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Current Affairs (CONSOLIDATION)

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(PART – I)

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Polity and Governance

Highlights

- SC Upholds Changes to SC/ST Atrocities Law
- Reservations in Promotion is Not a Fundamental Right: SC
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- SC Panel Recommendations on Prison Reforms
- Scheduled Tribes in Karnataka
- SC Order on Criminalisation of Politics
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SC Upholds Changes to SC/ST Atrocities Law

Why in News

The **Supreme Court** has upheld the constitutional validity of the **Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Amendment Act, 2018**.

- The Amendment Act nullified the Court's 20th March, 2018 judgment which had diluted the stringent provisions of the original Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.
- Petitions were filed challenging the 2018 Amendment Act on the grounds of violation of the **fundamental right to equality (Article 14)** and **personal liberty (Article 21)**.

Salient Features of the Amendment Act, 2018

- It added **Section 18A** to the original Act.
- It delineates **specific crimes** against Scheduled Castes and Scheduled Tribes as atrocities and **describes strategies and prescribes punishments** to counter these acts.
- It identifies what acts constitute **"atrocities"** and all offences listed in the Act are **cognizable**. The police can arrest the offender without a warrant

and start an investigation into the case without taking any orders from the court.

- The Act calls upon all the states to convert an existing sessions court in each district into a **Special Court** to try cases registered under it and provides for the **appointment of Public Prosecutors/Special Public Prosecutors** for conducting cases in special courts.
- It creates provisions for states to declare areas with high levels of caste violence to be **"atrocities-prone"** and to appoint qualified officers to monitor and maintain law and order.
- It provides for the **punishment for wilful neglect of duties by non-SC/ST public servants**.

Strengthening the law

■ The SC, in *Dr. Subhash Kashinath Mahajan vs State of Maharashtra*, held on March 20, 2018: No absolute bar against grant of anticipatory bail under the anti-atrocities law if no prima facie case is made out or if judicial scrutiny reveals the complaint to be prima facie mala fide

■ Parliament introduces an amendment in 2018. Inserts Section 18A in the original Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act of 1989. Section 18A re-affirms the original legislative intention that Section 438 CrPC (pre-arrest bail) is not applicable to accused booked under the atrocities law

■ Prathvi Raj Chouhan and other petitioners challenge the amendments as arbitrary

■ February 10, 2020 judgment in Prathvi Raj Chouhan case: Justices Arun Mishra and Vineet Saran uphold Section 18A. However, the judges add that the High Courts will have an "inherent power" to grant anticipatory bail in cases in which prima facie an offence under the 1989 law is not made out

■ Justice S. Ravindra Bhat adds a caveat about the use of this "inherent power" by courts. He says it should be used "only sparingly and in very exceptional cases". Otherwise, miscarriage of justice may result. The intention of Parliament to protect SCs and STs will be defeated

■ "It is important to keep oneself reminded that while sometimes (perhaps mostly in urban areas) false accusations are made, those are not necessarily reflective of the prevailing and wide spread social prejudices against members of these oppressed classes": Justice Bhat



Note:

Section 18A states that:

- Preliminary enquiry shall not be required for registration of a First Information Report against any person; or
 - The investigating officer shall not require approval for arrest, if necessary, of any person, against whom an accusation of having committed an offence under the Prevention of Atrocities Act has been made and no procedure other than provided under the Prevention of Atrocities Act or the Code of Criminal Procedure (CrPC), 1973, shall apply.
 - The provision of section 438 (pre-arrest bail) of the Code of Criminal Procedure (CrPC) shall not apply to a case under the Act, notwithstanding any judgment or order or direction of any Court.
- It is **implemented by the State Governments and Union Territory Administrations**, which are **provided due central assistance**.

Reservations in Promotion is Not a Fundamental Right: SC

Why in News

The Supreme Court has recently ruled that the **states are not bound to provide reservation in appointments and promotions** and that there is **no fundamental right to reservation in promotions**.

Related Constitutional Provisions about Reservation

- **Article 16(4)** empowers the state to make any provision for the reservation of appointments or posts in favour of any backward class of citizens which, in the opinion of the state, is not adequately represented in the services under the state.
- By way of the **77th Amendment Act**, a **new clause (4A)** was added to **Article 16**, empowering the state to make provisions for reservation in matters of promotion to **Scheduled Caste/Scheduled Tribe** employees if the state feels they are not adequately represented in services.

Key Points from the Ruling

- **Article 16 (4) and 16 (4A) of the Constitution are in the nature of enabling provisions**, vesting a discretion on the state government to consider providing reservation, if the circumstances so warrant.

- The state government cannot be directed to provide reservation for appointment in public posts. Similarly, the state is not bound to make reservations for Scheduled Castes and Scheduled Tribes in matters of promotions.
- **Articles 16 (4) and 16 (4-A) of the Constitution did not confer individuals with a fundamental right to claim reservations in promotion.**
 - The Articles empower the State to make reservations in matters of appointment and promotion in favour of the Scheduled Castes and Scheduled Tribes only “if in the opinion of the State they are not adequately represented in the services of the State”.
 - Thus, the State government has discretion “to consider providing reservations, if the circumstances so warrant”.
 - However, if a State wishes to exercise its discretion and make reservation in promotions, it has to first collect quantifiable data showing inadequacy of representation of a class or community in public services.
- **Subject to Judicial Review**
 - If the decision of the state government to provide SC/ST reservation in promotion to a particular public post is challenged, it would have to place the data and prove before the court that reservation was necessary and does not affect the efficiency of administration.

Reservation Issue in Andhra Pradesh

Why in News

The Supreme Court has questioned the **Andhra Pradesh government’s decision in 1988 to provide a 100% reservation to Scheduled Tribes (STs) for teacher posts in Scheduled Areas**.

Key Points

- The Supreme Court has mentioned that the 100% reservation would deprive other backward communities (including SCs, OBCs) of availing reservation benefits.
- The notification to provide a 100% reservation to STs for teacher posts in Scheduled Areas was **issued by then governor of the Andhra Pradesh**.

Note:

- The **Fifth Schedule of the Indian Constitution** dealing with the administration of Scheduled Areas vests the Governor with legislative and administrative powers.
- The Supreme Court also **questioned** the **availability of data** based on which the Governor of the Andhra Pradesh decided that ST is the only deprived group in the area.
- **Article 16 (4)** of the Constitution empowers the state to make any provision for the reservation of appointments or posts in favour of any backward class of citizens which, in the opinion of the state, is not adequately represented in the services under the state.
- The Supreme Court ruled that the Governor's **decision can't be above the law** while referring to its **judgment in Indira Sawhney case of 1992** which mentioned that **the reservation limit should not exceed 50% except in exceptional circumstances**.

Fifth Schedule of the Indian Constitution

- It deals with the **administration and control of scheduled areas and scheduled tribes in any state except for** the four states of **Assam, Meghalaya, Tripura and Mizoram**.
- The scheduled areas are treated differently from the other areas in the country because they are inhabited by **'aboriginals' who are socially and economically backwards** and special efforts need to be made to improve their condition.
 - Therefore, the whole of the **normal administrative machinery operating in a state is not extended** to the scheduled areas.
- **Declaration of Scheduled Areas:** The **President is empowered** to declare an area to be a scheduled area. He can also increase or decrease its area, alter its boundary lines, repeal such designation or make fresh orders for such redesignation on an area in consultation with the governor of the state concerned.
- **Administration of Scheduled Areas:**
 - **Executive Power of State and Centre**
 - The executive power of a state extends to the scheduled areas therein. But the **governor has a special responsibility regarding such areas**. He has to submit a report to the President regarding the administration of such areas, annually or whenever so required by the President.

- The executive power of the Centre extends to giving directions to the states regarding the administration of such areas.
- **Tribes Advisory Council:** Each state, having scheduled areas, has to establish a tribes advisory council to advise on welfare and advancement of the scheduled tribes.
- **Law applicable to Scheduled Areas**
 - The Governor is empowered to direct that any particular act of Parliament or the state legislature does not apply to a scheduled area or apply with specified modifications and exceptions.
 - He can also make regulations for the peace and good government of a scheduled area after consulting the tribes advisory council.
 - Also, a regulation may repeal or amend any act of Parliament or the state legislature, which is applicable to a scheduled area. But, all such regulations require the assent of the President.

SC Panel Recommendations on Prison Reforms

Why in News

The Supreme Court appointed **Justice Amitava Roy (retd.) Committee** has given recommendations on **prison reforms**.

- The Court **appointed the Committee in 2018** to examine the various problems plaguing prisons, from overcrowding to lack of legal advice to convicts to issues of remission and parole.

Problems Highlighted

- **Indian jails over-occupied**
 - A total of 1,341 prisons were functional in India as on 30th November 2018. The total population of prisoners in India was 4.68 lakh against the total sanctioned strength of 3.83 lakh.
 - From 2016 to 2018, the total prison population in India has increased by 8.2% against an increase of 0.7% in the prison sanctioned capacity.
 - Seven states, namely Uttar Pradesh, Madhya Pradesh, Chattisgarh, Uttarakhand, Sikkim, Meghalaya and Delhi have an occupancy rate of 150%.

Note:



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➤ **Huge number of undertrials**

- Most of the prisons are full of undertrial prisoners, their numbers being highly disproportionate to those of convicts (declared guilty).
- An undertrial is a person who is being held in custody awaiting trial for a crime.

➤ **Shortage of Prison Staff**

- The Prison Department has a perennial average vacancy of 30%-40%. This hinders the implementation of the Model Prison Manual and various jail reforms.
- The physical production of an accused for a trial in a court remains far below the aspired 100% in several States mainly because of unavailability of sufficient police guards for escort and transportation.

➤ **Unhygienic Food**

- The preparation of food in kitchens is "primitive and arduous". The kitchens are congested and unhygienic and the diet has remained unchanged for years now.

Key Recommendations

➤ **For overcrowding**

- **Speedy trial:** Speedy trial remains one of the best ways to remedy the unwarranted phenomenon of overcrowding.
- **Lawyer to prisoner ratio:** There should be at least one lawyer for every 30 prisoners, which is not the case at present.
- **Special courts:** Special fast-track courts should be set up to deal exclusively with petty offences which have been pending for more than five years. Further, accused persons who are charged with petty offences and those granted bail, but who are unable to arrange surety should be released on a **Personal Recognizance (PR) Bond**.
- **Avoid adjournment:** An adjournment should not be granted in cases where witnesses are present and the concept of plea bargaining, in which accused admits guilt for a lesser sentence, should be promoted.

➤ **For prisoners**

- **Accommodative Transition:** Every new prisoner should be allowed a free phone call a day to his family members to see him through his first week in jail.

- **Legal aid:** Providing effective legal aid to prisoners and taking steps to provide vocational skills and education to prisoners.
- **Use of ICT:** Use of video-conferencing for trial.
- **Alternatives:** The courts may be asked to use their "discretionary powers" and award sentences like "fine and admonition" if possible instead of sending the offenders to jails.
 - Further, courts may be encouraged to release offenders on probation at the pre-trial stage or after the trial in deserving cases.

➤ **Filling Vacancies**

- The Supreme Court should pass directions asking authorities to start the recruitment process against permanent vacancies within three months and the process should be completed in a year.

➤ **For Food**

- Modern cooking facilities and canteens to buy essential items.

Note:

- **'Prisons/persons detained therein' is a State subject** under **Entry 4 of List II** of the Seventh Schedule to the Constitution of India. Administration and management of prisons is the responsibility of respective State Governments.
 - However, the Ministry of Home Affairs provides regular guidance and advice to States and UTs on various issues concerning prisons and prison inmates.
- **Article 39-A of the Constitution** directs the State to ensure that the operation of the legal system promotes justice on a basis of equal opportunity and shall, in particular, provide free legal aid by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.
 - **Right to free legal aid or free legal service** is an essential **fundamental right guaranteed by the Constitution**. It forms the basis of reasonable, fair and just liberty under **Article 21 of the Constitution of India**, which says, "No person shall be deprived of his life or personal liberty except according to the procedure established by law".

Note:

- A **Personal Recognizance (PR) bond** is also known as **Own Recognizance (OR) bond** and sometimes referred to as '**no-cost bail**'. With this type of bond, a person is released from custody and is not required to post bail.
 - They are, however, responsible for showing up on their specified court date and must sign a release form stating this promise in writing. The person is then released from custody based on their promise to appear in court and abide by any conditions of release set by the court.

Scheduled Tribes in Karnataka

Why in News

Recently, the Lok Sabha passed the **Constitution (Scheduled Tribes) Order (Second Amendment) Bill, 2019**.

- The Bill was already passed by the Rajya Sabha in 2019.
- It seeks to **include the Parivara and the Taliwara communities** in the **Scheduled Tribes (ST) category** to ensure they get a reservation and other benefits provided by the government.
- The Siddi tribes of Belagavi and Dharwad would also be included in the category apart from those living in the **Uttar Kannada districts of Karnataka**.
- The Bill was passed in the **Rajya Sabha in 2019** and it will amend **Part VI of the Constitution (Scheduled Tribes) Order, 1950**, that specifies the tribal and tribal communities which are deemed to be Scheduled Tribes.
 - **Part VI** of the order contains the list of Scheduled Tribes in Karnataka.

Parivara and Taliwara

- It is estimated that the population of the Parivara community at roughly 2.58 lakh and that of the Taliwara community at 8.6 lakh.
- It added that most people from these communities live in Mysore, Chamrajanagara, Mandya and Tumkur districts and a "thin population" resides in Udupi, South Canara and North Canara districts of Karnataka with a majority of them employed as coolies, engaged in collecting firewood, husbandry and the cottage industry, thereby leading a life of lower status.
- The study states that the communities' life cycle rituals, language, lifestyle, the standard of living, physical features, socio-economic and educational

status and their geographical isolation are similar to that of Beda, Nayaka and Valmiki which are already included in the ST category in the state of Karnataka.

- As per the government, Pariwara and Taliwara are socially, politically, economically and educationally backwards.

Siddi Tribe

- The Siddi community is also known by different synonyms such as **Habshi and Badsha**.
- It is believed that they are of African origin because they clearly show the Negroid racial strain in their physical features.
 - Descendants of Bantu people of East Africa, Siddi ancestors were largely brought to India as slaves by Arabs as early as the 7th Century, followed by the Portuguese and the British later on.
 - When slavery was abolished in the 18th and 19th centuries, Siddis fled into the country's thick jungles, fearing recapture and torture.
- At present, the Siddis are living on the western coast of Gujarat, Maharashtra and Karnataka states. In Karnataka, they mainly live in Dharwad, Belagavi and Uttar Kannada districts.
- In India, the Union government in 2003, classified Siddis under the list of Scheduled Tribes.
- They are included in the Centre's list of **Particularly Vulnerable Tribal Groups**.
- Previously they depended on hunting and gathering but at present, their main source of livelihood is labour and agriculture.

SC Order on Criminalisation of Politics

Why in News

The Supreme Court (SC) has ordered **political parties to publish the entire criminal history of their candidates for Assembly and Lok Sabha elections** along with the **reasons that forced them to field suspected criminals**.

- The order **was a reply to the contempt petition** about the general disregard shown by political parties to a 2018 Constitution Bench judgment (Public Interest Foundation v. Union of India) to publish the criminal details of their candidates in their respective websites and print as well as electronic media for public awareness.

Note:



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- The SC passed an order while **exercising powers under Articles 129 and 142 of the Constitution** which deals with the contempt power of the Supreme Court and enforcement of its decrees and orders.

Highlights of the Order

- It is **mandatory for political parties (at the Central and State election level)** to upload on their website detailed information regarding individuals with pending criminal cases.
 - It shall also include the nature of their offences, charges framed against them, the court concerned, case number, etc.
- Additionally, the political parties need to **offer an explanation as to why candidates with pending criminal cases are selected** as candidates in the first place.
 - The **candidate's mere 'winnability at the polls' shall not be the sole reason** for handing over a ticket to him/her to contest elections.
- The above information needs to be published in a local as well as a national newspaper as well as the parties' social media handles.
- The information mandatorily to be published either within 48 hours of the selection of candidates or less than two weeks before the first date for filing of nominations, whichever is earlier.
- The political parties **need to submit compliance reports with the Election Commission of India within 72 hours**.
 - If a political party fails to submit then the Election Commission shall bring such non-compliance by the political party concerned to the notice of the Supreme Court as being in contempt of the Court's orders/directions.

Significance of the Order

- Over the last four general elections, there has been an **alarming increase in the incidence of criminals in politics**. The increasing criminalisation of politics threatens the law-making process and thus lawmakers should be above any kind of serious criminal allegation.
 - In 2004, 24% of the Members of Parliament (MPs) had criminal cases pending against them. This number has increased to 43% of MPs in 2019.
- The **direction of the SC to frame a parliamentary legislation to curb criminalisation of politics** may help to deliver constitutional governance.

Motion of Thanks

Why in News

Recently, a debate on Motion of Thanks to the President's Address was held in Lok Sabha.

President's Address

- **Article 87** provides for the special address by the President. The article provides that at the commencement of the first session after each general election to the House of the People and at the commencement of the first session of each year, the President shall address both Houses of Parliament assembled together and inform Parliament of the causes of its summons.
- Such an Address is called '**special address**', and it is also an **annual feature**.
- No other business is transacted till the President has addressed both the Houses of Parliament assembled together.
- This **Address has to be to both Houses of Parliament assembled together**.
 - If at the time of commencement of the first session of the year, Lok Sabha is not in existence and has been dissolved, and Rajya Sabha has to meet. Then, Rajya Sabha can have its session without the President's Address.
- The President's Address is the statement of policy of the Government and, as such, is drafted by the Government.

Discussion on the Address by Motion of Thanks

- The address of the president, which corresponds to the 'speech from the Throne in Britain', is **discussed in both the Houses of Parliament on a motion called the 'Motion of Thanks'**.
- It is available to the members of Parliament to raise discussions and debates to examine and criticise the government and administration for its lapses and failures.
- Generally, **three days are allotted** for the discussion on the Motion of Thanks.
- If any of the amendments are put forward and accepted then the Motion of Thanks is adopted in the amended form.

Note:

- Amendments may refer to matters contained in the Address as well as to matters which, in the opinion of the member, the Address has failed to mention.
- At the end of the discussion, the motion is **put to vote**.

Significance of Motion of Thanks

- The Motion of Thanks **must be passed in the House**. Otherwise, it amounts to the defeat of the government. It is one of the ways through which the Lok Sabha can also express a lack of confidence in the government. The **other ways** are:
 - Rejection of a **money bill**.
 - Passing a censure motion or an adjournment motion.
 - The defeat of the government on a vital issue.
 - Passing a cut motion.

Facial Recognition for Elections

Why in News

In the upcoming **Telangana urban local bodies polls**, the State Election Commission (SEC) will be using a **facial recognition app** for **verification and real-time authentication of voters** on the pilot basis in **10 selected polling stations**.

- The use of facial recognition for election will be a **first-of-its-kind in India**.
- It will help to **counter impersonation** by voters during polling.

Key Points

- The initiative will be implemented in **Kompally Municipality** of Medchal Malkajgiri district of **Telangana**.
- The facial recognition is proposed as an additional tool to validate the identity of the voter in addition to the existing procedures prescribed including use of photo electoral rolls, the insistence of photo ID proof in addition to the personal scrutiny by the polling agents appointed by the contesting candidates.
- **Proposed Procedure:**
 - The **additional polling officer-in-charge** of the mobile phone will work with a facial recognition system.
 - The app will display results of the verification based on the match established with the voters with an appropriate message.

- Further, the photographs taken **will not be stored or used for any other purpose**.

Fundamental Rights and OCI Cardholders

Why in News

Recently, the Union government has told the Delhi High Court that **Overseas Citizen of India (OCI) cardholders do not enjoy fundamental rights guaranteed by the Constitution, including the right to freedom of speech and expression**.

- This response was to a plea seeking information under the **Right to Information (RTI) Act, 2005**.
- The plea also sought exemption for overseas citizens from seeking permission under the **Foreign Contribution Regulation Act, 2010 (FCRA)** to make donations to religious and charitable institutions.
 - According to the plea, the right to make donations to religious institutions and the fundamental right to freedom of religion are guaranteed by the Constitution.

Key Points

- The Government has not specifically replied on the question of the right to practice religion in India. However, it says **no fundamental rights are applicable to the OCIs**.
- According to the government, OCI cardholders have merely been granted **statutory rights** under the **Citizenship Act, 1955**.
 - Centre held that the **right to freedom of speech and expression** is a **statutory right** and **not a fundamental or a constitutional right** for the **OCI cardholders**.
- The Central Government grants limited rights through the Citizenship Act (Conferment of rights on overseas citizens of India). Therefore, it depends on the policies of the government what rights are granted to the OCIs.
- Centre's response contradicts earlier Delhi High Court ruling in 2018, where it held that OCI cardholders have the right to enjoy the fundamental rights of equality and freedom of speech and expression like other Indian citizens.
 - In 2018, the Delhi High Court had said that an overseas citizen can exercise fundamental rights guaranteed to "natural persons" under the constitution.

Note:



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- The **Supreme Court**, in multiple cases, has held that the Right to Information is enshrined in Article 19(1) (a), that is granted to citizens and Article 21, which is guaranteed to all natural persons.

Article 19(1)(a): Freedom of speech and expression: It provides every citizen with the right to express one's views, opinions, beliefs, and convictions freely by word of mouth, writing, printing, picturing or in any other manner.

Article 21: It declares that no person shall be deprived of his life or personal liberty except according to the procedure established by law. This right is available to both citizens and non-citizens.

Lack of Anganwadis in Urban Areas

Why in News

Recently, the government's response to a **Right to Information (RTI)** query has revealed that for **every 100 anganwadi beneficiaries** in the country, **only seven are in urban areas**.

- The minuscule presence of beneficiaries is due to **lack of anganwadi centres in urban areas**.
- This shows **poor coverage by the Integrated Child Development Scheme (ICDS)** in urban areas.

Anganwadi Centres

- Anganwadis or day-care centres are set up under the centrally sponsored **Integrated Child Development Services (ICDS)** scheme.
 - The scheme is being implemented by the **Ministry of Women and Child Development**.
- Anganwadi centres provide a package of **six services**:
 - Supplementary nutrition.

Integrated Child Development Services (ICDS) Scheme

Serving Children of 0-6 years and Pregnant & Lactating Mothers



- Pre-school non-formal education.
- Immunisation.
- Nutrition.
- Health education.
- Referral services.

- **Aim:** To reduce infant mortality and child malnutrition.
- **Beneficiaries:** Children in the age group of zero to six years, and pregnant women and lactating mothers.

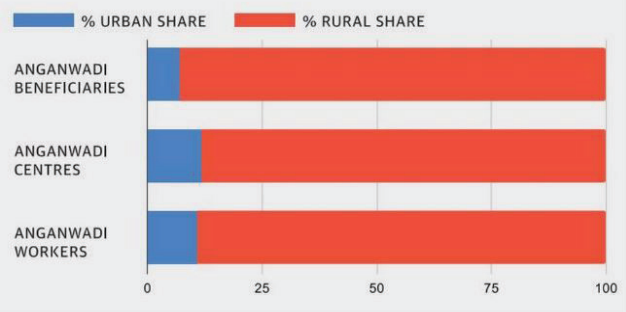
Current Scenario

➤ Number of Beneficiaries

- Out of **7.95 crore beneficiaries** of the Anganwadi scheme in the country as on September 30, 2019, **only 55 lakh** were registered at **urban anganwadis**.

Urban-rural disparity

Urban areas have very few beneficiaries of anganwadi services (7.02%) as compared to rural areas (92.8%)



➤ Less number of anganwadi centres in urban areas

- There are **13.79 lakh anganwadis operational across the country**, out of which **9.31 lakh centres** are linked to the government's web-enabled data entry system called **Rapid Reporting System**.
- Of that linked anganwadis, **1.09 lakh centres are in urban areas** and the remaining **8.22 lakh are in rural areas** of the country.

➤ Scope for coverage by the scheme

- National Nutrition Survey 2016-18 found that 35% of children under five were stunted and 17% were wasted.
 - It also found that 22% of children in the age group of 5-9 years were stunted and 23% were thin for their age.
- **Urban areas specific:** Children in urban areas showed two to three times **higher prevalence of obesity** as compared to their peers in rural areas.

Note:



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➤ Latest Step Taken

- The **NITI Aayog** has been working on a draft paper to strengthen the ICDS programme in urban areas, keeping in mind challenges such as migration, population density and the long commute involved for workers and beneficiaries.

Pradhan Mantri Matru Vandana Yojana Awards

Why in News

States, Union Territories and Districts have been awarded the **Pradhan Mantri Matru Vandana Yojana** Awards by the Ministry of Women & Child Development for best performances in the implementation of the maternity benefit programme since its inception in 2017.

Best Performers

- **States/UTs with a population of more than 1 crore:** Madhya Pradesh > Andhra Pradesh > Haryana.
- **States/UTs having a population of less than 1 crore:** Dadra & Nagar Haveli > Himachal Pradesh > Chandigarh.
- **Districts having a population of more than 1 crore:** Indore (Madhya Pradesh) > Kurnool (Andhra Pradesh) > South Salmara Mankachar (Assam).
- **Districts having a population of less than 1 crore:** Serchhip (Mizoram) > Unain (Himachal Pradesh) > Puducherry.

Matru Vandana Saptah

- Matru Vandana Saptah (MVS) was held from 2nd to 8th December 2019.
- The objective of observing MVS was to increase the implementation of the Scheme and create a healthy competition amongst States/ UTs.
- The theme of the Saptah was “**towards building a healthy nation – Surakshit Janani, Viksit Dharini**”.

National Means Cum-Merit Scholarship Scheme

Why in News

The Union Minister for Human Resource Development updated the progress of **National Means Cum-Merit**

Scholarship Scheme (NMMSS) in the written reply tabled in the Rajya Sabha during Budget Session 2020.

Key Points About NMMSS

➤ Aim

- The objective of the National Means Cum-Merit Scholarship Scheme (NMMSS) is to **award scholarships to meritorious students of economically weaker sections to reduce drop-outs in class VIII**. It also intends to encourage students to continue the study at a secondary stage.

➤ Type

- It is the **Centrally Sponsored Scheme (CSS)** which was launched in **2008**.

➤ Details about Scholarship

- Scholarship of **Rs. 6000/- per annum** (Rs.500/- per month) per student is awarded to selected students every year for study in classes from IX to XII in State Government, Government aided and local body schools.
- The selection of students award of the **scholarships is made through an examination** conducted by the State Governments.
- Scholarships are disbursed by the **State Bank of India** directly into the bank accounts of students on a quarterly basis

➤ Eligibility Criteria

- **Students whose parental income from all sources is not more than Rs. 1,50,000/- per annum** are eligible to avail the scholarships.
- The students studying in Kendriya Vidyalaya, Jawahar Navodaya Vidyalayas, Residential Schools run by the State Government Institutions and private schools are not eligible for the scholarship under this scheme.

➤ Performance of the Scheme

- An evaluation study conducted by the National Institute of Educational Planning and Administration (NIEPA) in 2017 states that **about 70.1% beneficiary students would have been unable to continue their studies without this scholarship**.
- Additionally, **students selected under NMMSS register better performance** in Class IX, X, XI and XII in order to continue getting the scholarship for the next four consecutive years.

Note:



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National Institute of Educational Planning and Administration

- The National Institute of Educational Planning and Administration (NIEPA) was **established by the Ministry of Human Resource Development**.
 - The National Institute has its **origin dating back to 1962** when the UNESCO established the Asian Regional Centre for Educational Planners and Administrators which later became the **Asian Institute of Educational Planning and Administration** in 1965.
 - After 4 years of its existence, it was **taken over by the Government of India**.
 - Subsequently, with the increased roles and functions it was renamed as the National Institute of Educational Planning and Administration (NIEPA) in 1979.
- The Government of India has empowered it to award its own degrees by way of conferring it the **status of Deemed to be University** in August, 2006.

Foreign Ambassadors in Srinagar

Why in News

Twenty-five foreign Ambassadors visited Srinagar, Jammu and Kashmir (J&K) to assess the situation in the region nearly six months after the Central government revoked Article 370.

- They asked for suggestions from locals including few politicians, elected grass-roots representatives, editors and traders on the measures for moving ahead.
- Around 100 local delegates formed separate groups and met the envoys.
 - These delegates also met the **Members of the European Parliament in October 2019**.
- The Ministry of External Affairs has said that there would be more such visits as the situation in J&K further normalises.

Significance

- It assumes significance because of the U.S. President's upcoming visit to India and the **European Union's (EU)** plan to discuss the **Citizenship Amendment Act (CAA)** and reading down of Article 370 in the European Parliament in March 2020.

- The visit marks an important step by the government after it faced huge criticism in the EU and in the US over scrapping Article 370.
- The visit gives a better understanding of the cultural and religious diversity of the state apart from giving a clear view of the development and governance priorities of the region.

Soil Health Card Scheme

Why in News

According to the **National Productivity Council (NPC)**, the **Soil Health Card** scheme has led to a **decline of 8-10% in the use of chemical fertilizers** and also **raised productivity by 5-6%**.

- Under the Phase-I (2015-17) of the scheme, 10.74 crore cards were distributed, while under the Phase-II (2017-19), 11.69 crore cards have been distributed.
- Issuance of the Soil Health Cards has enabled the farmers to understand the soil health parameters and improve the productivity by judicious application of soil nutrients.
- The Soil Health Card Scheme along with other projects (**National Mission for Sustainable Agriculture**) for soil health management has created jobs for the agrarian youth.
 - Village youth and farmers up to 40 years of age are eligible to set up Soil Health Laboratories and undertake testing.
 - 75% of laboratory costs are funded by the Central and State Governments.
 - National Mission for Sustainable Agriculture is one of the eight national missions under the **National Action Plan on Climate Change (NAPCC)** which was launched in 2008.

Soil Health Card Scheme

- The Ministry of Agriculture and Farmers' Welfare introduced the scheme on December 5, 2015.
- Soil Health Card (SHC) is a printed report which **contains nutrient status of soil** with respect to **12 nutrients**: pH, Electrical Conductivity (EC), Organic Carbon (OC), Nitrogen (N), Phosphorus (P), Potassium (K), Sulphur (S), Zinc (Zn), Boron (B), Iron (Fe), Manganese (Mn) and Copper (Cu) of farm holdings.
- SHC is **provided to all farmers in the country at an interval of 2 years** to enable the farmers to apply

Note:



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recommended doses of nutrients based on soil test values to realize improved and sustainable soil health and fertility, low costs and higher profits. Farmers can track their soil samples and also obtain their Soil Health Card report.

- It is a **field-specific** detailed report of soil fertility status and other important soil parameters that affect crop productivity.

National Productivity Council

- It is a **national-level organization** to promote productivity culture in India.
- Established by the **Ministry of Commerce and Industry**, Government of India in 1958, it is an autonomous, multipartite, non-profit organization.

Pesticides Management Bill, 2020

Why in News

The **Pesticides Management Bill, 2020** has been approved by the Union Cabinet.

- The Bill will regulate the business of pesticides and compensate farmers in case of **losses from the use of agrochemicals**.
 - **Agrochemicals** imply chemicals used in agriculture, such as a pesticide or fertilizer.
- **Currently**, the pesticide business is regulated by rules under the **Insecticides Act 1968**.

Key Features of the Bill

- **Pesticide Data:** The Bill will empower farmers by providing them with all the **information about the strength and weakness of pesticides, the risk** and alternatives. All information will be available openly as data in digital format and in all languages.
- **Compensation:** The Bill has a unique feature in the form of a provision for compensations in case there is any loss because of the spurious or low quality of pesticides.
 - If required, a **central fund will be formed** to take care of the compensations.
- **Organic Pesticides:** The Bill also intends to promote organic pesticides.
- **Registration of Pesticide Manufacturers:** All pesticide manufacturers have to be registered and bound by the new Act, once it is passed. The advertisements

of pesticides will be regulated so there should be no confusion or no cheating by the manufacturers.

Pesticides in India

- India is among the leading producers of pesticides in Asia.
- In the domestic market, Maharashtra, Uttar Pradesh, Punjab and Haryana are among the states with the highest recorded consumption.
- **Spurious Pesticides:**
 - They harm crops, soil fertility and the environment.
 - Spurious agrochemicals are responsible for the losses of not just farmers but also producers of genuine agrochemicals and the government, which loses revenue from the sales of the counterfeit versions of the real farm inputs.

Insecticides Act, 1968

- It was brought into force with effect from August 1971 with a view of regulating the import, manufacture, sale, transport, distribution and use of insecticides in order to prevent risk to human beings and animals.
- **The Central Insecticides Board** was established under Section 4 of the Act and it works under the **Ministry of Agriculture and Farmers' Welfare**.
 - The board advises the central government and state governments on technical matters arising out of the administration of the act and to carry out the other functions assigned to it.

Santusht Portal

Why in News

The **Ministry of Labour and Employment (MoL&E)** has launched 'Santusht Portal' to **monitor the implementation of labour laws** at the grassroots level.

Key Points

- The objective of 'Santusht' is to **promote transparency, accountability, effective delivery of public services and implementation of policies, schemes** of the Labor Ministry through constant monitoring.
- The government aims to implement **all four codes on wages**, industrial relations, social security and occupational safety, health and working conditions. These are expected to improve ease of doing business and safeguard the interest of workers.

Note:

- For public grievances, **Centralized Public Grievance Redressal and Monitoring System** portal is already functional.

Centralized Public Grievance Redressal and Monitoring System

- **Centralized Public Grievance Redressal and Monitoring System (CPGRAMS)** is an online web-enabled system developed by **National Informatics Centre (Ministry of Electronics & IT [MeitY])**, in association with **Directorate of Public Grievances (DPG)** and **Department of Administrative Reforms and Public Grievances (DARPG)** under the Ministry of Personnel, Public Grievances & Pensions.
- It aims to **receive, redress** and **monitor** the grievances of the public.
- It enables the citizen to track online the grievances being followed up with Departments concerned and also enables **DARPG to monitor the grievances**.

Sophisticated Analytical & Technical Help Institutes

Why in News

The **Ministry of Earth Sciences** has launched a unique scheme called **Sophisticated Analytical & Technical Help Institutes (SATHI)**.

- The Government is initiating the setting up of a shared, professionally managed, **Science and Technology infrastructure facility**, which can be readily accessible to academia, start-ups, manufacturing units, industries and R&D Labs.
- These Centres will be equipped with **major analytical instruments and advanced manufacturing facilities**, which is usually not available at Institutes / Organisations.
- The aim is to provide professionally managed services with efficiency, accessibility and transparency of highest order under one roof to service the demands of industry, start-ups and academia **to enable them to carry out R&D activities on a round the clock basis with minimum downtime**.
- In the **first phase SATHI facilities** are being located at **IIT-Delhi, IIT-Kharagpur** and **BHU-Varanasi**. The Government has planned to set up five SATHI Centres every year for the next four years.
- Besides the SATHI initiative, extra funds to 100 top-performing departments in universities and IITs etc

will be provided in 2020 for augmentation of their research facilities to global benchmarks.

- The research efforts of these supported departments will be in sync with the national priorities of excellence in manufacturing, waste processing, clean energy and water, and Start-up India, etc.

Note:

- **SAATHI (Sustainable and Accelerated Adoption of efficient Textile technologies to Help Small Industries) Initiative.**
 - It is an initiative of the **Ministry of Textiles**.
 - **Objective:** To sustain and accelerate the adoption of energy efficient textile technologies in the powerloom sector and cost savings due to use of such technology.
- **SATH (Sustainable Action for Transforming Human capital) Program**
 - It is a program of **NITI Aayog**.
 - **Objective:** To initiate transformation in the education and health sectors and build 3 future 'role model' states.
 - The program also addresses the need expressed by many states for technical support.

Investor Education and Protection Fund (IEPF)

- Investor Education and Protection Fund (IEPF) has been established under provision of the Companies Act, 2013.
- The amounts such as dividends, applications money, matured deposits etc, which have remained unpaid or unclaimed for a period of **7 years** are **required to be transferred to the IEPF**.
- The Amounts credited to IEPF are maintained under the consolidated fund of India (Article 266 of the Constitution).
- The fund is utilized for promoting investor awareness and protection of investor interests.
 - The Fund is also utilised for distribution of any **disgorged amount** among eligible applicants for shares or debentures, shareholders, debenture-holders or depositors who have suffered losses due to wrong actions by any person, in accordance with the orders made by the Court.

Note:



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- When a person or entity in the securities market makes a profit by fraudulent means, a 'disgorgement' order is issued to repay those gains to affected investors with interest.
- For administration of Investor Education and Protection Fund, the Government of India in 2016, established **Investor Education and Protection Fund Authority** under the provisions of section 125 of the **Companies Act, 2013**. The Authority is under the **Ministry of Corporate Affairs**.

Judgement on Netherland's Digital Identification Scheme

Why in News

In a first anywhere in the world, a **court in the Netherlands has ruled against a digital identification mechanism called SyRI (System Risk Indicator) due to data privacy and human rights concerns**.

- The Dutch Ministry of Social Affairs developed SyRI in 2014 to weed out those who are most likely to commit fraud and receive government benefits.

Key Points

- **Working of SyRI:**
 - It is based on the algorithm that analyses data (such as taxes, land registries, employment records, etc.) provided by the government and calculates risk scores.
 - The calculated risk scores are sent to relevant government arms, which stores these on government databases for a maximum of two years.
 - The government, in that time period, could open an investigation on the targeted person.
- **Court's Ruling:**
 - The Court found using new technology to control fraud as acceptable, but it held **SyRI was invasive and violative of the privacy guarantees** given by European Human Rights Law as well as the **EU's General Data Protection Regulation**.
 - It called it a case of '**Algorithmic Governance**'. As the algorithm would link socio-economic parameters like poverty and immigrant statuses with fraud risk.

- Such opaque algorithmic decision-making **may put citizens at a disadvantage** to challenge the resulting risk scores, consequently threatening democratic features of the country.
- It also ruled that SyRI was **violative of principles of transparency and data minimisation**.
- **Dutch Government's Stand:**
 - The government claimed that the **new technology prevented abuse** and acted as only a starting point for further investigation instead of a final determination.
 - The Dutch Ministry of Social Affairs has released a statement stating it will **study the ruling, not declaring a complete removal of their system**.

Significance of the Ruling

- The ruling is an example of **how a data protection regulation can be used against government surveillance**.
 - Other European tech initiatives have been stalled by the EU's General Data Protection Regulation including a facial recognition system on students in Sweden and France.
- The ruling **sets a strong legal precedent for other countries to follow**, as this is one of the first times a court anywhere has stopped the use of digital technologies and abundant digital information by welfare authorities on human rights grounds.
- It also demonstrates that legislative arms need to **balance the usage of technology in the social security system and the protection of the rights of their citizens**.

Netherlands Court Ruling and India

- **Similar to the Supreme Court's Aadhaar judgment** setting limits on the ID's usage, the Hague Court attempted to **balance social interest with personal privacy**. However, the Aadhaar judgment was about data collection and not regarding algorithmic decision-making.
- **India's proposed Personal Data Protection Bill (2019)** also contains many loopholes that could be potentially exploited like the USA.
 - The usage of the open-ended terms like 'National security' or 'reasonable' may lead to intrusion of the state into the private lives of citizens.



Note:

Economic Scenario

Highlights

- *Economic Survey 2019-20: Highlights*
- *Economic Survey 2019-20: Key Figures*
- *Economic Survey 2019-20: Banking Sector, Credit and Capital Market*
- *Economic Survey 2019-20: Social Infrastructure, Employment and Human Development*
- *Union Budget 2020-21: Highlights*
- *Union Budget 2020-21: Economy*
- *Union Budget 2020-21: Social Sector and Infrastructure*
- *Union Budget 2020-21: Financial Sector and Governance*
- *Anti-Dumping Duty on PTA Abolished*
- *Repo Rate Unchanged*
- *India International Seafood Show*
- *International Intellectual Property Index: US Chamber of Commerce*
- *National Organic Food Festival*
- *Direct Tax Vivad Se Vishwas Bill, 2020*

Economic Survey 2019-20: Highlights

Why in News

The Economic Survey 2019-20 has been tabled in the Parliament by the Union Minister for Finance.

- The Economic Survey **2019-20 builds on "India's aspiration of #Economy@5trillion with its theme of #WealthCreation"**.

Economic Survey

- The Economic Survey is a report that the government presents on the state of the economy in the past one year, the key challenges it anticipates, and their possible solutions.
 - It is a crucial document as it provides a detailed, official version of the government's take on the country's economic condition.
- The document is **prepared** by the **Economic Division of the Department of Economic Affairs (DEA)** under the guidance of the **Chief Economic Adviser (CEA)**, currently **Dr. Krishnamurthy Subramanian**.
- It needs to be noted that the **government is not constitutionally bound to present the Economic Survey** or to follow the recommendations that are made in it.

Wealth Creation

- The Survey makes an attempt to craft a framework

of policies that would set the economy firmly on an upward growth trajectory.

- The Survey identifies several levers for furthering Wealth Creation, which are:
 - **Grassroot Entrepreneurs:** Entrepreneurship as a strategy to fuel productivity growth and wealth creation.
 - **Competitive Market:** Promote 'pro-business' policies that unleash the power of competitive markets to generate wealth as against 'pro-crony' policies that may favour incumbent private interests.
 - **Remove anachronistic government interventions:** Eliminate policies that undermine markets through government intervention, even where it is not necessary.
 - **Assemble in India:** Integrate 'Assemble in India' into 'Make in India' to focus on labour-intensive exports and thereby create jobs at a large scale. India should focus on other labour-intensive sectors such as textile, clothing, footwear and toys.
 - **Banking:** Efficiently scale up the banking sector to become proportionate to the Indian economy and track the health of the shadow banking sector (NBFCs).



Note:

Market Enables Wealth Creation

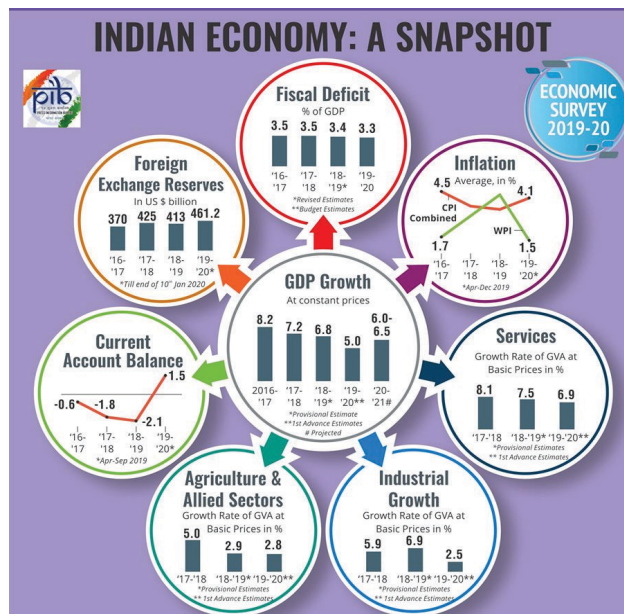
- The Survey lays stress on the importance of bringing an openness in the market that leads to wealth creation, in turn, boosting the economic activity through increased investment.
- India's historical dominance on the global economy is the result of two factors: '**Invisible Hand of Market**' and '**Trust**'. E.g. Indian economy returned to high growth trajectory post economic liberalisation.
- Trust is a public good that increases with use.
 - **Privatization:** Use privatization to foster efficiency and thus bolster the case for aggressive disinvestment of Central Public Sector Enterprises (CPSEs).

Thalinomics

- The Survey makes an attempt to relate economics to the common person using something that an individual encounters every day - **a plate of food i.e a Thali**.
- Affordability of Thalīs vis-à-vis a day's pay of a worker has improved over time, indicating improved welfare of the common person.

Economic Survey 2019-20: Key Figures

- GDP growth pegged at 6-6.5% for 2020-21, up from 5% in 2019-20. The Survey also observed that **India's GDP growth is not overstated**.
- **Government Expenditure**
 - The Survey called for rationalization of non-committed revenue expenditures like subsidies as a considerable proportion of revenue expenditure like interest payments, wages and salaries and pensions is committed.
 - However, the Survey has also warned against cutting capital expenditure.
- Share of **formal employment** increased from **17.9% in 2011-12 to 22.8%** in 2017-18 reflecting **formalization in the economy**.
 - In 2018, India witnessed an increase of about 80 % in the creation of new firms in comparison to 2014. As per the **World Bank's data** on Entrepreneurship, India ranks third in the number of **new firms created**.
- **Inflation declined** sharply from 3.2% in April 2019 to 2.6% in December 2019, reflecting the **weakening of demand** pressure in the economy.



- It needs to be noted that when demand surpasses supply, it leads to higher prices i.e. Demand-pull inflation.
- **India's Balance of Payments (BoP)**
 - The Balance of Payments position improved to USD 433.7 billion in September 2019 because of narrowing **Current Account Deficit (CAD)** which is 1.5% of GDP in the first half of 2019-20.
- **Foreign Direct Investment:** Net FDI inflows remained buoyant attracting USD 24.4 billion in the first eight months of 2019-20, much **higher** than the corresponding period of 2018-19.
- **Remittances**
 - Net overseas remittances in the first half of 2019-20 were **more than 50% of total receivables in 2018-19**, standing at USD 38.4 billion.
 - As per the World Bank report of 2019, India's **17.5 million diasporas** made it the top remittance-recipient country in 2018.
- **Merchandise Trade**
 - India's merchandise trade balance improved from 2009-14 to 2014-19, although most of the improvement in the latter period was due to more than 50% decline in crude prices in 2016-17.
 - India's **top five trading partners** continue to be **USA, China, UAE, Saudi Arabia and Hong Kong**.
- **Performance of Key Sectors**
 - **Industrial Sector:** As per **the Index of Industrial Production (IIP)**, the sector registered a growth of

Note:

0.6% in 2019-20 (April-November) as compared to 5.0% during 2018-19 (April-November).

- **Service Sector:** The **Services Sector** accounted for about **55% of the economy** and Gross Value Added (GVA) growth, **two-thirds of total FDI inflows** into India and about 38% of the total exports.
- **Agriculture sector:**
 - The share of agriculture and allied sectors in the total GVA of the country has been **continuously declining** on account of relatively higher growth performance of non-agricultural sectors, a natural outcome of the development process. Also, **livestock income** has become an **important secondary source of income** for millions of rural families.
 - Agricultural productivity is also constrained by lower level of mechanization in agriculture which is about 40 % in India, much lower than China (59.5 %) and Brazil (75 %).
- **Ease of Doing Business:** Suggestions for Improving Rank in **Ease of Doing Business (Rank 63 in 2019)**.
 - Close coordination between the Logistics division of the Ministry of Commerce and Industry, the Central Board of Indirect Taxes and Customs, Ministry of Shipping and the different port authorities.
 - Individual sectors such as tourism or manufacturing require a more targeted approach that maps out the regulatory and process bottlenecks for each segment.

Economic Survey 2019-20: Banking Sector, Credit and Capital Market

- India has the **second largest** emerging **green bond** market **after China**.
- Monetary policy remained accommodative in 2019-20. Accommodative monetary policy occurs when a central bank attempts to expand the **overall money supply to boost the economy** when growth is slowing (as measured by GDP).
- The financial flows to the economy remained constrained as credit growth declined for both banks and Non-Banking Financial Corporations (NBFCs).
- **Gross Non Performing Advances Ratio**

- Remained unchanged for Scheduled Commercial Banks (SCBs) at 9.3% between March and Sept. 2019.
- Increased slightly for the NBFCs from 6.1% in March 2019 to 6.3% in September 2019.
- **Capital to Risk-weighted Asset Ratio** of SCBs increased from 14.3% to 15.1% between March 2019 and September 2019.
- The General Government (Centre plus States) has been on the path of **fiscal consolidation**.
 - Fiscal consolidation is a policy aimed at reducing government deficits and debt accumulation.
- India has only one bank in the global top 100. The Survey observes 2019 as the golden jubilee year of bank nationalization.
 - PSBs are inefficient compared to their peer groups on every performance parameter.
 - Suggestions
 - Employee Stock Ownership Plan (ESOP) for PSBs' employees
 - Representation on boards proportionate to the blocks held by employees to incentivize employees and align their interests with that of all shareholders of banks.
 - Creation of a **GSTN** type entity that will aggregate data from all PSBs and use technologies like big data, artificial intelligence and machine learning in credit decisions for ensuring better screening and monitoring of borrowers, especially the large ones.
- The Economic Survey has suggested the use of a 'health score' index for NBFCs which can help in detecting early signs of impending liquidity risks.

Economic Survey 2019-20: Social Infrastructure, Employment and Human Development

- **Employment and Income**
 - Largest proportion of the Indian population depends directly or indirectly on agriculture for employment opportunities as compared to any other sector.
 - The share of regular wage/salaried employees has increased by 5 percentage points from 18% in 2011-12 to 23% in 2017-18.

Note:

- Gender disparity in India's labour market widened due to decline in female labour force participation, especially in rural areas.
- **Government Expenditure on Social Services**
 - The expenditure on social services (health, education and others) by the Centre and States as a proportion of GDP increased from 6.2% in 2014-15 to 7.7% in 2019-20.
 - Access to health services inter-alia through Ayushman Bharat and Mission Indradhanush across the country has improved.
 - A 10 Year Rural Sanitation Strategy (2019-2029) has been launched to focus on sustaining the sanitation behaviour change and increasing access to solid and liquid waste management.
- Burning of agricultural residues, leading to rise in pollutant levels and deterioration of air quality, is still a major concern, though the total number of burning events recorded reduced due to various efforts taken.
- All urban areas of 35 States/UTs have become Open Defecation Free (ODF) and the percentage of waste processing rose from around 18% to 60%.
- The Survey emphasizes on the sustainability of food security operations by:
 - Addressing the burgeoning food subsidy bill.
 - Revisiting the rates and coverage under National Food Security Act (NFSA).
- **Privatization of Education**
 - The Survey proposes privatization of education at all levels as a policy initiative to fast-track entrepreneurship and consequently wealth creation.
 - It links literacy levels to start-up activity and cites the example of the eastern parts of the country, which have the lowest literacy rate of about 59.6% and also the lowest rate of new firms being set up.

Union Budget 2020-21: Highlights

Why in News

The Union Minister of Finance has presented the Budget 2020-21. The Budget, with the **central theme of ease of living for all citizens**, is based on **three** prominent themes:

- **Aspirational India** – better standards of living with access to health, education and better jobs for all sections of the society
- **Economic Development for all** – “Sabka Saath, Sabka Vikas, Sabka Vishwas”.
- **Caring Society** – both humane and compassionate; Antyodaya as an article of faith.

Budget

- Union Budget of India is the country's comprehensive **Annual Financial Statement**.
- The Union Budget consists of a detailed account of the government's finances, its revenues from various sources and expenditures to be incurred on different activities that it will incur.
- As mentioned in **Article 112** of the Indian Constitution, the Union Government lays a statement of its estimated receipts and expenditure for that year, From April 1 to March 31, before both the Houses of Parliament.
- The term “**budget**” is **not** mentioned in the Constitution.

Union Budget 2020-21: Economy

Why in News

The Union Minister of Finance has presented the Budget 2020-21. Given below are the important macro-economic indicators and proposed changes in taxation in India.

➤ Macroeconomic Indicators

- **Nominal growth of GDP** – 10% (2020-21). Nominal GDP is an assessment of economic production in an economy that includes current prices in its calculation.
- **Fiscal deficit** - 3.8% of GDP (2019-20), 3.5% of GDP (2020-21).
 - The estimation for the FY20 was at 3.3%, thereby deviating from the target set in the fiscal path.
 - The Government has made use of **Section 4 of the FRBM (Fiscal Responsibility and Budget Management) Act** which provides a trigger mechanism for a deviation from the estimated fiscal deficit on account of structural reforms in the economy with unanticipated fiscal implications.
 - **Reasons:** The increase in deficit estimate is mainly on account of the **shortfall in revenue collection**. The government on its part has

Note:

lowered its expenditure on many of the heads. For example, food subsidy in the budget estimate 2019-20 was over ₹1.84 lakh crore, which has been lowered to ₹1.08 lakh crore in the revised estimate

- Fiscal deficit, by definition, is the difference between a government's revenue receipts plus non-debt capital receipts (NDCR) and its total expenditure.
- Fiscal deficit occurs when a government collects lesser money - in terms of personal and corporate taxes, GST, market loans and NDCR (money received from sale of old assets) etc. - than it spends, on items such as central sector schemes, salaries of employees, subsidies, payments to states and so on.
- According to the Fiscal Responsibility and Budget Management Act in India, the recommended fiscal deficit should be 3% of GDP.
- **Revenue deficit** – 2.7% of GDP (2020-21). By definition, revenue deficit is the excess of revenue expenditure over revenue receipts.
- **Size of Economy:** India is now the **fifth largest economy of the world** in terms of GDP.
- **Growth and Inflation:** 7.4% average growth clocked during 2014-19 with **inflation** averaging around 4.5%.
- **Poverty alleviation:** 271 million people raised out of poverty during 2006-16.
- **FDI:** India's **Foreign Direct Investment** elevated to US\$ 284 billion during 2014-19 from US\$ 190 billion during 2009-14.
- Central Government debt reduced to 48.7% of GDP (March 2019) from 52.2% (March 2014).
- **Two cross-cutting developments:**
 - Proliferation of technologies (Analytics, Machine Learning, robotics, Bioinformatics and Artificial Intelligence).
 - Highest ever number of people in the productive age group (15-65 years) in India.
- **15th Finance Commission** has cut state share of central taxes to the states by one percentage point to 41%.
 - This is due to the **newly formed Union Territories of Jammu and Kashmir, and Ladakh**, which will get funds from the Centre's share, which means devolution will be for 28 states compared to 29 earlier.

- 42% was recommended by the 14th Finance Commission

Changes in Taxation

- **Dividend Distribution Tax (DDT)** has been **removed**. Instead of companies paying DDT on the dividend they give out, the dividend income will now be added to the taxable income of the recipient, and taxed at the applicable rate.
- **Income Tax**
 - New tax slabs and **lower income tax rates**. Around 70 of the existing exemptions and deductions to be removed in the new simplified regime.
 - **New tax regime to be optional** – an individual may continue to pay tax as per the old regime and avail deductions and exemptions.
- **Corporate Tax:** Concessional corporate tax rate of 15% to new domestic companies in manufacturing and power sector.
- **5% health cess** to be imposed on imports of medical equipment given these are made significantly in India.
- **'Vivad Se Vishwas' scheme**, with a deadline of 30th June, 2020, **to reduce litigations in direct taxes**.
- 100% tax exemption to the interest, dividend and capital gains income on investment made in infrastructure and priority sectors before 31st March, 2024 with a minimum lock-in period of 3 years by the Sovereign Wealth Fund of foreign governments.

Union Budget 2020-21: Social Sector and Infrastructure

Why in News

The Union Minister of Finance has presented the Budget 2020-21. Given below are the provisions related to the social sector and infrastructure.

Agriculture

- A budget allocation of **₹2.83 lakh crore** for 16 action points.
- The action points include measures to provide farmers access to faraway markets by **running trains (Kisan Rail)** and **flights (Krishi Udaan)** and providing relief to farmers from water shortage.

Note:

- It will also include **'One-Product One-District'** for better marketing and export in the Horticulture sector. The scheme is already functional in **Uttar Pradesh**.
- The focus is also on **Jaivik Kheti Portal** (online national organic products market), **Zero-Budget Natural Farming, PM-KUSUM**.
- Agri-credit availability set at ₹15 lakh crore for 2020-21.

Health

- An allocation of **₹69,000 crore** for the health sector.
- Proposal to set up hospitals in **Tier-II and Tier-III cities** with the **private sector using PPP model**.
- Expansion of **Jan Aushadhi Kendra Scheme** to all districts by **2024**.
- A task force to be appointed to recommend steps required to lower the Maternal Mortality Rate (MMR) and improve nutrition.

Education

- ₹99,300 crore for the education sector in 2021 and about ₹3,000 crore for skill development.
- Urban local bodies to provide **internship to young engineers for a year**.
- Degree-level full fledged online education programmes by institutions ranked in the top 100 in **NIRF** rankings, especially to benefit underprivileged students.
- A **national police university and a national forensic science university** is proposed to be setup.
- **IND SAT exam for students of Asia and Africa** to promote "study in India" programme.

Infrastructure

- **Infrastructure Financing**
 - Rs. 103 lakh crore for **National Infrastructure Pipeline** projects announced.
 - An international bullion exchange to be set up at GIFT City (Gujarat).
 - Proceeds from divestment will go only into capital expenditure and not revenue expenditure.
- **Transport**
 - Budget proposes to provide ₹1.7 lakh crore for transport infrastructure in 2021.
 - National Logistics Policy to be released soon.
 - Chennai-Bengaluru Expressway to be started.
 - Government to monetise 12 lots of national highways by 2024.

- **Railways**
 - Aims to achieve electrification of 27,000 km of railway lines.
 - Plan to have a large solar power capacity for Indian Railways.
- 100 more airports will be developed by 2024 to support UDAN.
- 5 new smart cities in public-private partnership mode.

Culture and Tourism

- Proposal to establish Indian Institute of Heritage and Conservation.
- 5 archaeological sites to be developed as iconic sites:
 - Rakhigarhi (Haryana)
 - Hastinapur (Uttar Pradesh)
 - Shivsagar (Assam)
 - Dholavira (Gujarat)
 - Adichanallur (Tamil Nadu)
- **Maritime Museum** to be set up at **Lothal (Gujarat)**.
- Tribal Museum in Ranchi
- A museum on Numismatics and Trade to be established.

Rakhigarhi

- **Rakhigarhi** is the **largest Harappan site** in the Indian subcontinent.
 - Other large sites of **Harappan civilization** on Indian sub-continent are Harappa, Mohenjodaro and Ganveriwala in Pakistan and Dholavira (Gujarat) in India.
- At Rakhigarhi, the excavations are being done to trace its beginnings and to study its gradual evolution from 6000 BCE (Pre-Harappan phase) to 2500 BCE.
 - The site was excavated by **Amarendra Nath of ASI**.

Union Budget 2020-21: Financial Sector and Governance

Why in News

The Union Minister of Finance has presented the Budget 2020-21.

Key Points

- **Bank deposit insurance** cover has been increased from **₹1 lakh to ₹5 lakh** per depositor.

Note:

- Government plans to amend the Companies Act to decriminalise civil offences.
- Government to sell part of its stake in LIC via public offering.
- Scheme to encourage manufacturing of mobile phones, electronic equipment and semiconductor packaging.
- **National Technical Textiles Mission** for a period of **4 years**.
- **NIRVIK Scheme** for higher export credit disbursement launched.
- Setting up of an **Investment Clearance Cell** to provide end to end facilitation.
- Early life funding proposed, including a seed fund to support ideation and development of early stage Start-ups.
- Audit threshold for **MSMEs raised to ₹5 crore from ₹1 crore**.
- Certain specified categories of Government securities to be opened fully for non-resident investors also.
- Foreign Portfolio Investment (FPI) limit in corporate bonds **increased to 15% from 9%** of its outstanding stock.
- NBFCs eligibility limit for debt recovery reduced from:
 - Rs. 500 crore to Rs. 100 crore asset size
 - Rs. 1 crore to Rs. 50 lakh loan size.

Digitisation

- Knowledge Translation Clusters for emerging technology sectors.
- Policy to enable the private sector to build Data Centre parks throughout the country.
- Rs. 8000 crore proposed over five years for **National Mission on Quantum Technologies and Applications**.
- **Mapping of India's genetic landscape** – Two new national level Science Schemes to be initiated to create a comprehensive database.

Governance

- An independent, professional and specialist **National Recruitment Agency (NRA)** for conducting a computer-based online Common Eligibility Test for recruitment on all non gazetted posts. A test-centre in every district, particularly in the Aspirational Districts will be set up.
- New National Policy on Official Statistics to promote the use of the latest technologies including AI and

lay down a road-map towards modernised data collection, integrated information portal and timely dissemination of information.

- A sum of Rs. 100 crore allocated to begin the preparations for **G20** presidency to be hosted in India in the year 2022.

Anti-Dumping Duty on PTA Abolished

Why in News

The government has abolished **anti-dumping duty** on a chemical called **Purified Terephthalic Acid (PTA)**. The same was mentioned by the Finance Minister in her **Budget** speech.

- PTA is an important **raw material** which is used in making various products, including **polyester fabrics**.
- PTA makes up for around **70-80%** of a polyester product and is, therefore, important to those involved in the manufacture of man-made fabrics or their components.
- The latest move has come after persistent demand from the manufacturing and textile industry **to source PTA at an affordable rate**.

Meaning and Purpose of Anti Dumping Measures

- **Dumping** is said to occur when the goods are exported by a country to another country at a **price lower than the price it normally charges** in its own home market. This is an unfair trade practice which can have a distortive effect on international trade.
- Anti-dumping is a measure to rectify the situation arising out of the dumping of goods and its trade distortive effect.
 - Many countries impose stiff duties (known as anti-dumping duties) on products they believe are being dumped in their national market, undercutting local businesses and markets.
- The use of anti-dumping measures as an instrument of fair competition is permitted by the **World Trade Organisation (WTO)**.

Background

- Directorate General of Trade Remedies (DGTR) imposed anti-dumping duties on PTA imported from South Korea, Thailand, China, Indonesia, Taiwan, Iran and Malaysia between 2014 and 2016.

Note:



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- However, companies using PTA to manufacture polyester products claimed that the move left them with limited domestic suppliers of PTA.
 - The companies alleged that the cost of PTA became more expensive domestically, which made their own products pricier and less attractive for their domestic and international buyers.

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.

Similar Case of Mono Ethylene Glycol

- Mono Ethylene Glycol (MEG) is another such raw material used in the manufacturing of polyester and is under anti-dumping duty investigation initiated by the DGTR, recently.
- The manufacturers of MEG have argued that top MEG exporters like Kuwait, Saudi Arabia, Singapore and the United Arab Emirates (UAE) have been dumping the product because of which the domestic industry is suffering.
- Textile companies have approached DGTR against the imposition of anti-dumping duties on MEG as the step would lead to the same situation that developed after imposing anti-dumping duty on PTA.

Repo Rate Unchanged

Why in News

The Monetary Policy Committee (MPC) of the **Reserve Bank of India (RBI)** has decided to keep the **repo rate unchanged at 5.15%** in its sixth and last bi-monthly policy review meeting for the financial year 2019-20.

Key Points

- This is the second policy review meeting where the rates have been kept unchanged.
 - The rates also remained unchanged in the last meeting which was held in **December 2019**.

- The RBI **last reduced the rates** by 135 basis points (bps) between February and October 2019.
- The RBI has decided to keep the interest rates unchanged in the wake of a rise in **inflation**.
 - The outlook for the **consumer price index**-based inflation has been kept at 5.0-5.4% for the first half of 2020-21.
- However, the RBI has said that there is a scope for further easing.
 - The downside risks to global growth have intensified and have increased in the wake of the outbreak of **coronavirus**.
 - Thus, the policy space available for future action needs to be used appropriately and should be suitably timed to optimise its impact on growth.

Monetary Policy Committee

- It is a **statutory and institutionalized** framework under the **Reserve Bank of India Act, 1934**, for maintaining price stability, while keeping in mind the objective of growth.
- The **Governor of RBI** is **ex-officio Chairman** of the committee.
- The MPC determines the policy interest rate (repo rate) required to achieve the inflation target (4%).
- An RBI-appointed committee led by the then deputy governor **Urjit Patel in 2014 recommended** the establishment of the Monetary Policy Committee.

Repo Rate

- It is the rate at which the central bank of a country lends money to commercial banks in the event of any shortfall of funds (Reserve Bank of India, in case of India).
- It is used by monetary authorities to control inflation.
- In the event of inflation, central banks increase the repo rate as this acts as a disincentive for banks to borrow from the central bank. This ultimately reduces the money supply in the economy and thus helps in arresting inflation.
- The central bank takes the contrary position in the event of a fall in inflationary pressures.
- Ideally, a low repo rate should translate into low-cost loans for the general masses. When the RBI slashes its repo rate, it expects the banks to lower their interest rates charged on loans.

Note:

- The **GDP growth** for the financial year 2020-21 is projected at 6%.
 - The growth projection for the current financial year remains unchanged at 5%.

Other Measures by RBI to Ease Lending Rates

- It opened a window to extend ₹1 lakh crore to the commercial banks at the repo rate, 5.15%.
- Banks have been exempted from maintaining the Cash Reserve Ratio (CRR), which is 4% of the net demand and time liabilities now, for home, auto and MSME loans that are extended from January 31 to July 31, 2020.

Cash Reserve Ratio

- Banks are required to hold a certain proportion of their deposits in the form of cash. This minimum ratio (that is the part of the total deposits to be held as cash) is stipulated by the RBI and is known as the CRR.
- It means that banks do not have access to that much amount for any economic activity or commercial activity.
- Banks can't lend the money to corporates or individual borrowers, banks can't use that money for investment purposes. CRR remains in the current account and banks don't earn anything on that.

India International Seafood Show

Why in News

The 22nd edition of **India International Seafood Show (IISS), 2020** was organized jointly by the **Marine Products Export Development Authority (MPEDA)** and the **Seafood Exporters Association of India (SEAI)** in Kochi, Kerala from 7th-9th February 2020.

- **Theme for 2020** is: "Blue Revolution- Beyond Production to Value Addition".

Key Points

- **Event Held: Biennially** (occurring every two years). It is one of the oldest and largest seafood events in the world. The **21st edition** of IISS was held in **Goa** in January 2018.

- **Purpose:** It provides an umbrella platform for various involved stakeholders of this sector such as producers, processing machinery manufacturers, linkage sectors, technical experts, etc. to interact, build up trade relations and contribute towards the progress of seafood exports from the country.
- **Significance:** It gives scope for tapping new avenues and introducing various technologies and products to the global market. In this way, the show paves way for enhancing **Foreign Direct Investment** in India thereby contributing to the '**Make in India programme**'.
 - During 2018-19, India has exported worth \$6.70 billion of marine products.
 - With sustainable fishing methods, value addition and increased aquaculture production through diversification, it is expected to achieve an export turnover of \$15 billion in the next five years.

Marine Products Export Development Authority

- **Constituted:** In 1972 through the Marine Products Export Development Authority (MPEDA) Act 1972, under the **Ministry of Commerce and Industry**.
- It is the nodal agency for the holistic development of the seafood industry in India.

Seafood Exporters Association of India

- **Established in:** 1973 as an organisation registered under the Registrar of Companies Act, 1956.
- **Aim:** To protect and promote the interests of the seafood industry and develop the international trade of seafood from India.

International Intellectual Property Index: US Chamber of Commerce

Why in News

India has slipped to 40th position on the International Intellectual Property (IP) Index, 2020 from the **36th position in 2019**.

- It is **released by the US Chamber of Commerce's Global Innovation Policy Center**.

Key Points

- The US, the UK, France, Germany and Sweden are the **top five economies** on the IP Index in 2020.

Note:

- **India's rank has slipped despite** the government's focused **effort to support investments in innovation** and creativity through increasingly robust IP protection and enforcement, since the release of the **National Intellectual Property Rights (IPR) Policy, 2016**.
 - The Policy encompasses and brings to a single platform all IPRs, taking into account all inter-linkages and thus aims to create and exploit synergies between all forms of intellectual property (IP), concerned statutes and agencies.
 - Its implementation has improved the speed of processing for patent and trademark applications and increased awareness of IP rights among Indian innovators and creators.

US Chamber of Commerce

- It is the **world's largest business federation** representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations.
- The **2020 U.S. Chamber International IP Index titled 'Art of the Possible'** creates a template for economies that aspire to become the 21st century, knowledge-based economies through more effective IP protection.
 - In its **eighth edition**, the Index maps the IP ecosystem in **53 global economies**, representing over 90% of global GDP.
 - The Index evaluates the IP framework in each economy across 50 unique indicators which industry believes represent economies with the most effective IP systems. The indicators create a snapshot of economy's overall IP ecosystem and span **nine categories of protection**: patents, copyrights, trademarks, design rights, trade secrets, commercialization of IP assets, enforcement, systemic efficiency, and membership and ratification of international treaties.

National Organic Food Festival

Why in News

The **Ministry of Food Processing Industries (MoFPI)** with the **Ministry of Women and Child Development (MoWCD)** will host the **first National Organic Food Festival** in New Delhi between February 21 to February 23, 2020.

- It aims to strengthen the organic market and empower women entrepreneurs in the area of production and processing of organic products.
- **Theme: Unleashing India's Organic Market Potential.**

Key Points

- Women Entrepreneurs and Self Help groups (SHG's) from all over the country will be exhibiting their organic products in various segments such as fruit & vegetables, ready to eat products, spices and condiments, honey, cereals, dry fruits etc..
- It will also focus on facilitating business linkages and empowering women entrepreneurs through pre-arranged B2B and B2G meetings.

India's Organic Market Potential

- India has the **9th largest World's Organic Agricultural Land** and the largest number of producers.
 - **Sikkim is the first organic state in the world.** All of its farmland is certified organic.
- Organic Food Segment of India grew at rate of 10% during 2016-20.
 - As per the Indian Organic Sector – Vision 2025 report, India's organic business is expected to reach Rs.75,000 Crores by 2025.
- Factors for growth of organic food in India: Increasing disposable incomes, increasing awareness around health and wellness and increasing acceptability.
 - At the global level, demand for Indian organic food products is on constant increase.
 - The major demands under the organic product category are for oil seeds, cereals & millets, sugar, fruit juice concentrates, tea, spices, pulses, dry fruits, medicinal plant products etc.

Direct Tax Vivad Se Vishwas Bill, 2020

Why in News

Recently, the Union Cabinet has approved an **amendment to the 'Direct Tax Vivad se Vishwas Bill, 2020'** in order to widen its scope to cover litigation pending in various Debt Recovery Tribunals (DRTs).

- The amendment also includes certain search and seizure cases where the recovery is up to ₹5 crore.

Note:



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- The Direct Tax Vivad se Vishwas Bill, 2020 is **similar to the 'Sabka Vishwas Scheme'**, which was brought in to reduce litigation in indirect taxes in the year 2019. It resulted in settling over 1,89,000 cases.
 - Under the Sabka Vishwas Scheme, the government expected to raise around ₹ 39,500 crore. However, after the closure of the amnesty window in January 2020 application in relation to taxes worth ₹ 90,000 were received. This shows the success of the scheme.

Key Points

- **Objective:** The Bill provides a mechanism for resolution of pending tax disputes related to direct taxes (Income Tax and Corporate Tax) in simple and speedy manner.
- **Reduce Litigation:** According to the Finance Ministry, at present there are 4.83 lakh pending direct tax cases worth Rs.9 lakh crore in the courts. Through this scheme, the government wants to recover this money in a swift and simple way.
- **Addressing Revenue Shortfall:** The government is witnessing a big shortfall in revenues, especially tax revenues, hence, increasing revenues in one of the priorities of the government.

- Direct Tax collections have been lower than their budget targets due to the overall economic slowdown and a cut in the corporate tax rate in September, 2019.
- **Mechanism:** In case of payment of tax, a taxpayer would be required to pay only the amount of the disputed taxes and will get complete waiver of interest, penalty and prosecution provided he/she pays by March 31, 2020.
 - But, if the tax arrears relate to disputed interest or penalty only, then 25% of disputed penalty or interest will have to be paid.
 - Those who avail this scheme after March 31, 2020 will have to pay some additional amount.
 - However, the scheme will remain open till June 30, 2020.
- **Immunity to Appellant:** Once a dispute is resolved, the designated authority cannot levy interest or penalty in relation to that dispute.
 - Further, no appellate forum can make a decision in relation to the matter of dispute once it is resolved.
 - However, if an appellant provides false information or violates the Income Tax Act, 1961, then case of dispute can be revived.



Note:

International Relations

Highlights

- Blue Dot Network
- Anguilla: British Territory in Caribbean
- Agartala - Akhaura Rail Link
- Brexit
- USTR takes India off Developing Country List
- BIMSTEC Conference on 'Combating Drug Trafficking'
- BIMSTEC Disaster Management Exercise – 2020
- Lucknow Declaration
- India – Sri Lanka

Blue Dot Network

Why in News

India may join the **US-led Blue Dot Network (BDN)**.

- The BDN was formally announced on 4th November 2019 at the Indo-Pacific Business Forum in Bangkok, Thailand. It will be led by the US along with Japan and Australia.
- It is a multi-stakeholder initiative to bring together governments, the private sector and civil society to promote high-quality, trusted standards for global infrastructure development.
- It is expected to serve as a globally recognised evaluation and certification system for roads, ports and bridges with a focus on the Indo-Pacific region.
 - Infrastructure projects would be graded on debt, environmental standards, labour standards etc.
 - This system would apply to projects in any citizen-centric country where citizens would like to evaluate such projects.
- It seems to be planned as a direct counter to **China's Belt and Road Initiative (BRI)**. However, unlike the BRI, the BDN would not offer public funds or loans for the project. BDN will serve as a globally recognized seal of approval for major infrastructure projects, letting people know that projects are sustainable and not exploitative.
 - **India has not joined China's BRI.**

Belt and Road Initiative

- BRI is an ambitious project that focuses on connectivity and cooperation among multiple

countries spread across the continents of Asia, Africa, and Europe.

- Initially announced in the year 2013, the project involves building networks of roadways, railways, maritime ports, power grids, oil and gas pipelines, and associated infrastructure projects.
- The project covers two parts.
 - Silk Road Economic Belt: It is land-based and is expected to connect China with Central Asia, Eastern Europe, and Western Europe.
 - 21st Century Maritime Silk Road: It is sea-based and is expected to connect China's southern coast to the Mediterranean, Africa, South-East Asia, and Central Asia.

Anguilla: British Territory in Caribbean

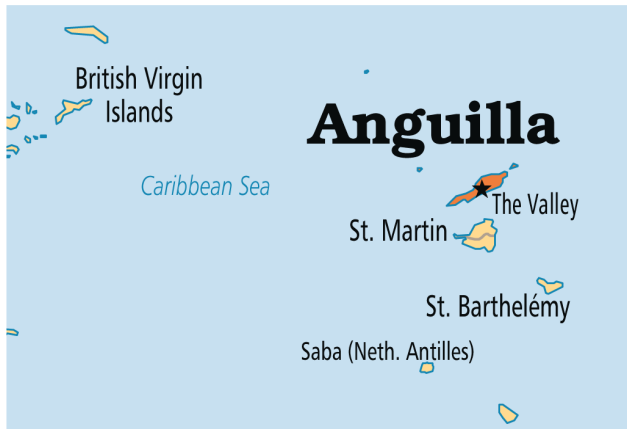
Why in News

Anguilla, an island in the Caribbean sea, is a financial beneficiary of two latest trends in technology: **Artificial intelligence (AI)** and **vanity URL (Uniform Resource Locator)** or internet addresses.

- Anguilla is the landlord for internet addresses that end in **“.ai”**.
- Every time a **.ai name is registered** or renewed by **AI startups** or big companies or investors, the island collects a \$50-a-year fee, which goes mostly to the government treasury.
- **Vanity URL** is a unique web address that is **branded for marketing purposes**. Vanity URLs are a type of

Note:

custom URL that exists to help users remember and find a specific page of one's website.



Anguilla

- It is an island in the **eastern Caribbean Sea** and a **British overseas territory**.
 - The Caribbean Sea is a body of water adjacent to the Atlantic Ocean, southeast of the Gulf of Mexico.
- It was formed from **coral and limestone** and it has a **tropical climate**.
- The territory includes several small uninhabited offshore islands, the largest of which are **Dog, Scrub, and Sombrero** islands and the Prickly Pear Cays.
- The majority of the population of Anguilla is of **African descent** and most of the population is **Christian**.
- The main economic activities revolve around tourism and financial services and agriculture is of minor importance.

Agartala - Akhaura Rail Link

Why in News

Recently, the central government has announced that **rail line to connect the northeastern region with Bangladesh** will be ready by the end of 2021.

Key Points

- The rail line between **Agartala in Tripura and Akhaura in Bangladesh** would pave the way for the **first train** to run from the northeastern region to Bangladesh.
- The railway link will connect **Gangasagar in Bangladesh to Nischintapur in India** and from Nischintapur to Agartala railway station.

- **Ministry for Development of North Eastern Region (DoNER)** will bear the cost of laying **5.46 km** track on the **Indian side** while the cost of laying **10.6 km** track on the **Bangladesh side** is being borne by the **Ministry of External Affairs**.



Brexit

Why in News

Britain has officially left the **European Union (EU)** and has become the **first country to leave the 28-member bloc**.

Key Points

- The UK faced a lot of **challenges** in materialising this move finally.
- It is a notable change for the UK although nothing will change immediately because of the 11-month transition period negotiated as part of an **EU-UK exit deal**, 2019.
- The UK will be able to work in and trade freely with EU nations and vice versa until December 31, 2020. However, it will no longer be represented in the EU's institutions.
- From 2021, the UK and EU will enter a new relationship possibly underpinned by a free trade deal.

EU-UK Exit Deal

- This agreement sets out the exact terms of the UK and EU relationship immediately after exit but it

Note:



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is not clear, on what terms the UK and EU's future relationship will be based.

- A key part of the withdrawal agreement was, there would be a transition period, until the end of 2020.
- The transitional arrangement is designed to make the separation process smoother and covers subjects like trade, law, and immigration.
 - It will give them more time to iron out the details of their future relationship including a possible free trade deal.
- During the transition, the UK will be officially out of the EU and not be represented on EU bodies but would still have the same obligations as an EU member. That includes remaining in the EU customs union and the single market, contributing to the EU's budget and following EU law.

USTR takes India off Developing Country List

Why in News

The office of the **United States Trade Representative (USTR)** has **taken off India from the list of developing and least-developed countries that are eligible to claim benefits for preferential treatment with respect to Countervailing duties (CVDs) investigations**. India will now come under the **list of Developed countries**.

- The preferential treatment with respect to CVDs investigations falls under the **US' Generalized System of Preferences (GSP) scheme**.
 - Generalized System of Preferences (GSP) is an umbrella that comprises the bulk of preferential schemes granted by industrialized nations to developing countries.
 - Countervailing Duty (CVD) is an import tax imposed on certain goods in order to prevent dumping or counter export subsidies.
- Along with India, **USTR has also eliminated other countries** including Brazil, Indonesia, Hong Kong, South Africa, Malaysia, Thailand, Vietnam and Argentina from getting preferential treatment.
 - The new lists consist of 36 developing countries and 44 least developed countries.
- The **move comes ahead of US President Donald Trump's visit to India** to talk and potentially sign a trade deal.

Talking business

■ India was in the 'developing country' list till February 10, eligible for relaxed norms

■ Country was taken off the list, as were Brazil, Indonesia, Malaysia, Thailand, Vietnam

■ New lists include 36 developing, 44 least developed nations

■ In 1998, U.S. had come up with lists of nations classified as per level of development

■ Lists helped determine if they were subject to U.S.' CVDs (countervailing duties)

■ A CVD probe was to be terminated if offending subsidy was too small

■ 1998 rule is now 'obsolete' as per USTR notice



Background

- The **USA had come up with lists of countries classified as per their level of development** to harmonise the USA preferential treatment laws with the **World Trade Organization's (WTO)** Subsidies and Countervailing Measures (SCM) Agreement in 1998.
 - The **WTO Agreement on Subsidies and Countervailing Measures** disciplines the use of subsidies, and it regulates the actions countries can take to counter the effects of subsidies.
 - Under the agreement, a country can use the WTO's dispute-settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects. Or the country can launch its own investigation and ultimately charge extra duty (countervailing duty) on subsidized imports that are found to be hurting domestic producers.
- The classification of the countries (**Developed, Developing and Least Developed**) is done according to the **following criteria**:
 - Per capita Gross National Income or GNI.
 - Share of world trade.
 - Other factors such as **Organisation for Economic Co-operation and Development (OECD)** membership or application for membership, EU membership, and **Group of Twenty (G20) membership**, etc.
- The country with Per capita GNI above \$12,375 or Rs. 8.82 lakh, the share of more than 0.5% to the world trade and membership to the above-mentioned organisations is **considered as a developed country** by USTR.

Note:



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India – As a USTR's Developed Country

- According to USTR, **India's share in global trade** was 2.1 % for exports and 2.6% for imports in 2017.
- Also **India**, along with nations like Argentina, Brazil, Indonesia, and South Africa, is **part of the G20 bloc** and G20 membership indicating that the country is developed.
 - As the G20 members account for large shares of global economic output and trade.
- Being a part of G20, India has been classified as a developed country **despite having a per capita GNI below \$12,375**.

Impact on India

- India is the **largest beneficiary nation under the GSP**, with total benefits from tariff exemptions amounting to \$260 million in 2018, according to the data from the USTR's office.
- In 2018, India exported goods worth \$6.3 billion (as per USTR figures) to the US under the GSP, accounting for around 12.1% of India's total export to that country.
- India no longer in the list of developing countries **allows the USA to hold a CVD investigation**.
 - The CVD laws allow the US to hold an investigation into the trade policies of other countries to determine whether they are harming the US trade.
 - If the investigation finds that India's policies allow exporters to sell their products in the US at a lower rate the **US can impose a countervailing duty**, to make the Indian goods more expensive in the US markets.
- Despite having a minimal impact on India's overall outbound trade with the US, **specific exports from India** in a diverse set of sectors such as jewellery, leather, pharmaceuticals, chemicals and agricultural products **may face higher costs and competition**.

BIMSTEC Conference on 'Combating Drug Trafficking'

Why in News

Recently, **India hosted the first-ever BIMSTEC Conference on Combating Drug Trafficking in New Delhi**. It was **organised by the Narcotics Control Bureau (NCB)**, India's federal agency for drug law enforcement.

- **BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation)** is an international organisation comprising **7 countries — India, Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka and Thailand** – that fall in the littoral and adjacent areas of the Bay of Bengal.

Key Points

- **Drug trafficking** is a global illicit trade involving the cultivation, manufacture, distribution and sale of substances which are subject to drug prohibition laws.
- The **UN's World Drug Report** points out that over 5% of the global population between 15-64 years of age is addicted to narcotics and use of illicit drugs.
- The **BIMSTEC conference** sought to provide an opportunity to all the member nations to deliberate on the increased threats posed by drug trafficking and the collective steps that were required to negate such threats.

BIMSTEC and Drug-Trafficking

- **Regional maritime connectivity and trade** through the Bay of Bengal are imperative for the shared prosperity and economic growth of the entire BIMSTEC region. However, one of the most prominent of **security challenges** for the region is **drug trafficking through sea**.
- It is thus very important for all countries of the BIMSTEC to engage with each other to exchange ideas, policies and best practices in order to combat this menace.
- In general, Asian countries are increasingly being affected by **drug trafficking**. **BIMSTEC**, being the **key link between South Asian and Southeast Asian nations**, is one of the most effective platforms to tackle this global threat.

India and Drug-Trafficking

- India is a **transit point for opiates** produced illegally.
 - India is in the middle of two major illicit opium production regions in the world:
 - The **Golden Crescent** (Iran-Afghanistan-Pakistan) in the West.
 - The **Golden Triangle** (South-East Asia) in the East.
- Manipur and Mizoram having borders with Myanmar and other coastal States are sensitive and may become a gateway for illicit drugs entering India.
- To protect itself from the menace of drug trafficking, **India has adopted a Zero Tolerance Policy** towards

Note:



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all kinds of narcotics and psychotropic substances to realise its vision of a Drug-free India.

- India has also started an **e-portal for digitalisation of drug data** to assist various drug enforcement agencies.

BIMSTEC Disaster Management Exercise – 2020

Why in News

The **2nd Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Disaster Management Exercise** was conducted (11-13 February, 2020) in **Bhubaneswar, Odisha**.

- The focus of the 2nd edition was on **heritage structures' protection**.
- The **first edition of the BIMSTEC DMEx was also hosted by India in 2017** with the focus on testing the region's preparedness and resilience towards effective activation of inter-Governmental interaction for immediate deployment of regional resources for disaster response.
- Participants in the exercise include BIMSTEC members **except Bhutan and Thailand** along with other global institutions like **United Nations Development Programme (UNDP)**, International Search and Rescue Advisory Group (INSARAG), International Centre for the Study of the Preservation and Restoration Cultural Property (ICCROM) etc.
- **Reasons for Focus on the Heritage Sites:** In the backdrop of recent losses suffered in an earthquake in Nepal(2015), damages to Heritage Sites in Gujarat earthquake (2001), the need was felt to protect the Heritage Sites during disasters and build the capacity of NDRF personnel.

Lucknow Declaration

Why in News

India and 50 African countries adopted the '**Lucknow Declaration**' at first India – Africa Defence Minister's Conclave.

- The Conclave was held on the **sidelines of the ongoing DefExpo 2020** (5th to 9th February, 2020) in **Lucknow (Uttar Pradesh)**.

Highlights of the Declaration

➤ **Peace and Security**

- All the signatories committed to continue their collaboration in the fields of peace and security including conflict prevention, resolution, management and peacebuilding.
- It also aims to enhance the role of women in peacekeeping.

➤ **Maritime Security**

- To exchange expertise and trainers, strengthening regional and continental early warning capacities and mechanisms.

➤ **Terrorism**

- Terrorism is a major threat in the region and thus aims to take resolute action in rooting out terrorism in all its forms and manifestations, eliminating financing channels and halting cross-border movement of terrorists.
- It also urges the international community to envisage the adoption of the **Comprehensive Convention on International Terrorism** in the **United Nations General Assembly (UNGA)**.
- To strengthen the UN Counter-Terrorism mechanisms and to ensure strict compliance with the UN Security Council sanctions regime on terrorism.

➤ **Importance of Indo-Pacific**

- To encourage enhanced cooperation between India and Africa on the evolving **concept of Indo-Pacific**.

➤ **India's SAGAR**

- It also welcomes the African Unions' vision for peace and security in Africa that coincides with India's vision of **SAGAR (Security and Growth for all in the Region)**.
 - **SAGAR is an articulation of India's vision for the Indian Ocean.**
 - SAGAR has elements such as enhancement of capacities to safeguard land and maritime territories & interests; deepening economic and security cooperation in the littoral; action to deal with natural disasters and maritime threats like piracy, terrorism.

Origin and Status of Comprehensive Convention on International Terrorism (CCIT)

- India has pushed for an intergovernmental convention to enhance prosecution and extradition of terrorists since **1996**.

Note:



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- Although consensus eludes towards the adoption of the terrorism convention, discussions have yielded three separate protocols that aim to tackle terrorism:
 - International Convention for the Suppression of Terrorist Bombings, adopted on 15 Dec 1997;
 - International Convention for the Suppression of the Financing of Terrorism, adopted on 9 December 1999;
 - International Convention for the Suppression of Acts of Nuclear Terrorism, adopted on 13 April 2005.

India – Sri Lanka

Why in News

At the invitation of the Prime Minister of India, Sri Lankan Prime Minister Mahinda Rajapaksa visited India from 8th to 11th February 2020.

- The Prime Minister of Sri Lanka also went to the Kashi Vishwanath Temple in Varanasi, the **Maha Bodhi temple in Bodh Gaya** and Tirupati (Andhra Pradesh).

Key Points

- **Tamil Issue:**
 - India expressed confidence in Sri Lanka to carry forward the process of reconciliation of Tamils in Sri Lanka.
 - India has also requested to fulfil the aspirations of the Tamils for equality, justice, peace and respect in Sri Lanka.
- **Development in War Affected Areas:**
 - Sri Lanka has requested India to build more houses in the north and east.
 - India has so far helped build 46,000 homes in the war-affected areas.
 - It has also requested to provide assistance for deep-sea fishing techniques which will help to create employment opportunities to people.
- **Joint Marine Resources Management Authority:**
 - Sri Lanka has also proposed to set up a Joint Marine Resources Management Authority between two countries.
 - The commission will have seven members from either side, including bureaucrats, researchers, fishermen's association representatives.

India-Sri Lanka Relations

- India is Sri Lanka's closest neighbour. The relationship between the two countries is more than 2,500 years old and both sides have built upon a legacy of intellectual, cultural, religious and linguistic intercourse.



- During the course of the civil war, India supported the right of the Government of Sri Lanka to act against terrorist forces.
- The **Indian Housing Project** is Government of India's flagship project of developmental assistance to Sri Lanka.
 - Its initial commitment is to build 50,000 houses for those affected by the civil war as well as for the estate workers in the plantation areas.
- Given the proximity of the territorial waters of both countries, especially in the **Palk Straits and the Gulf of Mannar**, incidents of straying of fishermen are common. Both countries have agreed on certain practical arrangements to deal with the issue of bona fide fishermen of either side crossing the International Maritime Boundary Line.
- India and Sri Lanka conduct **joint Military (Mitra Shakti) and Naval exercise (SLINEX)**.
- Recently, the **Chennai (India)-Jaffna (Sri Lanka)** flight service has resumed after a gap of 41 years.
 - The flight operations were suspended during the decades-old civil war in Sri Lanka.

- The proposed Authority is expected to find a lasting solution to the Palk Bay fisheries conflict.
 - The Palk Strait is a strait between the Tamil Nadu state of India and the Jaffna District of the Northern Province of Sri Lanka.

- **Debt Trap:**
 - They also discussed **countering 'debt traps'** experienced by Sri Lanka.
 - Debt-trap diplomacy refers to the strategy used by China to lure or trap developing or underdeveloped countries like in Africa to borrow money to be used for much-needed infrastructure projects. China claims it to be a simple tactic for financial strategies.

Note:

➤ **Indian Ocean Region:**

- Both the countries agreed to provide close cooperation for peace and prosperity in the Indian Ocean Region and even in the **Indo-Pacific region**.
- India also reinforced the security of Indian ocean with its '**Neighbourhood First**' policy and **SAGAR (Security and Growth for all in the Region)**.
 - SAGAR is an articulation of India's vision for the Indian Ocean.

- SAGAR has elements such as enhancement of capacities to safeguard land and maritime territories & interests; deepening economic and security cooperation in the littoral; action to deal with natural disasters and maritime threats like piracy, terrorism.

➤ **Terrorism:**

- Both countries aimed to strengthen the contacts and cooperation between the counter-terrorism agencies of the two countries.



Note:

Science and Technology

Highlights

- Classical Swine Fever Vaccine
- Medical Equipment Notified as 'Drugs'
- Genome India Project Approved
- Vikram Sarabhai Centenary Programme
- Medical Data Leaks
- Gaganyaan
- Increasing Imports of Li-ion Batteries
- US Nod to Integrated Air Defence Weapon System
- Solar Orbiter's Mission
- The SuperCam on Mars 2020 Rover
- Longest Spaceflight by a Woman: Christina Koch

Classical Swine Fever Vaccine

Why in News

The live attenuated Classical Swine Fever (CSF) Vaccine technology developed by the Indian Veterinary Research Institute (IVRI) has been released recently.

- Live Attenuated Vaccines (LAV) are vaccines prepared from living microorganisms (viruses, bacteria) that have been weakened under laboratory conditions.

Key Points

- CSF is one of the diseases of pigs causing high mortality with an annual loss of approximately Rs. 4.299 billion.
- A lapinized CSF vaccine (uses Weybridge strain, UK) has been used in India since 1964 for controlling the disease. The vaccine is produced by sacrificing large numbers of rabbits for each batch.
 - Lapinized denotes viruses which have been adapted to develop in rabbits by serial transfers in this species.
- Since the cell culture vaccine is from a foreign strain (Weybridge Strain, UK), IVRI has further developed a new CSF Cell Culture Vaccine by attenuating an indigenous virulent CSF virus in cell culture.
 - The vaccine virus has a very high titre (concentration) and lakhs of doses can be produced very easily in cell culture and the country's requirement can be easily fulfilled using this new vaccine.
 - Cell culture refers to the maintenance and growth of the cells of multicellular organisms outside the

body in specially designed containers and under precise conditions of temperature, humidity, nutrition, and freedom from contamination.

- Besides, the new vaccine gives **immunity for two years** as compared to 3 to 6 months of protection under the vaccines currently being used.

Indian Veterinary Research Institute

- IVRI is the **Indian Council of Agricultural Research (ICAR)** institute.
- Established in 1889, IVRI is one of the premier research institutions dedicated to livestock research and development of the region.

Medical Equipment Notified as 'Drugs'

Why in News

The Ministry of Health and Family Welfare has notified that **medical equipment** would qualify as '**drugs**' under **Section 3** of the **Drugs and Cosmetics Act (D & CA), 1940** from 1st April, 2020.

- The **Medical Devices Amendment Rules, 2020** were also released. The rules will also come into force from 1st April, 2020.
 - The Rules state that the medical devices shall be registered with the Central Licensing Authority through an identified online portal established by the Central Drugs Standard Control Organisation (CDSCO).

Note:

- Such registration is voluntary for a period of 18 months, after which it will be mandatory.
- The move comes in the wake of years of controversy about **faulty hip implants of Johnson & Johnson (J&J)**.

Section 3 of the Drugs and Cosmetics Act, 1940

- The Central Government, after consultation with the Drugs Technical Advisory Board (DTAB), specifies the devices intended for **use in human beings or animals as drugs**.

Drugs Technical Advisory Board

- Drugs Technical Advisory Board is a **statutory body** constituted under the **Drugs and Cosmetics Act, 1940**.
- The function of DTAB is to advise the Central government and State government on technical matters related to drugs and cosmetics.

Key Points

- At present, only **23 medical devices** have been classified as drugs. The latest notification gives a wide definition of the term medical devices.
 - The devices used for diagnosis, monitoring, treatment, assistance for any injury or disability, investigation, replacement or modification or support of the anatomy or of a physiological process will come within the scope of the definition of 'Drugs'.
 - Medical equipment under this definition include **implantable medical devices** such as **knee implants, CT scan, MRI equipment, defibrillators, dialysis machine, PET equipment, X-ray machine** etc.
 - Primary intended action of the device in or on human body or animals should **not** be pharmacological or immunological or metabolic.
- The aim is to regulate all medical devices so that they meet certain standards of quality. Besides it will also make medical device companies accountable for quality and safety of their products.
 - The manufacture, import and sale of **all medical devices** will now **need to be certified** by the **Central Drugs Standard Control Organisation**.
- **Possible Impact**
 - The decision is going to have a major impact on the small and marginal players, largely **unorganised**, in the low-value high volume segment of the medical devices industry.

- The hi-tech diagnostic imaging sector is dominated by large players and will be the least impacted.
- **Concerns:** Rules are very rigid and any non-conformity can be treated as a **criminal offence** by any drug inspector under the Act at his **discretion**.

Way Forward

Merely expanding the scope of regulation to all devices is not enough in a moment of growing number of safety disasters involving devices. Hence, there is a pressing need for framing of a new medical device act.

Genome India Project Approved

Why in News

The Department of Biotechnology under the **Ministry of Science and Technology** has cleared the **Genome India Project**.

- It is a **gene-mapping project** involving 20 leading institutions including the Indian Institute of Science (IISc) in Bengaluru and a few Indian Institute of Technology (IITs).
- The project is said to be among the most significant of its kind in the world because of its scale and the diversity it would bring to genetic studies.

Key Points

- The first stage of the project will look at samples of 10,000 persons from all over the country to form a grid that will enable the development of a reference genome.
- The Centre for Brain Research, which is an autonomous institute in the IISc, Bengaluru, will serve as the **nodal point** of the project.
- **Significance:**
 - The diverse genetic pool of India will be mapped and it will help in making personalised medicine. Today, the goal of personalized medicine is to utilize information about a person's genes, including his or her nucleotide sequence, to make drugs better and safer.
 - It will be a hard task considering the population diversity and the disease burden of complex disorders like diabetes, mental health, etc but once the genetic base is ready it will be possible and easy to take action before the onset of a disease.

Note:



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- Mapping of India's genetic landscape is critical for next-generation medicine, agriculture and for biodiversity management.
- The Government of India got inspiration from the Human Genome Project.

Human Genome Project

- It was an international research effort to determine the **sequence of the human genome** and identify the genes that it contains.
- It was a 13-year-long, publicly funded project that ended in 2003.
- The HGP has revealed that there are probably about 20,500 human genes. This information can be thought of as the basic set of inheritable "instructions" for the development and function of a human being.

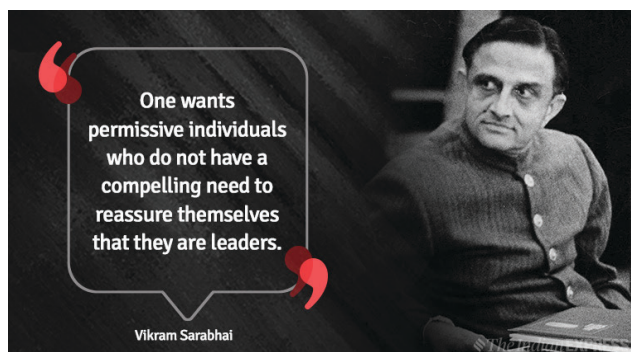
Vikram Sarabhai Centenary Programme

Why in News

Indian Space Research Organisation (ISRO) and Department of Atomic Energy (DAE) are conducting various events at national level in a year long programme to commemorate the **100th birth anniversary of Dr. Vikram Sarabhai**.

Key Points

- The celebrations began on 12 August, 2019 in Ahmedabad, where Sarabhai was born on the same day in 1919. He led the establishment of the **Physical Research Laboratory (PRL)** in the city in 1947.
- The celebrations would conclude exactly a year later, i.e. on 12th August, **2020 in Thiruvananthapuram, Kerala** where he had set up the first rocket launching station of India.



- ISRO has recently announced the '**Vikram Sarabhai Journalism Award in Space Science, Technology and Research**', as part of the centenary year celebrations of Dr. Vikram Sarabhai, the father of Indian space programme.

Department of Atomic Energy

- The **Indian Atomic Energy Commission** was first set up in **August 1948** in the Department of Scientific Research.
- The **Department of Atomic Energy (DAE)** was set up on **August 3, 1954**, under the direct charge of the Prime Minister.
- Subsequently, the Atomic Energy Commission (AEC) was brought under the Department of Atomic Energy.
- The Secretary to the Government of India in the Department of Atomic Energy is ex-officio Chairman of the Commission.
- DAE has been engaged in the development of nuclear power technology, applications of radiation technologies in the fields of agriculture, medicine, industry and basic research.

Vikram Sarabhai

- Vikram Ambalal Sarabhai, (born-August 12, 1919, Ahmadabad, India and died-December 30, 1971, Kovalam), was an **Indian physicist and industrialist** who initiated space research and helped develop nuclear power in India.
- Remembered as the **founding father of the Indian space programme**, Sarabhai **set up the Physical Research laboratory** in his hometown in Ahmedabad in 1947 which was a precursor to the ISRO.
- After the death of physicist Homi Bhabha in 1966, Sarabhai was appointed the chairman of the Atomic Energy Commission of India.
- Sarabhai was **awarded** two of India's highest honours, the **Padma Bhushan (1966)** and the **Padma Vibhushan** (awarded **posthumously in 1972**).

Medical Data Leaks

Why in News

A German cybersecurity firm, **Greenbone Sustainable Resilience** has published its second report related to **medical data leaks**.

Note:


- According to the report, medical details of over **120 million Indian patients** have been leaked and made freely available on the internet.
- The **first report was published in October 2019**, which had observed a widespread data leak of a massive number of records, including images of CT scans, X-rays, MRIs and even pictures of the patients.
 - After the first report was published, the number of medical data leaks bearing the patients' information increased from 6,27,000 to 1.01 million and that of the images of patients' details rose from 105 million to 121 million.

Key Findings of India

- **Categorisation of Countries**
 - The report classified countries in the **"good", "bad" and "ugly" categories** based on the action taken by their governments after the first report was made public.
 - **India ranks second** in the **"ugly" category**, after the U.S.
- **State-wise Analysis**
 - **Maharashtra** reported the **maximum** medical data leaks followed by **Karnataka and West Bengal**.
- **Reasons**
 - Generally, medical details are stored on **Picture Archiving and Communications Systems (PACS)** servers which are linked to the public internet without any protection. Thus, the lack of security makes them easily accessible to malicious elements.
 - PACS is a medical imaging technology which provides economical storage and convenient access to images from multiple modalities.
- **Concerns**
 - Doctors or hospitals are ethically, legally and morally bound to maintain the confidentiality of medical records. The report indicates the moral irresponsibility on the part of medical practitioners.

Compromised

STATE	DATA TROVES	IMAGES
Maharashtra	3,08,451	7 crore
Karnataka	1,82,865	1.4 crore
West Bengal	1,72,885	34 lakh
Telangana	1,26,160	60 lakh
Gujarat	1,11,408	1.4 crore



- There are possibilities of fake identities being created using the leaked medical details. The fake identities can be misused in any possible ways.

Data Protection in India

- The **Information Technology Act, 2000** amended in **2008** contains provisions for the protection of electronic data.
- The **Information Technology (Reasonable Security Practices and Sensitive Personal Data) Rules** were framed under **Section 43A of IT Act** which sets out a procedure for corporate entities which collects, possess and collects personal data.
- According to the Supreme Court in the **Puttaswamy judgement (2017)**, the **right to privacy is a fundamental right** and it is necessary to protect personal data as an essential facet of informational privacy.
- Recently, the Indian Parliament tabled the **Personal Data Protection (PDP) Bill, 2019** which would be **India's first attempt to domestically legislate on the issue of data protection**.

Gaganyaan

Why in News

- Four Indian Air Force (IAF) pilots**, chosen as candidate-astronauts for **India's first manned mission Gaganyaan**, have begun training at the **Gagarin Research and Test Cosmonaut Training Centre (GCTC) in Moscow, Russia**.
- In June 2019, the Human Space Flight Centre of the **Indian Space Research Organisation (ISRO)** and the Russian government-owned Glavkosmos signed a contract for the training, which includes Russian support in the selection of candidates, their medical examination, and space training.
- The candidates will study in detail the systems of the **Soyuz manned spaceship**, as well as be trained in short-term weightlessness mode aboard the **II-76MDK aircraft**.
 - The **Soyuz is a Russian spacecraft**. The Soyuz carries people and supplies to and from the space station.
 - The **II-76MDK is a military transport plane** specially designed for **parabolic flights of trainee astronauts and space tourists**.

Note:

- The candidates will also be trained to take appropriate actions during emergencies — for example should the spacecraft make an abnormal landing in (unplanned) climate and geographic zones.

Gaganyaan

- Gaganyaan is the ₹10,000-crore Indian human space flight scheduled for 2022. It is designed to have 3-7 crew members spend 3-7 days in space in a 400-km orbit.
- The first of the two pre-Gaganyaan flights with a humanoid will be launched in 2020-end along with some of the six shortlisted microgravity experiments.

Increasing Imports of Li-ion Batteries

Why in News

Union Minister for Science & Technology has given information about **imports of lithium-ion (Li-ion) batteries** in the country during the Budget session of 2020-21.

Key Points

- **Imports by Volume:**
 - India has **quadrupled its imports of lithium-ion (Li-ion) batteries**.
- **Cost of Imports:**
 - It has **more than tripled its import bill** on the products vital for powering a range of devices from cellphones to electric vehicles from 2016-2018.
- **Origin of Imports:**
 - India imports Li-ion batteries from **China, Japan and South Korea** and is among the **largest importers** in the world.
 - **China dominates** the Li-ion battery market. Around three-quarters of battery cell manufacturing capacity is in China and Chinese companies have unparalleled control of required domestic and foreign battery raw materials and processing facilities.
- **Manufacturing by India:**
 - The **Indian Space Research Organisation (ISRO)** manufactures Li-ion batteries but **volumes are limited** and they are **restricted for use in space applications**.
- **Need to Increase Manufacturing by India:**

- The government has announced investments worth \$1.4 billion to make India one of the largest manufacturing hubs for electric vehicles **by 2040**.
- **Electric vehicles** are expected to account for a significant share in the growth of the Li-ion battery demand in India **till 2025**.

Steps taken by India:

- The **Central Electro Chemical Research Institute (CECRI) of CSIR** and **RAASI Solar Power Pvt. Ltd.** had signed a Memorandum of Agreement **for transfer of technology for India's first lithium-ion (Li-ion) battery project in 2018**.
- The Union Cabinet has also approved a **National Mission on Transformative Mobility and Battery Storage** to drive clean, connected, shared sustainable and holistic mobility initiatives.

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, battery electric vehicles and aerospace applications.

National Mission on Transformative Mobility and Battery Storage

- National Mission on Transformative Mobility and Battery Storage aims to promote clean, connected, shared, sustainable and holistic mobility initiatives.
- A Phased Manufacturing Program (PMP) will be launched to localize production across the entire EV value chain which will be valid for 5 years until 2024.
- The multi-disciplinary programme with an Inter-Ministerial Steering Committee will be chaired by CEO NITI Aayog.

Note:

- The details of the value addition that can be achieved with each phase of localization will be finalized by the Mission with a clear Make in India strategy for the electric vehicle components as well as battery.
- The Mission will coordinate with key stakeholders in Ministries/ Departments and the states to integrate various initiatives to transform mobility in India.

US Nod to Integrated Air Defence Weapon System

Why in News

The US has approved the sale of an Integrated Air Defence Weapon System (IADWS) to India at an estimated cost of \$1.9 billion.

- The objective of the deal is to modernise India's armed forces and to expand its existing air defence architecture to counter threats posed by air attacks.

Key Points

- IADWS will be used along with **indigenous**, Russian and Israeli systems to erect an ambitious multi-layered missile shield over the National Capital Territory (NCT) of Delhi against aerial threats.
- It comes amidst the massive military modernisation by China which is also flexing its military muscles in the strategic **Indo-Pacific region**.

Integrated Air Defence Weapon System

- The Integrated Air Defence Weapon System (IADWS) is called the **National Advanced Surface to Air Missile System (NASAMS-II)**.
- It is an upgraded version of the NASAMS developed by the US firm Raytheon in partnership with Kongsberg Defence & Aerospace of Norway.
- The IADWS system provides integrated air missile defence and is currently deployed around Washington, DC.
- It includes launchers, targeting and guidance systems, advanced medium-range air-to-air missile (**AMRAAM**) and **Stinger missiles**, 3D Sentinel radars, fire-distribution centres and command-and-control units.

Proposed Multi-Layered Air Defence Shield for NCT of Delhi

- The **innermost layer** of protection will be through the **NASAM-II**.

- The indigenous **Akash defence missile systems**, with a 25-km range, will form the **layer over** the NASAMS-II.
- The **next layer** will be through highly automated and mobile **S-400 systems**.
- Then will come the **Barak-8** medium-range surface-to-air missile systems.
- The **outermost layer** will be provided by the indigenous two-tier **Ballistic Missile Defence (BMD) System**.

Advanced Medium-Range Air-to-Air Missile

- **Advanced Medium-Range Air-to-Air Missile (AMRAAM)** is an American **beyond-visual-range** air-to-air missile capable of **all-weather** day-and-night operations.
- Manufactured by Raytheon, more than 30 countries are using the AMRAAM.

Stinger Missiles

- Stinger is a **shoulder-fired Man-Portable Air Defense System (MANPADS)** developed by the United States.
- It is a fire-and-forget, lightweight (15kg) weapon with the **reusable launcher**.
- Stinger missile is an extremely effective weapon for **shooting down aircraft**.

Solar Orbiter's Mission

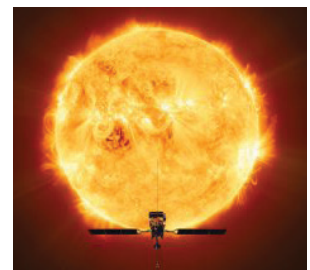
Why in News

The **National Aeronautics and Space Administration (NASA)** has launched the **Solar Orbiter** to space on an Atlas 5 rocket from Florida on 10th February, 2020.

- The mission is a **cooperative mission between NASA and the European Space Agency (ESA)** which will help researchers to know how the star's energy affects Earth and humans in space. It is a seven-year mission.

Significance

- It will observe the Sun with high spatial resolution telescopes and capture observations in the environment directly surrounding the spacecraft to know **how**



Note:

the Sun can affect the space environment throughout the solar system.

- The spacecraft will also be the first to provide **images of the Sun's poles**.
 - The mapping of Sun's pole could allow for the first time to observe the concentrated source of solar wind that permeates our solar system.
 - The solar wind is the mixture of charged particles that are highly concentrated at the poles and beam through our solar system, affecting satellites and electronic devices on Earth.
- The mission will also study the **magnetic environment around the Sun**, which in turn will provide information about the Sun's 11-year solar cycle and its periodic outpouring of solar storms.
- Solar Orbiter carries ten instruments, three of which will help to survey **how Sun's surface changes over time**.

The SuperCam on Mars 2020 Rover

Why in News

NASA is sending a robot called **SuperCam** aboard the **Mars 2020 rover** to study rocks and look for signs of past life on Mars.

- The robot will use a camera, laser and spectrometers for studying **mineralogy and chemistry**.

Key Points

- SuperCam's laser is uniquely capable of **remotely clearing away surface dust**, giving all of its instruments a clear view of the targets.
- The robot can identify the chemical and mineral arrangement of **rock as small as pencil point** from distance of more than 7 metres.
- It will observe different rock and **'soil'** types to find ones that could preserve signs of past microbial life on Mars - if any ever existed.
- It will identify those elements in the Martian dust which may be harmful to humans.
- It will **measure the air** so that the scientists can learn about how atmospheric molecules, water ice, and dust absorb or reflect solar radiation. This data improves our ability to predict Martian weather.

Mars 2020 rover

- Mars 2020 rover will be launched by **NASA** in July-August 2020.
- It has been designed to better understand the geology of Mars and seek signs of ancient life. The mission will collect and store a set of rock and soil samples that could be returned to Earth in the future.
- It will also test new technology to benefit future robotic and human exploration of Mars.



Longest Spaceflight by a Woman: Christina Koch

Why in News

The **National Aeronautics and Space Administration (NASA)** astronaut **Christina Koch** landed on the Earth on 6th february, 2020 after a **record stay of 328 days on the International Space Station**.

➤ Single Spaceflight

- The previous **longest single spaceflight** by any **woman** was 289 days by **Peggy Whitson**, also an American, who set that record in 2017.
- **Valery Polyakov of Russia** holds the **combined (i.e. for both men and women)** record for the longest single spaceflight in history (438 days).

➤ Cumulative Record

- **Gennady Padalka at 879 days is the world record holder in terms of cumulative time in space** across one or more spaceflights.
- **Whitson at 665 days** holds the world record for **women**.

➤ Significance

- One particular research project Koch participated in is the **'vertebral strength investigation'**, which better defines the extent of spaceflight-induced bone and muscle degradation of the spine and the associated risk for broken vertebrae.
- This is expected to provide insights into the development of **future countermeasures such as preventative medicine or exercise**.
- These results also could provide recommendations for limiting the amount of **force astronauts are subjected to during launch**.

Note:



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Challenges of Human Spaceflight

- **Gravity Field:** Transitioning from one gravity field to another is tricky. It affects **hand-eye and head-eye coordination**. NASA has learned that without gravity working on the human body, **bones lose minerals**. Even after one returns from a space mission, one could be at greater **risk of osteoporosis-related fractures**.
- **Isolation:** No matter how well trained one is, behavioural issues are likely to crop up. Due to isolation, an astronaut may encounter **depression, fatigue, sleep disorder and psychiatric disorders**. This may lead to performance decrements, adverse health outcomes and compromised mission objectives.
- **Radiation:** In space stations, astronauts receive **over ten times the radiation than what people are subjected to on Earth**. Radiation exposure may increase the risk of **cancer**. It can damage the **central nervous system**. Radiation can also cause **nausea, vomiting, anorexia and fatigue**.
- **Hostile Environment:** Rockets are extreme machines. These need to have habitability factors including temperature, pressure, lighting, noise and quantity of space. It's essential that astronauts get the **requisite food, sleep and exercise needed to stay healthy and happy**.
- **Distance from Earth:** An astronaut over a spaceflight may face a **communication delay** with its team on the Earth. Also, there is a possibility of **equipment failures or a medical emergency**.



Note:

Environment and Ecology

Highlights

- Coral Restoration Through Biorock
- Forest Fire Prevention and Management
- Crude Oil Spillage in Burhi Dihing River
- Amrabad Tiger Reserve
- Van Vihar National Park
- Nilgiri Tahr
- Someshwara Wildlife Sanctuary
- World Wetlands Day
- Cauvery Delta Declared as a Protected Special Agriculture Zone
- The Future of Earth, 2020 Report
- Toxic Air: The Price of Fossil Fuels - Greenpeace Report
- Indian Pangolin
- Reducing SO₂ Emissions
- Mudumalai Tiger Reserve

Coral Restoration Through Biorock

Why in News

The Zoological Survey of India (ZSI), with help from Gujarat's forest department, is attempting for the **first time** a process to restore coral reefs using **biorock or mineral accretion technology**.

Mineral Accretion Technology

- Also called '**Biorock Technology**', it is a method that applies safe, low voltage electrical currents through seawater, causing dissolved minerals to crystallize on structures, growing into a white limestone (CaCO₃) similar to that which naturally makes up coral reefs and tropical white-sand beaches.
 - Biorock, also known as **Seacrete or Seament**, refers to the substance formed by electro-accumulation of minerals dissolved in seawater.
- The formed material has a strength similar to concrete. It can be used to make robust artificial reefs on which corals grow at very rapid rates.
 - Fragments of broken corals are tied to the biorock structure, where they are able to grow at least four to six times faster than their actual growth as they need not spend their energy in building their own calcium carbonate skeletons.
 - The technology also helps corals, including the highly sensitive branching corals, to counter the **threats posed by global warming**.

➤ Working

- The technology works by passing a small amount of electrical current through electrodes in the water.
- When a positively charged anode and negatively charged cathode are placed on the seafloor, with an electric current flowing between them, calcium ions combine with carbonate ions and adhere to the structure (cathode). This results in calcium carbonate formation (CaCO₃).
- Coral larvae adhere to the CaCO₃ and grow quickly.
- Biorock projects can be powered by a **wide range of electrical sources including renewable energy** like windmills, photovoltaic solar panels and tidal current generators. **This enables their construction in areas where conventional electric power is unavailable.**
- The mineral accretion process was **first** developed by architect **Wolf Hilbertz in 1976** in order to provide alternative construction materials. He and Tom Goreau of the Global Coral Reef Alliance later developed its use for reef restoration and shore protection.

Use of Technology in India

- A biorock structure was installed one nautical mile off the **Mithapur coast in the Gulf of Kutch** on 19th January 2020. The scientists have used solar panels for power in this case.
- The calcification (conversion into calcium carbonate) has started but real success will come when attached and new organisms (corals) start to grow faster.

Note:

Coral Reefs

- Corals are made up of genetically identical organisms called polyps. These polyps have microscopic algae called zooxanthellae living within their tissues.
- The corals and algae have a **mutualistic relationship**.
 - The coral provides the zooxanthellae with the compounds necessary for photosynthesis.
 - In return, the zooxanthellae supply the coral with organic products of photosynthesis, like carbohydrates, which are utilized by the coral polyps for the synthesis of their calcium carbonate skeletons.
 - Zooxanthellae are also responsible for the unique and beautiful colors of corals.
- It is the above relationship that allows shallow-water corals to grow fast enough to build the enormous structures called reefs.
 - Often called the “rainforests of the sea,” coral reefs are home to a spectacular variety of organisms.
- India has four major coral reefs areas: Andaman and Nicobar Islands, Lakshadweep, Gulf of Mannar and the Gulf of Kachchh.
- The coral reefs are threatened by climate change-induced acidification as well as by anthropogenic factors such as overfishing, pollution.

Zoological Survey of India

- The Zoological Survey of India (ZSI) is a subordinate organization of the Ministry of Environment and Forests which was established in 1916.
- It is a national centre for faunistic survey and exploration of the resources leading to the advancement of knowledge on the exceptionally rich faunal diversity of the country.
- It has its headquarters at Kolkata and 16 regional stations located in different geographic locations of the country.

Forest Fire Prevention and Management

Why in News

Recently, the Ministry of Environment, Forests and Climate Change (MoEF&CC) provided information about **forest fires management and prevention**.

Key Points

- The **area** covering about **93,000 hectares** was affected by **forest fires in 2019**. However, it also includes ‘**ground fires**’, i.e. burning of ground vegetation.
- **Forests** are a subject in the **Concurrent list of the 7th Schedule of the Constitution**.
- The MoEF&CC has prepared a **National Action Plan on Forest Fires (2018)** after consultation with all States and Union Territories.
- Additionally, MoEF&CC also provides forest fire prevention and management measures under the **Centrally Sponsored Forest Fire Prevention and Management scheme**.

National Action Plan on Forest Fires

- **National Action Plan on Forest Fires (NAPFF)** 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.

Forest Fire Prevention and Management Scheme

- **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**.
 - By revamping the IFMS, the FPM has **increased the amount dedicated for forest fire work**.
- 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.

Note:



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Crude Oil Spillage in Burhi Dihing River

Why in News

A stretch of **Dihing or Burhi Dihing river in Eastern Assam's** Dibrugarh district **witnessed fire following the spillage of crude oil** which was being transported to **Digboi refinery**.

- **Assam is an ecologically sensitive state**, spillage of crude or processed oil in river bodies threatens aquatic life.
- An **oil spill** is the release of a liquid petroleum hydrocarbon into the environment, especially the marine ecosystem, due to human activity, and is a form of pollution.

Dihing River

- Dihing or Burhi Dihing is a **tributary of the Brahmaputra River** in Upper Assam.
 - Other Tributaries of the Brahmaputra River:
 - **Left Bank:** Dibang River, Lohit River, Dhansiri River, Kolong River
 - **Right Bank:** Kameng River, Manas River, Beki River, Raidak River, Jaldhaka River, Teesta River, Subansiri River.
- The river **originates in the Eastern Himalayas (the Patkai Hills)** in **Arunachal Pradesh** and flows through Tinsukia and Dibrugarh Districts in Assam to its **confluence with the Brahmaputra at Dihingmukh (Assam)**.
- It creates a number of **oxbow lakes** in the area.

Digboi Oil Refinery

- It is **India's oldest operating refinery** and one of the oldest operating refineries in the world.
- It is situated in **Tinsukia district of Assam**.
- The historic Digboi Refinery has been termed as the **"Gangotri of the Indian Hydrocarbon sector"**.



Oxbow Lake

- An oxbow lake is a lake that starts out as a curve, or meander, in a river. The U-shaped lake forms along the side of the river as the river finds a different, shorter, course.
- Water does not flow into or out of oxbow lakes hence they often become swamps or bogs, and dry up as their water evaporates.
- A meander is a curve in a river. Meanders form a snake-like pattern as the river flows across a fairly flat valley floor.
- Meanders are typical of the middle and lower course of a river. This is because vertical erosion is replaced by a sideways form of erosion called lateral erosion, plus deposition within the floodplain.



Amrabad Tiger Reserve

- Amrabad Tiger Reserve lies in **Nallamala hills of Telangana**.
- It is India's **second-largest tiger reserve**, after **Nagarjunasagar Srisailem Tiger Reserve (Andhra Pradesh)**.
- It has a large presence of the **Chenchu tribe**.
- It harbours great biodiversity, consisting of around 70 species of mammals, more than 300 hundred avian varieties, 60 species of reptiles and thousands of insects, all supported and nourished by more than 600 different plant species.

Chenchu Tribe

- The Chenchus are **Scheduled Tribe** in the Indian states of Andhra Pradesh, Telangana, Karnataka, and Odisha.
- They are an **aboriginal tribe** whose traditional way of life has been based on hunting and gathering.
- The Chenchus speak the **Chenchu language**, a member of the **Dravidian language** family.
- Chenchu's relationship with non-tribal people has been largely symbiotic.

Note:

Van Vihar National Park

- Van Vihar National Park is located in **Bhopal (Madhya Pradesh)**.
- It is situated next to the famous **Upper Lake of Bhopal** also known as the “**Bada Talab**” which is a **Ramsar Site** and one of the two lakes of Bhoj Wetland.
- It has the unique distinction of being a **combination** of National Park, a Zoo, Rescue Centre for wild animals and Conservation Breeding Centre for selected vital species.
 - It is the **only place in central India** where its rescue centre harbours a number of Lions and Tigers rescued from the circuses, Sloth Bears rescued from the madaris, Tigers, Panthers and Bears rescued from the zones of human-wildlife conflict.
 - It is also a designated co-ordinating zoo and Conservation Breeding Centre for the **Hard Ground Barasingha, the state animal of Madhya Pradesh** and two species of Gyps Vultures.

Nilgiri Tahr

- **Habitat:** Western Ghats in southern India (Tamil Nadu and Kerala), Nilgiri Tahr is the state animal of Tamil Nadu.
- **Threatened By:** Hunting, habitat loss (mainly from domestic livestock and spread of invasive plants), climate change
- **Protection Status:**
 - IUCN Red List: **Endangered**
 - Indian Wildlife Protection Act, 1972: Schedule 1



Someshwara Wildlife Sanctuary

- Someshwara Wildlife Sanctuary lies in the **Western Ghats of Karnataka** (Udupi & Shimoga districts).
 - The Western Ghats are on India's **World Heritage sites list**.
- It is named after the Someshwara temple located within the sanctuary.
- The sanctuary is mostly made up of evergreen forests, semi-evergreen and moist deciduous forests.

- It is situated very close to the **Kudremukh National Park**.
- **Sitanadi river** flows through the sanctuary.
- Some **Endangered species** are found viz; **Lion Tailed Macaque, Tiger, Dhole (wild dog)**.

Lion-tailed Macaque

- It is **endemic to the Western Ghats** in the states of Karnataka, Kerala and Tamil Nadu.
 - Although the species has a relatively wide range, its area of occupancy is small and severely fragmented.
 - Primarily diurnal arboreal, it prefers the upper canopy of primary tropical evergreen rainforest.
- Conservation and Protection:
 - IUCN Red list: **Endangered**.
 - It is listed in Appendix I of CITES.
 - It is protected under Schedule I, Part I, of the Wildlife (Protection) Act, 1972.



World Wetlands Day

Why in News

- **World Wetlands Day** is celebrated **every year** on the **2nd of February**. This day marks the date of the adoption of the Convention on Wetlands on 2 February **1971** in the **Iranian city of Ramsar**.
- The **theme for 2020** is ‘**Wetlands and Biodiversity**’.
- It was **first** celebrated in **1997**.

Wetlands

- **Wetlands** are ecosystems saturated with water, either seasonally or permanently. They include mangroves, marshes, rivers, lakes, deltas, floodplains and flooded forests, rice-fields, coral reefs, marine areas no deeper than 6 metres at low tide, as well as human-made wetlands such as waste-water treatment ponds and reservoirs.
- Though they cover only around **6% of the Earth's land surface**, 40% of all plant and animal species live or breed in wetlands.
- Wetlands are a critical part of our natural environment. They mitigate floods, protect coastlines and build

Note:



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community resilience to disasters, reduce the impacts of floods, absorb pollutants and improve water quality.

- 30% of land-based carbon is stored in peatland.

Threats

- As per the IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services)'s global assessment wetlands are the **most threatened ecosystem**.
- Wetlands are **disappearing 3 times faster than forests** due to human activities and global warming.

Status of Wetlands in India

- Recently, the Ramsar Convention declared **10 wetlands** from India as Ramsar sites taking the **total number of Ramsar Sites in the country to 37**.
 - Wetlands declared as Ramsar sites are protected under strict guidelines of the convention.
 - There are currently over **2,300 Ramsar Sites** around the **world**.
- India has over 7 lakh wetlands, covering 4.5% of the country's area, yet none of the wetlands has been notified under domestic laws.
- Wetlands are regulated under the **Wetlands (Conservation and Management) Rules, 2017**.

IPBES

- IPBES is an independent intergovernmental body established to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.
- It was established in Panama City (US), in April 2012.
- It is not a United Nations body.

Cauvery Delta Declared as a Protected Special Agriculture Zone

Why in News

The Tamil Nadu government has declared the Cauvery delta region as a **Protected Special Agriculture Zone**.

- The protected zone includes eight districts namely **Thanjavur (Rice Bowl of Tamil Nadu)**, Tiruvarur, Nagapattinam, Pudukottai, Cuddalore, Ariyalur, Karur and Tiruchirappalli.
- Such a declaration will prevent non-agrarian projects in the region.
 - The Government has emphasised that central projects on hydrocarbon exploration in the delta region cannot be implemented without No Objection Certificate (NOC) from the State government.
- The Cauvery delta region is an important agricultural region in **Tamil Nadu**.
 - It has been seen that in the last four decades, Tamil Nadu's food dependence on the delta has fallen from 65% to 40%. Hydrocarbon wells are one of the major reasons behind the same.

The Future of Earth, 2020 Report

Why in News

The **South Asia Future Earth Regional Office**, the Divecha Centre for Climate Change and the Indian Institute of Science have released "**The Future of Earth, 2020**" report.

- The report has been prepared with the aim of **reducing carbon footprint and halting global warming below 2 degree Celsius by 2050**.

Key Findings

- **Five Global Risks**
 - Climate change
 - Extreme weather
 - Biodiversity loss
 - Food crisis
 - Water crisis
- **Example of Interrelation between different Global Risks**
 - Extreme heat waves can accelerate global warming by releasing large amounts of stored carbon from affected ecosystems, and at the same time intensify water crises and/ or food scarcity.
 - Strains on food production are expected to increase, as a result of various forces including climate change, biodiversity loss, and a global population on the rise.

Note:

➤ Greenhouse Gas Emissions

- Despite declarations of a climate crisis or climate emergency by the leaders of more than 700 cities, states and governments, the concentration of carbon dioxide in the atmosphere during 2019 reached more than 415 parts per million (ppm).
- The five years from 2014 to 2018 were the **warmest recorded over land and ocean since 1880**.

➤ Decline in Biodiversity

- Humans have significantly altered 75% of the planet's land area. About a quarter of species in assessed plant and animal groups are threatened.
- In 2018, the world's last male northern **white rhino** died in his Kenyan enclosure, while the Brazilian blue parrot, Spix's Macaw, was declared extinct in the wild.

➤ Suggestions

- Reversing the trends of loss of life on the planet will require some new ways of thinking about conservation.
- Humans are now the main driver behind planetary change, thus human systems should be targeted. This means addressing societal systems including populism, finance, and information transmission, alongside the practices and technologies that emit greenhouse gases, from fossil-fuel burning to food production.
- Negative impact of migration can be avoided with pragmatic planning that anticipates inevitable demographic change, and accommodates human movements with infrastructure and targeted social inclusion programmes.

South Asia Future Earth Regional Office

- South Asia Future Earth Regional Office is hosted by the Divecha Centre for Climate Change, Bengaluru, India. The office plays a key role in promoting solution-oriented research on environmental sustainability in the south Asian region.
- Future Earth, established in 2015, is an international sustainability research network.
- The Divecha Centre for Climate Change was established at Indian Institute of Science in January 2009. The primary goal of this centre is to understand climate variability and climate change and its impact on the environment.

Toxic Air: The Price of Fossil Fuels - Greenpeace Report

Why in News

The **Greenpeace Southeast Asia** has released a report titled '**Toxic Air: The Price of Fossil Fuels**'.

- The report provides a global assessment of the health impact of air pollution from **fossil fuels in 2018** and a first-of-its-kind estimate of the associated economic cost.
 - The study is **limited to the following pollutants**: fine particulate matter (PM 2.5), ozone (O3) and nitrogen dioxide (NO2), and only that pollution which is emitted by fossil fuel combustion (coal, oil and gas).

Pollutants and Their Effects

- **PM2.5** refers to fine particles with diameters that are generally 2.5 micrometers and smaller. PM2.5 particles are respirable, which means that they are small enough to reach the gas exchange region of the lungs.
- **Ozone (O3)**: The ground level ozone is an air pollutant that causes smog. It forms when Nitrogen oxide (NOx) pollutants react with chemicals called volatile organic compounds (chemicals from sprays, paints etc.).
- **Nitrogen oxides**: When fossil fuels are burned in air, nitrogen oxides (NO and NO2, collectively referred to as NOx) are created from molecular nitrogen in the air and in the fuel that is being burned. NOx pollution, along with sulfur dioxide, which is also produced when fossil fuels are burned, reacts with water to form acid rain, snow and fog, and with other substances to form particulate matter. The health impacts of exposure to nitrogen oxides include cardiovascular diseases, exacerbated symptoms of asthma, chronic obstructive pulmonary disorder and other respiratory diseases.

Key Findings

- **Impact of Air Pollution on Health**
 - Exposure to an air pollutant or combination of air pollutants, such as PM2.5, NO2 or ozone, is associated with increased incidence of diseases

Note:

including Ischaemic Heart Disease (IHD), Chronic Obstructive Pulmonary Disease (COPD), lung cancer, lower respiratory infections, type II diabetes, etc.

➤ **Economic Cost of Air Pollution**

- Air pollution from burning fossil fuels costs an estimated 3.3% of global Gross Domestic Product (GDP), equivalent to US \$8 billion per day and 12,000 premature deaths every day.
- **China, the US and India** bear the highest economic cost of soaring pollution, at an estimated \$900 billion, \$600 billion and \$150 billion (5.4% of the India's GDP) a year, respectively.

➤ **Burden of PM2.5**

- PM2.5 air pollution leads to the greatest health impact and the greatest financial cost of the three pollutants (PM2.5, O3, NO2).
- Globally, air pollution is estimated to cause 4.5 million premature deaths each year. This includes 3 million deaths attributable globally to PM2.5.
- Pollution from PM2.5 costs 2.5% of the global GDP whereas pollution from O3 and NO2, each costs equivalent to 0.4% of global GDP.

➤ **Suggestions**

- **Sustainable Transport System:** Creating a sustainable transport system by setting a phase-out date for diesel and petrol cars, while implementing various urban transport measures, such as restricting cars' access into certain neighborhoods or districts, promoting car-free days, etc.
- **Switch to Renewable Energy:** The phaseout of fossil fuels and switch to renewable forms of energy is beneficial both for reducing air pollution and mitigating anthropogenic (man-made) climate change.

India-Related Findings

- PM2.5 is one of the principal pollutants in northern Indian cities including Delhi.
- The 2 million preterm births globally due to PM2.5 include 9,81,000 preterm births in India.
- The report links approximately 3,50,000 new cases of child asthma in India to nitrogen dioxide. As a result of this, over 1.28 million more children in India live with asthma, which is linked to fossil fuel pollution.
- In India, exposure to fossil fuels also leads to a loss of around 490 million workdays.

Indian Pangolin

Why in News

The Madhya Pradesh forest department, for the first time, has radio-tagged an Indian Pangolin.

- Radio-tagging involves attaching a transmitter to an animal to monitor its movements. Several wild animals — tigers, leopards and migratory birds — have been tagged over decades.
- This measure comes as the world gets ready to observe the ninth 'World Pangolin Day' on 15th February, 2020.
 - **World Pangolin Day**, celebrated on the **third Saturday in February every year**, is an international attempt to raise awareness of pangolins and bring together stakeholders to help protect these species from extinction.
- The radio-tagging is part of a joint project by the forest department of Madhya Pradesh and non-profit organisation, the Wildlife Conservation Trust (WCT).

Pangolins in India

- Out of the eight species of pangolin, the **Indian Pangolin (*Manis crassicaudata*)** and the **Chinese Pangolin (*Manis pentadactyla*)** are found in India.
- **Habitat**
 - Indian Pangolin is widely distributed in India, **except the arid region**, high Himalayas and the North-East. The species is also found in **Bangladesh, Pakistan, Nepal and Sri Lanka**.
 - Chinese Pangolin is found in the **Himalayan foothills in Eastern Nepal, Bhutan, Northern India, North-East Bangladesh and through Southern China**.
- **Threats to Pangolins in India:** Hunting and poaching for local consumptive use (e.g. as a protein source and traditional medicine) and international trade for its meat and scales in East and South East Asian countries, particularly China and Vietnam.
- **Protection Status**
 - IUCN Red List
 - **Indian Pangolin: Endangered**
 - **Chinese Pangolin: Critically Endangered**
 - Both these species are listed under **Schedule I, Part I of the Wildlife (Protection) Act, 1972**.

Note:

Reducing SO₂ Emissions

Why in News

The Central Pollution Control Board (CPCB) has sent show cause notices to 14 thermal power plants for **not complying with the 31st December, 2019 deadline to limit sulphur dioxide emissions**.

- The CPCB has the **power to impose steep fines or shut a unit** under the provisions of the **Environment Protection Act, 1986**.

Key Points

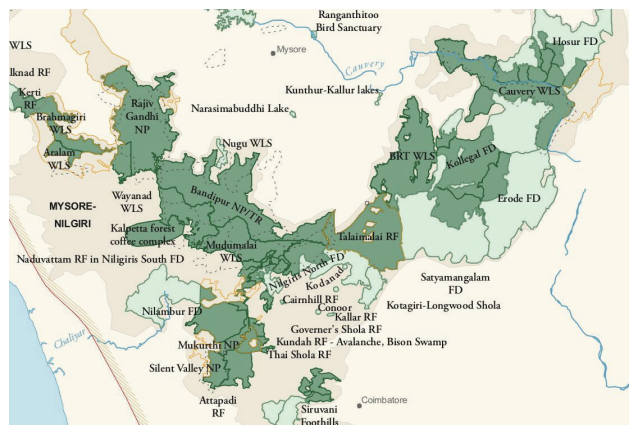
- To limit **Particulate Matter (PM)**, **sulphur dioxide** and nitrous oxide emission from thermal plants, **India has put in place a phased-approach** that directs coal-fired units to put in place measures to limit pollution by December 2022.
 - As per **Centre for Science and Environment (CSE) estimates**, these norms can help reduce PM emissions by about 35%, NOx emission by about 70%, and SO₂ emissions by more than 85% by 2026-27 against a business-as-usual scenario with no pollution control technologies.
- However plants in a 300 km radius of Delhi were to comply by 31st December, 2019 because of the poor air quality in the city as well as the surrounding Gangetic plain.
 - Few units have set in place the process for acquiring flue-gas desulphurisation technology.
 - **Flue Gas Desulfurization (FGD)** is a set of technologies used to remove sulphur dioxide (SO₂) from exhaust flue gases of fossil-fuel power plants. Flue gas is a mixture of gases produced by the burning of fuel or other materials in power stations and industrial plants and extracted via ducts.

Central Pollution Control Board

- It is a **statutory organisation under the Ministry of Environment, Forest and Climate Change**.
- It was established in 1974 under the **Water (Prevention and Control of Pollution) Act, 1974**.
- The CPCB is also entrusted with the powers and functions under the **Air (Prevention and Control of Pollution) Act, 1981**.

Mudumalai Tiger Reserve

- Mudumalai Tiger Reserve is located in the Nilgiris District of Tamil Nadu state at the **tri-junction** of three states, viz, **Karnataka, Kerala and Tamil Nadu**.
- It is a **part of Nilgiri Biosphere Reserve (1st Biosphere Reserve in India)** along with **Wayanad Wildlife Sanctuary (Kerala)** in the West, **Bandipur National Park (Karnataka)** in the North, **Mukurthi National Park** and **Silent Valley** in the South.
- The name Mudumalai means "the ancient hill range". Indeed, it is as old as 65 million years when the **Western Ghats were formed**.



Important Flora and Fauna

- **Flora:**
 - The Reserve has tall grasses, commonly referred to as **'Elephant Grass'**.
 - **Bamboo** of the giant variety, valuable timber species like **Teak, Rosewood**, etc.
 - There are several species of **endemic flora**.
- **Fauna:**
 - Flagship Species: **Tiger and Asian Elephant**.
 - **Other species:** Indian Gaur, Spotted Deer, Common Langur, Malabar Giant Squirrel, Wild Dog, Jungle Cat among others.
 - **Birds:**
 - Reserve hosts **more than 260 species of birds**.
 - **8% of bird species** found in India are recorded in Mudumalai.
 - This includes **rare birds** like Malabar Grey Hornbill, Malabar Pied Hornbill, Malabar Laughing Thrush among others.

Note:

➤ **Other Tiger Reserves in Tamil Nadu**

- **Anamalai Tiger Reserve (ATR)**
- Kalakad Mundanthurai Tiger Reserve (KMTR)
- Sathyamangalam Tiger Reserve (STR)

➤ **Kalakad Mundanthurai Tiger Reserve**

- It lies in Tirunelveli and Kanyakumari District of **Tamil Nadu**.
- Vegetation types gradually change from **dry thorn forest to dry deciduous**.
- Mundanthurai Tiger Sanctuary was declared as **Nation's first Tiger Sanctuary** during **1962**, much before Tiger conservation was a national focus.
- Kalakad Wildlife Sanctuary was **established in 1976** primarily for the conservation of **Lion Tailed Macaque**.
- **River Thamirabarani** and 13 other rivers originate

from KMTR. Hence, KMTR is called popularly as **River Sanctuary**.

➤ **Sathyamangalam Tiger Reserve**

- It is located at the confluence region of **Western and Eastern Ghats**.
- This area holds a significant population of tiger and it is also **contiguous to other Tiger conservation landscapes** like **BRT, Bandipur, Mudumalai and Nagarhole**.
- The region is also a part of **Nilgiri-Eastern Ghats Elephant Reserve**.
- It has got a high diversity of flora and fauna owing to its location. Apart from Tigers, the region is noted for Elephants, Gaur, Black Buck, Four Horned Antelope, White Backed Vulture and a variety of other creatures.



Note:



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History

Highlights

- Consecration at the Brihadeshwara Temple
- Chola Dynasty Port-Poompuhar

Consecration at the Brihadeshwara Temple

Why in News

Recently, the consecration (Kumbhabhishekam) ceremony was held at the Brihadeshwara Temple after 23 years in Thanjavur, Tamil Nadu.

- The ceremony was held after the Madras High Court settled an old argument over the ritual.
- The ceremony got embroiled in the struggle for supremacy between the Sanskrit and Tamil traditions.
- The court allowed the consecration to be performed in both Tamil and Sanskrit.
- It argued that there is nothing either in the Agamas (canonical texts) or in any other religious script to prohibit the chanting of Tamil mantras in the temples.

Brihadeshwara Temple

- Brihadeshwara Temple, also known as Raja Rajeswara Temple, is dedicated to Shiva and is located in Thanjavur (Tamil Nadu).
 - Thanjavur lies in the delta of the Cauvery River.
- It is one of the best examples of the Dravidian style of temple architecture built by Chola emperor Raja Raja Chola I (985-1014 AD) between 1003 AD and 1010 AD.
 - The Dravidian style of temple architecture flourished roughly from the 8th century to about 13th-14th century AD.
- The temple consists of a pyramidal spire and is adorned with sculptures and paintings inside as well as outside.
- The temple entered the UNESCO World Heritage Site list in 1987 and is also a part of "Great Living Chola Temples" along with the Brihadeshwara Temple at Gangaikondacholapuram and the Airavatesvara Temple at Darasuram.

- Brihadeshwara Temple (Gangaikonda Cholapuram, Tamil Nadu).

- It was built for Shiva by Rajendra I (1012-1044 CE).
- The temple has sculptures of exceptional quality.
- The bronze sculptures of Bhogasakti and Subrahmanya are masterpieces of Chola metal icons.

- Airavatesvara Temple (Darasuram)

- It was built by the Chola King Rajaraja II (1143-1173 CE).
- It is much smaller in size as compared to the Brihadeshwara temple at Thanjavur and Gangaikondacholapuram.
- The temple consists of a sanctum without a circumambulatory path and axial mandapas.
- The front mandapa is unique as it was conceptualized as a chariot with wheels.

Special Features:

- The temple, which is one of the tallest temples in India, still remains an engineering mystery as it is completely made of granite and archaeologists still don't know how the builders got such huge pieces of granite for construction at this height.
- The apex structure on top of the temple is believed to be carved out of a single stone.
- It is so designed that the Vimana does not cast a shadow at noon during any part of the year.



Note:



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- **Vimana:** It is the structure over the **garbhagriha** or **sanctum sanctorum** in the Hindu temples of South India and Odisha.
- It is like a **stepped pyramid** that rises up geometrically rather than the **curving Shikhara** of North India.

Chola Dynasty Port-Poompuhar

Why in News

The **Department of Science and Technology (DST)** has launched '**Project Digital Poompuhar**' to recreate the **Chola Dynasty port city (Poompuhar)** in **Tamil Nadu**.

- The reconstruction of Poompuhar is a part of DST's **Indian Digital Heritage (IDH) project**. An exhibition of its first project 'Digital Hampi' is currently on display at the National Museum.
- The Poompuhar project is a part of the second phase of IDH. The second phase will focus on the heritage sites that are currently underwater in Gujarat (eg. Dwarka) and Tamil Nadu.

History

- The Poompuhar is mentioned in works of **Sangam Tamil literature** which refers to the city located 30 km from the existing Poompuhar town in southern Tamil Nadu.
- The port city flourished in inter-continental trade but shifted with time. Finally, it was re-established at the present location at the mouth of the river Cauvery around 3,000 years ago.
- The shifts took place due to the continuous "kadalkol" or rising sea levels and the submergence of the deltas.

Project Digital Poompuhar

- The project involves underwater surveys and photography by remotely operated vehicles and remote sensing-based geodynamic studies to bring out comprehensive information on the time series evolution and extinction.
- It also involves the visualisation of geodynamic processes of the last 20,000 years like land subsidence, sea-level rise, Cauvery's migration, floods, tsunami, cyclones and erosion.
- The study is also expected to provide scientific information not only on the life history of Poompuhar and the socio-cultural evolution but also the science and technological evolution and the disaster history of this region.

Indian Digital Heritage Initiative

- India Digital Heritage is an initiative by the **Department of Science and Technology** in the areas of technology and humanities for digital documentation and interpretation of our tangible and intangible heritage.
- The project highlights art, architecture and cultural legacy of the world heritage site Hampi in Karnataka, the medieval capital of the **Vijayanagara dynasty**.

Cholas

- The Cholas controlled the central and northern parts of Tamil Nadu.
- Their core area of the rule was the **Kaveri delta**, later known as Chola mandalam. Their capital was **Uraiyur** (near Tiruchirappalli town) and Puhar or Kaviripattinam was an alternative royal residence and chief port town.
- **Tiger** was their **emblem**.
- The **Cholas** also maintained an **efficient navy**.
- **King Karikala** was a famous king of the **Sangam Cholas**.



Note:

Geography

Highlights

- Ujh Multipurpose Project
- Mt. Aconcagua
- Kakinada Port
- Godavari and Cauvery River Interlinking Project
- Melting of Thwaites Glacier
- 11th Expedition of an Indian Mission to the Southern Ocean

Ujh Multipurpose Project

Why in News

Ujh Multipurpose Project is planned to fast track utilization of India's rights under **Indus Waters Treaty**.

- The project is planned to be constructed in Kathua District of Jammu & Kashmir on the River Ujh.
 - Ujh is a tributary of the Ravi river.
- The project will enhance the utilization of waters of Eastern Rivers allotted to India as per the Indus Water Treaty.



Indus Waters Treaty

- The **Indus system** comprises the **Indus, Jhelum, Chenab, Ravi, Beas and Sutlej**. The basin is shared by India and Pakistan.
- Under the **Indus Waters Treaty signed between India and Pakistan in 1960**, the waters of three rivers, namely Ravi, Sutlej and Beas (Eastern Rivers) shall be available for the unrestricted use of India.
 - While, the waters of Western rivers - Indus, Jhelum, and Chenab were allocated to Pakistan except for specified domestic, non-consumptive and agricultural use permitted to India as provided in the Treaty.

- India has also been given the **right to generate hydroelectricity through Run of the River (RoR) projects on the Western Rivers** which, subject to specific criteria for design and operation is unrestricted.
- **India is also allowed to use 20% of water from Western rivers for irrigation, power generation and transport purposes.**
- This is a **unique treaty involving a third party since it was brokered by the World Bank.**
- The Treaty provides an arbitration mechanism to solve disputes amicably.
- A **Permanent Indus Commission** was set up as a bilateral commission to implement and manage the Treaty. The Commission solves disputes arising over water sharing.

Mt. Aconcagua

Why in News

Kaamya Karthikeyan, a twelve year old Indian student, has become **the youngest girl in the world to summit Mt. Aconcagua, the highest peak in South America.**

- At **6962 metres, Mt. Aconcagua is the highest peak outside Asia**. It lies in the **Southern Andes** (the **world's longest mountain range** that is located along the **entire western coast of South America**).
 - At 8,850 metres, Mount Everest is the highest mountain in Asia and the world.



Note:

- Aconagua is of volcanic origin, but it is not itself an active volcano.

Kakinada Port

- Kakinada **Deep Water Port** is located on the **East Coast of India**. It is in the East Godavari district of Andhra Pradesh, and is **strategically located** between **major Ports of Visakhapatnam and Chennai**.
- It was commissioned by the Andhra Pradesh Government in November 1997. However, the Port was privatized in 1999.
- Primary cargoes of this region include agricultural products, minerals, coal and fertilizers.



Godavari and Cauvery River Interlinking Project

Why in News

The National Water Development Agency (NWDA) has circulated a **draft Detailed Project Report (DPR) on Godavari-Cauvery link project** to the concerned states to elicit their views.

- The project envisages the diversion of 247 thousand million cubic feet (tmcft) of unutilised water in the **Indravati sub-basin of the Godavari basin** to meet the requirements between the Godavari and the Cauvery rivers.
 - Water will be diverted from **Godavari river to Nagarjuna Sagar dam** (through lifting) and further south to meet the demands of Krishna, Pennar and Cauvery basins.

- The Godavari - Cauvery link comprises three components namely,
 - the Godavari (Inchampalli/Janampet) - Krishna (Nagarjunasagar),
 - the Krishna (Nagarjunasagar) – Pennar (Somasila) and
 - the Pennar (Somasila)–Cauvery.
- The project will provide irrigation facilities to 3.45 to 5.04 lakh hectares in Prakasam, Nellore, Krishna, Guntur, and Chittoor districts of Andhra Pradesh.

National Water Development Agency

- NWDA is a registered society under the Ministry of Jal Shakti.
- It was set up in the year 1982 to carry out detailed studies, surveys and investigations in respect of the Peninsular Component of National Perspective for Water Resources Development, which envisages inter-basin water transfer.

Godavari River

- **Source:** Godavari river rises from **Trimbakeshwar near Nasik in Maharashtra** and flows for a length of about 1465 km before outfalling into the **Bay of Bengal**.
- **Drainage Basin:** The Godavari basin extends over states of **Maharashtra, Andhra Pradesh, Chhattisgarh and Odisha** in addition to **smaller parts in Madhya Pradesh, Karnataka and Union territory of Puducherry**.
- **Tributaries:** Pravara, Purna, Manjra, Penganga, Wardha, Wainganga, Pranhita (combined flow of Wainganga, Penganga, Wardha), Indravati, Maner and the Sabri.

Krishna River

- **Source:** It originates near **Mahabaleshwar (Satara) in Maharashtra**.
- **Drainage Basin:** It runs from four states namely, **Maharashtra, Karnataka, Telangana and Andhra Pradesh** before emptying into the Bay of Bengal.
- **Tributaries:** Tungabhadra, Mallaprabha, Koyna, Bhima, Ghataprabha, Yerla, Warna, Dindi, Musi and Dudhganga.
- **Nagarjunasagar dam** is on the river Krishna.

Pennar River

- **Source:** It rises in **Nandi Hills in Chikballapur District of Karnataka** and runs north and east before emptying into the Bay of Bengal.

Note:



- **Drainage Basin:** It is 597 kilometres long, with a drainage basin covering 55,213 km² in **Karnataka and Andhra Pradesh**.
- **Tributaries:** Jayamangali, Kunderu, Sagileru, Chitravathi, Papagni and Cheyyeru.

Cauvery River

- **Source:** The river rises on **Brahmagiri Hill of the Western Ghats** in southwestern Karnataka.
- **Drainage Basin:** It flows in a southeasterly direction through the states of **Karnataka and Tamil Nadu**, and descends the Eastern Ghats in a series of great falls. Before emptying into the Bay of Bengal south of Cuddalore, Tamil Nadu, the river breaks into a large number of distributaries forming a wide delta called the “**garden of southern India**”.
- **Tributaries:** Arkavathi, Hemavathi, Lakshmana Theertha, Shimsa, Kabini and Harangi.

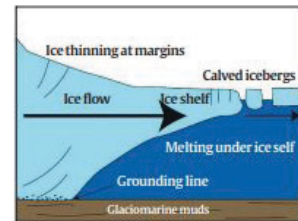
Melting of Thwaites Glacier

Why in News

Recently, a new study has detected the **presence of warm water** at a vital point beneath the **Thwaites glacier** as the cause of its melting.

Key Points

- The study has observed that the **temperature of the water at the grounding zone or grounding line of the glacier is two degrees higher than the freezing point of the water**.
 - The **grounding line** is the place below a glacier at which the ice transitions between resting fully on bedrock and floating on the ocean as an ice shelf.
 - The location of the line is a pointer to the rate of retreat of a glacier.
- When glaciers melt and lose weight, they float off the land where they used to be situated. It makes a **retreat of the grounding line**.



- This further exposes more of a glacier's underside to seawater, increasing the likelihood it will melt faster. This results in the glacier speeding up, stretching out, and thinning, causing the grounding line to retreat ever further.

Thwaites Glacier

- Thwaites Glacier is 120 km wide, fast-moving glacier **located in Antarctica**.
- Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre.
- Its melting already contributes 4% to global sea-level rise each year. It is estimated that it would collapse into the sea in 200-900 years.
 - Studies have found the amount of ice flowing out of it has nearly doubled over the past 30 years.
- It is important for Antarctica as it slows the ice behind it from freely flowing into the ocean. Because of the

Note:

risk it faces — and poses — **Thwaites is often called the Doomsday Glacier.**

11th Expedition of an Indian Mission to the Southern Ocean

Why in News

The South African oceanographic research vessel **SA Agulhas** has started its journey for the 11th expedition of an Indian mission to the Southern Ocean, or Antarctic Ocean from Port Louise (Mauritius).

- Currently, the research vessel was located at Prydz Bay, in the coastal waters of “**Bharati**”, India’s third station in Antarctica.

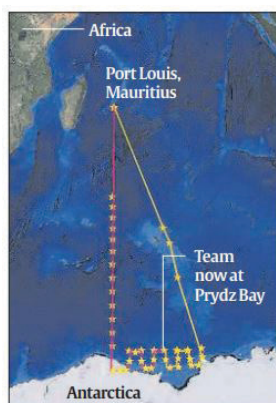
NOTE: The research vessel SA Agulhas is named after **Agulhas warm ocean current** that runs south along the east coast of southern Africa.

India’s Antarctic Missions

- India officially acceded to the Antarctic Treaty System on 1st August 1983. On 12 September 1983, India became the **fifteenth Consultative Member of the Antarctic Treaty.**
- India is expanding its infrastructure development in Antarctica. The newest base commissioned in 2015 is **Bharati**.
- India is rebuilding its station, **Maitri**, to make it bigger and last for at least 30 more years.
- **Dakshin Gangotri**, the first Indian base established in 1984, has weakened and become just a supply base.

Key Points

- **Objectives:**
 - The **National Centre for Polar and Ocean Research (NCOPR)** stated that the mission intends to **quantify changes in the oceanic remote area** and the **impact of these changes on large-scale weather phenomenon**, like the Indian monsoon.



- It also aims to **understand the influence of the Southern Ocean across ecosystem** and atmospheric changes and how it affects the tropical climate and weather conditions.
- The Expedition consists of **six core projects**:
 - **Hydrodynamics and biogeochemistry** of the Indian Ocean sector of the Southern Ocean at different depths. It will help to understand the **formation of Antarctic bottom water.**
 - **Observations of movement of trace gases** (halogens and dimethyl sulphur) from the ocean to the atmosphere which will help to improve parameterisations that are used in global models.
 - Study of organisms namely, **coccolithophores** (existed in the oceans for several million years). The study of their concentrations in sediments will create a picture of past climate.
 - Investigate **atmospheric aerosols** and their optical and radiative properties. Its continuous measurements will quantify the impact on Earth’s climate.
- Study the **Southern Ocean’s impact on Indian monsoons.**
- **Dynamics of the food web** in the Southern Ocean which will help to implement sustainable fishing.

National Centre for Polar and Ocean Research

- National Centre for 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**.
- It is 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.
- Its major responsibilities include:
 - Management and upkeep of the Indian Antarctic Research Bases “**Maitri**” and “**Bharati**”, and the **Indian Arctic base “Himadri”.**
 - Management of the **Ministry’s research vessel ORV Sagar Kanya** as well as the other research vessels chartered by the Ministry.

Note:

Significance of the Expedition**➤ Cyclic Movement of Carbon Dioxide:**

- Carbon Dioxide (CO₂) is emitted in tropical regions and through atmospheric circulation, it reaches to the Antarctic and polar regions.
- Due to the low temperature in these regions, CO₂ is absorbed and converted into dissolved inorganic carbon or organic carbon.
- Further, through water masses and circulation it is coming back to tropical regions. Since it is warmer

in these areas, it re-enters the atmosphere,

- The expedition will help to **plot the quantity and time period for such cyclic movement of CO₂.**
- **The Southern Ocean- A Transport Agent:**
- The expedition will help to study the Southern Ocean as it connects all the major oceans around the world. Thus the conveyor belt that circulates heat around the world is connected through the Southern Ocean and can have a large impact on **climate change** due to anthropogenic forces.



Note:



drishti

Art & Culture

Highlights

- World Heritage Site Certificate to Jaipur
- Hampi
- Chindu Yakshaganam
- Conservation Plan for Konark Temple
- 34th Surajkund International Crafts Mela

World Heritage Site Certificate to Jaipur

Why in News

The Chief Minister of Rajasthan will dedicate the **United Nations Educational, Scientific and Cultural Organisation (UNESCO)** world heritage site certificate for Jaipur to the people on 5th February, 2020.

- The **walled city of Jaipur**, famous for its grid plan-based architecture and buildings constructed with the pink facade, was **declared a world heritage site by UNESCO** in July 2019.
- A brochure on “**Intangible Heritage Promotion Project**” would also be released.

Intangible Heritage Promotion Project

- It is signed between the **Tourism Department of Rajasthan and UNESCO** and aims at developing 10 new cultural tourism destinations in the State.
- It would be implemented during the **next three years** at a **cost of ₹7.50 crore**.
- It will directly benefit about 1,500 artists in the districts such as Jodhpur, Barmer, Jaisalmer and Bikaner, known for folk music and traditional handicrafts.

Jaipur

- It was founded in **1727 AD** by the then **Kachwaha Rajput ruler of Amber, Sawai Jai Singh II**. It also serves as the capital city of the state of Rajasthan.
- The city was established on the plains and built according to a grid plan interpreted in the light of Vedic architecture.

- The city's urban planning shows an exchange of ideas from **ancient Hindu and modern Mughal** as well as Western cultures.
- Designed to be a commercial capital, the city has maintained its local commercial, artisanal and cooperative traditions to this day.
- The iconic monuments in the city include the Govind Dev temple, City Palace, Jantar Mantar, Hawa Mahal etc.
- Jaipur has become the second city of the country after Ahmedabad to get the recognition of the World Heritage Site.

UNESCO World Heritage Committee (WHC)

- The World Heritage Committee is composed of representatives of 21 States Parties to the World Heritage Convention who meet annually.
 - The Convention concerning the Protection of the World Cultural and Natural Heritage is an international agreement that was adopted by the General Conference of UNESCO in 1972.
 - It is based on the premise that certain places on Earth are of outstanding universal value and should therefore form part of the common heritage of humankind.

Hampi

Why in News

Recently, the Supreme Court confirmed the Karnataka govt's decision to demolish restaurants, hotels, guest houses and other buildings constructed in **Virupapura Gaddi**.

- Virupapura Gaddi is an **oval islet formed by the Tungabhadra river** and is located **west of the Hampi (UNESCO World Heritage Site)**.

Note:

- The constructions were in violation of the **Mysore Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1961**.
 - The Karnataka government released a notification in 1988 under Section 19(3) of the 1961 Act indicating the entire village of **Virupapura Gaddi** as a **protected zone**.

Hampi

- The site of Hampi comprises mainly the **remnants of the capital city of the Vijayanagara Empire (14th-16th century CE)**, the last great Hindu Kingdom.
- It encompasses an area of 4187, 24 hectares, **located in the Tungabhadra basin** in Bellary District, **Central Karnataka**.
- The sophistication of the varied urban, royal and sacred systems is evident from the more than 1600 surviving remains that **include** forts, riverside features, royal and sacred complexes, **temples (e.g. Vittala Temple)**, shrines, pillared halls, mandapas etc.
 - One of the unique features of temples at Hampi is the **wide chariot streets** flanked by the **row of pillared mandapas**.



Chindu Yakshaganam

The Chindu Yakshaganam is an **age-old art form popular in Telangana**.

- The art form **dates back to the second century BC**. It is **similar to Yakshaganam, a traditional theatre form particular to Karnataka**.
- It is a theatre art form that combines dance, music, dialogue, costume, make-up, and stage techniques with a unique style and form.

- The word '**Chindu**' in Telugu means '**jump**'. As their presentation is interspersed with leaps and jumps, it gained the name of Chindu Yakshaganam.
 - Chindu is also derived from the artists' caste Chindu Madiga, a sub-caste of Madiga among Scheduled Castes (SCs).
- The Chindu Yakshaganam is **also called Chindu Bhagavatam** as most of the stories narrated are from 'Bhagavatam'.
 - Bhagavatam refers to the Bhagavata Purana which can be translated as 'the history of the devotees of Vishnu'.



Conservation Plan for Konark Temple

Why in News

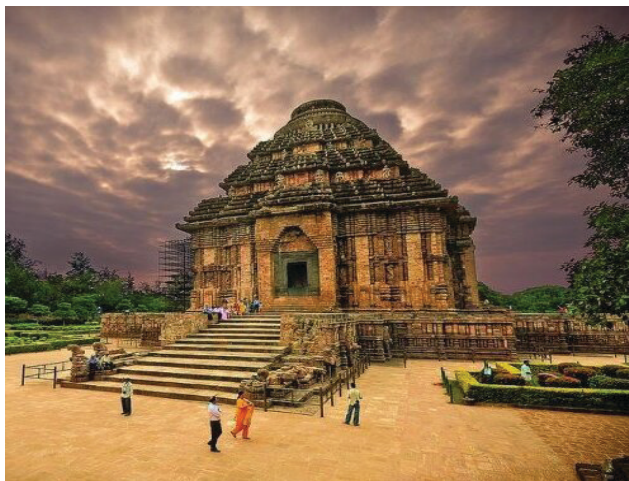
The Union Government has decided to restore and preserve the nearly 800-year-old **Konark Sun Temple, in the state of Odisha**.

- Earlier, the monument had entered into controversy over allegations that the stone carvings on the outer surface were being replaced with plain blocks of stones causing irreplaceable loss to the uniqueness of the temple.

Key Points

- **Konark** was built by **King Narasimhadeva I (1238-1264 AD)** in the **13th century** and is located in Eastern Odisha near the sacred city of **Puri**.
 - King Narasimhadeva I was a famous ruler of the **Ganga Dynasty** and with his accession to the throne, the Ganga Dynasty reached its zenith.

Note:



- It is a **UNESCO World Heritage Site (1984)**.
- Dedicated to the Sun God, Konark is the culmination of Odisha temple architecture, and is one of the most outstanding monuments of religious architecture in the world.
- The entire temple was designed in the shape of a colossal chariot **with 7 horses and 24 wheels**, carrying the sun god, Surya, across the heavens.
 - **'Konarka'**, the place bears a name composed of two world elements: **Kona meaning corner and Arka meaning the Sun**.
 - The Sun god worshipped in Arka Kshetra is also called Konark.
 - In **'Brahma Purana'** the Sun God in Arka-kshetra has been described as Konaditya.

- Surya has been a popular deity in India since the Vedic period.

34th Surajkund International Crafts Mela

Why in News

The President of India inaugurated the **34th Surajkund International Crafts Mela** in Surajkund, Haryana on February 1, 2020.

- The Mela is organized by the Surajkund Mela Authority & Haryana Tourism in collaboration with Union Ministries of Tourism, Textiles, Culture and External Affairs.

Key Points

- The Surajkund Mela is unique as it showcases the richness and diversity of the handicrafts, handlooms and cultural fabric of India, and is the largest crafts fair in the world.
- The Mela was **initiated in 1987** to promote the pool of skilled artisans, who used indigenous technology, but were suffering due to the cheaper machine-made imitations.
 - The fair was upgraded to an **international level in 2013**.
- **Himachal Pradesh** is the **'Theme State'** and **Uzbekistan** is the **'Partner Nation'** for the Year 2020.



Note:

Social Issues

Highlights

- World Cancer Day
- Missing Women and Children in India
- Global Forum on Childhood Pneumonia
- National Consultation on the Review of Beijing+25
- National Deworming Day
- International Day of Women and Girls in Science
- 2 Billion Kilometres to Safety Campaign
- Poor Compensation Rate for Trafficking Survivors

World Cancer Day

Why in News

The World Health Organisation (WHO) and its specialized agency, International Agency for Research on Cancer (IARC) have released **two reports** on the occasion of **World Cancer Day (4th February)**.

- The reports aim to **set the global agenda** on cancer, mobilise stakeholders and help countries set priorities for **investing in cancer control and universal health coverage**.

Key Points

- **Global Scenario:**
 - The report has warned that **1 in 5 people worldwide** would face a cancer diagnosis in their **lifetime**.
 - The overall cancer cases in the world would **rise by 60% by 2040** and **tobacco use** is responsible for **25% of cancer deaths** in the world.
 - **Less than 15% of low- and middle-income countries** offer comprehensive **cancer treatment** services through their public health systems, compared to **higher-income countries**.
 - **Better cancer treatment** in high-income countries has resulted in a **20% drop in mortality** between 2000 and 2015 whereas only 5% drop is observed in the case of low and middle-income countries.
 - Thus cancer cases would **rise by 81% in low- and middle-income countries by 2040** because of a **lack of investment in prevention and care**.
 - Million lives could be saved over the next decade, by **identifying the most appropriate science for each country's situation** by basing strong cancer responses on universal health coverage,

and by mobilizing different stakeholders to work together.

➤ National Scenario:

- **1 in 10 Indians** will develop **cancer** during their **lifetime**, and **1 in 15 Indians** will **die of cancer**.
- There are an estimated **11.6 lakhs new cancer cases**, **7,84,800 cancer deaths in India**.
- The **6 most common** cancer types in India : **Breast cancer, oral cancer, cervical cancer, lung cancer, stomach cancer, and colorectal cancer**.
 - Together, these account for **49% of all new cancer cases**.
- **Tobacco-related cancers** account for **34-69%** of all cancers in **men** and constitute **10-27%** of all cancers in **women** in most regions in India.

World Cancer Day

- World Cancer Day is organized by the **Union for International Cancer Control (UICC)** and celebrated **each year on 4 February**.
- It aims to rally the international community to **end the injustice of preventable suffering from cancer**.
- The **theme for 2020** is **"I am and I will"** which acknowledges that everyone has the capacity to address the cancer burden.

International Agency for Research on Cancer

- **International Agency for Research on Cancer (IARC)** was created in 1965 by a resolution of the World Health Assembly, as the **specialized cancer agency** of the WHO.
- The objective of the IARC is to **promote international collaboration** in cancer research.
- It comprises 27 member countries. **India is a member of it**.
- It is headquartered at **Lyon in France**.

Note:

Missing Women and Children in India

Why in News

Recently, the **National Crime Records Bureau (NCRB)** has released a study on **missing persons** (especially on **women and children**) in India.

- The analysis was **directed by the Supreme Court of India in 2019 to identify** the areas prone to **child and women trafficking**.
 - Some parts of the country report higher incidents of missing children and women which could be one of the sources, transit or destination for child /women trafficking.
- The data for the study has been taken from the annual **Crime in India (CII) report** compiled by the NCRB for the years 2016, 2017 and 2018.

Global Scenario

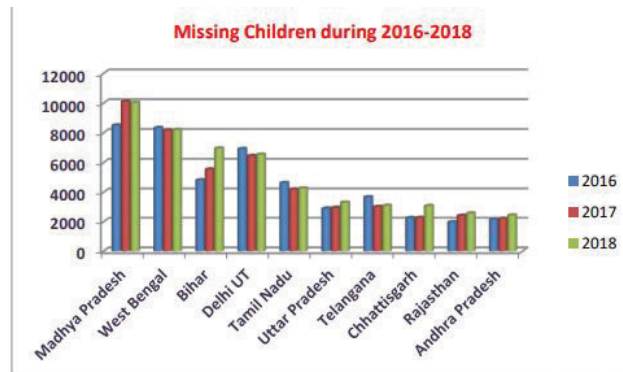
- The **United Nations Office on Drugs and Crime (UNODC) Global Report 2018 on trafficking in persons** indicates that the vast **majority** of the detected victims of **trafficking** for sexual exploitation are **females**.
- More than **half** of the victims of **trafficking for forced labour** are **men** and 35% of them are females.
- **Reasons for missing:** Mental illness, miscommunication, misadventure, domestic violence, and being a victim of crime.
 - Whereas the common cause of **trafficking** is forced marriage, child labour, domestic help and sexual exploitation etc.

National Scenario

- **Missing Women**
 - **Maharashtra** registered the **maximum** number of missing women followed by **West Bengal**.
 - Maharashtra, West Bengal and Madhya Pradesh are the three **most vulnerable** states.
 - Mumbai and Pune (Maharashtra), Kolkata (West Bengal) and Indore (Madhya Pradesh) recorded the **highest number** of such incidents.

Missing Children

- The number of missing children are **maximum** in the States of **Madhya Pradesh, West Bengal, Delhi and Bihar**.
- Indore reported the **highest** number of missing children. Whereas **West Bengal's Nadia district, bordering Bangladesh**, showed a **steep increase** from 291 missing children reports in the year 2017 to 474 in 2018.

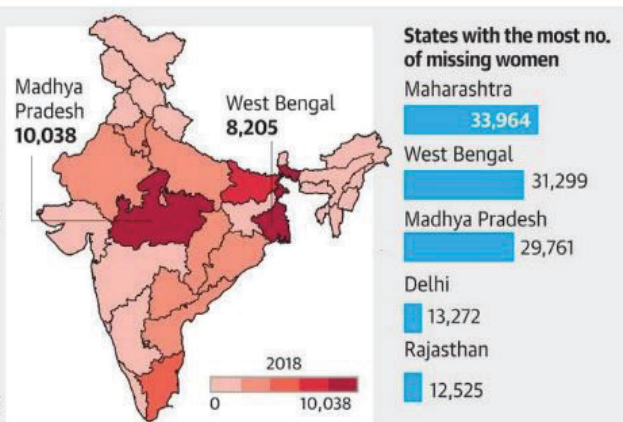


National Crime Record Bureau (NCRB)

- The NCRB was set-up in 1986 under the **Ministry of Home Affairs (MHA)**.
- It functions as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It was set up based on the recommendations of the National Police Commission (1977-1981) and the MHA's Task Force (1985).
- NCRB brings out the **annual comprehensive statistics of crime across the country ('Crime in India' report)** since 1953.
 - The report serves as a crucial tool in understanding the law and order situation across the country.

Yet to be found

In 2018, most number of missing children were reported from Madhya Pradesh (10,038), followed by West Bengal (8,205). In the same year, most number of missing women were reported from Maharashtra, followed by West Bengal. The map shows the no. of missing children by State



Note:

Global Forum on Childhood Pneumonia

Why in News

World's **first conference on Childhood Pneumonia** was held in **Barcelona (Spain)** to make it part of the global health agenda.

- Despite being the biggest infectious killer of children, pneumonia remains a neglected disease both nationally and globally.
 - **Every 39 seconds, a child under-5 dies from it.**
- Global Forum on Childhood Pneumonia is an initiative of 9 leading health and children's organisations including **UNICEF**, Bill & Melinda Gates Foundation, and **Gavi** among others.
- The theme of the conference is 'Fighting for Breath'.

Pneumonia

- Pneumonia is an **acute respiratory infection** of the lungs.
- **Cause:** It doesn't have one single cause – it can develop from **either bacteria, viruses or fungi** in the air.
- **Vaccine:** Pneumonia caused by bacteria is **easily preventable with vaccines**. 3 doses of the primary vaccine **Pneumococcal Conjugate Vaccine (PCV)** to prevent it are recommended.
 - A new vaccine for one of the main viral causes of pneumonia is under development.
 - India is planning for the nationwide rollout of PCV under **Universal Immunisation Programme (UIP)**.
- **Vulnerability:**
 - Children whose immune systems are immature (i.e. newborns) or weakened – such as by undernourishment, or diseases like HIV – are more vulnerable to pneumonia.
- **Spread:**
 - Pneumonia is contagious and can be spread through coughing or sneezing. It can also be spread through fluids, like blood during childbirth, or from contaminated surfaces.

Note:

- **Child mortality:** The death of children under the age of 5.
- **Infant mortality:** The death of children under the age of 1.
- **Preventable:**
 - The poorest children are most at risk because of high rates of malnutrition, low vaccine coverage and limited access to correct diagnosis and timely treatment.
 - Almost all of the deaths from childhood pneumonia are preventable through vaccination, adequate nutrition, reducing risk factors like air pollution (which makes the lungs more vulnerable to infection), using good hygiene practices and treatable with low-cost antibiotics and oxygen,
 - **Outdoor air pollution** contributes to nearly 18% or nearly 1 in 5 pneumonia deaths among children under 5.
 - **Exclusive Breastfeeding:**
 - Exclusive breastfeeding during the first 6 months of a child's life can lead to a 23% reduction in pneumonia incidence.
 - Infants who aren't breastfed are 15 times more likely to die from pneumonia.
- **Incidence:**
 - **Global:** Together, the Democratic Republic of Congo, Ethiopia, India, Nigeria and Pakistan account for more than half of all deaths due to pneumonia among children under 5.
 - **India:** Annually, 14% of under-5 deaths in India happen due to pneumonia.

National Consultation on the Review of Beijing+25

Why in News

To mark **25 years of the adoption of the Beijing Platform for Action**, Ministry of Women & Child Development, the National Commission for Women (NCW) and UN Women organized a National Consultation on the **Review of Beijing+25**.

- National Consultation brings on board all stakeholders (civil society, **women** and youth etc.) to implement

Note:



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actions that remove the most visible barriers to **gender equality**.

- **2020 marks the 25th anniversary** of the **4th World Conference on Women (WCW)** and adoption of the **Beijing Declaration and Platform for Action (1995)**. Hence, it is referred to as **Beijing + 25**.

Key Points

- **Objective:** To assess progress and challenges to the implementation of the Beijing Declaration and Platform for Action in India over the past 5 years.
- The issue of gender equality has also been highlighted by the Economic Survey 2019-20 and points out that in achieving Sustainable Development Goals (SDGs), India lags behind in Zero Hunger (**SDG 2**) and Gender Equality (**SDG 5**). Similarly, the **SDG India Index by NITI Aayog** raised the same concerns in achieving gender equality.
 - India has been ranked 112th among 153 countries in the annual **Global Gender Gap Index** for 2020, published by the **World Economic Forum (WEF)**.
- Recent government schemes to achieve gender equality are, Beti Bachao Beti Padhao, Pradhan Mantri Matru Vandana Yojana, Scheme for Adolescent Girls, National Nutrition Mission (NNM), Pradhan Mantri Mahila Shakti Kendra.

World Conferences on Women

- The United Nations has organized 4 world conferences on women namely, Mexico City (1975), Copenhagen (1980), Nairobi (1985), Beijing (1995).
- The **1995 4th World Conference on Women (WCW)**, held in Beijing, was one of the largest ever gatherings of the United Nations, and a critical turning point in the world's focus on gender equality and the empowerment of women.
 - The Beijing Declaration was adopted unanimously by the UN during the event.
 - Beijing Declaration is an agenda for women's empowerment and considered the key global policy document on gender equality.
 - It sets strategic objectives and actions for the advancement of women and the achievement of gender equality in 12 critical areas of concern like women and health, women in power and decision-making, the girl-child, women and the environment.

National Deworming Day

Why in News

Every year **February 10** and **August 10** are observed as the **National Deworming Days (NDD)**.

- The days aim at **eradicating intestinal worms** also known as **Soil-Transmitted Helminths (STH)**, among children in the **age group of 1-19 years**.
- Children and adolescents are administered a **single dose of a safe medicine Albendazole** across government, government-aided schools, anganwadis, private schools and other educational institutions.
 - Deworming through Albendazole is an evidence-based, globally-accepted, effective solution used to control worm infections in all children.
- Started in **2015** by the Ministry Of Health And Family Welfare, the NDD is the **largest public health program** implemented on a single day reaching crores of children and adolescents through **two NDD rounds every year**.
 - NDD is a **key intervention** of **Anemia Mukh Bharat**.
- The program is implemented in **collaboration** with the **Ministry of Women and Child Development** and **Ministry of Human Resource Development**.
- Its success and impact lie in convergence with the **Swachh Bharat Mission**. NDD also presents opportunities to further policy dialogue on health and nutrition as a way of supplementing efforts under **POSHAN Abhiyan**.

Intestinal Worms

- Intestinal worms are **parasites that live in the human intestines** and consume nutrients and vitamins that a child consumes.
- There are **three main types of STH** that infect people, **roundworm** (*Ascaris lumbricoides*), **whipworm** (*Trichuris trichiura*) and **hookworms** (*Necator americanus* and *Ancylostoma duodenale*). These worms depend on the human body for their food and survival and while being there, they lay thousands of eggs each day.
- **Transmission:** STHs are transmitted via eggs in faeces deposited in the local environment, typically through open defecation or lack of proper hygiene.
- **Impact:**
 - Since worms feed on host (human body) tissues, including blood, it leads to loss of iron, and protein,

Note:

resulting in anaemia – reduced oxygen carrying capacity due to less Haemoglobin (Hb) available in the body.

- Worm infection can also lead to diarrhoea; dysentery; loss of appetite; reduced nutritional intake and physical fitness; increased malabsorption – a condition that prevents absorption of nutrients through the small intestine.
- In **India**, over **22 crore** children **under 14 years of age** are at risk of STH infections.

POSHAN Abhiyan

- POSHAN Abhiyaan (National Nutrition Mission) was launched by the government on **March 8, 2018**.
- The Abhiyaan targets to reduce stunting, undernutrition, anemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively.
- The target of the mission is to bring down stunting among children in the age group 0-6 years from 38.4% to 25% by 2022.

International Day of Women and Girls in Science

Why in News

The **International Day of Women and Girls in Science** is celebrated on **11th February** every year to promote full and equal access to and participation in science for women and girls.

- The **UN General Assembly** designated the Day in 2015.
- It is **implemented** by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** and UN-Women, in collaboration with institutions and civil society partners.

World-wide Scenario

- **Women in STEM:**
 - UNESCO data from 2014-16 shows that only around 30% of female students select STEM (Science, Technology, Engineering and Mathematics)-related fields in higher education.
 - Female enrolment is particularly low in information technology (3%), natural science, mathematics and statistics (5%) and engineering and allied streams (8%).

➤ Research as a Profession:

- According to a 2018 fact sheet prepared by UNESCO on women in science, only **28.8% of researchers are women**.
 - UNESCO defines researchers as “professionals engaged in the conception or creation of new knowledge”.

➤ Share in Nobel Prizes:

- Between 1901 and 2019, 334 **Nobel Prizes** have been awarded to 616 laureates in Physics, Chemistry and Medicine, of which **just 20 have been won by women**.

➤ Share in Abel Prizes:

- In **2019**, the American mathematician **Karen Uhlenbeck** became the **first woman** to win the Abel Prize, following 16 male mathematicians.
- The Abel Prize is a Norwegian prize awarded annually by the King of Norway to one or more outstanding mathematicians.

➤ Share in Fields Medals:

- The Fields Medal so far has also been **awarded to only one woman** mathematician, the late Maryam Mirzakhani of Iran, as opposed to 59 men since 1936.
- The Fields Medal is awarded every four years by the International Congress of Mathematicians to recognize outstanding mathematical achievement for existing work and for the promise of future achievement.

National Scenario

➤ Women in STEM:

- The female enrolment in science streams rose from 2010-11 to 2015-16.
- According to the **NITI Aayog** report in 2015-16, **9.3% of female students in Undergraduate (UG) courses were enrolled in engineering, compared to 15.6% across genders**. Conversely, 4.3% of female students were enrolled in medical science, compared to 3.3% across genders.

➤ Research as a Profession:

- Only 13.9% of women work as researchers in India. At master and doctoral levels, female enrolment remains lower than overall enrolment.

➤ Presence at Technical Professions:

- The NITI Aayog report has also found that in over 620 institutes and universities, including IITs, NITs,

Note:



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ISRO, and DRDO, the presence of women was 20.0% among Scientific and Administrative Staff, 28.7% among Post-Doctoral Fellows, and 33.5% among PhD scholars.

Way Forward

- Interventions geared to popularising subjects such as **Engineering** or the Physical sciences or Chemistry among **female students** at the school level in both urban and rural areas might be helpful in changing mind-set.
- Gender equality in science and technical fields is necessary to achieve **Sustainable Development Goal (SDG) 5** worldwide.
 - SDG 5 aims for gender equality worldwide.

2 Billion Kilometres to Safety Campaign

The **United Nations High Commissioner for Refugees (UNHCR)** has launched a global campaign calling on people all over the world to cover the distance travelled by refugees each year.

- UNHCR traced the journeys of refugees around the world and calculated that collectively, **people forced to flee travel approximately two billion kilometres** every year to reach the first point of safety.
 - In 2016, Syrian refugees travelled more than 240 kilometres to reach Turkey. South Sudanese refugees travelled more than 640 kilometres to reach Kenya and **Rohingya refugees in Myanmar** travelled approximately 80 kilometres to reach Bangladesh.
- The 2 Billion Kilometres to Safety campaign invites people to act in solidarity and **run, walk or cycle to achieve a cumulative total of two billion kilometres**.

Refugees

- Refugees are **people forced to flee to another country because of war or persecution**.
- The majority of refugees stay close to home with most fleeing to neighbouring countries. Only 1% of them are ever resettled in third countries. **Turkey hosts the maximum number of refugees** followed by Pakistan, Uganda and Lebanon.

United Nations High Commissioner for Refugees

- United Nations High Commissioner for Refugees (UNHCR) 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 in **Geneva, Switzerland**.

Poor Compensation Rate for Trafficking Survivors

Why in News

Based on the data of the **National Crime Records Bureau (NCRB)**, a non-profit organisation (Sanjog) released a report on compensation awarded to survivors of trafficking the country, which highlighted the poor status of compensation awarded during 2011- 2019.

- NCRB reports put the **total number of cases of human trafficking at 35,983**, but **only 82 (0.2%) victims** were awarded **compensation**.
- The latest report also reflects the **number of trafficking survivors who applied for the victim compensation scheme** to their respective legal services authority.
 - While 107 individuals applied under the scheme, in 102 cases between 2011 and 2019, courts directed the authorities to release compensation.

Background

- Following the national outrage over the Nirbhaya gang-rape case (2012), the government had announced **₹1,000 crore fund** to be used to combat sexual violence against persons – children or adults.
 - The **Nirbhaya Fund** Framework provides for a non-lapsable corpus fund for the safety and security of women.
 - It is administered by the Department of Economic Affairs (DEA) of the Ministry of Finance.
 - It is being used in the Central Victim Compensation Fund (CVCF).
- The amount of compensation to victims of trafficking varied from State to State, hence the Supreme Court had directed the **National Legal Services Authority (NALSA)** to frame a **standardised victim compensation scheme**.

Note:



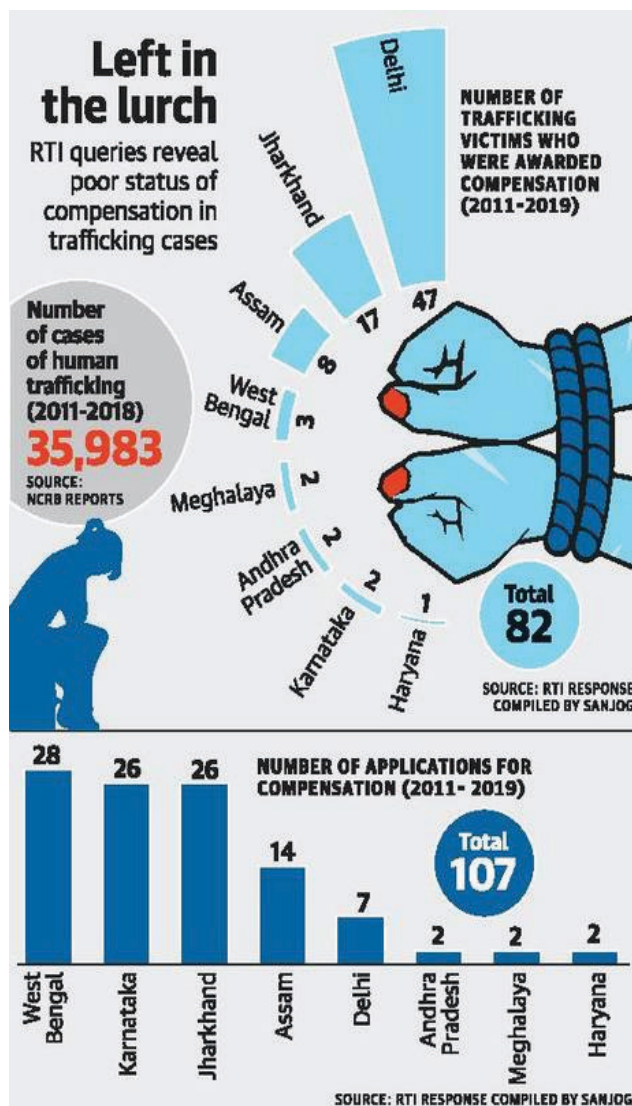
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- The Central Victim Compensation Fund has been formed in pursuance to the Section 357-A of Code of Criminal Procedure (CrPC).
- Section 357A states that every State Government in coordination with the Central Government shall prepare a scheme for providing funds for the purpose of compensation to the victim of crime.
- The Fund has been introduced to enable support to victims of rape, acid attacks, human trafficking and women killed or injured in the cross border firing.
 - Compensation for Civilian victims of cross border firing, shelling or IED explosion, terrorism and Maoist violence
- So far 24 states and 7 UTs have formulated the Victim Compensation Scheme.

Reasons Behind the Low Rate of Compensation

- A lack of information provided to survivors on victim compensation.
- Low investment on part of legal aid.
- **Role of Legal Services Authorities:** The report suggests grave inconsistencies on the part of legal services authorities.
 - There is a **lack of initiative** on the part of legal services authorities.
 - Manipur's 2019 victim compensation scheme does not even have an entry in the schedule corresponding to human trafficking.
 - **District Legal Service Authority (DLSA) and State Legal Services Authority (SLSA)**'s response to the claims has been slow, and they hold the survivors' claims with suspicion – often putting the burden of proof on the survivors themselves.

- **Multiple Agencies:** From their rescue till rehabilitation, the survivors are in touch with multiple agencies but none of them takes any steps to help them get compensation.



Note:

Security

Highlights

- INS Karanj
- DefExpo 2020
- Exercise AJEYA WARRIOR-2020

INS Karanj

Why in News

The **third Scorpene submarine, Karanj**, will be delivered to the Indian Navy by December 2020.

- INS Karanj is a **part of Project-75** and was **launched in January 2018**. It is currently in advanced stages of sea trials.

Project-75

- It is a programme by the Indian Navy that entails **building six Scorpene-Class attack submarines**.
- The programme has been undertaken with **transfer of technology from French company Naval Group (formerly known as DCNS)** at the Mazagon Dock Limited (MDL).
- The submarines in the P75 Scorpene-Class are powered by the **conventional diesel-electric propulsion system**.
- The **first Scorpene submarine, Kalvari**, was commissioned in 2017 and it would go for a normal refit after six years in 2023, during which time the **Air-Independent Propulsion (AIP) would be installed**.
 - AIP technology is being **developed by the Defence**



Research and Development Organisation (DRDO)

to provide submarines long-range and extended endurance capabilities undersea.

- **Second Scorpene Khanderi** was inducted in September 2019.
- The **remaining submarines (Vela, Vagir and Vagsheer)** in the series are in advanced stages of manufacturing and trials.

Air-Independent Propulsion

- Conventional submarines use a diesel-electric engine, and must surface for oxygen required for fuel combustion. If fitted with an Air Independent Propulsion (AIP) system, the **submarine needs to take in oxygen less frequently**.
- While many naval powers, including India, have acquired **nuclear-powered submarines** for deep-sea operations, conventional diesel-electric variants are considered useful for coastal defence. The latter are optimised for stealth, and their weapons and sensors provide for effective operations close to the shore.
- Diesel-electric submarines require them to come to the surface frequently to charge their batteries, their underwater endurance time is less. **'Air-independent' propulsion technology helps to make the diesel generator less dependent on surface air.**

DefExpo 2020

Why in News

DefExpo, a flagship **biennial event** of the **Ministry of Defence**, is being held for the first time in Lucknow (Uttar Pradesh) from 5th to 9th February 2020.

- This is the **11th edition** of DefExpo - a mega defence exhibition. DefExpo is one of the largest events of its kind.

Note:

- The 10th edition of the event was held at Chennai (Tamil Nadu) in 2018.
- The main **theme** of the DefExpo India- 2020 is '**India: The Emerging Defence Manufacturing Hub**' and the focus will be on '**Digital Transformation of Defence**'.
- DefExpo-2020 promises to bring new technologies, technological solutions, where defence manufacturing companies from India and abroad showcase their products and services in defence arena, on a single platform. This provides Indian defence industry an opportunity to promote its export potential.
- The **fifth India Russia Military Industry Conference** will be held on the sidelines of the event.
 - The Conference primarily aims at **addressing issues related to life-cycle support and maintenance of major Russian-origin equipment/platforms** such

as SU-30 MKI aircraft, Mi-17 Helicopters, MiG-29K aircraft, INS Vikramaditya and T-90 tanks.

Exercise AJEYA WARRIOR-2020

- The fifth edition of **India-UK joint military exercise 'Ajeya Warrior'** was conducted at **Salisbury Plains, United Kingdom** from 13th-26th February, 2020.
- The **aim** of this exercise is to conduct army level joint training with emphasis on counter terrorism operations.
- The **exercise is conducted alternatively** in the United Kingdom and India.
- **Other joint exercises between India and UK:**
 - **Navy: Konkan.**
 - **Air Force: Indradhanush.**



Note:



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Miscellaneous

Highlights

- Mukti Caravan
- Agrochemical Spraying through Drones Illegal
- Yaravirus
- Coronavirus Disease Named Covid-19
- BBNL and Dark Fibre
- Apiary on Wheels

Mukti Caravan

Why in News

Mukti Caravan is being run in the **state of Rajasthan**.

- Mukti (liberation) Caravan is a campaign to **raise awareness** about evils like **child trafficking, child labour and child sexual abuse**.
- The reason behind the program: Child trafficking is rampant in India. 60% of the victims of human trafficking are children.
- Mukti Caravan was launched by **Nobel peace laureate Kailash Satyarthi in 1997**.
- Activists, government officials, theatre artists, **National Legal Services Authority** representatives, judiciary and other stakeholders are part of this campaign.
- Street plays, songs, wall art and small group meetings are some activities, among others, to spread awareness about the trafficking of children, child sexual abuse. The discussion will focus on solutions to these evils and laws which can stop them.

Agrochemical Spraying through Drones Illegal

Why in News

Recently, the Union Government has clarified that **drone-spraying** is illegal as per the **Insecticides Act, 1968**.

- This clarification has come after environmentalists highlighted that the **usage of drones for agrochemical spraying** has **increased** and has the potential to create problems.

Key Points

- The **Insecticide Act, 1968** does **not** allow **aerial spraying**. As per its provisions, aerial application of pesticides needs approval or permission from the Central Insecticides Board (CIB).
 - Further, the CIB has not granted any approval or permission in the past for the use of drones to spray pesticides.
- Aerial spraying impacts a larger area while decreasing the efficacy on the target pests.
- Drones and unmanned remote-controlled machines can be harmful tools for spraying chemicals.
 - There is no scientific validity that drones help in precision spraying.
- Adverse weather and wind conditions can result in drifting of the fine hazardous chemical beyond the range of application.
 - Kasargod in Kerala faced the negative consequences of aerial spraying of Endosulfan (a pesticide) for over 25 years.

Central Insecticides Board

- It was established under Section 4 of the Insecticides Act, 1968 and it works under the **Ministry of Agriculture and Farmers' Welfare**.
- It advises the central government and state governments on technical matters arising out of the administration of the act and to carry out the other functions assigned to it. Advice is given on:
 - The risks to human beings or animals involved in the use of insecticides/pesticides and the safety measures necessary to prevent such risk.
 - The manufacturing, sale, storage, transport and distribution of insecticides/pesticides with a view to ensure safety to human beings or animals.

Note:

Kasargod Incident

- Over 20 years of aerial spraying on cashew plantations and on other crops in Kerala left many people especially children with mental and physical disorders like deformities and other health complications.
- The health effects of the chemical include neurotoxicity, late sexual maturity, physical deformities, poisoning, among others.
- Studies established linkages between aerial spraying of the pesticide and the growing health disorders in Kasargod district.
- In 2011, the **Supreme Court** banned its production and distribution of Endosulfan.

Yaravirus**Why in News**

Researchers have discovered an **unusually small virus** in a lake in **Brazil**.

- The virus has been named Yaravirus after 'Yara', a water-queen figure in Brazilian mythology.
- The Yaravirus **infects amoeba** and has genes that have not been described before, something that could challenge how Deoxyribonucleic Acid (DNA) viruses are classified.
 - DNA viruses are classified based on the protein that makes up their shell, or capsid. The Yaravirus' capsid doesn't resemble any previously known protein.
- The Yaravirus does not infect human cells.

Virus

- A virus is a small parasite that cannot reproduce by itself. Once it infects a susceptible cell, however, a virus can direct the cell machinery to produce more viruses.
- Most viruses have either Ribonucleic acid (RNA) or Deoxyribonucleic Acid (DNA) as their genetic material.
- Diseases caused by Virus: HIV/AIDS, smallpox, Ebola, etc.

**Coronavirus
Disease Named Covid-19**

- The **World Health Organisation (WHO)** has named the **new coronavirus** disease, 'Covid-19'.

- The new name is taken from the words "corona", "virus" and "disease", with 2019 representing the year when it emerged (the outbreak was reported to the WHO on 31st December, 2019).
- The WHO wanted to avoid stigmatizing a country or particular group so it chose a name that did not refer to a geographical location, an animal, an individual or a group of people.
- Moreover, the word coronavirus refers to the group of viruses it belongs to rather than the latest strain. The latest strain **has been designated 'Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)'** by the **International Committee on Taxonomy of Viruses**.

BBNL and Dark Fibre**Why in News**

Three major telecom service providers of the country have approached the state-run **Bharat Broadband Network Limited (BBNL)** to use its **dark fibre**. It will help the telecom service providers to cut down on their capital expenditure.

- The unused infrastructure of BBNL will be used to expand the presence in rural India and offer 4G as well as other long-term evolution (LTE) mobile telephony services.

Bharat Broadband Network Limited

- It is a Special Purpose Vehicle set up by the Government of India under the Companies Act, 1956 with an authorized capital of ₹1000 crore.
- It comes under the Ministry of Communications and Information Technology.
- In 2011, it was mandated to create the National Optical Fiber Network (NOFN) in India which was later renamed as the **BharatNet project** in 2015.

BharatNet

- BharatNet is a flagship mission to connect 250,000 gram panchayats with broadband being implemented by Bharat Broadband Network Ltd (BBNL), a special purpose vehicle set up under Department of Telecommunications (DoT) in February 2012.
- National Optical Fibre Network (NOFN) which was launched in October, 2011 was renamed as Bharat Net Project in 2015.

Note:

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.

Apiary on Wheels

Why in News

The **Ministry of Micro, Small and Medium Enterprises** has flagged off '**Apiary on Wheels**'.

- 'Apiary on Wheels' is a unique concept designed by the **Khadi and Village Industries Commission (KVIC)** for the easy **upkeep and migration of Bee Boxes having live Bee colonies**.

- It is a holistic approach to address the challenges faced by the beekeepers. It is designed so as to reduce the labour and cost of maintaining and upkeeping Bee Boxes and live bee colonies across India.
- The KVIC launched **Honey Mission** in 2017 and has been training beekeepers, distributing Bee Boxes and helping rural, educated but unemployed youth to earn extra income through beekeeping activities, at their doorstep.

Khadi and Village Industries Commission

- KVIC is a statutory body established under the Khadi and Village Industries Commission Act, 1956.
- The KVIC is charged with the planning, promotion, organisation and implementation of programmes for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- It functions under the Ministry of Micro, Small and Medium Enterprises.



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Summary

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Summary