issuance of solvency certificate, etc.

Advanced Torpedo Decoy System: Maareech

Why in News

The Indian Navy has inducted an **Advanced Torpedo Defence System (ATDS)** called '**Maareech**' that is capable of being fired from all frontline ships.

- Torpedoes are self propelled weapons with a warhead and can be used **under or on the water surface**. They are one of the mainstay of sea-warfare attack systems.



Key Points

- **Description:**
 - '**Maareech**' has been designed and developed indigenously by the **Defence Research and Development Organization (DRDO)** and it is capable of detecting, locating and neutralizing incoming torpedoes.
 - **Bharat Electronics Limited**, a Defence PSU, would undertake the production of this decoy system.
- **Working:**
 - Maareech detects and locate the incoming torpedo and applies countermeasures to protect the naval platform against attack.
 - It **first detects and then confuses and divert** the torpedo attacks on ships from under the water.
 - By diverting the torpedoes' original course, it forces it to **lose its energy thus preventing it from being effective on target**.
- **Significance:**
 - This induction not only stands testimony to the joint resolve of the Indian Navy and DRDO towards indigenous development of defence technology, but has also given a major fillip to the government's '**Make in India**' initiative and the country's resolve to become '**Atmanirbhar**' in niche technology.

Anthropause Period

Why in News

Recently, researchers have coined the term '**anthropause**' to refer to the **Covid-19** induced **lockdown** period and they will study its impact on other species.

Key Points

- **Etymology:**

Note:

- The shortened form of prefix 'anthropo-' (for 'human') and 'pause'.
- It is a more precise term for the lockdown period which is also being referred to as the 'Great Pause'.
- **Impact:**
 - As a result of the lockdown, **nature appears to have changed** especially in **urban environments**.
 - The **unprecedented curbs led to reports of unusual animal behaviour** and **unexpected animals are being spotted** more frequently.
 - On the other hand, lockdown may have been **more difficult and challenging for various urban-dwelling animals** such as rats, gulls and monkeys who **depend on food provided or discarded by humans**.
- **Significance of the Study:**
 - Studying this period will provide valuable **insights into the relationship between human-wildlife interactions** in the 21st century.
 - The linkages of human and animal behaviour can help **provide invaluable information**, useful in **preserving global biodiversity**, maintaining the **integrity of ecosystems** and **predicting global zoonoses** and **environmental changes**.



Note:



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Key Points

Details

Blank area for Key Points.

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Summary

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