



drishti

**Current  
Affairs  
(CONSOLIDATION)**

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# Polity and Governance

## Highlights

- Article 370 and 35(A) Revoked
- Delimitation of Jammu and Kashmir
- The Muslim Women (Protection of Rights on Marriage) Act 2019
- Anti Mob Lynching and Honour Killing Bills Passed
- Increasing the Strength of SC Judges
- Accused Can be Ordered to Give Voice Samples
- Institutions of Eminence Scheme
- Skilling under MGNREGA
- Western Zonal Council
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- SKOCH Governance Gold Award for DAY-NULM
- Shagun: Integrated Online Junction for School Education
- Compulsory Rural Service for Doctors
- San-Sadhan Hackathon
- Mob Lynching

## Article 370 and 35(A) Revoked

On 5<sup>th</sup> of August 2019, the President of India promulgated the **Constitution (Application to Jammu and Kashmir) Order, 2019**.

- The order effectively abrogates the special status accorded to Jammu and Kashmir under the provision of **Article 370** - whereby, provisions of the Constitution which were applicable to other states were not applicable to **Jammu and Kashmir (J&K)**.
- According to the Order, provisions of the **Indian Constitution are now applicable in the State**.
- A separate Bill - the **Jammu and Kashmir Reorganisation Bill 2019** - was introduced to **bifurcate the State into two separate union territories of Jammu and Kashmir (with legislature), and Ladakh (without legislature)**.
- **Jammu and Kashmir Reservation (Second Amendment) Bill, 2019** was also introduced to extend the reservation for **Economically Weaker Sections (EWS)** in educational institutions and government jobs in Jammu and Kashmir.

### History

- J&K acceded to the Dominion of India after the **Instrument of Accession** was signed by Maharaja Hari Singh, the ruler of the princely state of Jammu and Kashmir, on 26 October 1947.
- **Article 370 of the Indian Constitution** provided that only **Articles 1 and 370 itself would apply to J&K**. The

application of other Articles was to be determined by the President in consultation with the government of the state.

- **The Constitution Order of 1950** specified the matters on which the Union Parliament would be competent to make laws for J&K, in concurrence with the Instrument of Accession - accordingly, 38 Subjects from the Union List were added.
- **The Constitution (Application to Jammu and Kashmir) Order, 1954** settled the constitutional relationship of J&K and the Union of India. It made the following provisions:
  - Indian citizenship and all related benefits (fundamental rights) were extended to the '**permanent residents**' of Jammu and Kashmir.
  - **Article 35A** was added to the Constitution (empowering the state legislature to legislate on the privileges of permanent residents with regard to immovable property, settlement in the state and employment)
  - The **jurisdiction** of the Supreme Court of India was extended to the State.
  - Central Government was given the power to **declare a national emergency** in the event of **external aggression**. The power in case of internal disturbances could be exercised only with the concurrence of the State Government.
  - Normalized the financial relations between the Centre and J&K.

Note:



### Article 370 - Features and Provisions

- Present in part XXI of the Indian Constitution, which comprises of **Temporary, Transitional and Special Provisions** with respect to various states of India.
- Forms the basis of the **"Special Status"** of J&K.
- Provides for a **separate Constitution** of J&K.
- Limits the Union Parliament's power to make laws for J&K to those subjects mentioned in the **Instrument of Accession (defense, foreign affairs, and communications)** and others as and when declared by the Presidential Orders with the concurrence of the Government of the State.
- Specified the mechanism by which the Article shall cease to be operative. That is, on the **recommendation of the Constituent Assembly of the State** before the President issues such a notification. However, this provision has been amended by the **Constitution (Application to Jammu and Kashmir) Order, 2019**.

### Was it Temporary

- The Article was introduced to accommodate the apprehensions of Maharaja Hari Singh who would not have acceded to India without certain concessions.
- Territorial integrity and security was of paramount importance to India post-independence. Thus, such a special provision was introduced in the constitution.
- This provision, however, is part of the **"Temporary, Transitional and Special Provisions"** of our constitution.
- Moreover, Article 370 could be interpreted as temporary in the sense that the J&K Constituent Assembly had a right to either modify, delete, or retain it and it decided to retain it.
- Another interpretation was that accession was temporary until a plebiscite.

### Issues in Revoking

- Article 370 is the bedrock of the constitutional relationship between Jammu and Kashmir and the rest of India.
- It has been described as a tunnel through which the Constitution of India is applied to J&K.
- India has used Article 370 at least 45 times to extend provisions of the Indian Constitution to J&K. This is the only way through which, by mere Presidential Orders, India has almost nullified the effect of J&K's special status.

- By the 1954 order, almost the entire Constitution was extended to J&K including most Constitutional amendments.
- However, abrogating the article altogether **may threaten the peace in the state** which is already a hotspot of conflicts and militancy.
- It will completely change the relationship between the state and the rest of India.
- It will also clear the path for **abrogating Article 35A** which would allow Indian citizens to **purchase land and settle permanently** in J&K.
- Thus, the move is bound to have a **significant impact on the demography, culture, and politics of J&K**.

## Delimitation of Jammu and Kashmir

Recently, the **Election Commission of India** held internal discussions on the delimitation of constituencies ahead of elections to the new Union Territory of Jammu and Kashmir.

- According to the Jammu and Kashmir Reorganisation Act, 2019, the number of seats in the Legislative Assembly of J&K would be increased from **107 to 114**.
- In the new Assembly, 24 seats have been kept aside for areas under Pakistan Occupied Kashmir (PoK), which means elections will be **conducted for the remaining 90 seats**.
- The Act also specifies that delimitation will be based on the **2011 census** till 2026.

### Delimitation in India

- Articles **82 and 170 of the Constitution of India** provides for readjustment (Delimitation) and the division of each State into territorial constituencies on the basis of the 2001 census and in such manner as Parliament may, by law, determine.
  - Accordingly, the Parliament has enacted the **Delimitation Commission Acts in 1952, 1962, 1972 and 2002 for this purpose**.
- Further, **Articles 330 and 332 of the Constitution of India** provides for refixing the number of seats reserved for the Scheduled Castes and Scheduled Tribes in the House of the People and State Legislative Assemblies on the basis of the 2001 census.

Note:

### Need for Delimitation

- The **uneven growth of population** in constituencies in different parts of the country as well as within the same state.
- Also, **continuous migration** from one place to another, especially from rural to urban areas have resulted in strikingly different sizes of electoral constituencies even within the same State.
- So, after every census, a readjustment is to be made in:
  - Allocation of seats to the states in the Lok Sabha.
  - Division of each state into territorial constituencies.
- However, the **42<sup>nd</sup> Amendment Act of 1976** froze the allocation of seats to the states in the Lok Sabha and the division of each State into territorial constituencies till the year 2000.
- Further, by the **84<sup>th</sup> Amendment Act of 2001**, this ban on readjustment was extended for another 25 years (i.e., upto year 2026), without affecting the total number of seats based on the **1971 census**.
  - The **84<sup>th</sup> Amendment Act of 2001** also empowered the government to undertake readjustment and rationalisation of territorial constituencies in the states on the basis of the population figures of 1991 census.
  - Later, the **87<sup>th</sup> Amendment Act of 2003** provided for the delimitation of constituencies on the basis of the 2001 census and not 1991 census.
- Delimitation of constituencies is carried out by the **Simple Majority of Parliament**.
- Also, delimitation exercise cannot be **questioned in any court**.

## The Muslim Women (Protection of Rights on Marriage) Act 2019

The Muslim Women (Protection of Rights on Marriage) Bill 2019 after receiving President's nod became an Act.

- The Muslim Women (Protection of Rights on Marriage) Act, 2019 has replaced an **ordinance promulgated on triple talaq**.

### Key Provisions

- **Declaration of Talaq:** The Act makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable by law) and illegal.

- The Act defines talaq as **talaq-e-biddat** or any other similar form of talaq pronounced by a muslim man resulting in instant and irrevocable divorce.
- **Offence and Penalty:** The Act makes a declaration of talaq a **cognizable offence**, punishable with three years of **imprisonment with a fine**.
  - A cognizable offence is one for which a police officer may arrest an accused person without warrant.
- **Cognizable Offence:** The offence will be cognizable only if information relating to the offence is given by married woman (against whom talaq has been declared), or any person related to her by blood or through marriage.
- **Bail:** The Act provides that the Magistrate may grant bail to the accused.
  - The bail may be granted only after hearing the woman (against whom talaq has been pronounced), and after that, if the Magistrate is satisfied that there are reasonable grounds for granting bail.
- **Compounding Offence:** The offence may be compounded (i.e. the parties may arrive at a compromise) by the Magistrate upon the request of the woman (against whom talaq has been declared).
  - The terms and conditions of the compounding of the offence will be determined by the Magistrate.
- **Allowance:** A Muslim woman against whom talaq has been declared, is entitled to seek **subsistence allowance** from her husband for herself and for her dependent children.
  - The amount of the allowance will be determined by the Magistrate.
- **Custody:** A Muslim woman against whom such talaq has been declared, is entitled to seek custody of her minor children.
  - The manner of custody will be determined by the Magistrate.

## Anti Mob Lynching and Honour Killing Bills Passed

The Rajasthan Assembly has passed two separate bills against mob lynching and honour killing to tackle the rising incidents of these offences.

- The bills propose to make offences non-bailable and also impose heavy penalties and punishment, including the death penalty or life imprisonment, in case of honour killings.

Note:



### ***The Rajasthan Protection from Lynching Bill, 2019***

- Makes mob lynching a cognisable, non-bailable and non-compoundable offence, punishable with life imprisonment and a fine up to Rs 5 lakh.
- Definition of Mob and Lynching in the bill:
  - **Mob:** Bill defines the mob as a group of two or more individuals.
    - **Lynching:** It is an act or series of acts of violence or those of aiding, abetting or attempting an act of violence, whether spontaneous or preplanned, by a mob on the grounds of **religion, race, caste, sex, place of birth, language, dietary practices, sexual orientation, political affiliation or ethnicity.**
- **Imprisonment and Fine:** For the offence of an assault by a mob, leading to the victim suffering grievous injuries, the bill provides for jail term up to 10 years and a fine of ₹25,000 to ₹3 lakh and if victims suffer simple injuries, the **imprisonment** is up to seven years and a fine up to ₹1 lakh
- **Conspiracy of Lynching:** For plotting a conspiracy of lynching or aiding, abetting or attempting such an offence, the bill seeks to punish the offenders in the same manner as if he/she actually committed the offence.
- **Prevention of Lynching:** Bill empowers the state police chief to appoint a state coordinator of the rank of Inspector General of Police to prevent the incidents of lynching
- **Other Offences Related to Lynching:** Bill also enlists various other offences related to the lynching such as dissemination of offensive materials, propagation of hostile environment and obstructing legal processes, which would be punishable with jail terms varying from three to five years.
- **Victim Compensation and Rehabilitation:** Bill also stipulates the provision of compensation to victims by the state government as per the Rajasthan Victim Compensation Scheme.
  - It also binds the state government to take necessary measures to rehabilitate the victims of mob lynching, suffering displacement from their native places.

#### ***Need***

- Among the total number of mob lynching cases in India after 2014, **86%** of cases were reported in Rajasthan.

### ***The Anti Honour Killing Bill, 2019***

- **Death Penalty:** As per the provisions of the bill whoever causes the death of a couple or either of them on the basis that their marriage has dishonoured, or brought disrepute to the caste, community or family shall be punished with death, or with imprisonment for life and fine which may extend to 3 lakh.
- **Life Imprisonment and Fine:** If the couple or either of them is **grievously hurt**, the punishment will be from 10 years to imprisonment for life and with fine of maximum ₹3 lakh, whereas in the case of simple injuries punishment will be three to five years imprisonment with fine which may extend to ₹2 lakh.
  - **Sub Divisional Magistrate** or the **District Magistrate** shall receive any request or information from any person or persons seeking protection from any unlawful assembly, or from any other person who is likely to or who have been objecting to any lawful marriage.
- **Unlawful Assembly:** Bill says no person or group shall assemble at any time with the view or intention to deliberate on or condemn any marriage, not prohibited by law, on the basis that such marriage has dishonoured the caste or community tradition or brought disrepute to all or any of the persons forming part of the assembly or the family or the people of the locality concerned.

#### ***Need***

- In past five years in Rajasthan, 71 cases of illegal diktat given by 'Khap Panchayats' (caste councils which function like kangaroo courts) were registered and 10 cases of honour killing occurred in which four men and eight women were killed.
- Honour killing cases have increased in the past few years and have become a hurdle in societal development.

### ***Increasing the Strength of SC Judges***

The Union Cabinet has approved increasing the strength of judges in the Supreme court.

- The Cabinet has taken a decision to **increase the strength (an increase of 10%)** from 31 to 34 judges including the Chief Justice of India (CJI).

Note:

- The Supreme Court (Number of Judges) Act, 1956 was last amended in 2009 to increase the judge's strength from 25 to 31 (including the CJI).
- As per the **Article 124 (1)** of the Constitution of India, the strength of the Supreme Court is fixed by the law made by the Parliament.

### Need

- **Rising Pendency:**
  - Between 2006 and 2018 (up to April), there has been an 8.6% rise in the **pendency** of cases across all courts.
  - Pendency before Supreme Court increased by 36%, High Courts by 17%, and subordinate courts by 7%.
- **Low Disposal Rate:** The disposal rate has stayed between 55% to 59% in the Supreme Court, at 28% in the High Courts, and at 40% in the subordinate courts.

### Constitutional Provisions

- **Article 124 (1)** states that there shall be a Supreme Court of India consisting of a Chief Justice of India and not more than seven other judges, until Parliament by law prescribes a large number.
- **Article 124 (2)** states that every judge of the Supreme Court shall be appointed by the President by warrant through his seal after consultation with the judges of Supreme Court and of the High Courts (in states).
- The **Parliament is competent** to increase the number of judges if it deems necessary.

## Accused Can be Ordered to Give Voice Samples

The Supreme Court has ruled that a **judicial magistrate** can order an accused to give his **voice samples** even **against his consent** in the course of a **criminal investigation**.

- The Supreme Court has issued this order under **Article 142** of the Constitution of India.
- It called upon the Parliament to make requisite changes in the Code of Criminal Procedure and till the time these changes are made, the magistrate will have the power to order the same.
  - The **87<sup>th</sup> Report of the Law Commission of India** describes a voiceprint as a “**visual recording of voice**”. Voiceprints resemble fingerprints, in that each person has a distinctive voice with characteristic features dictated by vocal cavities and articulates.

- In a past judgment, the court said that the making of such far-reaching interpretations in the Criminal Procedure Code – which is silent on whether a court can order a person to give voice sample to police – should be best left to the legislature.
- The court also observed that **the fundamental right to privacy (Article 21)** cannot be construed as absolute and must be bendable towards public interest and welfare.
- The court did not give any direct observation on **Article 20 (3)** of the Constitution which protects an accused from being compelled to be a witness against himself.
  - However, with this order, a person can be compelled to give his voice sample during the criminal investigation.
  - The **Chief Justice** compared a voice sample with other impressions like **specimen handwriting, or impressions of his fingers, palm or foot** collected by police during the investigation. By themselves, these impressions or the handwriting do not incriminate the accused person, or even tend to do so.
  - A voice sample will be taken for comparing it **with other voices** in order to see if they match and are of the same person.

### Article 142

- **Definition:** Article 142 provides **discretionary power** to the Supreme Court as it states that the Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing **complete justice in any cause or matter pending before it**.
- **Constructive Application:** In the early years of the evolution of Article 142, the general public and the lawyers both lauded the Supreme Court for its efforts to bring complete justice to the deprived sections of society or to protect the environment.
  - The **Cleansing of Taj Mahal** and justice to many undertrials is a result of the invocation of this article only.
  - In the **Union Carbide case**, relating to the victims of the Bhopal gas tragedy, the Supreme Court placed itself above the laws made by the **Parliament or the legislatures of the States** by saying that, to do justice, it could easily override the laws.
    - However, in the **Supreme Court Bar Association v. Union of India**, the Supreme Court stated that **Article 142 could not be used to supplant the existing law, but only to supplement it**.

Note:



➤ **Cases of Judicial Overreach:** In recent years, there have been several judgments of the Supreme Court which prove that lately, it has been foraying into areas which had long been forbidden to **the judiciary by the doctrine of 'separation of powers'**, which is part of the **basic structure of the Constitution**. One such example is:

- **The ban on the sale of alcohol along national and state highways:** While the notification by the central government prohibited liquor stores along National Highways only, the Supreme Court put in place a ban on a distance of 500 metres by invoking **Article 142**.
- Additionally, and in the absence of any similar notification by any of the State governments, the court extended the ban to State highways as well.
- Such judgments have created **uncertainty about the discretion** vested in the court to invoke Article 142 where even fundamental rights of individuals are being ignored.

### Way Forward

- **The Supreme Court needs to introspect** on whether the use of Article 142 as an independent source of power should be regulated by strict guidelines.
- Another option is that **all cases invoking Article 142 should be referred to a Constitution Bench of at least five judges** so that this exercise of discretion may be the outcome of five independent judicial minds operating on matters having such far-reaching impact on the lives of people.
- In all cases where the court invokes Article 142, the government should bring out a white paper to study the beneficial as well as the negative effects of the judgment after a period of six months or so from its date.

## Institutions of Eminence Scheme

The **University Grants Commission**, has nominated 20 institutions for **Institutes of Eminence tag (IOE)**.

- Nominations have been made on the recommendations of **Empowered Expert Committee (EEC)** headed by **N Gopalaswami**.
  - Empowered Expert Committee constituted by the **University Grants Commission (UGC)** was

entrusted to conduct the appraisal of applications for shortlisting 20 Institutions of Eminence (10 public and 10 private institutions).

### Objectives

- **Excellence and Innovation:** To provide for higher education as may be deemed fit at post-graduate, graduate and research degree levels.
- **Specialization:** To engage in varied areas of specialization to make distinctive contributions to the objectives of the university education system.
- **Global Rating:** To aim to be rated internationally for its teaching and research-oriented activities, in top hundred Institutions of the world, over time.
- **Quality teaching and Research:** To provide for high quality teaching and research and for the advancement of knowledge and its dissemination.

### Criteria

- **Global/National Ranking:** Only those institutions which have appeared in any of the global/national ranks shall be recommended for the IoE status.
  - **Public institutions** are assessed on the basis of **QS-2020 world rankings**, in case of a tie **QS- 2019 rankings** are used.
  - **Private institutions** are assessed on the basis of **their ranking in the QS India or National Institution Ranking Framework (NIRF)**, the NIRF ranking is to be used as a tie-breaker.
  - Any institution that did not appear in any rankings (QS-2019, QS-2020 and NIRF) will be **excluded completely from the list of IOE tag**.
- **Greenfield Proposals:** Only after exhausting the above criterion, if any slot remains vacant, preference shall be given to yet to be established (Greenfield) proposals.
  - The term **greenfield project** generally refers to the initiation of a project without the need to consider any prior work.
  - The Greenfield Institutions would get 3 year period to establish and operationalise the institution, and thereafter, EEC will consider giving IoE status to such institutions.
  - **Satya Bharti Foundation** (telecom major Airtel's philanthropic arm) became the **second greenfield institution** to be given IoE status, after Reliance's Jio Institute.

Note:

### Benefits

- **Autonomy:** Institutes with IOE tag will be given greater autonomy and freedom to decide fees, course durations and governance structures.
- **Grant:** The public institutions under IOE tag will receive a government grant of ₹1,000 crore, while the private institutions will not get any funding under the scheme.

## Skilling under MGNREGA

The central government is working on an initiative to root out 10-12.5 million families out of poverty and include them within the ambit of the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**, by imparting skills and creating durable assets.

### Background

- Under the **Livelihoods in Full Employment (LIFE) project** of the MGNREGA, started in 2015-16, the government provides training to eligible workers in the age group of 15-35 years. However, this is applicable to only those MGNREGA workers, who have completed at least 100 days of work.
- In a mid-term review of the initiative, a lot of states complained of slow progress.
  - States also complain of **absence of stipends** (for loss of wages due to engagement in skilling),
  - Candidates ineligibility for skilling due to the age criterion, was also one of the complaints from the states.

### New Initiative Features

- The government is planning to **spend Rs 500-1,000 crore every year** on this and it will not be limited to those who completed 100 days of work under the MGNREGA.
- As part of the proposed initiative, each year **one member of 400,000-500,000 families will get training for 30-45 days**.
- **Stipends** will be provided for compensation of any loss in wages that may arise.
- Training will be provided within the mandated 100 days (of MGNREGA) and conducted under skill-development initiatives such as the **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)**, self-employment programmes run by banks, and the **National Rural Livelihood Mission (NRLM)**.

- The workers will be working under **Krishi Vigyan Kendras (KVKs)** and trained in grafting, horticulture, growing fruit-bearing crops, etc.

### Livelihoods in Full Employment (LIFE) Project

- The **Ministry of Rural Development** has formulated a project for '**Livelihoods in Full Employment**' under Mahatma Gandhi National Rural Employment Guarantee Act (Project LIFE-MGNREGA) in April 2015.
- The project aims to **promote self reliance** and improving the skill base of the **MGNREGA** workers, and thereby improving the livelihood of the workers, so that they can improve their current status of partial employment to full employment.

### Deen Dayal Upadhyaya

#### Grameen Kaushalya Yojana (DDU-GKY)

- The **Ministry of Rural Development** announced the **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) Antyodaya Diwas**, on 25<sup>th</sup> September 2014.
- It is the demand based, skill training initiative, with a promise of placements, under the **National Rural Livelihood Mission (NRLM)**.
- DDU-GKY is uniquely focused on youth between the ages of 15 and 35 years belonging to poor families.

### Krishi Vigyan Kendras (KVKs)

- KVK is an integral part of the **National Agricultural Research System (NARS)**, which aims at assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations.
- KVKs have been functioning as **Knowledge and Resource Centre of agricultural technology** supporting initiatives of public as well as private sector for improving the agricultural economy of the district and are linking the NARS with extension system and farmers.
- The KVK scheme is 100% financed by the Government of India.
- KVKs are sanctioned to **Agricultural Universities, ICAR institutes, related Government Departments and Non Government Organizations (NGOs)** working in Agriculture.
- The first KVK was established in 1974 at Puducherry.

Note:



## Western Zonal Council

The 24<sup>th</sup> meeting of the Western Zonal Council, to be chaired by Union Home Minister, will be held in **Panjim (Goa) on August 22, 2019**.

- Issues such as- Speedy investigations into sexual assault cases, a comprehensive security plan and improved security at railway stations etc will be among some of the primary agendas of the meeting.
- The council, functioning under the aegis of the **Ministry of Home Affairs (MHA)**'s Inter-State Council Secretariat, comprises **Goa, Gujarat, Maharashtra, and the Union Territories of Daman and Diu and Dadra and Nagar Haveli**.
- The previous meeting of the council was chaired by the then Home Minister in April, 2018 at Gandhinagar (Gujrat).

### Zonal Council

- The **Zonal Councils** are the **statutory (and not the constitutional) bodies**. They are established by an Act of the Parliament, that is, **States Reorganisation Act of 1956**.
- The act divided the country into **five zones (Northern, Central, Eastern, Western and Southern)** and provided a zonal council for each zone.
- While forming these zones, several factors have been taken into account which include: the **natural divisions** of the country, the river systems and means of communication, the **cultural and linguistic affinity**, and the requirements of **economic development, security and law and order**.
- Each zonal council consists of the following members:
  - Home Minister of Central government.
  - Chief Ministers of all the States in the zone.
  - Two other ministers from each state in the zone.
  - Administrator of each union territory in the zone
- In addition to the above Zonal Councils, a **North-Eastern Council** was created by a separate Act of Parliament—the **North-Eastern Council Act of 1971**.
  - Its members include **Assam, Manipur, Mizoram, Arunachal Pradesh, Nagaland, Meghalaya, Tripura and Sikkim**.
- These are **advisory bodies** that will discuss and make recommendations with regard to any matter of common interest, in the field of economic and social planning, between the Centre and States.

## City Knowledge and Innovation Clusters

Six cities — **Bhubaneswar, Chandigarh, Jodhpur, Pune, Ahmedabad and Hyderabad** will be developed as City Knowledge and Innovation Clusters.

- The project is led by the office of the **Principal Scientific Advisor (PSA)** on a priority basis.
- These clusters will **connect existing research and knowledge setups at institutions** and various industries that exist in the city or state.
  - A huge amount of knowledge and fiscal resources exist within a city or region. If these independent entities **connect through a virtual platform**, optimisation of resources can be achieved and various sectors will be able to work in partnership.
- The project will **assist industries in gaining access** to existing technology, and help academic institutions commercialise this technology.
- Under the project each city cluster will be have a **nodal office** headed by a **Chief Executive Officer (CEO)**, who will be selected by the stakeholders. Government officials, such as municipal commissioners, will also be a part of the city cluster.
  - The nodal offices will be **run and funded by the PSA's office** for the first three years, within which time the stakeholders will have to look at how to make the initiative independent of government funding.
- The aim of the project is that over a period of time, **city clusters will be able to bid for international projects** and seek international funding from organisations like the **World Bank**.
- To enhance collaboration of research and facilities in the clusters, the government is also planning to set up **I-Stemm** (a web portal which will function as a nationwide inventory of all public funded institutions as well as all scientific instruments and infrastructure).
- It can be noted that, Chandigarh has already experimented with a version of the project called **Chandigarh Region Innovation Knowledge Cluster (CRIKC)** where the city has opened its laboratories to students of Panjab University. The Chandigarh model has done well and the government is pondering over extending it to the rest of the state

Note:

## North East Rural Livelihood Project

The North East Rural Livelihood Project (NERLP) has empowered the poor and improved the lives of people in about 3,00,000 rural households in Mizoram, Nagaland, Tripura and Sikkim.

### About North East Rural Livelihood Project

- Launched in 2012, the **NERLP** is aided by the **World Bank**, multi-state livelihood ₹683 crore project under the **Ministry of Development of North Eastern Region (DoNER)**.
- The project has been implemented in 11 districts of **Mizoram, Nagaland, Tripura and Sikkim** with an aim to improve rural livelihoods especially that of women, unemployed youth and the most disadvantaged.
- There are **four components** to the Project:
  - Social empowerment
  - Economic empowerment
  - Partnership development
  - Project management
- The specific **project objectives** are to:
  - Create sustainable community institutions around women **Self-Help Groups (SHGs)**, Youth Groups of men and women (YG) and Community Development Groups (CDG).
  - Build capacity of community institutions for self governance, bottom up planning and democratic functioning with transparency and accountability.
  - Increasing livelihood opportunities.
  - Developing partnership of community institutions for natural resource management, microfinance, market linkages and sectoral economic services.
- The project also works in partnerships with expert organizations to focus on **cluster development through value chain**.

### Outcomes

- It has **impacted the lives of about 18 lakh population**, with creation of common economic assets (including rural infrastructure) worth around total Rs. 136 crores.
- Under the project, 10,462 **boys and girls have been trained in various job skills** and 5,494 of them are employed as of now.

- Various activities have been undertaken by CDGs such as reclamation of wasteland, construction of check-dams, plantation, horticulture projects etc.
- Livelihood activities pursued by SHG members have increased considerably, leading to **increase in family incomes**.
- **Women have become more knowledgeable**, expressive and display better leadership qualities.

## SKOCH Governance Gold Award for DAY-NULM

The **Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)** has been conferred the prestigious **SKOCH Governance Gold Award** for its **Portal for Affordable Credit and Interest Subvention Access (PAISA)**.

- **DAY-NULM is a flagship mission under the Ministry of Housing and Urban Affairs. Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)**.
- The mission was launched in 2014 and is being implemented by the **Urban Ministry of Housing & Poverty Alleviation**.
- It aims to uplift urban poor by providing livelihood opportunities through skill development.
- It is **Centrally Sponsored Scheme**.
  - Funding will be shared between the **Centre and the States** in the **ratio of 75:25**. For **North Eastern and Special Category** – the ratio will be 90:10.
- Its intended beneficiaries are urban poor (street vendors, slum dwellers, homeless, rag pickers), unemployed and differently-abled.
  - **Skills Training and Employment:** It provides for the development of vendor markets and also the promotion of skills for the aforementioned parties by setting up infrastructure and special projects for rag picker and differently-abled etc.
    - It provides for employment through **Skill Training and Placement**, through City Livelihood Centres, to reduce poverty and vulnerability.
    - It also provides subsidy to urban poor i.e. interest subsidy of 5% – 7% for setting up individual micro-enterprises with the loan of up to 2 lakhs and for group enterprises with a loan limit of up to Rs. 10 lakhs.

Note:



- **Self-Help Groups:** It also provides **social mobilization and institution** development through the formation of **Self-Help Groups (SHG)** for training members, initial support of Rs. 10,000 is given to each group.
- **Shelters:** It fully funds the cost of **construction of shelters for the urban homeless.**

### **Portal for Affordable Credit and Interest Subvention Access (PAiSA)**

- It is a centralized IT platform which simplifies and streamlines the release of **interest subvention** under the DAY-NULM.
- It offers end to end online solution for processing, payment, monitoring and tracking of interest subvention claims from banks, on a monthly basis.
- The portal has been designed and developed by the **Allahabad Bank.**

#### **SKOCH Awards**

- These awards were given in 2003, for the first time in recognition of **people, projects and institutions** that go the extra mile to make India a better nation.
- It recognises the best of efforts in the areas of digital, financial and social inclusion, governance, inclusive growth, excellence in technology and applications, change management, corporate leadership, corporate governance, citizen service delivery, capacity building and empowerment.

## **Shagun: Integrated Online Junction for School Education**

The Union Human Resource Development Minister has launched **one of the world's largest Integrated Online Junction for School Education 'Shagun'**.

- It is an **online junction of different websites and portals** at a single platform, to improve the accessibility of information relating to schools.
- It will ensure a **holistic approach to transforming the education sector.**

### **Shagun**

- It is an initiative to improve school education system by creating a junction of all online portals and websites relating to various activities of the Department of School Education and Literacy in the Government of India and to be applied in all States and Union Territories.

- The term 'Shagun' is coined from two different words - '**Shala**' meaning **Schools** and '**Gunvatta**' meaning **Quality.**
- The portal seeks to provide an effective feedback mechanism, which will increase public participation and ensure accountability and transparency.
- It also provides vital information relating to the availability of nearby schools, navigable distance vis-a-vis aerial distance between schools.

### **Integrated National School Education Treasury**

- Union Human Resource Development Minister has also announced the setting up of the **Integrated National School Education Treasury (INSET).**
- It will envisage a fully integrated, accessible and seamless information network for students, teachers, and schools in the country.
- The **main focus of INSET** will be on the following areas:
  - Reinforcing and cleaning the data of the Integrated Online Junction through feedback from Stakeholders.
  - Ensuring full interoperability among the websites, portals and applications which are already hosted in the junction.
  - Creating high-quality e-contents, including quizzes and puzzles to enhance learning and providing aids for teachers for creative classroom interactions.
  - Using artificial intelligence and deep machine learning in a variety of ways to enhance the quality of school education including for designing evidence-based inventions.

## **Compulsory Rural Service for Doctors**

The Supreme Court has suggested the Union Government and the **Medical Council of India** to have a uniform policy regarding the compulsory service to be rendered by the doctors who are trained in government institutions.

- The **Association of Medical Super Speciality Aspirants and Residents and others** had challenged the state government's regulations that imposed a condition of **compulsory service** for a fixed period with the state.
- Doctors complained that such a condition violated the **right of an individual** to carry on his profession, amounted to '**forced labour**' in violation of their constitutional right and would impede their career growth.

Note:

- However, the **Supreme Court** ruled that doctors across the country are bound by the compulsory bonds executed by them at the time of their admission in post-graduate and super-speciality medical courses.
- The SC noted that huge infrastructure has to be developed and maintained, for running medical colleges with post-graduate and super-speciality courses. However, the fees charged from students is meagre in comparison to private medical colleges.
- Moreover, reasonable stipend is also paid to these doctors.
- It affirmed policies of states of Andhra Pradesh, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana and West Bengal.
- **Compulsory Bonds:** It binds doctors with conditions to serve in their respective states for a fixed period, in rural areas. The doctors' original mark-sheets, certificates and other documents are usually retained by the state authorities, after the completion of speciality courses.
- **Compulsory service** is in the **larger public interest** and beneficial for **deprived sections of society**, the top court ruled in favour of the policy to have compulsory bonds to be executed on the doctors before their admissions to PG and super speciality courses.

### ***Need of Compulsory Bonds***

- There is a need to provide healthcare to people and due to the scarcity of super specialists in their states, it is not arbitrary to utilise the services of doctors who were government beneficiaries.
- The state governments have introduced compulsory service bonds to protect the fundamental right of the deprived sections of society guaranteed to them under **Article 21 of the Constitution of India**.

### ***Violation of Fundamental Right***

- The appellants contended that their **rights guaranteed under Article 21** of the Constitution of India have been violated.
  - The SC rejected this argument on the grounds that, while balancing **communitarian dignity** vis-à-vis the dignity of private individuals, the scales must tilt in favour of communitarian dignity.

## **San-Sadhan Hackathon**

The government has invited applications for its latest initiative under the **Swachh Bharat Mission**, called the '**San-Sadhan**' Hackathon.

- The initiative aims to ease lives of **Divyangjan** by making toilets smarter, more accessible, and easier to use.
- It is being jointly Organized by:
  - **Ministry of Jal Shakti**
  - Department of Empowerment of Persons with Disabilities
  - **Atal Innovation Mission, NITI Aayog**
  - Bill & Melinda Gates Foundation
  - 91 spring board.
- The **Objective of San-Sadhan Hackathon** are:
  - Affordable, compact, flexible to use & designed in a way so as to suit variable area requirements.
  - Demands of different disabilities, age groups, genders and cultures have to be kept in mind.
  - Specifically, issues of wheelchair users, amputees, visually impaired and conditionally disabled (person with fracture, pregnant women, lactating mothers, elderlies etc.), need to be addressed.
- The solution could be developed for any one of the following categories:
  - Rural Individual Use Toilet
  - Rural Community Use Toilet
  - Urban Individual Use Toilet
  - Urban Community Use Toilet
- As per the **2011 census, 2.68 crore people** in the country fall under the category of 'Divyangs'.

### ***Swachh Bharat Abhiyan***

- The **Swachh Bharat Abhiyan (SBA)** or **Swachh Bharat Mission (SBM)** was launched on October 2, the **birth anniversary of Mahatma Gandhi in 2014**.
- It aims to clean up the streets, roads and infrastructure of India's cities, towns, and rural areas and achieve an open-defecation free India by October 2, 2019, the 150th birth anniversary of Mahatma Gandhi.
- Also aims to build 90 million rural toilets in the country.
- Further, the mission will also help India meet the **Sustainable Development Goal-6 (SDG 6)**, as established by the UN in 2015.

Note:

### Other Initiatives Related to Divyangjan

- Recently, the second "**Disability Summit, 2019**" took place in **Buenos Aires, Argentina** with the hope of achieving real change for people with disabilities.
- The **United Nations Convention on the Rights of Persons with Disabilities (UNCPRD)** is a comprehensive human rights convention and international development tool and is at the heart of the disability rights movement.
- India had enacted the **Rights of Persons with Disabilities Act, 2016**.
- **The international day of persons with disabilities** is observed every year on 3<sup>rd</sup> December.
- Recently, the **Ministry of Social Justice and Empowerment** organised Regional Conference on "**Deendayal Disabled Rehabilitation Scheme (DDRS)**" in Mumbai.
- The **Election Commission of India (ECI)** launched **Accessible Elections initiative** in Lok Sabha Election-2019 to make the election process more participative and inclusive.
- Recently, the Ministry of Social Justice and Empowerment entered into the Guinness Book of **World Records for implanting 'Modern Artificial Limbs (Legs)'** on 260 Divyangjans within eight hours.

### Mob Lynching

The **West Bengal Assembly** has passed a bill to prevent and punish mob assaults and lynching.

- The **West Bengal (Prevention of Lynching) Bill, 2019** provides for three years to life imprisonment for the crime of causing injuries to a person and capital punishment or rigorous life imprisonment for those causing death.
- Recently, **Rajasthan also passed an anti-lynching bill**.
- **Manipur was the first state** to pass a law against lynching.
- In 2018, the Supreme Court had also **issued guidelines to curb lynching**.

### The Supreme Court's Guidelines on Preventing Mob Lynching:

- The state governments shall designate a senior police officer in each district for taking measures to prevent incidents of mob violence and lynching.
- The state governments shall immediately identify districts, sub-divisions and villages where instances of lynching and mob violence have been reported in the recent past.
- The nodal officers shall bring to the notice of the Director General of Police (DGP) any inter-district co-ordination issues for devising a strategy to tackle lynching and mob violence-related issues.
- It shall be the duty of every police officer to cause a mob to disperse, which, in his opinion, has a tendency to cause violence in the disguise of vigilantism or otherwise.
- The Central and the state governments should broadcast on radio and television and other media platforms including the official websites that lynching and mob violence of any kind shall invite serious consequence under the law.
- Curb and stop the dissemination of irresponsible and explosive messages, videos and other material on various social media platforms which have a tendency to incite mob violence. Register FIR, under relevant provisions of law against persons who disseminate such messages.
- State governments shall prepare a lynching/mob violence victim compensation scheme.
- Ensure that there is no further harassment of the family members of the victims.
- If a police officer or an officer of the district administration fails to do his/her duty, the same will be considered as an act of deliberate negligence for which an appropriate action must be taken against him/her.



Note:

# Economic Scenario

## Highlights

- Cabinet Approves Nutrient Based Subsidy Rates
- Atal Community Innovation Centre
- WorldSkills International Competition 2019
- Flipkart Samarth
- SANKALP Scheme
- Pathamadai Silk Mat
- Periodic Labour Force Survey (PLFS)
- Aquaponics
- National Time Release Study
- India: Second-largest Scrap Importer
- Changes in the Prevention of Money Laundering Act
- Injeti Srinivas Committee Report on CSR
- SUPRA Scheme
- 'Farm in' Expenditure
- Sabka Vishwas
- Tech-Saksham
- Auto Trigger Mechanism in RCEP
- NDB to Tap Indian Offshore Market
- World's First Facial Biometric Seafarer Identity Document
- Decriminalisation of CSR Violation
- Revised FDI Norms
- 5<sup>th</sup> Aqua Aquaria India 2019

## Cabinet Approves Nutrient Based Subsidy Rates

The **Cabinet Committee on Economic Affairs (CCEA)** has approved the proposal of the **Department of Fertilizers** for fixation of NBS rates for **Phosphatic and Potassic (P&K) Fertilizers** for the year 2019-20.

- The approved rates for NBS will be Rs 18.90 per kg for N (Nitrogen), Rs 15.21 per kg for P (Phosphorus), Rs 11.12 per kg for K (Potash) and Rs 3.56 per kg for S (Sulphur).
- The expected expenditure for release of subsidy on P&K Fertilizers during 2019-20, will be Rs. 22875.50 crore.

### Cabinet Committee on Economic Affairs

- **Chaired by the Prime Minister**, CCEA lays down the priorities for public sector investment and considers proposals for investment of not less than Rs. 3 Billion, at present, which is revised from time to time.
- It has a mandate to review economic trends as well as the problems and prospects, on a regular basis, with a view to evolve a consistent and integrated economic policy framework for the country.
- It also directs and coordinates all policies and activities in the economic field including **foreign investment**.

### Background

- Government provides fertilizers, Urea and 21 grades of P&K fertilizers to farmers at subsidized prices.
- In accordance to its **farmer friendly approach**, the Govt is committed to ensure the availability of P&K fertilizers to farmers at affordable prices.
- The subsidy on P&K fertilizers is being governed by NBS Scheme from 2010.

### The Nutrient Based Subsidy (NBS) Scheme

- It is being implemented from April 2010 by the Department of Fertilizers, Ministry of Chemicals & Fertilizers.
- Under NBS, a fixed amount of subsidy decided on an annual basis, is provided on each grade of subsidized Phosphatic & Potassic (P&K) fertilizers depending on its nutrient content.

### NBS Analysis

- The NBS scheme, was sought to **deregulate subsidy on non-urea fertilizers** and expected to reduce the subsidy burden substantially.
- While the NBS certainly did not lead to any decline in subsidy on fertilizer, it did lead to worsening of soil quality, along with shortages and price increases all three types of major nutrients, namely Nitrogenous, Phosphoric and Potassic.

Note:

- An undesirable outcome has been the change in fertilizer mix. As against the recommended Nitrogen (N): Phosphorous (P): Potassium (K) ratio of 4:2:1, the NPK ratio in 2013-14 was 8.2:3.2:1.
- The **environmental damage** caused by the inappropriate use of fertilizers, is certainly a matter of serious concern in many states.
- Considering that fertilizer subsidy is the **second-biggest subsidy after food subsidy**, the inaction on the part of the government might adversely affect fiscal health as well as soil health of the country.
- Since fertilizer prices follow the trend in international petroleum prices, the only way to reduce the subsidy bill is to **reduce the dependence on imports and increase domestic production**.
- While **rationalizing fertilizer subsidy** across nutrients may be the short-term and immediate solution to the problem, the need of the hour is to have a policy framework that incentivizes domestic production of fertilizers.
- The bigger challenge is to **change the pattern of fertilizer use**. This not only involves **revamping and re-energizing the extension services** but also changing the NBS suitably to remove the price distortion caused by it.

## Atal Community Innovation Centre

The Union Minister of Petroleum & Natural Gas and Steel inaugurated the **Atal Community Innovation Centre (ACIC)** program, a new initiative under **Atal Innovation Mission (AIM)**.

- The purpose of ACIC, is to enable establishment of **socially inclusive innovation ecosystem** as well as to encourage the **equitable distribution** of necessary infrastructure by encouraging innovation across the country.
- The aim is to not only **encourage the spirit of innovation** in the country's specific areas that lack the required infrastructure, but also facilitate innovation ecosystem.
- **Coverage:** In order to provide an environment conducive to support innovators across unserved/ regions in an equitable manner, the desired applicant for establishment of ACICs should be from the following focus areas:
  - Tier-2, Tier-3 cities, Tribal areas, Rural areas
  - **Aspirational districts**, North East (NE) region and cities of Jammu & Kashmir (J&K).
  - Smart Cities identified by Government of India.
  - Unserved/ areas of Tier-1 / Metro cities.
- **Eligibility under the Program**
  - The eligible academic applicants are **University Grants Commission (UGC)** and the **All India Council for Technical Education (AICTE)** affiliated Universities/ Colleges, educational institutions like ITIs & other technical diploma colleges.
  - The eligible non-academic applicants are voluntary and other organizations having good experience and exposure in awareness and promotion of Science and Technology in the country.
- **Finance Mechanism:**
  - Atal Innovation Mission in its ACIC program will consider applications for the grant in-aid support up to Rs. 2.5 Crore in multiple over a maximum period of 5 years. This support would cover capital and operational expenditure of the proposed ACIC up to 50%, of the total project cost. The remaining contribution has to be arranged by applicant.
  - An important objective behind establishment of ACIC, is to evolve a **Public Private Partnership (PPP) model** with participation from the **Corporate Social Responsibility (CSR) funds** or other funding sources to support community education and build the innovation ecosystem.
- **Expected function outcome of the ACIC**
  - Build capacity of the potential innovators through community engagement in innovation related events.
  - Conduct events like Ideathons to encourage scouting solutions for addressing community challenges .
  - Provide training and mentorship to entrepreneurs to groom their capacity to innovate.
  - Assist the potential startups in unserved and underserved regions for creating a sustainable, scalable & profitable business model.
- **Benefits:**
  - It will help in providing solutions to the problems that India is facing such as pollution, high fossil fuel import bill etc.
  - It will play a major role towards establishing India as **Innovation and Technology led Start-up**

Note:



nation and improve the ranking of India in [Global Innovation Index](#).

## WorldSkills International Competition 2019

The **Ministry of Skill Development & Entrepreneurship (MSDE)** has announced the 48-member group which will represent India at the **WorldSkills International Competition 2019**.

- The WorldSkills International is a not for profit membership association open to agencies or bodies which have a responsibility for promoting vocational education and training in their respective countries/regions. The organization is registered in Amsterdam, Netherlands.
- The WorldSkills International Competition is a biennial event and the biggest showcase of skills excellence in the world.
  - Also referred to as the '**Olympics for Skills**', the event is scheduled in **Kazan, Russia** from 22<sup>nd</sup> to 27<sup>th</sup> August 2019.
- More than 1,500 competitors from 60 countries will compete in 55 skill competitions at this mega event. India will participate in 44 skills including mobile robotics, prototype modeling, hairdressing, baking, confectionery & patisserie, welding, bricklaying, car painting, floristry among others.
- **National Skill Development Corporation (NSDC)** under the aegis of **MSDE** has been leading India's delegation at the event since 2011.
- During the **last edition of the event at Abu Dhabi** in 2017, India won one silver, one bronze and nine medallions of excellence. India also finished at 19th out of 56 countries which participated at the event, making it India's best performance since its participation at this event.
- With the **sixth-largest contingent** at WorldSkills this year, Team India aspires to improve on its performance from the last competition and win laurels for the country.

## Flipkart Samarth

Indian **E-commerce** company Flipkart has launched "**Flipkart Samarth**" initiative to bring indigenous weavers, artisans and makers of handicrafts on its online platform.

- Flipkart Samarth will support such artisans, weavers, etc by on-boarding and helping them in the process of selling their products on the internet.
- The initiatives and benefits under Flipkart Samarth include dedicated support for onboarding, cataloguing, account management, business insights, dedicated seller support, reduced commission where eligible, and warehousing support.
- 'Flipkart Samarth' will leverage **internet usage** in rural India to boost entrepreneurship.
- Flipkart Samarth will work closely with reputed NGOs, Government bodies and livelihood missions to reach a large number of rural entrepreneurs, with a special focus on women-led enterprises, differently abled entrepreneurs, artisans, and weavers, who often face obstacles such as lack of access to working capital, poor infrastructure, and inadequate training.
- Earlier, the **Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)** and e-commerce giant Amazon have signed an agreement for selling tribal products on Amazon's global marketplace.

## SANKALP Scheme

Recently the **Ministry of Skill Development and Entrepreneurship** has called for **SANKALP** Scheme to focus on district-level skilling ecosystem through convergence and coordination.

- To enhance the district level ecosystem, the Ministry has taken the following initiatives:
  - **Skill India Portal:** A system to capture and converge skill data even at the district level.
  - **Grants:** Nine States namely Andhra Pradesh, Assam, Bihar, Gujarat, Jammu & Kashmir, Maharashtra, Manipur, Punjab and Uttar Pradesh were given grants.
  - **Aspirational Districts:** In addition to these State, grants have also been released to 117 **aspirational districts** under Aspirational Skilling Abhiyaan.

### *Skills Acquisition and Knowledge Awareness for Livelihood Scheme*

- Skills Acquisition and Knowledge Awareness for Livelihood (SANKALP) is an outcome-oriented programme of Ministry of Skill Development & Entrepreneurship (MSDE) with a special focus on decentralised planning and quality improvement.

Note:



- It is a **Centrally Sponsored Scheme** which is collaborated with the World Bank.
- It aims to implement the mandate of the **National Skill Development Mission (NSDM)**.
- The main objectives of the scheme are:
  - **Convergence:** Creating convergence among all skill training activities, both State-led and Government of India funded, at the state level.
  - **Quality:** Improving the quality of skill development programs through building a pool of quality trainers, developing model curriculum and content, and standardizing assessment and certification.
  - **Evaluation System:** Establishing a robust monitoring and evaluation system for skill training programs.
  - **Inclusiveness & Opportunity:** Providing access to skill training opportunities to the disadvantaged sections. Creating industry-led and demand-driven skill training capacity.
- Similar to SANKALP scheme, the government has also launched the STRIVE scheme for skill development.

### **Skills Strengthening for Industrial Value Enhancement Scheme**

- Skills Strengthening for Industrial Value Enhancement (STRIVE) scheme is a World Bank assisted-Government of India led project with the objective of improving the relevance and efficiency of skills training, provided through Industrial Training Institutes (ITIs) and apprenticeships.
- It is a **Central Sector Scheme**, covering the following 4 result areas:
  - Improved performance of ITI.
  - Increased Capacities of State Governments to support ITIs and Apprenticeship Training.
  - Improved Teaching and Learning.
  - Improved and Broadened Apprenticeship Training.

### **Central Sector Scheme and Centrally Sponsored Scheme**

- India's developmental plan comprise of two types of schemes i.e., **Central Sector and Centrally Sponsored Scheme**.
  - Central sector schemes, are 100% funded by the Union government and implemented by the Central Government machinery.

- Under Centrally Sponsored Scheme (CSS), a certain percentage of the funding is borne by the States, usually in the ratio of 50:50, 70:30, 75:25 or 90:10 and these are implemented by the State Governments.

## **Pathamadaai Silk Mat**

Inclusion of technology in the making of traditional Pathamadaai silk mat, through the use of electronic powerloom is ensuring higher production and income for weaving community.



- Handmade Pathamadaai silk mats are also called Pattu paai.
- Traditional art of weaving pathamadaai silk mat belongs to Tirunelveli district of Tamil Nadu.
- Pathamadaai mat is made up of Korai grass.
- Pathamadaai mats have been granted **Geographical Indication (GI)** status by the trademarks and GI authorities.
- These are made specially for **wedding ceremonies** and have the bride's and groom's names as well as the wedding date woven on them.

### **Concerns**

- Because of the initial use of outdated **handicraft methods** in the making of **Pattamadaai mats**, the **handicraft industry** is facing tough competition from increased domestic and international demand as well as supply imbalance which has led to increased use of synthetic dyes and lesser focus on benefits for the weaver.
- Low cost of plastic mats also contributed to the decline of the silk mat industry.

Note:

### **Initiatives/Schemes to Promote Technology in Textile Production**

- **Sustainable and Accelerated Adoption of efficient Textile technologies to Help Small Industries (SAATHI) Initiative:** Under this initiative, Energy Efficiency Services Limited (EESL), will acquire energy efficient powerlooms, motors and rapier kits in bulk and provide them to the small and medium powerloom units.
- **Power Tex India:** It is a comprehensive scheme for powerloom sector development.
- **Merchandise Exports from India Scheme (MEIS):** It is aimed at stimulating the growth of textile exports from India in various traditional and emerging markets.
  - Textile sector is one of the biggest beneficiaries of the MEIS.
- **Amended Technology Upgradation Fund Scheme for textiles industry (ATUFS):** It is designed to provide incentives to entrepreneurs and business owners for upgrading technologies.
- **Integrated Skill Development Scheme (ISDS):** Textile weavers and workers lack formal training in using the latest technology which reduces their chance to get a better job and higher wages.
  - ISDS plans to bridge this skill gap by training 1.5 million people.
- **Scheme for Integrated Textile Parks (SITP):** Under SITP scheme, the government will provide funding for infrastructure, buildings for common facilities like design & training centre, warehouse, factories and plant & machinery.

### **Periodic Labour Force Survey (PLFS)**

The recently released unit-level data of the PLFS, (PLFS was launched by the National Sample Survey Organisation (NSSO) in 2017), suggests that job market conditions in the country are more worrisome than what the headline numbers reveal.

- According to **Periodic Labour Force Survey (PLFS) 2017-18**, **6.1%** of India's labour force, and **17.8%** of young people (15-29 years) in the labour force are unemployed.
- The data shows that the proportion of the workforce engaged in regular wage/salaried jobs increased by

**5 percentage points** between 2011-12 (when the last **NSSO** employment unemployment survey was conducted) and 2017-18.

- But this increase was partly because of the denominator effect (the overall workforce declined by 4 percentage points between 2011-12 and 2017-18).
- As a share of the population, regular workers increased only by one percentage point to 8% over the same period.
- Moreover, it is worth noting that **India still lags far behind its South Asian neighbours and developing economies** such as China (53.1%), Brazil (67.7%) and South Africa (84.8%) in the share of salaried or regular jobs.
- The **median daily earnings were higher for men and women in regular jobs**, as compared to self-employment and casual work.
  - However, not all salaried jobs guarantee high pays as around 45% of salaried workers — the best-paid workers in India — **earned less than ₹10,000 per month**, and only about 4% of them earned more than ₹50,000 per month in 2017-18.
  - Overall, **72% of regular workers earned below the minimum monthly salary of ₹18,000 prescribed by the 7<sup>th</sup> Pay Commission.**
- Across categories of the workforce, **wages and earnings were higher in urban areas than in rural areas, and for men than for women.**
- About 15% of regular workers were engaged in **elementary occupations** such as building caretakers, garbage collectors and manual workers.
  - This includes 21% of female regular workers and 13% of male regular workers.
  - The median earnings of these workers was only about one-fourth of the top-earning occupational group (legislators, senior officials and managers).
- The median earnings in elementary occupations is followed by service workers and those engaged in skilled agricultural work and fisheries (median earnings of ₹8000 per month for both sets of workers).
- Regular jobs are important and in **high demand globally** because they tend to offer **better pay and job security.**
- About 71% of the regular workers in the non-agricultural sector did not have a **written job contract** in 2017-18.

Note:



- Absence of a written job contract **undermines job security**, and the proportion without a job contract increased for both men and women regular workers between 2011-12 and 2017-18. So did the proportion of workers who were not eligible for paid leave.
- There was a 5.8 percentage points decline in the proportion of regular workers who were not eligible for any **social security benefits** between 2011-12 and 2017-18.
  - This number continues to be high, and around half of the regular workers were not eligible for any social security benefits in 2017-18.

### **Government Steps for Generating Employment in the Country**

- Government is **encouraging private sector** of the economy to boost employment in the country.
- Government is also working for fast tracking of various projects involving substantial investment and increasing public expenditure on schemes like:
  - Prime Minister's Employment Generation Programme (**PMEGP**) run by the Ministry of Micro, Small & Medium Enterprises.
  - Mahatma Gandhi National Rural Employment Guarantee Scheme (**MGNREGA**).
  - Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (**DDU-GKY**) scheme run by Ministry of Rural Development.
    - Deendayal Antyodaya Yojana- National Urban Livelihoods Mission (**DAY-NULM**) run by the Ministry of Housing & Urban Affairs etc.
- The Government has also constituted **Cabinet Committee on Employment & Skill Development**.

## **Aquaponics**

Aquaponics is an ecologically sustainable model that **combines Hydroponics** with **Aquaculture**. Hydroponics is the soilless growing of plants, where soil is replaced with water. Aquaculture is raising of fish.

- With Aquaponics **both fish and plants** can grow in one integrated **ecosystem**.
- The fish waste provides an **organic food source** for the plants, which in turn naturally filter the water for the fish, creating a **balanced ecosystem**.

- The third participant i.e. **microbes or nitrifying bacteria** converts the ammonia from the fish waste into nitrates which is essential for plants to be able to grow.

### **Benefits and Weaknesses of Aquaponics**

The **Food and Agriculture Organization** of the United Nations (**FAO**) put out a technical paper in 2014, detailing the positives and negatives of the practice:

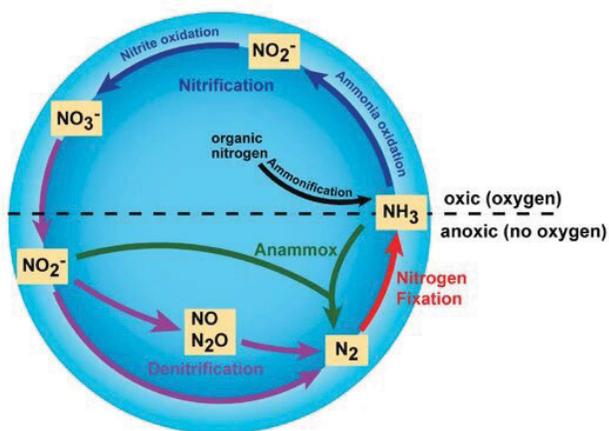
- **Benefits:**
  - Higher yields (20-25% more) and qualitative production.
  - Can be used on non-arable land such as deserts, degraded soil or salty, sandy islands.
  - Creates little waste.
  - Daily tasks, harvesting and planting are cut down to a great extent, thereby saving labour and time.
  - Both fish and plants can be used for consumption and income generation.
- **Weaknesses:**
  - Expensive initial startup costs compared with soil production or hydroponics.
  - Knowledge of fish, bacteria and plant production is needed.
  - Optimal temperature ranges needed (17-34°C).
  - Mistakes or accidents can cause catastrophic collapse of system.
  - Daily management is mandatory.
  - Requires reliable access to electricity, fish seed and plant seeds.
  - If used alone, aquaponics will not provide a complete diet.

### **Nitrogen Cycle**

- Nitrogen is one of the primary nutrients critical for the survival of all living organisms.
- It is a **necessary component** of many biomolecules, including proteins, DNA, and chlorophyll.
- Although nitrogen is abundant in the atmosphere as **Nitrogen gas (N<sub>2</sub>)**, it is largely inaccessible in this form to most organisms, making nitrogen a scarce resource and often limiting primary productivity in many ecosystems.
- Only when nitrogen is converted from Nitrogen gas into **ammonia (NH<sub>3</sub>)** it becomes available to primary producers, such as plants.

Note:

- The major transformations of nitrogen gas can be through the processes of:
  - Nitrogen fixation (nitrogen gas to ammonia).
  - Nitrification (ammonia to nitrite and nitrate).
  - Denitrification (nitrate to nitrogen gases).
- The process of converting Nitrogen gas (N<sub>2</sub>) into biologically available nitrogen, that is ammonia, by **nitrogen fixing microorganisms**, is called **nitrogen fixation**.
  - Some nitrogen-fixing organisms are free-living, while others are **symbiotic nitrogen-fixers**, which require a close association with the host to carry out the process.
  - Some of these bacteria are **aerobic**, others are **anaerobic**; some are **phototrophic**, others are **chemotrophic** (use chemicals as their energy source instead of light).
  - They all have a similar enzyme complex called **nitrogenase** that catalyzes the reduction of N<sub>2</sub> to NH<sub>3</sub> (ammonia).
- **Nitrification** is the process that converts ammonia to nitrite and then to nitrate.
  - Most nitrification occurs aerobically and there are two distinct steps of nitrification that are carried out by distinct types of microorganisms.
    - The first step is the **oxidation of ammonia to nitrite**, which is carried out by microbes known as ammonia-oxidizers.
    - The second step in nitrification is the **oxidation of nitrite (NO<sub>2</sub>-) to nitrate (NO<sub>3</sub>-)**. This step is carried out by a completely separate group of prokaryotes (a unicellular organism), known as **nitrite-oxidizing bacteria**.



Nitrogen Cycle

## National Time Release Study

India's first national Time Release Study (TRS) is being conducted by the **Ministry of Finance** as part of its **strategic commitment to improve global trade**.

- Time Release Study exercise will be conducted every year across **15 ports including sea, air, land and dry ports**.
- The national TRS will **establish baseline performance measurement** and have standardized operations and procedures across all ports.
- TRS initiative for accountable governance, will **measure rule-based and procedural bottlenecks** (including physical touchpoints) in the clearance of goods, from the time of arrival until the physical release of cargo.
- The **TRS is an** internationally recognized tool advocated by the **World Customs Organization** to measure the efficiency and effectiveness of international trade flows.
- **Objective:** Identify and address bottlenecks in the trade flow process and take the corresponding policies and measures required to improve the efficiency of border procedures, without compromising efficient trade control.
- **Expected beneficiaries:** These will be export-oriented industries and **Micro, Small & Medium Enterprises (MSME)** which will enjoy greater standardization of Indian processes with comparable international standards.
- **Significance:** TRS initiative will help in improving the **Ease of Doing Business (EODB)**, particularly on the trading across borders indicator which measures the efficiency of the cross border trade ecosystem

## India: Second-largest Scrap Importer

India has emerged the **world's second-largest scrap importer of steel** **toppling South Korea**.

- Scrap imports in India increased by 35% in the first half of this year to 3.87 million tonnes.
- This signifies that **the Indian system is not consuming internal scrap of steel, due to lack of efficient metal recycling facilities and technology**.

Note:

### **What will be the benefits of using internal scrap?**

- Due to the **slowdown in the domestic steel industry and cheap price of imported scrap metals**, India became the second-largest scrap importer.
- However, India's Internal scrap market holds huge potential, for instance, India will have **22 million obsolete vehicles by 2025** from 8.7 million at present.
- But as of now, **India lacks regulations in scrapping and, recycling** is mostly done by the **unorganised segment**.
- Thus, there is a need for a **comprehensive metal recycling policy** so that India can mobilise Internal scrap market.
- **Benefits of using internal scrap:**
  - It will improve India's **balance of trade**.
  - Mobilising internal scrap will create **millions of jobs** in recycling dominated industries like plastic, rubber, glass, fabric, metal industries and technology and the automobile sector.
- The government can **incentivise internal scrap mobilisation** in the automobile industry, by steps like waiver in the registration fee for a new car can be provided if the buyer produces a certificate for scrapping an old car.
- **Turkey** is still the **world's largest recycler** and scrap importer of the world.

## **Changes in the Prevention of Money Laundering Act**

Recently, the Union government has issued a notification on certain changes in the Prevention of **Money Laundering Act (PMLA)**, which will further empower the Enforcement Directorate (ED) in tackling the cases of Money Laundering.

### **What are the proposed amendments?**

- The amendment seeks to treat **money laundering as a stand-alone crime**.
  - Till now Money Laundering was not an independent crime; rather linked to another crime, known as the '**predicate offence**' or '**scheduled offence**', the proceeds of which are made the cause behind the crime of money laundering.
- It also **expands the ambit of "proceeds of crime"** to those properties which "may directly or indirectly be

derived or obtained as a result of any criminal activity relating to the scheduled offence.

- The most crucial amendments are the **deletion of provisions** in sub-sections (1) of Section 17 (Search and Seizure) and Section 18 (Search of Persons).
  - These provisions required the pre-requisite of a FIR or charge sheet by other agencies that are authorised to probe the offences listed in the PMLA schedule.
- An explanation is added to Section 45 that clarifies that all **PMLA offences will be cognisable and non-bailable**.
  - **Therefore, ED will be empowered to arrest an accused without a warrant, subject to certain conditions**.
- Another vital amendment makes concealment of proceeds of crime, possession, acquisition, use, projecting as untainted money, or claiming as untainted property as independent and complete offences under the Act.
- Section 72 will now give power to the Centre to set up an **Inter-Ministerial Coordination Committee** for inter-departmental and inter-agency coordination for operational and policy level cooperation, for consultation on anti-money laundering and counter-terror funding initiatives.

### **What is Money Laundering?**

- **Money laundering is the process of making large amounts of money generated by criminal activity, such as drug trafficking or terrorist funding, appear to have come from a legitimate source.**
- Criminal activities like illegal arms sales, smuggling, drug trafficking and prostitution rings, insider trading, bribery and computer fraud schemes produce large profits.
- Thereby it creates the incentive for money launderer to "legitimize" the illegal gains through money laundering.
- The money so generated is called 'dirty money' and **money laundering is the process of conversion of 'dirty money', to make it appear as 'legitimate' money.**

### **How does Money Laundering take place?**

- Money laundering is a three-stage process:
  - **Placement:** The first stage is when the crime money is injected into the formal financial system.

Note:

- **Layering:** In the second stage, money injected into the system is layered and spread over various transactions with a view to obfuscate the tainted origin of the money.
- **Integration:** In the third and the final stage, money enters the financial system in such a way that original association with the crime is sought to be wiped out and the money can then be used by the offender as clean money.
- **Bulk Cash Smuggling, Cash Intensive Businesses, Trade-based laundering, Shell companies and trusts, Round-tripping, Bank Capture, Gambling, Real Estate, Black Salaries, Fictional Loans, Hawala, False invoicing are some of the common methods of Money Laundering.**

### ***The legal framework in India to deal with Money Laundering***

- In India, the specific legislation dealing with money laundering is the Prevention of Money-Laundering Act (PMLA), 2002
- The law was enacted to combat money laundering in India and has three main objectives :
  - To prevent and control money laundering.
  - To provide for confiscation and seizure of property obtained from laundered money.
  - To deal with any other issue connected with money-laundering in India.
- **Under the PMLA Act, the Enforcement Directorate is empowered to conduct a Money Laundering investigation.**
- Apart from the provisions of PMLA, there are other specialised provisions such as RBI/SEBI/IRDA anti-money laundering regulations

### ***Enforcement Directorate***

- Directorate of Enforcement is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance, Government of India.
- On 1 May 1956, an 'Enforcement Unit' was formed, in Department of Economic Affairs, for handling Exchange Control Laws violations under Foreign Exchange Regulation Act, 1947.
- In the year 1957, this Unit was renamed as '**Enforcement Directorate**'.
- ED enforces the following laws:
  - Foreign Exchange Management Act, 1999 (FEMA)
  - Prevention of Money Laundering Act, 2002 (PMLA)

## **Injeti Srinivas** **Committee Report on CSR**

The committee chaired by **Injeti Srinivas**, secretary, corporate affairs ministry, has submitted its **recommendations on Corporate Social Responsibility (CSR)** to the **Minister of Corporate Affairs (MCA)**.

### ***Corporate Social Responsibility (CSR)***

- The term "Corporate Social Responsibility" in general can be referred to as **corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare.**
- In India, the concept of CSR is governed by **clause 135 of the Companies Act, 2013.**
- India is the **first country in the world to mandate CSR spending** along with a framework to identify potential CSR activities.
- The CSR provisions within the Act is **applicable to companies with an annual turnover of 1,000 crore and more, or a net worth of Rs. 500 crore and more, or a net profit of Rs. 5 crore and more.**
- The Act requires companies to setup a CSR committee which shall recommend a CSR Policy to the Board of Directors and also monitor it from time to time.
- The Act encourages **companies to spend 2% of their average net profit in the previous three years** on CSR activities.
- The indicative activities, which can be undertaken by a company under CSR, have been specified under **Schedule VII of the Act.** The activities include:
  - Eradicating extreme hunger and poverty.
  - Promotion of education, gender equality and empowering women.
  - Combating Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome and other diseases.
  - Ensuring environmental sustainability.
  - Contribution to the **Prime Minister's National Relief Fund** or any other fund set up by the Central Government or the State Governments for socio-economic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes and other backward classes, minorities and women etc.

Note:

### Recommendations

- The **expenses towards CSR should be eligible for deduction in the computation of taxable income.**
- A clarification may be issued that for newly incorporated companies, the CSR obligation under Section 135 of the Companies Act shall lie only after they have been in existence for three years.
- A provision to **carry forward unspent CSR balance** for three to five years.
  - CSR should not be used as a “means of resource-gap funding for government schemes”.
  - **The Companies (Amendment) Act, 2019** provides that the CSR expenditure which remains unspent in three years would be transferred to any fund specified in Schedule VII of the Companies Act such as the Swachh Bharat Kosh, the Clean Ganga Fund, and the Prime Minister’s Relief Fund.
  - The committee report said that the central government funds should be discontinued as CSR spend, and instead a **special designated fund** should be created for **transfer of unspent CSR money beyond three to five years.**
- **Aligning Schedule VII** of the **Companies Act** with the **United Nations Sustainable Development Goals.**
- The companies having CSR-prescribed amount below ₹50 lakh may be exempted from constituting a CSR Committee.
- The violation of **CSR compliance** may be made a civil offence and shifted to the penalty regime.
  - This is a departure from the recent policy change, which provided for a three-year jail term for violating CSR norms.
- Introducing impact assessment studies for CSR obligations of ₹5 crore or more.
- CSR spending has to be a “board-driven process to provide innovative technology-based solutions for social problems” and that the board has to assess the credibility of an **implementation agency**, which have to be registered with the MCA to carry out CSR activities.
- **Developing a CSR exchange portal to connect contributors**, beneficiaries and agencies, allowing CSR in social benefit bonds and promoting social impact companies.

### SUPRA Scheme

The **Science and Engineering Research Board (SERB)** has proposed a new scheme, **Scientific and Useful Profound Research Advancement (SUPRA)** with the objective of funding exploration of new scientific and engineering breakthroughs with global impact.

- The scheme will fund **disruptive ideas** that can lead to new areas of study, new scientific concepts, new products and technologies.
- The focus is not on incremental or short-term advances in understanding, but new science or truly disruptive technologies.
- The scheme is **designed to attract high quality research proposals** consisting of new hypotheses or challenge existing ones and provide 'out-of-box' solutions.

### Science and Engineering Research Board

- It was set up as a **statutory body in 2009** under the **Department of Science and Technology** to promote and fund research in different scientific disciplines.

### 'Farm in' Expenditure

Recently, the **Central Board of Direct Taxes (CBDT)** has clarified that **'farm in' expenditure** incurred by **oil Exploration and Production (E&P) companies** would be treated as an 'intangible asset' and thereby it would be eligible for claim of depreciation.

- After this Farm-in expenditure will become **unamortised expenses.**
  - Unamortised Expenses are those expenses that are written off to the company's Statement of **Profit/Loss periodically.**
  - The unamortised expenditure is allowed as a deduction and the surplus is taxed.
  - Hence, this will boost domestic and foreign investment and enhance the domestic production of oil and gas.
- Farm in expenditure is incurred when an entity in the oil and gas business acquires a **Participating Interest (PI)** from another entity in oil/gas block(s) and becomes part of the **Production Sharing Agreement (PSC).**
- Participating interest is like holding equity (shares) in a company.

Note:

- A **holding of 20%** or more of the shares of an undertaking is presumed to be a participating interest.
- The CBDT has also acknowledged that it is common international practice for (E&P) companies to buy (farm-in) and sale (farm-out) their PI in the PSC to share the risk, bring new and niche expertise and technologies

### **Central Board of Direct Taxes (CBDT)**

- It is a statutory authority that functions under the **Central Board of Revenue Act, 1963**.
- It is a part of the **Department of Revenue** in the **Ministry of Finance**.
- It provides inputs for policy and planning of direct taxes in India and is also responsible for the administration of direct tax laws through the **Income Tax Department**.
- Direct Taxes include income tax, corporation tax etc.

### **Production Sharing Contract**

- It is a term used in the Hydrocarbon industry and refers to an agreement between Contractor and Government whereby Contractor bears all exploration risks, production and development costs in return for its stipulated share of (profit from) production resulting from this effort.
- Production Sharing Contracts became widely adopted as part of the **New Exploration and Licensing Policy (NELP)** launched by the Government in 1997, for enhanced exploration of oil and gas resources in the country.
- PSC allows the contractor to recover his cost, before giving Government its share in the contractor's revenues. Until a profit is made, no share is given to the Government, other than royalties and cesses.

## **Sabka Vishwas**

Sabka Vishwas is a **legacy dispute resolution scheme** notified by Government for closing pending disputes relating to **legacy Service Tax and Central Excise** cases. It is to be operationalized from 1<sup>st</sup> September 2019.

- The two main components of the Scheme are dispute resolution and amnesty.
  - The **dispute resolution component** is aimed at liquidating the legacy cases of Central Excise and

Service Tax that are subsumed in GST and are pending in litigation at various forums.

- The **amnesty component** of the Scheme offers an opportunity to the taxpayers to pay the outstanding tax and be free of any other consequences under the law.
  - The most attractive aspect of the Scheme is that it provides substantial relief in the tax dues for all categories of cases as well as full waiver of interest, fine, penalty. In all these cases, there would be no other liability of interest, fine or penalty. There is also a complete amnesty from prosecution.
- **The objective of the Scheme:** is to free the large number of small taxpayers of their pending disputes with the tax administration.

## **Tech-Saksham**

The Union **Minister for Micro, Small and Medium Enterprises (MSME)** has launched a project named '**Tech Saksham**' to accelerate **MSME** growth through technology enablement.

- It is a Ministry of MSME and **Confederation of Indian Industry (CII)** partnered project which brings together technology majors Dell Technologies India, HP India, etc to address technological gaps faced by MSMEs in their growth.
- **Vision:** To bridge the gap in technology adoption for MSMEs so as to provide an impetus for them to be competitive on a global scale, increase their contribution to country exports and leverage cost efficiencies.
- **Duration:** It is a three-year-long comprehensive project which, in its first phase, will focus on sectors that are labour-intensive and have the propensity to respond positively to tech-adoption, and will spark a larger discussion in other MSME clusters.
- **Expected Outcome:** Through various policy recommendations, knowledge sessions, mentoring initiatives, and useful resource banks for MSMEs, the project will help in addressing critical barriers in the MSME ecosystem such as awareness and cost of technology purchase/maintenance, resources and manpower required to run the technologies, return on investments, etc.

Note:



## Auto Trigger Mechanism in RCEP

Recently, India has stated it will push for several crucial issues for acceptance at negotiating round of the **RCEP countries** that have started in Jakarta.

### Key demands of India

- To protect the domestic industry, India proposes the **'auto-trigger' mechanism** to check import surges.
  - According to it, in case **there is a flood of imports** (once duties are eliminated or reduced for RCEP members), after reaching a certain threshold, the auto-trigger of safeguard duties on imports should be initiated.
  - Through this India can accord some **protection to its local industry**.
- India is opposed to the proposed **Investor-State Dispute Settlement (ISDS)** body, as it does not want its domestic laws to be challenged outside India.
  - However, RCEP countries are in favour of ISDS, because of certain issues faced by companies in India like:
    - Operational permits of international investors in telecom companies were cancelled by the Supreme Court in the wake of the 2G scam. etc.
- India is pushing for stringent norms for **'Rules of origin'** to prevent goods being routed through nations with lower duties.
  - India is apprehensive that after signing of RCEP, the Indian market will be flooded with cheap import of the third country which is not a member of RCEP but has signed FTA with other RCEP member.
- **Rules of origin** are the criteria needed to determine the national source of a product. Their importance is derived from the fact that duties and restrictions in several cases depend upon the source of imports.
- Apart from this India wants greater **market access in the services sector**.

## NDB to Tap Indian Offshore Market

- Recently, the **New Development Bank (NDB)** in its efforts to raise capital has announced to tap into the Indian rupee offshore market.

- NDB which recently has received its **first 'AAA' rating**, is looking into the Indian rupee offshore market to raise resources after the Masala bonds market slowed down.
  - There has been a slowdown in **Masala bond** market due to the global slowdown and India's economic issues like **IL&FS crisis**.
- It is a significant move as this will strengthen **gradual internationalization of the Indian Rupee**.
- However, the offshore rupee market has its own issues.
  - The exchange rate in the two markets i.e. home and offshore, could be different leading to arbitrage opportunities and inefficiencies.
  - In fact, the price in one market could drive the price in another market.
  - This reduces the efficacy of central bank's monetary policy.
  - That's why the government had recently formed a **Task Force on Offshore Rupee Markets** under former Deputy Governor of the RBI, Usha Thorat.
    - The task force recommended expanding onshore currency markets, in a calibrated manner.
    - This will enable foreign investors to hedge their currency risk and could incentivise greater participation in rupee-denominated bonds.

### Note:

- AAA is the safest of investment ratings, as there's almost zero probability of defaulting on the loan.
- It is significant that NDB got a higher rating than the **BRICS countries**.
  - Also, no other bank owned by emerging markets has a AAA rating.

## World's First Facial Biometric Seafarer Identity Document

India has become the first country in the world to issue **Biometric Seafarer Identity Document (BSID)**, capturing the **facial biometric data of seafarers**.

- The project has been launched by the **Ministry of Shipping**.

Note:

- The new card is in confirmation of the **Convention No. 185** of the **International Labour Organisation** on BSID.
- **India ratified** the Convention in October 2015.

### **Background**

- Development of BSID is very significant against the backdrop of the increase in seafaring activities.
- BSID will provide a foolproof identification to seafarers which will facilitate:
  - **Seafarer's movement,**
  - **Ease of getting jobs,**
  - **Identification of seafarers from any location in the world.**
- The shipping sector is seeing major developments in the areas of coastal shipping, inland waterways and other maritime activities.
- These major developments will increase the number of Indian seafarers in the international shipping industry.
- The total number of Indian seafarers who were employed on Indian or foreign flag vessels increased by 35% from 2017 to 2019.

### **Biometric Seafarer Identity Document**

- It will have a biometric chip embedded in it.
- The card has two optical security features:
  - **Micro prints/micro texts.**
  - **Unique Guilloche pattern.**
- A software has been developed for capturing the facial biometrics and its authentication through the public key infrastructure.
- A record of each **Seafarer Identity Document (SID)** issued will be maintained in a national database and its related information will be internationally accessible.

#### **Convention No. 185 of the International Labour Organisation on BSID**

The convention promotes:

- Security against potential threats of **International Terrorism.**
- Introduces **modern security features** of the BSID.
- Requiring a record of each BSID issued to be maintained in a **national database**, with the related information to be internationally accessible.
- Ensures the reliability of the identification of the holder of the BSID, while protecting the holder's dignity and privacy.

## **Decriminalisation of CSR Violation**

Finance Minister has announced that **corporate social responsibility (CSR)** violations would not be treated as criminal offences and would instead be a **civil liability**.

- The imprisonment of up to 3 years for officials of companies that fail to comply with the specified corporate social responsibility (CSR) expenditure has been **rolled back**.
- Recently, **Injeti Srinivas panel** had been set up to study CSR expenditure.
- Implications of decriminalisation of CSR Violations:
  - It will allow the corporations to think and employ their CSR funds in an effective way.
  - Freedom to decide and choose the field of CSR related work for corporations.
- Recently, **Parliament passed amendments to the Companies Act, 2013** which includes:
  - Unspent CSR funds by companies should be transferred into an **escrow account** called Unspent Corporate Social Responsibility Account.
  - The transferred funds needs to be utilised within three years of transfer.
  - Any unspent annual CSR funds must be transferred to one of the funds under **Schedule 7 of the Companies Act** like Prime Minister's Relief Fund within six months of the financial-year end.

### **Corporate Social Responsibility**

- Under the Companies Act, 2013, certain classes of profitable entities are required to spend at least two per cent of their three-year annual average net profit towards Corporate Social Responsibility (CSR) in a particular financial year.

## **Revised FDI Norms**

Recently, the Union Cabinet has approved the proposal for the review of **Foreign Direct Investment** in various sectors.

- This will result in making India a **more attractive FDI destination**, leading to benefits of increased investments, employment and growth.
  - As of now (March 2019), **Singapore remains India's top FDI source**, twice that from Mauritius.

Note:

**Revised Norms**

- **100% FDI under automatic route** is permitted for **sale of coal**, for **coal mining activities** including associated processing infrastructure.
- The government has allowed **100% FDI through the automatic route** for contract manufacturing.
- It will **augment the Make in India initiative** and will attract global companies in India looking to establish alternative manufacturing hubs.

**Contract Manufacturing**

- The business model in which a firm hires a contract manufacturer to produce components or final products based on the hiring firm's design. **Companies outsource their production to other companies.**
- Contract manufacturing offers a number of benefits:
  - **Cost Savings:** Companies save on their capital costs and labour costs because they do not have to pay for a facility and the equipment needed for production.
    - Some companies may look to contract manufacture in low-cost countries, such as India, to benefit from the low cost of labour.
  - **Advanced Skills:** Companies can take advantage of skills that they may not possess, but the contract manufacturer does.
  - **Focus:** Companies can focus on their core competencies better if they can hand off base production to an outside company.
  - **Economies of Scale:** Contract Manufacturers have multiple customers that they produce, it may lead to reduced costs in acquiring raw materials by benefiting from economies of scale.
- **Easing norms for FDI in Single Brand Retail Trading (SBRT):** Retail trading through **online trade by SBRT**, can also be undertaken prior to the **opening of brick and mortar stores** (it should be opened within 2 years from the date of start of online retail).
  - Online sales will lead to the creation of jobs in logistics, digital payments, customer care, training and product skilling.
- It has been decided to **permit 26% FDI under government route for uploading/ streaming of News & Current Affairs through Digital Media**, on the lines of print media.

- In India, FDI policy provisions have been progressively liberalized across various sectors in recent years to make India an attractive investment destination.
  - Some of the sectors include Defence, Construction Development, Trading, Pharmaceuticals, Power Exchanges, Insurance, Pension, Other Financial Services, Asset Reconstruction Companies, Broadcasting and Civil Aviation.
  - **Due to these measures, a total FDI into India from 2014-15 to 2018-19 has been \$ 286 billion.**
  - Despite the dim global picture (**UNCTAD's World Investment Report 2019**), India continues to remain a preferred and attractive destination for global FDI flows.
    - India seeks to use this potential to attract far more foreign investment which can be achieved inter-alia by further liberalizing and simplifying the FDI policy regime.

**Foreign direct investment (FDI)**

- It is an investment from a party in one country into a business or corporation in another country with the intention of **establishing a lasting interest**.
- Lasting interest differentiates FDI from foreign portfolio investments, where investors passively hold securities from a foreign country.
- Foreign direct investment can be made by expanding one's business into a foreign country or by becoming the owner of a company in another country.

**5<sup>th</sup> Aqua Aquaria India 2019**

Recently, the Vice President of India inaugurated the 5<sup>th</sup> Aqua Aquaria India, 2019 in Hyderabad, Telangana.

- The **theme** for the 2019 edition is **"To take Blue Revolution to India's hinterland"**.
- It is the largest aquaculture exhibition in India.
- It is a **biennial exhibition** organised by the **Marine Products Export Development Authority (MPEDA)**.

**Fisheries Sector in India**

- India is the **second-largest fish producer** in the world.
- Fish constituted about **10% of total exports from India and almost 20% of agriculture exports** in 2017-18.
- India is the **4<sup>th</sup> largest exporter of fish** in the world.
- Contribution of **fisheries to the GDP is about 1% and about 5.37% to the Agricultural GDP**.

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- Thus, India has the potential to emerge as a leading **Blue Economy** in the world. Notified existing potentials in the Fisheries sector are:
  - **Shrimp Culture:** Recently, the government has permitted the regulated introduction of Pacific White Shrimp with the objective of utilizing the potential of the species to cater to the global markets.
  - **Cage Culture:** It involves the growing of fish in existing water resources while being enclosed in a net cage which allows free flow of water.
  - **Pen Culture:** It is the system of culturing fish within a fixed net enclosure either at the bank or in a water body

### **Marine Products Export**

#### **Development Authority (MPEDA)**

- **Marine Products Export Development Authority (MPEDA)** is a nodal coordinating, state-owned agency engaged in fishery production and allied activities.
- It was established in 1972 under the **Marine Products Export Development Authority Act (MPEDA), 1972**.
- It functions under the **Union Ministry of Commerce and Industry**.
- It is headquartered in **Kochi, Kerala**.
- Its mandate is to increase exports of seafood including fisheries of all kinds, specifying standards, marketing, processing, extension and training in various aspects.



Note:



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# International Relations

## Highlights

- United Nations Convention on International Settlement Agreements
- Currency Manipulation
- International Day of Indigenous Peoples
- India France
- PM's Visit to Bhutan
- India-Bahrain
- First Monument in Memory of a Glacier
- Five Star Movement
- Akademik Lomonosov

## United Nations Convention on International Settlement Agreements

The Union Cabinet has approved the signing of the **United Nations Convention on International Settlement Agreements (UNISA)** by India.

- **United Nations Convention on International Settlement Agreements** is scheduled to be signed at **Singapore** on 7<sup>th</sup> August, 2019, or at the **United Nations**.

### Background

- Until the adoption of the convention, the often-cited challenges to the use of **mediation** was the lack of an **efficient and harmonized framework** for cross-border enforcement of settlement agreements resulting from mediation.
  - In response to this need, the convention has been developed and adopted by the **General Assembly**.
- The United Nations General Assembly adopted the **United Nations Convention on International Settlement Agreements Resulting from Mediation (the Convention)** on 20<sup>th</sup> December 2018.
- The General Assembly authorized that the convention will open for signature on 7<sup>th</sup> August 2019 in Singapore and will be known as the "**Singapore Convention on Mediation**" (**the Convention**).

### Benefits

- Signing of the convention will boost the confidence of the investors and shall provide a positive signal to foreign investors about India's commitment to adhere

to international practice on **Alternative Dispute Resolution (ADR)**.

### Initiatives to Promote ADR Mechanisms

- **New Delhi International Arbitration Centre (NDIAC) Bill, 2019**, seeks to establish a New Delhi International Arbitration Centre (NDIAC) as a **statutory body**.
  - Earlier, the Committee chaired by **Justice B.N. Srikrishna (Srikrishna Report)** to review the institutionalization of arbitration in India had **recommended** the establishment of NDIAC.
  - NDIAC will conduct arbitration, mediation and conciliation proceedings.
- **The Commercial Courts Act, 2015**, has been further amended and legislative exercise to further replace the Arbitration and Conciliation Act, 1996 with **The Arbitration and Conciliation (Amendment) Bill, 2018** is currently underway.
- **Commercial Division and Commercial Appellate Division of High Courts (Amendment) Bill, 2018** has been passed by Lok Sabha to resolve commercial disputes worth Rs 3 lakh or more.
- Several measures have been taken by the **Ministry of Law and Justice** to introduce **Online Dispute Resolution** mechanism.

### UNISA

- The Convention has been designed to become an essential instrument in the facilitation of **international trade** and in the promotion of **mediation** as an alternative and effective method of resolving **trade disputes**.
- It also contributes to strengthening access to justice, and to the **rule of law**.

Note:

- The Convention defines two additional grounds upon which a court may, on its own motion, refuse to grant relief.
  - Those grounds relate to the fact that a dispute would not be capable of settlement by mediation or would be contrary to public policy.
- The Convention ensures that a settlement reached by parties becomes **binding and enforceable** in accordance with a simplified and streamlined procedure.

## Currency Manipulation

The US Treasury Department has **declared China** as a currency **manipulator**. This move comes after the People's Bank of China (PBOC), which is the central bank of China, allowed the **yuan** to suddenly depreciate (or lose value) relative to the dollar by 1.9% - one of the biggest single-day falls.

### Background

- China's currency move came as a result of new tariffs announced by the US President on \$300 billion of Chinese imports.
- The move roiled markets, with **S&P 500 Index** sliding more than 1% in Asia.
  - The S&P 500 or Standard & Poor's 500 Index is a market-capitalization-weighted index of the 500 largest U.S. publicly traded companies.
- Also, a weaker yuan makes **Chinese exports more competitive**, or cheaper to buy with foreign currencies.
- The US government has said that it will now engage with the **International Monetary Fund (IMF)** to eliminate the unfair competitive advantage created by China's latest actions.
- It seems that the ongoing **trade war** between the world's two biggest economies is now turning into a **currency war** as well.

### Currency Manipulation

- Currency manipulation happens when governments try to artificially tweak the exchange rate to gain an "unfair" advantage in trade.
- The US Treasury department defines currency manipulation as **when countries deliberately influence the exchange rate between their currency and the US dollar to gain "unfair competitive advantage in international trade"**.

- Once a country is designated as a currency manipulator by the U.S., the next step taken by the US government is to seek negotiations with the government accused of manipulation.
  - But officials in Beijing and Washington have already been engaged in trade talks for more than a year.
- If there is no progress a year after the designation, China could face possible sanctions including its firms being prohibited from competition for US government contracts and excluded from getting financing from an American government agency for development projects.

### Exchange Rate

- Exchange rate is the **price of one currency in terms of another currency**.
- It often determines the affordability of buying or selling internationally.
  - For instance, if one wants to buy a car produced in the U.S., that will involve two transactions: one, using rupees to buy dollars; two, using these dollars to buy the car.
- The exchange rate for any currency would be **determined by the interplay of its demand and supply**.
  - For instance, if more Indians want to buy US goods, there would be a higher demand for the dollar relative to the rupee. This, in turn, would mean the dollar would be "stronger" than the rupee — and gain in strength as the demand increases.
  - If demand falls, the dollar would depreciate relative to the rupee (or the rupee would appreciate relative to the dollar).
- **Sometimes central bank of a country intervenes** to reduce wild fluctuations in the exchange rate. But **excessive and undisclosed interventions** are not considered fair.
  - For instance, if China's central bank buys dollars in the forex market, it can artificially weaken the yuan — and Chinese goods will then become more affordable (and competitive) in the international market

## International Day of Indigenous Peoples

International day of indigenous people is observed on August 9 every year, in order to raise awareness of

Note:



the needs of indigenous people. The first meeting of the **UN Working Group on Indigenous Populations was held in Geneva in 1982.**

- The **theme of 2019 is Indigenous People's Languages** in view of 2019 being marked as the **International Year of Indigenous Languages** by the **United Nations.**

### **International Day of Indigenous Peoples in India**

- On International day of indigenous people, the **Khadi and Village Industry Commission (KVIC)** has launched a new programme '**Leather Mission**'.
- It has distributed as many as 50 leather kits and 350 Bee-Boxes with live bee colonies in tribal-dominated village in Sirohi district of Rajasthan, one of the **aspirational districts** in India identified by the NITI Aayog.

#### **Indigenous people**

- They are inheritors and practitioners of unique cultures and ways of relating to people and the environment.
- They have retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live. Despite their cultural differences, indigenous peoples from around the world share common problems related to the protection of their rights as distinct peoples.
- The indigenous people in the world make up less than 5 percent of the total population, but fall in the 15 percent of the poorest, according to the UN website. They represent as many as 5,000 different cultures.

### **International Year of Indigenous Languages**

- Languages play a important role in the daily lives of all people. They are pivotal in the areas of human rights protection, peace building and sustainable development, through ensuring cultural diversity and intercultural dialogue.
  - However, despite their immense value, languages around the world continue to disappear at an alarming rate due to a variety of factors. Many of them are indigenous languages.
- Indigenous languages in particular are a significant factor in a wide range of other indigenous issues, notably education, scientific and technological development,

the biosphere and the environment, freedom of expression, employment and social inclusion.

- The **International Year of Indigenous Languages** is a United Nations observance in 2019. It aims to raise awareness of the consequences of the endangerment of indigenous languages across the world, with an aim to establish a link between language, development, peace, and reconciliation.

## **India France**

India's Prime Minister on his two-day visit to France is supposed to participate in **G-7 meeting scheduled to be held in France** as a non-member country on the invitation of France for the first time. He had a discussion on a spectrum of issues with France President. Both countries have condemned cross-border terrorism in all its forms and manifestations. They have called for halting cross-border movements of terror outfits based in Pakistan and engaged in anti-India activities, particularly in Jammu and Kashmir.

- The followings are **key takeaways** of recently concluded visit:
  - **Terror:** France backed the PM's proposal to hold a global conference on terrorism. The two leaders asked UN countries to support organising new "No Money for Terror" International Conference on Fighting Terrorist Financing in Melbourne.
    - Two countries agreed to enhance their operational cooperation and launch fresh efforts to fight radicalisation, especially **Online Radicalisation.**
    - The two leaders reaffirmed their support for the implementation of the **Christchurch Call to Action** to eliminate terrorist and violent extremist online content adopted in Paris last May.
  - **Defence:** Both countries showed satisfaction towards the progress in implementation of agreements signed and reaffirmed their commitment to further strengthen cooperation in defence industry field in the spirit of "**Make in India**" and for the mutual benefit of both countries.
    - The first of the **36 Rafale aircraft** is likely to be delivered in the third week of September.
  - **Nuclear:** Both countries expressed satisfaction with the progress in negotiations between NPCIL and EDF since the conclusion of the **Industrial Way**

Note:

**Forward Agreement** between the two parties in 2018 for construction of six nuclear power reactors in Jaitapur, Maharashtra.

- **Space:** Both have decided to deepen space cooperation to meet new challenges together, whether it concerns **planetary exploration** or human spaceflight.
  - They took the decision to train medical support personnel for Indian astronauts, who will be part of India's manned space mission by 2022.
- **Cyber:** Both countries adopted a cybersecurity and digital technology roadmap aimed at expanding Indo-French bilateral cooperation, particularly in the strategic sectors of high-performance computing and Artificial Intelligence, with the target of bringing start-up ecosystems closer to each other.
- **Maritime:** Based on a shared commitment to **maintaining the freedom of navigation**, particularly in the Indo-Pacific zone.
  - France and India reviewed the swift implementation of the conclusions of the Joint Strategic Vision of India-France Cooperation in the Indian Ocean Region, adopted during the last visit of France president.
  - For the implementation of the **White Shipping agreement**, India and France agreed on the appointment of a French liaison officer at the **Information Fusion Centre** – Indian Ocean Region (IFC-IOR) in Gurgaon.
  - They signed an Implementing Arrangement for the establishment of a framework for the realisation of joint **maritime domain awareness mission**. This is to keep an eye on Chinese assertive moves in the Indian Ocean region.
- **Economic engagement:** The two sides decided to have an appropriate framework to find ways to further promote bilateral trade and investment
- **Issue of Afghanistan:** The two sides decided to cooperate actively for international peace and security. They supported an inclusive peace and reconciliation process in Afghanistan which is **Afghan-led, Afghan-owned and Afghan-controlled**, leading to a lasting political solution based on preservation of the gains, including the constitutional order, human rights, particularly women's rights, and liberties gained over the past 18 years.

- They called for the timely holding of Presidential elections; cessation of terrorist violence; and an end to terrorist safe havens for enduring and sustainable peace, security and stability in Afghanistan.

#### White Shipping Agreement

- The white shipping information refers to an exchange of relevant advance information on the identity and movement of commercial non-military merchant vessels.
- Ships would be classified into white (commercial ships), grey (military vessels), and black (illegal vessels).
- The seas of the entire world are interlinked and vessels can sail routinely around the globe in pursuit of cargo. Thus a vessel that is in Indian waters today maybe sailing towards a distant destination and similarly several vessels set sail from ports around the globe could be bound for India.
  - This information is likely to be available with the country from whose port it sails. The information is equally relevant for the destination country and those it passes en route. Thus the mutual exchange of such information, called white shipping information, is extremely useful for all concerned.
- India has signed white shipping agreements with several countries including The United States and Singapore and is seeking similar agreements with more countries.

### PM's Visit to Bhutan

During the visit of the Prime Minister of India to Bhutan, **both the countries reiterated their commitment to maintain close coordination on matters affecting each other's security and national interests.**



Note:

### Key Takeaways

- The two countries inked 10 Memoranda of Understanding (MoUs) in the fields of **space research, aviation, IT, power and education** to infuse new energy in their ties.
- Both sides emphasised the importance of “hydro-power development” as one of the most important areas of mutually beneficial bilateral cooperation.
  - The two Prime Ministers formally inaugurated the recently completed 720 MW Mangdechhu Hydroelectric Plant and resolved to continue working together to expedite the completion of other ongoing projects such as Punatsangchhu-1, Punatsangchhu-2 and Kholongchhu.
- Both the leaders agreed to collaborate on the **joint development of a small satellite for Bhutan**.
- The two countries agreed to further expand bilateral trade and investment.
  - The Prime Minister of India assured the Bhutan Prime Minister of “positive consideration” of Bhutan’s request for enhancement of the currency swap limit under the SAARC Currency Swap Framework.
  - As an interim measure, he offered an additional USD 100 million of currency swap under the **Standby Swap Arrangement**.
  - The Union Cabinet had, on March 1, 2012, approved the framework on currency swap arrangement for SAARC member-countries with the intention to provide a line of **funding for short-term foreign exchange requirements** or to meet balance of payments crises till longer term arrangements are made or the issue is resolved in the short-term itself.
  - India has also incorporated a \$400-million ‘**Standby Swap**’ facility within the existing approved overall \$2 billion currency swap arrangement for SAARC member-countries.
  - This incorporation of ‘Standby Swap’ provides the necessary flexibility to the current ‘framework on currency swap arrangement’ and enable India to provide a prompt response to the request from SAARC member- countries for availing themselves of the swap amount exceeding the present limit prescribed under the SAARC Swap Framework.
- India announced the **increase in scholarships for Bhutanese students** for studies at Nalanda University from 2 to 5.

- Both the leaders launched the facility for **use of Indian RuPay cards in Bhutan**, which would facilitate Indians’ travel to Bhutan by reducing the need to carry cash, boost the Bhutanese economy and further integrate the two economies
  - They also agreed for a feasibility study on the use of India’s **Bharat Interface for Money (BHIM) app** in Bhutan to promote cashless payments between the two countries.
- The two Prime Ministers also **inaugurated in Thimphu** the **Ground Earth Station of the South Asian Satellite**, constructed with the support of the **Indian Space Research Organisation (ISRO)**.

### India-Bahrain

The Prime Minister of India, during his visit to Bahrain, launched a **USD 4.2 million redevelopment project of the 200-year-old Lord Sri Krishna temple in the Bahraini capital, Manama**.



- This is the first time that an Indian Prime Minister has visited Bahrain.
- The heritage and the 200-year-old **legacy of the Shreenathji (Shree Krishna)** temple in Manama will be highlighted in the redevelopment and the new iconic complex will house the sanctum sanctorum and prayer halls.
- India and Bahrain also agreed to enhance cooperation in the field of **security and counter-terrorism**.
  - In a joint statement, both the countries urged the international community to reject terrorism infrastructures and to cut off any kind of support to the terrorists.
- An MoU was also signed between BENEFIT, a Bahrain company handling ATM and POS transactions among others, and National Payments Corporation of India (NPCI) for **launch of RuPay card**.

Note:

- The two countries also signed MoUs on **cultural exchange programme, space technology, solar energy**.
- India welcomed the interest of Bahrain to join the **International Solar alliance (ISA)**.
- Both the sides also emphasised on the urgent need to pursue **UN reforms**, including the Security Council through an expansion of both categories of its membership, to make it more representative and effective in tackling global challenges.

## First Monument in Memory of a Glacier

Iceland honours the passing of **Okjokull**, its first glacier lost to climate change. A bronze plaque was unveiled in a ceremony to mark Okjokull — which translates to “**Ok glacier**” — in the **western Iceland**.

- It will be the **first monument** to a glacier lost to **climate change** anywhere in the world.

### Okjokull Glacier

- Okjokull, also called OK (jokull is Icelandic name for “glacier”), was part of the **Langjökull group**—one of Iceland’s eight regional groupings of glaciers.
  - **Vatnajokull group** being the largest among them.

### Vatnajokull Glacier

- The Iceland’s **Vatnajokull National Park** was recently added to **UNESCO's World Heritage List**, is situated in the largest ice cap in Europe i.e Vatnajokull Glacier.
- Vatnajokull National Park is situated in the south Iceland and was officially formed in 2008 by joining together Jokulsargljufur and Skaftafell National Parks.
- It is the **largest National Park in Europe** and covers an area of 12,000 square kilometers.
- It is situated atop of **OK volcano** in the west central Iceland.



- Glaciologists stripped Okjokull of its glacier status in 2014.
  - A glacier is defined as a persistent mass of compacted ice that accumulates more mass each winter than it loses through summer melt and moves constantly under its own weight. When this ceases to be the case, the remains are known as “dead ice”.
- According to the **University of Iceland report (2017)**, the glacier measured around 16 square kilometre (6.2 square miles) in 1890, which now remains just 0.7 square kilometre.
- It was also labelled as “**415 ppm CO<sub>2</sub>**”, which means the record level of carbon dioxide measured in the atmosphere.
- According to a study published by the **International Union for Conservation of Nature (IUCN)**, nearly half of the world's heritage sites could lose their glaciers by 2100 if greenhouse gas emissions continue at the current rate.

## Five Star Movement

Recently, **Italy’s Prime Minister Giuseppe Conte** announced his resignation on account of the collapse of coalition between his party **Five Star Movement (M5S)** and **League party**.

- League party withdrew its support by stating that its political goal was to challenge the European Union’s fiscal rules.

### Five Star Movement (M5S)

- M5S is a populist movement that was started in 2009 as an **internet-based group** becoming one of the most voted-for parties in Italy.
- It was started by **Beppe Grillo** and **Gianroberto Casaleggio** through their social networking site **Meetup.com** to bring people together to campaign on local issues and then field candidates for elections.
- In 2013 it became the second-largest party and eventually coming to power in 2018.
- M5S marks the significance of the internet and social media that could spur a new kind of politics.
  - M5S used the internet to form a political party – one without organisation, money, ideology or headquarters.
  - Also, it adds a new dimension to populism.

Note:



- Populism is a political approach that strives to appeal to ordinary people who feel that their concerns are disregarded by established elite groups.

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## Akademik Lomonosov

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Akademik Lomonosov, a **Russian ship** that has floating nuclear units, started its **first journey from the Russian port of Murmansk** to the arctic town of Pevek despite opposition from environmental groups.

- It is the world's only floating power unit and the world's northernmost nuclear installation.
- Significance of a **floating nuclear plant**.
  - It is suited for powering remote areas and island states that require stable, green sources of energy.

- It will power the extraction of natural resources in the Arctic region.
- The portable nuclear plants will help to reduce emissions of carbon dioxide, thus help in mitigating climate change.
- China and the US are also working on sea-based nuclear power plants, and France has explored the possibility.
- However, the environmental group Greenpeace has called the plan "**Chernobyl on Ice**".
  - Chernobyl accident is the 1986 nuclear power plant meltdown in erstwhile USSR, which released large levels of nuclear radiation into the atmosphere, forced thousands to flee their homes and sparked long-term fears of health and environmental repercussions.



Note:

# Science and Technology

## Highlights

- *Hope Probe*
- *Genome India Initiative*
- *Growing Human Organs in Animals*
- *Tardigrades*
- *Mexico's Prickly Pear Cactus*
- *First Contract for NSIL*
- *Mobile Application to Aid Farmers*
- *Gravitational Lensing*
- *Perseid Meteor Shower*
- *GramNet to Connect All Villages through Wi-Fi*
- *Nicotine as Class A Poison*
- *Biosimilar Medicine for Cancer*
- *Coprolite*
- *Chandrayaan-2 Scans Mitra Crater*

## Hope Probe

The **United Arab Emirates (UAE)** has announced that it will launch the '**Hope Probe**', the **Arab world's first spacecraft to Mars, in July 2020**.

- The space programme, also known as the **Emirates Mars Mission (EMM)**, aims at collecting information on Mars, meteorological layers and study the causes of loss of hydrogen and oxygen gases – the two main constituents of water – from the upper layer of the Martian atmosphere.
- The mission, if successful, will become the **first space exploration programme** to take a picture of the Mars atmosphere.
- The 'Hope Probe' **will be launched** into orbit in **mid-July 2020**. The spacecraft is expected to reach Mars orbit in the first quarter of 2021, coinciding with the 50th anniversary of the founding of the UAE.

## Genome India Initiative

India is planning to launch its first **Human Genome Mapping project**.

- Project involves scanning of 20,000 Indian genomes (in the next five years) in order to develop **diagnostic tests** and effective therapies for **treating diseases** such as cancer.
- It is to be implemented by **The Department of Biotechnology (DBT), Ministry of Science and Technology**.

## Cancer Incidence in India

- According to the study, as India continues to age, cancer cases will **double every 20 years**.
- **Uttar Pradesh, Bihar, Jharkhand and Odisha**, will bear the biggest cancer burden in the next 10-20 years.
- According to **Epidemiological Transition Level concept (ETL)**, number of patients with cancer started to increase as the life expectancy of Indians started to increase.
- The States with high ETL have a better development index and higher cancer rates.
  - ETL is highest in Kerala and is lowest in Uttar Pradesh.
- Government should consider **Bhore committee** and **Mudaliar committee report** recommendations for cancer that include creation of a multidisciplinary cancer treatment unit in all medical colleges and setting up of a stand-alone cancer speciality hospital.
- The project is to be carried out in two phases:
  - The first phase of the project involves sequencing the **complete genomes** of 10,000 healthy Indians.
  - Second phase, involves **genome sequencing** of 10,000 diseased individuals.
- Data on human sequencing would be accessible to researchers through a proposed **National Biological Data Centre** envisaged in **Biological Data Storage, Access and Sharing Policy**.
- **National Centre for Cell Sciences** will collect samples of the microbiome from the human gut.

Note:



### National Centre for Cell Science

- The National Centre for Cell Science is a national level, biotechnology, tissue engineering and tissue banking research center located at Savitribai Phule Pune University, Maharashtra.
- It is one of the premier research centers in India, which works on cell-culture, cell-repository, immunology, chromatin-remodelling.

### Significance

- **Healthcare:** For new advancements in medical science (like predictive diagnosis and precision medicine, genomic information) and in disease management, **genome sequencing** can play a crucial role.
  - Through genome sequencing methodology, researchers and clinicians can easily detect the disease related to **genetic disorder**.
- **Genetic Screening:** The genome project will lead to improved techniques of genetic **screening for diseases** prior to the birth.
- **Evolution Puzzle:** The genome project may answer questions regarding evolution by comparing human DNA with primate DNA.

### Concerns

- **Discrimination:** Discrimination based on genotype is a possible consequence of genome sequencing. For example, employers may obtain genetic information on employees prior to hiring them. If a certain employee is shown to be genetically susceptible to undesirable workforce traits they may be discriminated against their genotype.
- **Ownership and Control:** Apart from the issue of privacy and confidentiality, questions of ownership and control of genetic information becomes critical.
- **Fair Use of Genetic Data:** For insurance, employment, criminal justice, education, adoption, and military is necessary.

## Growing Human Organs in Animals

Scientists in **Japan** have received the **permission** of the government to try **growing human organs in animals**.

- The research led by **Hiromitsu Nakauchi**, a professor of genetics at Stanford University, is the first of its kind.

- The research involves generating **animal embryos** — **mice, rats or pigs** — that lack a particular organ such as a pancreas.
  - The modified embryos are then implanted with human "**induced Pluripotent Stem (iPS)**" cells that can grow into the missing pancreas.
  - The embryos would be transplanted into wombs where they could theoretically be carried to term with a functioning human pancreas.
- **Concerns:**
  - Implanting animal embryos with human cells creates what is known as a **chimera** – an entity with both animal and human cells.
  - The process throws up complex **ethical issues**, particularly over concerns that it may not be possible to completely control which organs are formed in the animal by the human iPS cells.
- **Benefit:** This experiment may lead to a future where human organs for transplant could be grown inside animals.

## Tardigrades

Microscopic Earthlings known as **Tardigrades**, likely survived a crash landing on the Moon surface by **Israel's Beresheet probe** in April, 2019.

**Beresheet** probe is a private mission to the Moon by **Israeli non-profit Spacell organisation**. It was successfully launched in February 2019, on board of **Falcon 9 rocket** from **Cape Canaveral (Florida, USA)** and arrived in lunar orbit in April 2019.



- Tardigrades are found in **terrestrial, marine, and freshwater environments** from the Arctic to the Antarctic, including great depths and altitudes.
- They **can withstand extreme radiation, sizzling heat, the coldest temperatures** of the universe, and decades without food.
- Also known as **water bears or moss piglets**, they are capable of surviving temperatures as high as 150° Celsius and as low as minus 272° Celsius albeit for a few minutes.

Note:

- The grub-like, **eight-legged animals** can come back from being dried out to a lifeless husk for decades, **withstand near zero pressure in outer space and the crushing depths** of the **Mariana Trench**.
- They are **microscopic, multicellular**, and one of the **most durable** forms of life on planet Earth.

## Mexico's Prickly Pear Cactus

Recently, researchers have found **Mexico's prickly pear cactus**, that can play a new and innovative role in the production of **biodegradable plastics**.

- The pulp for the cactus is strained to obtain a juice and is then mixed with non-toxic additives to produce sheets that can be used to form different types of packaging.
- It can provide a solution to one of the world's biggest pollution conundrums i.e., **Plastic pollution**.
- UN is committed to significantly reduce single-use plastics over the next decade. In pursuance of this India also seeks to ban single-use plastics.
  - Single-use plastics are disposable plastic items that are commonly used for packaging and include items intended to be used only once before they are thrown away or recycled.

## First Contract for NSIL

Recently, New Space India Limited (NSIL), the newly created second commercial arm of the **Indian Space Research Organisation**, has bagged its first contract.

- A private US space services provider: **Spaceflight**, has booked ISRO's **Small Satellite Launch Vehicle (SSLV)**, which is yet to be tested, for **launching a spacecraft**.

### Small Satellite Launch Vehicle

- The SSLV is the **smallest vehicle** weighing only 110-tonne.
- It would take only **72 hours to integrate**, unlike the 70 days taken for launch vehicles like **Polar Satellite Launch Vehicle (PSLV) or Geosynchronous Satellite Launch Vehicle (GSLV)**.
- **Cost-effective**: Its cost would be around Rs. 30 crores.
- It will be an **on-demand vehicle**.
- SSLV is perfectly suited for **launching multiple microsattellites** at a time and supports multiple orbital drop-offs.

- The SSLV can carry **satellites weighing up to 500 kg** to Low Earth Orbit while the PSLV can launch satellites weighing in the range of 1,000 kg.

- A **low Earth orbit (LEO)** is an orbit around Earth with an altitude above the Earth's surface of 2,000 kilometres (1,200 mi), and an orbital period between about 84 and 127 minutes.

- ISRO's SSLV was originally scheduled to have its first development flight on July 2019 but got delayed to end of 2019.

### New Space India Limited

- The establishment of NSIL was announced in **Budget 2019**.
- One of the mandates of NSIL is to **mass-produce and manufacture the SSLV and the more powerful PSLV** in partnership with the private sector in India through technology transfers.
- Its aim is to use research and development carried out by ISRO over the years for **commercial purposes through Indian industry partners**.
- It differs from ISRO's existing commercial arm Antrix Corporation:
  - Antrix will handle ISRO's commercial deals for satellites and launch vehicles with **foreign customers**.
  - NSIL will deal with **capacity building** of local industry for space manufacturing.

## Mobile Application to Aid Farmers

Government to launch a new mobile application, "**Uber for tractors**", which will help in **hiring of expensive agricultural equipment**.

- **Customer Hiring Centres (CHCs)** will be connected with the help of this app, just like the Uber connects an individual with cabs.
  - There are now more than 38,000 custom hiring centres (CHCs) across the country, which rent out 2.5 lakh pieces of farm equipment every year.
- The app will show the CHCs which have the equipment available within **5, 20 and 50 km of location, with their rates**.

Note:



### Benefits

- **Informed Decisions:** Feedback from both the CHC and the farmers will allow customers to make informed decisions.
- **Database:** The app will also create an **invaluable database for policy-makers**, who can track the use and cost of equipment.
- **Promotion of New Technology:** The system would also help to **track the usage** of new technology that the government wants to promote, such as the **Happy Seeder** that aims to prevent stubble burning that causes air pollution, or solar dryers that can help farmers process and preserve their produce.

### Solar Dryers

- Solar dryers uses solar energy in **drying applications**.
- They use air heated through **solar energy collectors**, which can be installed in modules according to the requirements of hot air.
- They have numerous applications in industries such as **textiles, food processing, paper, pharmaceutical, and agro-industries**.

### Customer Hiring Centres

- Customer Hiring Centres (CHCs) are basically a **unit comprising a set of farm machinery, implements and equipment meant for hiring by farmers**.
- **Marginal farmers** (Farmers whose land holdings are less than two hectares of land), by virtue of their economic condition are unable to own farm machinery on their own or through institutional credit.
  - Therefore in order to bring farm machinery available within the reach of small/marginal holdings, collective ownership or Custom Hiring Centres are being promoted in a big way.
- Ideally, the CHCs should be located **within a radius of 5 to 7 kms** of land holdings. This will reduce the transport cost and time of transport of agricultural machinery.

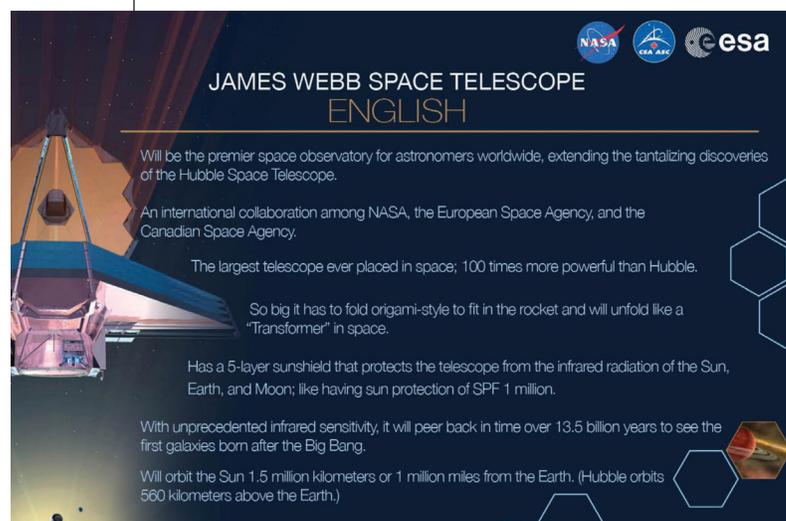
## Gravitational Lensing

USA's space agency NASA is planning to launch the **James Webb Space Telescope (JWST)** in 2021, which will use a natural phenomenon called "**gravitational lensing**" to carry out astronomical observations.

- JWST will study every phase in the **history of our Universe**, ranging from the first luminous glows after the Big Bang, to the **formation of solar systems** capable of supporting life on planets like Earth, to the evolution of our own Solar System, etc.
- For achieving this objective NASA has launched a program called **Targeting Extremely Magnified Panchromatic Lensed Arcs and Their Extended Star Formation, or TEMPLATES**.

### Gravitational Lensing

- The phenomenon of **gravitational lensing** occurs when a **huge amount of matter, such as a massive galaxy, cluster of galaxies or a black hole**, creates a gravitational field that **distorts and magnifies the light from objects behind it**.
- Gravitational lensing is based on Einstein's theory of **general relativity (Mass bend light)**.
- Normal lenses such as the ones in a magnifying glass work by bending light rays that pass through them in a process known as refraction, in order to focus the light somewhere else.
- Similarly, the gravitational field of a massive object causes light rays passing close to that object to be bent and refocused somewhere else.
- The more massive the object, the stronger its gravitational field and hence the greater the bending of light rays - just like using denser materials to make optical lenses results in a greater amount of refraction.
- In effect, **gravitational lenses act like natural cosmic telescopes**.



Note:

- The effect allows researchers to **study the details of early galaxies too far away** to be seen otherwise with even the most powerful space telescopes.
- However, gravitational lensing is very rare as it requires a distant star, black hole and the observer on earth to be well-aligned.
- Also, it can help astronomers to know about **black holes, dark matter**, etc.

## Perseid Meteor Shower

The Perseid Meteor Shower, which has been active from 17<sup>th</sup> July 2019 onward, can be seen until 26<sup>th</sup> August, 2019.

- The Perseids occur as the Earth runs into pieces of cosmic debris left behind by **the comet Swift-Tuttle**.
- The cloud of debris is about 27 km wide — and at the peak of the display, between 160 and 200 meteors streak through the Earth's atmosphere every hour as the pieces of debris, travelling at some 2.14 lakh km per hour, burn up a little less than 100 km above the Earth's surface.
- The Perseids currently visible in the night sky are **not due to the debris left behind** by the comet Swift-Tuttle during its most recent pass, which happened in 1992.
  - This **particular comet goes around the Sun once every 133 years**, and the meteors now visible were left behind by the pass before the last one — or perhaps even earlier.

### Meteor Shower

- The cosmic debris are the **remnants of comets** — great frigid chunks of matter that leave behind dirty trails of rocks and ice that linger long after the comets themselves have passed.
- As the Earth wades through this cloud of comet waste, the bits of debris create what appears from the ground to be a fireworks display in the sky — **known as a meteor shower**.
- Meteor showers take their name from the location of the radiant.
  - The Perseid radiant is in the constellation Perseus. The Geminid meteor shower, which is observed each December, is named for a radiant in the constellation Gemini.

## GramNet to Connect All Villages through Wi-Fi

The Government has reiterated its commitment to provide **Wi-Fi in all the villages through GramNet with connectivity between 10 Mbps to 100 Mbps speed**.

- During the **36th Foundation Day celebrations of Centre for Development of Telematics (C-DOT)**, Minister of State for Communications announced that BharatNet also plans to provide 1 GBPS connectivity, which can be expanded up to 10 GBPS.
- C-DOT also launched **three latest innovations** during Foundation Day Celebration, which are as follows:
  - **XGSPON (10 G Symmetrical Passive Optical Network)**
    - It can fulfil the increasing demands of high network speeds emanating from the new dimensions of user applications like IPTV, HD Video Streaming, Online Gaming.
    - It can also be a host of other cloud-based services that necessitate the seamless availability of high bandwidth.
  - **C-Sat-Fi (C-DOT Satellite WiFi)**
    - It is based on the optimal utilization of wireless and satellite communication to extend connectivity.
    - It offers the ease of deployment, which is ideally suited to addressing disasters and emergencies when no other means of communication are available.
    - It does not require the expensive Satellite Phones and can work on any WiFi-enabled phone.
  - **CiSTB (C-DOT's Interoperable Set-Top Box)**
    - Based on a portable smart card like a mobile SIM, this solution will revolutionize the experience of the Cable TV operators by offering them a high degree of choice, ease and convenience without having to replace the once installed STB.
- The above innovations seek to address the **challenges in the Telecom Sector** and empower Indian people especially in rural and remote areas as connectivity will bind people from all corners of the country.
- GramNet is a part of **National Broadband Mission (Rashtriya Broadband Abhiyan)** to secure universal broadband access. Apart from this, **there are other initiatives being taken** under the same. Few being:

Note:



**Centre for Development of Telematics (C-DOT)**

- It was established in 1984.
  - It is an autonomous Telecom R&D centre of DoT, Government of India.
  - It is a registered society under the **Societies Registration Act, 1860**.
  - It is a registered public-funded research institution with the Department of Scientific and Industrial Research (DSIR), Government of India.
  - Currently, C-DOT is working towards realising the objective of various flagship programmes of Govt. of India which include **Digital India, BharatNet, Smart Cities** etc.
- **BharatNet** – Providing 1 Gbps to Gram Panchayats upgradeable to 10 Gbps
  - **NagarNet** – Establishing 1 Million public Wi-Fi Hotspots in urban areas
  - **JanWiFi** – Establishing 2 Million Wi-Fi Hotspots in rural areas

**Nicotine as Class A Poison**

Karnataka has amended Poisons (Possessions and Sale) Rules 2015 by notifying **nicotine** as Class A poison.

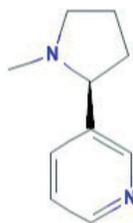
- The move aims at strengthening the enforcement of the ban on production and sale of electronic cigarettes.

**Background**

- In August 2018, the **Union Health Ministry** had instructed all the States to put a ban on the sale of e-cigarettes and other **Electronic Nicotine Delivery Systems (ENDS)** under their jurisdiction.
- Though Karnataka had banned the sale and production of e-cigarettes in June 2016, but illegal sale and smuggling of nicotine cartridges and **e-cigarettes** is rampant in the State.

**Nicotine**

- Nicotine is a plant alkaloid that contains nitrogen, which is found in several types of plants, including the tobacco plant and can also be produced synthetically.
- Nicotine is both a **sedative and a stimulant**.
- Nicotine is used as a direct substance in e-cigarettes and the content ranges



up to **36 mg/mL**. Although regular cigarettes have nicotine, but it ranges between **1.2 to 1.4 mg/mL**.

- Chewing or snorting tobacco products usually releases more nicotine into the body than smoking.

**Harmful Effect of Nicotine**

- Nicotine on direct application in humans causes irritation and burning sensation in the mouth and throat, increased salivation, nausea, abdominal pain, vomiting and diarrhea.
- It also increases pulse rate and blood pressure.

**Classification of Poison**

US Department of Transport divides poisons in two classes.

- **Class-A:** Highly toxic chemicals which even in very small quantities as gas or vapor in air are dangerous to life such as cyanogen, hydrocyanic acid, nitrogen peroxide, and phosgene.
- **Class-B:** Chemicals other than those included in Class-A and comparatively less toxic but considered dangerous.

**Biosimilar Medicine for Cancer**

Pharma major Dr. Reddy's Laboratories Ltd has launched '**Versavo (bevacizumab)**', a biosimilar of Roche's Avastin in India. The drug is for the treatment of several types of cancers.

- A **biosimilar** is exactly what its name implies — it is a biologic that is "**similar**" to another **biologic medicine** (known as a reference product).
  - **Biologics or biological products** are medicines made from living organisms through highly complex manufacturing processes and must be handled and administered under carefully monitored conditions.
  - Biologics are used to prevent, treat or cure a variety of diseases including cancer, chronic kidney disease, diabetes, cystic fibrosis, and autoimmune disorders.
- **Biosimilars are highly similar to the reference product in terms of safety, purity and potency**, but may have minor differences in clinically inactive components.
- **India is one of the leading manufacturers** of similar biologics. India developed a new guideline in 2012 for the pre- and post-marketing approval of similar biologics. The guidelines also address the regulation of manufacturing process as well as quality, safety, and efficacy of similar biologics.

Note:

## Coprolite

The scientists have found the oldest parasite **DNA (Deoxyribonucleic Acid)** in the Coprolite of a prehistoric **Puma in Argentina**.

- Coprolites are **fossilised faeces belonging to animals** that lived millions of years ago.
- Scientists can analyse and study the shape and size of coprolites and depending on the location they were found in, scientists can figure out the animal from which they came as well as uncover what those animals ate.
- For instance, if there are bone fragments in the faeces, it tells scientists that the animal might have been a carnivore. Tooth marks can reveal how the animal ate.

## Chandrayaan-2 Scans Mitra Crater

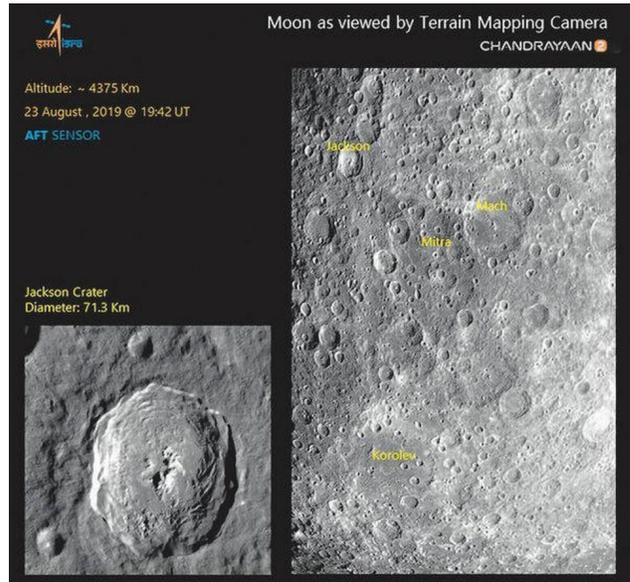
Recently, the Chandrayaan-2's orbiter has scanned a crater on the moon named after 20th century's acclaimed radio physicist Sisir Kumar Mitra.

- The set of images taken by the **Chandrayaan-2**, also include the images of impact craters namely:
  - **Jackson:** Named after a Scottish astronomer.
  - **Mach:** Named after an Austrian physicist and philosopher.
  - **Korolev:** Named after the father of the space programme of the erstwhile USSR.
- The **Working Group for Planetary System Nomenclature of the International Astronomical Union (IAU)**—the global authority for naming planetary features in the solar system— had named the impact based crater after **Professor Sisir Kumar Mitra** in 1970.

### Sisir Kumar Mitra

- Sisir Kumar Mitra was an **Indian physicist** who led the research in the ionosphere – the upper region of the atmosphere and **radiophysics**.
- He was the first to introduce the teaching of radio communication in India.
- His book, 'Upper Atmosphere' is considered as the Bible for research workers in the field of the ionosphere.

- In the 1950s, he advocated space research and high altitude rocket research programmes which had been successfully conducted by the US and USSR.



### Lunar Craters

- Lunar Craters are bowl-shaped landforms created by **Volcanism and Cratering**.
- There are hundreds of thousands of moon craters ranging from less than a mile across to giant basins.
- The **largest crater** on the Moon is called **South Pole-Aitken Basin**.
- Due to Moon's lack of water, atmosphere, and tectonic plates, there is little erosion, and craters are found that exceed **two billion years in age**.

### Chandrayaan-2

- It will attempt to soft-land the **lander – Vikram** and **rover – Pragyan** in a high plain between two craters, **Manzinus C** and **Simpelius N**.
- It is the first Space Mission to conduct a soft landing on the Moon's south polar region.
- It is the First Indian expedition to attempt a soft landing on the lunar surface with home-grown technology.
- India is the fourth country ever to soft-land on the lunar surface.



Note:

# Environment and Ecology

## Highlights

- Komodo Dragon
- Economic Valuation of Tiger Reserves
- Integrated Coastal Zone Management Plan
- Solar Thermal Energy Technology
- World Biofuel Day
- Wild Buffalo
- New Frog Species in Aravalis
- Rare Tarantula Sighted in Tamil Nadu
- Rules Eased for Development in Buffer Zones
- Preservation of Sundarban
- Clouded Leopards and Their Habitats
- Higher Protection to Star Tortoise and Otters
- Two New Species of Eels
- BASIC Meeting on Climate Change
- Kutch Desert
- India Fights to Get Rosewood Delisted from CITES
- Amazon Rainforest
- Ocean Energy as Renewable Energy
- Composite Water Management Index 2.0
- Land Degradation
- Compensatory Afforestation Fund

## Komodo Dragon

Recently, the **Indonesian government** ordered to **relocate** the residents of an island in eastern Indonesia called the **island of Komodo** in a bid to conserve rare Komodo dragons.

- This eviction has been ordered with a view for the recovery of the reptiles and the **Komodo National Park (the only habitat for the world's largest lizard species)**.
- The recovery effort of this national park was needed due to the deterioration caused by excessive tourism.
- However, shutting down of such ecological sites is not the right approach unless it is an **ecological emergency** as the relocation of the residents may lead to loss of livelihood.
- Instead, the system could be revamped to build local communities into the revenue generation process and manage tourism flows.

### Komodo Dragon

- The Komodo dragon is the largest living species of lizard.
- They are listed as **Vulnerable by the IUCN**.
- Komodo dragons hunt and prey including invertebrates, birds, and mammals.
- Comparison of Komodo's venom with Snake's venom:



- It is claimed that Komodo's have a venomous bite, which has been shown to secrete an anticoagulant.
  - An anticoagulant is a compound that prevents the victim's blood from clotting, causing it to bleed to death.
- Snake venoms are composed of a complex collection of toxins, enzymes, and non-toxic substances. It can be classified into three main types: **Neurotoxins, Hemotoxins, and Cytotoxins**.
  - **Neurotoxins** are chemical substances that are poisonous to the **nervous system**. Neurotoxins work by disrupting chemical signals (neurotransmitters) sent between neurons. E.g.: King Cobra
  - **Hemotoxins** are blood poisons that disrupt normal **blood coagulation processes**. They work by causing **Red Blood Cells (RBCs)** to burst open, by interfering with blood clotting

Note:

factors, and by causing tissue death and organ damage. **E.g.:** Vine snake

- **Cytotoxins** are poisonous substances that **destroy body cells**. Cytotoxins lead to the death of most or all of the cells in a tissue or organ. **E.g.:** Puff adders, Mozambique spitting cobras
  - Cytotoxins help to **partially digest** the prey before it is even eaten.
  - Cytotoxins are usually specific to the type of cell they impact. **E.g.:** Cardiotoxins are cytotoxins that **damage heart cells**. Mycotoxins target and dissolve muscle cells.

## Economic Valuation of Tiger Reserves

The **National Tiger Conservation Authority (NTCA)** has released a study titled “**Economic Valuation of Tiger Reserves in India: A Value + Approach**”.

- The study, authored by the **Centre for Ecological Services Management at the Indian Institute of Forest Management (Bhopal)**, estimated the **economic valuation**, based on ecosystem services, of ten tiger reserves in the country. The ten Tiger Reserves are:
  - Anamalai (Tamil Nadu),
  - Bandipur (Karnataka),
  - Dudhwa (Uttar Pradesh),
  - Melghat (Maharashtra),
  - Nagarjunsagar-Srisaillam (Andhra Pradesh/Telangana),
  - Pakke (Arunachal Pradesh),
  - Palamau (Jharkhand),
  - Panna (Madhya Pradesh),
  - Similipal (Odisha), and
  - Valmiki (Bihar)
- **Objective:** The objective behind the report is to enhance tiger conservation by highlighting the holistic economic benefits of protected areas.
- **Approach:** The “Value +” approach was used in the study, where the “**VALUE**” represents all the benefits in monetary terms for those services where monetary economic valuation is possible and derived based on the available knowledge, tools and methods.
  - **The “+” represents** all those benefits for which **economic valuation** is currently not possible

on account of lack of accepted methodologies, knowledge, available technology, current resources and/or understanding of the system.

### Ecosystem Services and Tiger Reserves

- Ecosystem Services can be defined as benefits in terms of goods or services provided by nature which are of fundamental importance to human well-being, for health, livelihoods, and survival.
- In the context of natural resource development, Tiger Reserves are the primary repositories of forests and other natural ecosystems.
- A range of ecosystem services emanate from tiger reserves such as **Non Timber Forest Products (NTFPs)** provisioning, employment generation, carbon sequestration, biological control, habitat for species, genepool protection, gas regulation, pollination, fuelwood, fodder grazing, watershed protection, increased soil fertility, physical and mental well being, spiritual tourism etc.

### Economic Value of Tiger Reserves

- The study findings indicate that the **natural ecosystems** in the **Tiger Reserves (TRs)** provide adequate resources to humans in the range of Rs. 1643-7042 crore.
- **TRs offer protection from disease, predators, and parasites**, which is an avoided cost in the range of Rs. 7.7 crore to Rs. 24.15 crore.
- They also help in maintaining a benign physical and chemical environment for amenable living conditions by providing necessary infrastructure and ecosystem services worth Rs. 2567-8260 crore.
- The tiger reserves play a **significant role in the lives of local communities** and conserve a range of traditional values apart from providing recreation and leisure. Thus the socio-cultural fulfilment benefits from these TRs range from 0.3 crore to 62.144 crore.
- They conserve ecosystems and natural assets worth Rs. 15310-98530 crore.

### Suggestions

- **Ecosystem services** should be kept as a focal area in Tiger management.
- Comprehensive analysis of **ecosystem services** may result in establishing partnerships with relevant stakeholders, effective policies and mechanisms for incentivizing conservation.

Note:



- **Adequate investment in natural capital** contained in tiger reserves is essential to ensure the flow of ecosystem services in the future.

**Note:**

The Indian Institute of Forest Management is an autonomous institute of Ministry of Environment, Forest and Climate Change, established in 1982.

## **Integrated Coastal Zone Management Plan**

The Ministry of Environment, Forest and Climate Change (MoEFCC) has unveiled the **draft Environmental and Social Management Framework (ESMF)** for Integrated **coastal** management.

- The draft plan will dictate how prospective infrastructure projects situated along the coast would be assessed before they can apply for clearance by laying out guidelines for coastal States to adopt when they approve and regulate projects in coastal zones.
- The ESMF draft plan as a part of a World Bank-funded project seeks to assist the Government of India in **enhancing coastal resource efficiency and resilience, by building collective capacity** (including communities and decentralised governance) for adopting and implementing **Integrated Coastal Zone Management Plan**.
- The MoEFCC had launched an Integrated Coastal Zone Management Project (ICZMP) by establishing a **Society of Integrated Coastal Management (SICOM)**.

### **Draft Environmental and Social Management Framework**

- Draft ESMF has been prepared in support of a project proposal for “Enhancing climate resilience of India’s coastal communities” by the Government of India (GoI) to the Green Climate Fund (GCF).
- The **objective of the draft ESMF project** is to enhance the resilience of the lives and livelihoods of the most vulnerable populations, particularly women, in the coastal areas of India.
- The project will work at national, state, and community levels to enhance capacity for the ecosystem and community-based approaches to adaptation.

### **Society of Integrated Coastal Management**

- Society of Integrated Coastal Management (SICOM) has been established under the aegis of the Ministry of Environment, Forests and Climate Change.
- It has a vision for vibrant, healthy and resilient coastal and marine environment for the continuous and enhanced outflow of benefits to the country and the coastal community.
- SICOM is the national project management unit of India in strategic planning, management, execution, monitoring and successful implementation of the ICZMP-Phase-I.

### **Integrated Coastal Zone Management Plan**

- (ICZM) is a process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainability.
- The concept was born in 1992 during the Earth Summit of Rio de Janeiro.
- The specifics regarding ICZM is set out in the proceedings of the summit within Agenda 21.

### **Implementation**

- It is a **World Bank** assisted project and is being implemented by the Department of Forests and Environment with assistance from the **Union Ministry of Environment, Forests and Climate Change (MoEFCC)**.
- The **National Centre for Sustainable Coastal Management (NCSCM)**, Chennai, is providing scientific and technical inputs.

### **Objective**

- Formulation of Integrated Coastal Zone Management Plan for the State
- Lessen the coastal erosion
- Reduce vulnerability to disaster
- Biodiversity conservation
- Livelihood security
- Pollution/ environmental quality management
- Improvement and conservation of cultural/ archaeological assets

### **Components**

- Society of Integrated Coastal Management (SICOM) would be implementing the project at national level and state level.

Note:

- Till now three coastal states namely West Bengal, Gujarat and Orissa have been selected under the ICZM plan.
- Four main components of the plan include National Coastal Zone Management Programme, ICZM-West Bengal, ICZM-Orissa and ICZM-Gujarat:
  - National Coastal Zone Management Programme: The national component will include **mapping, delineation and demarcation** of the hazard lines, and delineation of coastal sediment cells all along the mainland coast of India.
  - **ICZM approaches in Gujarat, Orissa and West Bengal:** will support capacity building of the state-level agencies and institutions, including preparation of an ICZM plan for the coastal sediment cell, regional coastal process studies, and pilot investments.

## Solar Thermal Energy Technology

The **National Institute of Solar Energy (NISE)** and the **United Nations Industrial Development Organization (UNIDO)** have signed an agreement to initiate a skill development programme for different levels of beneficiaries in the solar thermal energy sector.

- The agreement is part of the ongoing **MNRE-GEF-UNIDO** project which aims to support capacity building and skill development of technical manpower in the Concentrated **Solar Thermal Energy Technologies (CST)** which are being used to replace conventional fossil fuels e.g. coal, diesel, furnace oil etc.
  - The **GEF-UNIDO's project** is designed to complement MNRE's support programme by helping to remove barriers associated with **CST technology**, its awareness, capacity building, market and financial barriers.
  - The duration of the project is from January 2015 to December 2019.
  - Different concentrating technologies have been developed or are currently under development for various **commercial and industrial applications**.
  - For industrial processes where temperatures above 80°C are required, concentrating solar collectors such as parabolic trough or dish collectors, non-imaging concentrators or a Linear Fresnel system are required to be used.

- The industries showing good potential for implementation of solar concentrators are food processing, paper and pulp, fertilizer, breweries, electroplating, pharmaceutical, textiles, refineries, rubber and desalination sectors.

### **United Nations Industrial Development Organization**

- The United Nations General Assembly passed the resolution for establishing the UNIDO in the year 1966.
- It is a specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability.
- As of 1st April 2019, 170 States are members of UNIDO.
- It is headquartered in Vienna, Austria.

### **National Institute of Solar Energy**

- National Institute of Solar Energy (NISE), an autonomous institution of the Ministry of New and Renewable (MNRE), is the apex National R&D institution in the field of Solar Energy.
- The Government of India converted 25 year old Solar Energy Centre (SEC) under MNRE to an autonomous institution in September, 2013 to assist the Ministry in implementing the National Solar Mission and to coordinate research, technology and other related works.
- It is located in Gurugram, Haryana.

## World Biofuel Day

- The **World Biofuel Day** is observed every year on August 10 to create awareness about the importance of non-fossil fuels as an alternative to conventional fossil fuels.
  - It is being observed by the **Ministry of Petroleum & Natural Gas**.
- The theme of the World Biofuel Day, 2019 is "Production of Biodiesel from **Used Cooking Oil (UCO)**".
- The **National Policy on Biofuels**, released by the Government of India in 2018, envisages production of biofuel from UCO. **Food Safety and Standards Authority of India (FSSAI)** is implementing a strategy to divert UCO from the food value chain and curb current illegal usage.

Note:



- The benefits of transformation of UCO will help bring health benefits as there would be no recycling of the UCO, employment generation, infrastructural investment in rural areas & cleaner environment with reduced carbon footprint.

### **Scheme for Used Cooking Oil**

On the occasion of **World Biofuel Day**, the Minister of Petroleum and Natural Gas released the **Expression of Interest (EOI)** for procurement of **biodiesel** made from **Used Cooking Oil (UCO)**.

- The entrepreneurs setting up **biodiesel plants (using used cooking oil as their raw material)** to get remunerative price and assurance of complete offtake of production by the oil companies for the purpose of blending with normal diesel.
- The Minister also launched a **'Repurpose Used Cooking Oil (RUCO)' sticker** and a phone app to enable the collection of used cooking oil.
  - Restaurants and hotels interested in supplying used cooking oil can affix the sticker to show availability.

### **Background**

- The announcement comes just a day after the **Food Safety and Standards Authority of India (FSSAI)** directed Food Safety Commissioners to ensure that Food Business Operators (FBOs), whose consumption of **edible oils for frying is more than 50 litres per day, stop reusing the oil more than three times**.
  - FSSAI is planning to launch a **mobile app for tracing and tracking used cooking oil**.
  - FSSAI is also planning to ask cooking oil manufacturers to come out with colour charts (either on the product or in a booklet along with the product) that will help people to identify if the oil is fresh or re-used.
- The order is aimed at ensuring that reused cooking oil is neither directly used in food preparation nor re-enters the food chain i.e. to set in safety standards in the food industry.
  - When used multiple times, cooking oil becomes acidic and darkens in colour. This may alter the fatty acid composition of the oil.

### **Other Initiatives Taken for Boosting Production of Biofuels**

- The Ministry of Petroleum and Natural Gas is working on a four-pronged strategy in this regard-promoting

Ethanol, 2-G ethanol, Compressed Biogas (CBG) and Bio-diesel.

- The ethanol blending in Petrol has gone up from 1% to about 8% and is likely to touch 10%.
- **The Budget 2019-20** underlined the transformation of farmers from **Annadata to Urjadata**.
  - The Government is **planning to allow production of ethanol from surplus food grains** which sometimes go waste and also entail expenditure on storage.
- The **City Gas Distribution (CGD)** network is being set up in over 400 districts which will give a big fillip to the use of CBG.
  - Biogas is purified to remove carbon dioxide and hydrogen sulphide gases to prepare CBG.
  - CBG has calorific value and other properties similar to **Compressed Natural Gas (CNG)** and hence can be utilized as green renewable automotive fuel.

## **Wild Buffalo**

Recently, the government has decided to translocate five female wild buffaloes from **Manas National Park** in Assam to **Udanti Wildlife Sanctuary in Raipur district, Chhattisgarh**.

- This will be the **longest such translocation** in the country ever, that seeks to revive the waning population of **Chhattisgarh's State animal**.
- **The survival hazard of inbreeding, poaching for horns and increasing male population** have necessitated the translocation.
- The Central India Wild Buffalo Recovery Project aims to stabilise the wild buffalo population in Udanti-Sitanadi Tiger Reserve.

### **Wild Buffalo (Bubalus arnee)**

- The wild buffalo is mainly found in the alluvial grasslands, marshes, swamps and river valleys. They are generally found in areas that have plenty of water holes and resources
- The estimated population of the wild buffaloes in the Northeast is around 3,000-4,000, the largest in the country and accounting for **92% of the world population**.
- It is listed under **Schedule 1** of the **Wild Life (Protection) Act, 1972**.
- It is classified as **endangered** in the **IUCN Red List** of Threatened Species.

Note:

## New Frog Species in Aravalis

An amphibian survey conducted by Delhi University professor has found four new species of frogs in the Aravalli biodiversity area.

- The survey has found the presence of eight frog species in Aravalli biodiversity park.
  - The four species reported earlier are **Bull frog** (largest frog in India), **Indian skipper frog**, **Narrow-mouthed frog** (smallest land vertebrate from Delhi) and **Pierrei's wart frog**.
  - The four new species found this year are **Nepal's Wart Frog**, **Indian Toad**, **Indus Valley Toad** and **Indian burrowing Frog**.
- Since frogs are an environmental indicator, their presence indicates a relatively healthy ecosystem.

### Indian Skipper Frog

- The species is widely distributed in **South Asia and South-east Asia**, from **southeastern Iran, southern Afghanistan, Pakistan, Nepal** and eastern India at low to moderate elevations.
- They are often seen **at the edge of bodies of water** with their eyes above the water. They noisily move away from the shore when disturbed, giving them their common name.
- It is classified as **least concern** by the **IUCN**.

### Pierrei's Wart Frog

- It is found in India and its adjacent countries **Nepal, Bangladesh** and **Bhutan**.
- It is a common species associated with paddy fields.
- It is classified as **least concern** by the **IUCN**.

### Nepal's Wart Frog

- It is a small-sized frog native to northern and northeastern **India, Bangladesh, and Nepal**.
- It is classified as **least concern** by the **IUCN**.

### Indian Toad

- It is found **widely from northern Pakistan through Nepal, Bangladesh, India including the Andaman and Nicobar Islands and other southeast Asian countries**.
- It lives mostly in **disturbed lowland habitats**, from upper beaches and riverbanks to human-dominated

agricultural and urban areas but uncommon in closed forests.

- It is classified as **Near Threatened** by the **IUCN**.

## Rare Tarantula Sighted in Tamil Nadu

The spider belonging to the **Genus Poecilotheria**, commonly known as the **Peacock Parachute Spider** or **Gooty Tarantula** was spotted in the **Pakkamalai Reserve Forests** in **Villupuram District, Tamil Nadu**.

- **Peacock Parachute Spider (Gooty Tarantula)**
  - **The International Union for Conservation of Nature (IUCN)** has categorised it as **Critically Endangered**.
  - It is **endemic to India**.
  - The known habitat of this species is in the **Eastern Ghats** especially degraded forests near **Nandyal in Andhra Pradesh**.
  - Species of this genus can be identified based on the banding patterns on the underside of the legs.
- Tarantulas are **biological pest controllers** and there is a huge demand for them by collectors in the pet trade. There is an urgent need to protect them.



## Rules Eased for Development in Buffer Zones

The Union Ministry of Environment, Forest and Climate Change has relaxed the procedure for environmental clearances of developmental activities in the **buffer zone**.

- Buffer Zone is an area supposed to reinforce conservation of protected area. This move is likely to weaken the protection offered to **wildlife sanctuaries and national parks**.
- As per an office memorandum (OM), the projects outside the boundary of the notified **Eco-Sensitive Zone (ESZ)** of a sanctuary or national park **but within 10 km radius of the park will not need prior clearance from the National Board for Wildlife (NBWL)**.
  - The **Wildlife Conservation Strategy of 2002** recommends a **buffer of 10 km** around sanctuaries.

Note:



- ESZ are formed to serve as “**shock absorber**” for protected areas. The basic aim here is to regulate certain activities around national parks and wildlife sanctuaries to minimise negative impact on the fragile ecosystem around.
- Such proposals will now get **environmental clearance** from the ministry’s **Expert Appraisal Committee (EAC)**, which will ensure “appropriate conservation measures in the form of recommendations”.
- **Projects within the notified ESZ** will require the NBWL’s nod, which can be applied for together with the initial “terms of reference” application.
- **Mining** will be prohibited within the notified ESZ or within only one km from the boundary of the park, whichever is higher according to the new OM.
- It nullifies previous OMs dated February 27, 2007 and Dec 2, 2009, which made the NBWL’s approval mandatory for projects within a 10 km radius of the park.

### **National Board for Wildlife**

As per the amendment of the **Wildlife (Protection) Act, 1972 in 2002**, a provision was incorporated for the constitution of the **National Board for Wildlife (NBWL)**, replacing the Indian Board for Wildlife.

- The National Board for Wildlife has 47 members with the **Prime Minister in the Chair**.
- The Minister in charge of the Ministry of Environment & Forests in the Central Government is the Vice-Chairperson.
- The Board is responsible for promotion of conservation and development of wildlife and forests.

### **Concerns**

- This completely defeats the purpose of recognising 10 km around protected areas as areas that need to be recognised for their conservation value.
- It also reads down the importance of ensuring wildlife related scrutiny at the time of environment clearances.

### **Issues and loopholes**

- In many states, **protected areas** do not have an ESZ of 10 km as specified by the Supreme Court. Some have a buffer zone of a few hundred metres to one-km radius, while other states still have not notified an **ESZ**.
- In cases where the ESZ notification is in the draft stage, a nod from NBWL is needed and can be applied for along with environmental clearance.

- For example, the Jim Corbett National Park has not notified its ESZ, but its draft notification provides a buffer of 1 km, while Bandipur Tiger Reserve has notified an ESZ of 7.7 km radius. ESZ for other tiger reserves like Nagarhole, Biligiriranga Temple Sanctuary and Ranthambore haven’t been notified.
- The SC had directed states and the Centre on several occasions to enforce the ESZ .
  - The SC in its September 2017 order, in the context of reduction of 10 km ESZ to 100m, had strongly observed that since an order of this nature is capable of destroying national parks and wildlife sanctuaries in the country.
- The real worry, therefore is that ESZs around parks and sanctuaries may not achieve the envisioned goal of acting as shock absorbers and protection of corridors.

## **Preservation of Sundarban**

**Discovery India** and **World Wide Fund (WWF)** India have partnered with the **Government of West Bengal** and local communities in the Sundarban to help save the world’s only mangrove **tiger habitat**.

- They are working with a vision to create **climate-smart villages** in the Sundarbans.
  - Climate Smart Villages are sites where farmers, researchers, local government and the private sector come together to understand which climate smart agriculture practices are best suited for a particular location.
- The project will use technology to solve several of the issues faced in the region. This includes building datasets on impacts of climate change on estuarine ecosystem.
  - Through this project, in partnership with the **West Bengal Forest Directorate** and **Indian Institute of Science Education and Research (IISER) Kolkata**, two Sundarbans ecological observatories will be set up, each featuring data loggers, monitoring buoys and an onsite laboratory.
- **Farmland productivity:** The initiative also focuses on enhancing farmland productivity through low-cost measures and adjusting crop calendars to deal with climate change.
- The initiative will also include work towards securing habitats for tigers and prey species.

Note:



- The project at Sundarbans is part of a global movement, **Project CAT (Conserving Acres for Tigers)**, aimed at building healthy habitats for Tigers by conserving six million acres of protected land across four countries.

### **Project CAT (Conserving Acres for Tigers)**

- **Discovery Communications** is working with World Wildlife Fund and others to support a worldwide effort to double the number of tigers in the wild by 2022.
- It is a mission to ensure a future for tigers and other endangered wildlife by conserving nearly a million acres of protected land on the border of India and Bhutan.
- Tigers face multiple threats from **poaching, habitat loss and fragmentation, conflict with humans and overhunting of their prey species**.
- As a large predator, tigers are an umbrella species. They play a key role in maintaining a healthy ecosystem.
  - By protecting tigers and their habitat, the others risk animals that share this habitat, like Asian elephants, greater one-horned rhinos, clouded leopards and important prey species are also getting protected.

### **Umbrella Species and Keystone Species**

- **Umbrella Species** are species that are selected for conservation-related decisions because the conservation and protection of these species indirectly affect the conservation and protection of other species within their ecosystem.
- Umbrella species help in the selection of potential reserve locations, as well as the determination of the composition of the reserve.
- These species usually have a large area requirement for which the conservation of the species extends the protection to other species sharing the same habitat.
- Umbrella species are representative of other species in their habitat since they are known species, and they also determine the area of conservation.
  - **For example:** The protection of the Bay checkerspot butterfly automatically leads to the protection of the grassland while the conservation of the Amur tiger in the Russian Far East also means automatic conservation and protection of the deer and boar in their habitat.
- A **keystone species** is an organism that helps define an entire ecosystem. Without its keystone species,

the ecosystem would be dramatically different or cease to exist altogether.

- Keystone species have low functional redundancy.
  - This means that if the species were to disappear from the ecosystem, no other species would be able to fill its ecological niche.
  - The ecosystem would be forced to radically change, allowing new and possibly invasive species to populate the habitat.
- Any organism, from plants to fungi, may be a keystone species; they are not always the largest or most abundant species in an ecosystem.

### **The Sundarbans Mangrove Forest**

- The Sundarbans mangrove forest, one of the largest such forests in the world, lies across India and Bangladesh on the delta of the **Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal**.
- It is adjacent to the border of India's Sundarbans **World Heritage site inscribed in 1987**.
- The site is intersected by a complex network of tidal waterways, mudflats and small islands of salt-tolerant **mangrove forests**, and presents an excellent example of ongoing ecological processes.
- The area is known for its wide range of fauna, including 260 bird species, the Bengal tiger and other threatened species such as the estuarine crocodile and the Indian python.
  - It is home to many rare and globally threatened wildlife species such as the estuarine crocodile, Royal Bengal Tiger, Water monitor lizard, **Gangetic dolphin** and **olive ridley turtles**.

### **Clouded Leopards and Their Habitats**

Recently a study conducted in nine countries (Bhutan, Nepal, India, Peninsular Malaysia, Thailand, Vietnam, Cambodia, Laos, Myanmar) suggested that only 9.44% of the studied region was 'highly' suitable for clouded leopards (*Neofelis nebulosa*).

- In India, the **Dampa tiger reserve in Mizoram** was chosen as the study site.



Note:

- Dampa had one of the highest population densities of clouded leopards, among the sites surveyed.
- **Clouded leopard:**
  - Named after cloud shaped pattern on its skin.
  - It is listed as Vulnerable on the IUCN Red List.
  - It is the State animal of Meghalaya.
  - It has been added to India's Recovery Programme for Critically Endangered Species to aid more research and strengthen conservation efforts.
- **Habitat:**
  - Clouded Leopard prefers **grassland, shrubs, subtropical and dense tropical forest up to a height of 7,000 feet** occurring from the Himalayan foothills through mainland Southeast Asia into China.
  - In India, it occurs in Sikkim, northern West Bengal, Meghalaya subtropical forests, Tripura, Mizoram, Manipur, Assam, Nagaland and Arunachal Pradesh.
  - Clouded leopard's presence is positively related to:
    - Dense forest cover
    - High rainfall
    - Hard terrain
    - Low human presence
- **Factors affecting Clouded leopards distribution:**
  - Deforestation
  - Changing rainfall patterns
  - Human-animal conflict
  - Development projects

Thus, steps should be taken to make land-use and development policy to facilitate coexistence of people alongside **clouded leopards** as umbrellas for wider nature.

#### Dampa Tiger Reserve

- It is located in **Mizoram**.
- It received the status of a tiger reserve under **Project Tiger**.
- Recently in the news, as the tigers were estimated to be zero as part of the **latest all India tiger estimation exercise**.

#### Integrated Development of Wildlife Habitat (IDWH)

- It is a **centrally sponsored scheme** launched to provide technical and financial assistance to States/UTs for protection of wildlife habitat.
- The activities covered under the scheme include
  - Staff development and capacity building,

- Wildlife research and evaluation
- Anti-poaching activities
- Wildlife veterinary care
- Addressing man-animal conflict
- Promoting eco-tourism.
- **Financial assistance** is also provided to States for the **relocation of communities from within protected areas to other areas**.
- The scheme includes three components:
  - **Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves & Community Reserves).**
    - All Protected Areas (PAs) in different states are eligible for assistance, except those areas which receive assistance under Project Tiger.
  - **Protection of Wildlife outside Protected Areas** **Many wildlife habitats fall outside the network of protected areas.**
    - Under this component, funds are granted against Biodiversity Plans prepared by Chief Wildlife Wardens of the respective States. Priority is given to regions contiguous to the Protected Areas.
  - **Recovery Program** for critically endangered habitats and species
    - 16 species have been identified for recovery under this component. These are **snow leopard, Bustard, dolphin, hangul, Nilgiri Tahr, marine turtles, dugongs, edible nest swiftlet, Asian wild buffalo, Nicobar Megapode, vultures, Malabar Civet, Indian rhino, Asiatic lions, Swamp deer, Jerdon's Courser and Brown antlered deer**. A scientific Recovery Plan has to be prepared by the Chief Wildlife Warden in each state.

## Higher Protection to Star Tortoise and Otters

India's **proposal to upgrade the protection status** of Star Tortoise, the Smooth-coated Otter & Small-clawed Otter has been approved in the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**.

- The species are now listed under **Appendix I of the CITES** & enjoy highest degree of protection.

Note:

- Henceforth, complete International ban will be enforced on their trade, as an effort to boost their numbers.
- The upgradation was approved at **Conference of Parties (COP18)** held at **Geneva**.
- According to Deputy Director, **Wildlife Crime Control Bureau**, "90% of the trade of **Star Tortoise** occurs as part of the International pet market."
  - If their exploitation had continued at a similar pace or had expanded, a decline of greater than 30% was predicted by 2025.

## Two New Species of Eels

Recently, two new species of Marine Eels have been discovered by Estuarine Biology Regional Centre (EBRC) of the **Zoological Survey of India (ZSI)**.

- One of them, a short brown un-patterned Moray Eel, named **Gymnothorax andamanensis**, is found near the south Andaman coast.
  - 10 species of short brown unpatterned moray eels have been discovered in the world, out of which **two were found in Indian waters**.
- Another is a new white-spotted Moray Eel, now named **Gymnothorax smithi**.

### Moray Eels

- Moray Eels occur in all **tropical and subtropical seas**, they live in shallow water among reefs and rocks.
- They are known for two types of jaws: one is **regular (oral) jaws** with big teeth and the second jaw is called the **pharyngeal jaw** (which drags prey inside the eels stomach).
- There **IUCN red list** status is **Least Concern**.

#### Zoological Survey of India

- The Zoological Survey of India (ZSI), a subordinate organization of the **Ministry of Environment and Forests** 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.

## BASIC Meeting on Climate Change

The BASIC countries held their **28<sup>th</sup> ministerial meeting** on Climate Change from 14<sup>th</sup> to 16<sup>th</sup> August 2019 in **Sao Paulo, Brazil**.

- The countries expressed their concern about climate change and its adverse effects, and reaffirmed their commitment to the successful implementation of the **United Nations Framework Convention on Climate Change (UNFCCC)**, its Kyoto Protocol and its Paris Agreement, in accordance with the principles of Equity and **Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**, in the light of different national circumstances.
- The Ministers stated the importance of responsible, comprehensive, urgent and ambitious actions against climate change, including in the urban environment.
- The group noted with concern the **trend of developing countries being denied their right to support in different fora, including the Green Climate Fund (GCF) and the Global Environment Facility (GEF)**. It stressed in this regard that climate finance should not be a vehicle for increasing the indebtedness of developing countries.
- The BASIC Ministers **urged developed countries** to fulfill their climate finance commitments of mobilizing USD 100 billion annually by 2020 for developing countries in a transparent manner and on a grant basis.
- The Ministerial meeting was held in the **run-up to the UNFCCC Conference of Parties (COP-25)** meet to be held in Chile from 2<sup>nd</sup>-3<sup>rd</sup> December, 2019.

### BASIC

- The BASIC group was formed as the result of an agreement signed by the four countries (Brazil, South Africa, India and China) on 28th November, 2009.
  - The signatory nations committed to acting together at the upcoming United Nations Climate Change Conference, commonly known as the Copenhagen Summit, scheduled in Copenhagen, Denmark from December 7-18 of that year.
- BASIC is one of several groups of nations working together to fight climate change and carry out negotiations within the UNFCCC.

Note:

- Other than BASIC, there are the **Organisation of Petroleum Exporting Countries (OPEC)**, the group of countries of Central Asia, Caucasus, Albania and Moldova (CACAM), etc.
- Brazil, South Africa, India and China put together has one-third of the world's geographical area and nearly 40% of the world's population.
- **China will host the next meeting** of the BASIC Ministers. The **27<sup>th</sup> BASIC Ministerial Meeting** on Climate Change was held on 19<sup>th</sup>-20<sup>th</sup> November, 2018 in New Delhi, India.

## Kutch Desert

The study of fossils from Kutch in Gujarat has revealed that the hot arid desert of Kutch was once a humid subtropical forests.

- **Findings of Study:** The fossil from Palasava suggest that a rich diversity of fauna and flora sustained in warm, humid/wet, tropical to sub-tropical environmental conditions during the Middle Miocene.
  - The bulk of fossils unearthed in Kutch have so far been mainly marine organisms, due to their proximity to the Arabian Sea. Geological changes eventually closed off the salt-flats' connection to the sea and the region turned into a large lake, eventually becoming salty wetlands.
  - It points to clues on how mammals dispersed between Africa and the Indian subcontinent when part of India was in the **Gondwanaland supercontinent that existed nearly 300 million years ago**.

### Kutch Desert

- Kutch Desert covers a vast area of 45,612 sq. km and is bounded to the north and northwest by Sindh (Pakistan), west and southwest by the Arabian Sea, and to the northeast by Rajasthan.
- The Rann of Kachchh comprises a unique example of **Holocene sedimentation**. It covers a large tracts of 23,000 sq. km and has been arbitrarily divided into two parts namely the Great Rann and Little Rann.
- Kachchh furnishes an interesting example of four diverse geomorphic type of terrain namely (i) the Rann, (ii) the low lying Banni plains, (iii) the hilly region, and (iv) the coastal plains.



- Such physiographic diversity is a reflection of geology, climate and sea level changes in this region
- It is connected to the Arabian Sea through **Kori Creek** in the west and the **Gulf of Kachchh** in the east, and is very close to sea level.
- The **Wild Ass Wildlife Sanctuary**, situated in the Indian state of Gujarat, is the largest wildlife sanctuary in the country. It is spread in the entire area of the little **Rann of Kutch** where small grass-covered areas, known as baits, forms the flora and is an important source to support the fauna of the region.

### Holocene Epoch

- Holocene Epoch, is the latest interval of geologic time, covering approximately the last 11,700 years of Earth's history.
- The sediments of the Holocene, both continental and marine, cover the largest area of the globe of any epoch in the geologic record.
- The Holocene is unique because it is coincident with the late and post-Stone Age history of humankind. The influence of humans is of world extent and is so profound that it seems appropriate to have a special geologic name for this time.

### Miocene Epoch

- The Miocene epoch is a major division of the geologic timescale and extends from about 23.03 to 5.332 million years before the present.

Note:

## India Fights to Get Rosewood Delisted from CITES

India, with the help of Bangladesh and Nepal, is trying to de-list '**Dalbergia sissoo**', from the list of **threatened varieties** in order to protect the livelihood of handicraft manufacturers and farmers in the Sub-continent.

- **Dalbergia sissoo** is commonly known **Rosewood, Shisham** and is a medium to large deciduous tree, native to India, with a slight crown.
- **Distribution:** It is native to the foothills of the Himalayas. It is primarily found growing along river banks below 900 metres (3,000 ft) elevation, but can range naturally up to 1,300 m (4,300 ft).
  - The temperature in its native range averages 10–40°C (50–104°F), but varies from just below freezing to nearly 50°C (122°F).
  - It can withstand average annual rainfall up to 2,000 millimetres (79 in) and droughts of 3-4 months.
  - Soils range from pure sand and gravel to rich alluvium of river banks; shisham can grow in slightly saline soils.
- **Use:** It is used as firewood, timber, poles, posts, tool handles, fodder, erosion control and as a windbreak. Oil is extracted from the seed and tannin from the bark.
- It is best known internationally as a premier timber species of the rosewood genus. However, Shisham is also an important fuel wood, shade, and shelter.
  - With its multiple products, tolerance of light frosts and long dry seasons, this species deserves greater consideration for tree farming, reforestation and agroforestry applications.
  - After teak, it is the most important cultivated timber tree in India, planted on roadsides, and as a shade tree for tea plantations.

### CITES Status

- **Dalbergia sissoo** is currently part of **Appendix II** of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, a multilateral treaty to protect endangered plants and animals.
- It says that the species is not necessarily threatened with extinction, but the trade must be controlled to avoid utilisation incompatible with their survival.

## Amazon Rainforest

According to data from Brazil's National Institute for Space Research (INPE), **the Amazon Forests in Brazil has experienced 74,155 fires since January 2019.**

- This is an **85% increase from the last year (2018)** and significantly higher than that in the year 2016, when there were severe drought conditions in the region associated with a strong **El Nino** event.
- Moreover, there is **nothing abnormal about the climate this year** or the rainfall in the Amazon region, which is just a little below average.

### Amazon Rainforests

- These are **large tropical rainforest** occupying the drainage basin of the Amazon River and its tributaries in northern South America and covering an area of 6,000,000 square km.



- **Tropical forests are closed-canopy forests** growing within 28 degrees north or south of the equator.
- They are very wet places, receiving more than 200 cm rainfall per year, either seasonally or throughout the year.
- Temperatures are uniformly high - between 20°C and 35°C.
- Such forests are found in Asia, Australia, Africa, South America, Central America, Mexico and on many of the Pacific Islands.
- Comprising about 40% of Brazil's total area, it is bounded by the Guiana Highlands to the north, the

Note:

Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

### Reason Behind the Fires

- **Natural Cause:** The dry season creates favourable conditions for the use and spread of fire.
- **Man-made causes:** Since the 1960s, the Amazon has witnessed large-scale deforestation because of cattle-ranching, logging, power projects, mining and farming.
  - The Amazon has large reserves of gold and other minerals.
- **Immediate Cause:** Environmentalists have blamed farmers setting the forest alight to clear land for pasture.
  - The President of Brazil has repeatedly said that he believes that Brazil should open the Amazon up to business interests, to allow mining, agricultural and logging companies to exploit its natural resources.

### Concerns

- The Amazon rainforest is a **repository of rich biodiversity** and produces approximately 20% of oxygen in the Earth's atmosphere.
- It is home to many indigenous communities, their life depends on the forests.
- **Additional Carbon Emissions:** Carbon intake by the Amazon basin matches the emissions released by nations in the basin. The burning of forests, therefore, implies additional carbon emissions.
  - Further deforestation could lead to Amazon's transformation from the world's largest rainforest to a savanna, which would reverse the region's ecology.
  - **Savanna** is a vegetation type that grows under hot, seasonally dry climatic conditions and is characterized by an open tree canopy (i.e., scattered trees) above a continuous tall grass understory (the vegetation layer between the forest canopy and the ground).
  - The largest areas of savanna are found in Africa, South America, Australia, India, Myanmar (Burma)–Thailand region in Asia, and Madagascar.
- **Impact on Water Cycle:** Amazon rainforest has the ability to produce at least half of the rain it receives. The rain produced by the Amazon travels through the region and even reaches the Andes mountain range.
- The **United Nations** and the international community need to **take serious measures** to save the forests.

## Ocean Energy as Renewable Energy

The **Ministry of New and Renewable Energy** has declared Ocean Energy as renewable energy.

- It has clarified to all the stakeholders that energy produced using various forms of ocean energy such as tidal, wave, ocean thermal energy conversion among others shall be considered as renewable energy and shall be eligible for meeting the non-solar **Renewable Purchase Obligations (RPO)**.

### Renewable Purchase Obligation

- This is a mechanism by which the State Electricity Regulatory Commissions are obliged to purchase a certain percentage of power from renewable energy sources.
- RPO is being implemented throughout the country to create demand for renewable energy.

### Potential

- According to MNRE, the total identified potential of tidal energy is about 12,455 MW, with potential locations identified at **Khambhat & Kutch regions (Gujrat)** and large backwaters, where barrage technology could be used.
- The total theoretical potential of wave energy in India along the country's coast is estimated to be about 40,000 MW.
- **Ocean Thermal Energy Conversion (OTEC)** has a theoretical potential of 180,000 MW in India subject to suitable technological evolution.
- The sector has the potential to grow, fuelling economic growth, reduction of carbon footprint and creating jobs not only along the coasts but also inland along its supply chains.

### Ocean Energy

- Oceans cover 70% of the earth's surface and represent an enormous amount of energy in the form of wave, tidal, marine current and thermal gradient. India has a long coastline with the estuaries and gulfs.
- Ocean energy is used in the form of Tidal, Wave, Current Energy and Ocean Thermal Energy.
  - **Tidal Energy:** The tidal cycle occurs every 12 hours due to the gravitational force of the moon. The difference in water height from low tide and high

Note:

tide is stored in the form of potential energy. Similar to traditional hydropower generated from dams, tidal water can be captured in a barrage across an estuary during high tide and forced through a hydro-turbine during low tide.

- The capital cost for tidal energy power plants is very high due to the high construction cost and high power purchase tariff.
  - To capture sufficient power from the tidal energy potential, the height of high tide must be at least five meters (16 feet) greater than low tide.
  - The Gulf of Cambay and the Gulf of Kutch in Gujarat on the west coast have few ideal locations in the country where potential exists.
- **Wave Energy:** Wave energy is generated by the movement of a device either floating on the surface of the ocean or anchored to the ocean floor.
- Wave conversion devices that float on the surface have joints hinged together that bend with the waves. This kinetic energy pumps fluid through turbines and creates electricity.
  - Stationary wave energy conversion devices use pressure fluctuations produced in long tubes from the waves swelling up and down.
- **Current Energy:** Marine current is ocean water moving in one direction. Few examples being the Gulf Stream, North Atlantic Drift, etc. Tides also create currents that flow in two directions.
- Kinetic energy can be captured from the Gulf Stream and other tidal currents with submerged turbines.
- **Ocean Thermal Energy Conversion (OTEC):** Ocean Thermal Energy Conversion uses ocean temperature differences from the surface to depths lower than 1,000 meters, to extract energy. A temperature difference of only 20°C can yield usable energy.

## Composite Water Management Index 2.0

NITI Aayog in association with **Ministry of JAL Shakti** and **Ministry of Rural Development** released Composite Water Management Index 2.0.

### Background to CWMI

- India is experiencing a very significant water challenge, approximately 820 million people of India - living in

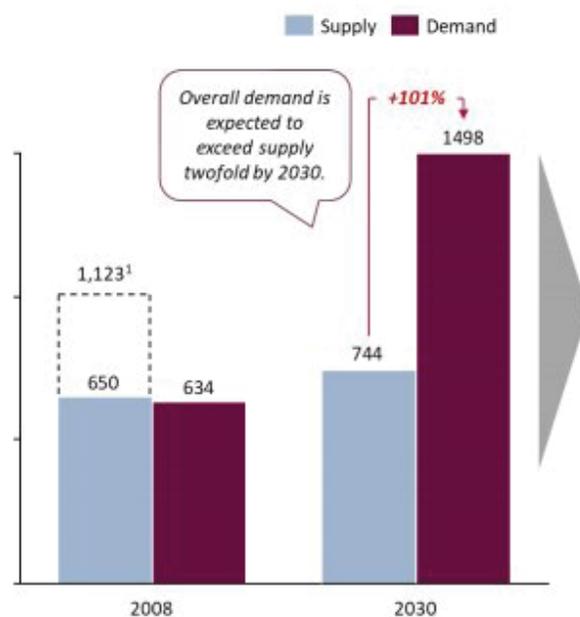
twelve river basins across the country have per capita water availability close to or lower than 1000m<sup>3</sup> – the official threshold for water scarcity as per the Falkenmark Index.

### About Report

- NITI Aayog **first launched and conceptualized the Composite Water Management Index in 2018** as a tool to instil a sense of **cooperative and competitive federalism** among the states.
- It provided actionable guidance to States on where they were doing well absolutely and relatively and what they needed to focus on to secure their water
- The index comprises 9 themes.

### Demand and supply of water in India

km<sup>3</sup> (2008 – 2030)



### Indicator Themes and Weights

| No. | Themes  | Weights |
|-----|---|---------|
| 1   | Source augmentation and restoration of water bodies         | 5       |
| 2   | Source augmentation (Ground water)                          | 15      |
| 3   | Major and medium irrigation – Supply side management        | 15      |
| 4   | Watershed development – Supply side management              | 10      |
| 5   | Participatory irrigation practices – Demand side management | 10      |

Note:

|              |  |            |
|--------------|--|------------|
| 6            | Sustainable on-farm water use practices – Demand side management | 10         |
| 7            | Rural drinking water   | 10         |
| 8            | Urban water supply and sanitation                                | 10         |
| 9            | Policy and governance  | 15         |
| <b>Total</b> |  | <b>100</b> |

### Falkenmark Indicator or Water Stress Index

- It is one of the most commonly used measures of water scarcity.
- It defines water scarcity in terms of the total water resources that are available to the population of a region; measuring scarcity as the amount of renewable freshwater that is available for each person each year.
- If the amount of renewable water per person per year in a country is
  - below 1,700 m<sup>3</sup>, the country is said to be experiencing water stress.
  - below 1,000 m<sup>3</sup>, it is said to be experiencing water scarcity.
  - below 500 m<sup>3</sup>, it is experiencing absolute water scarcity.

### Key Findings

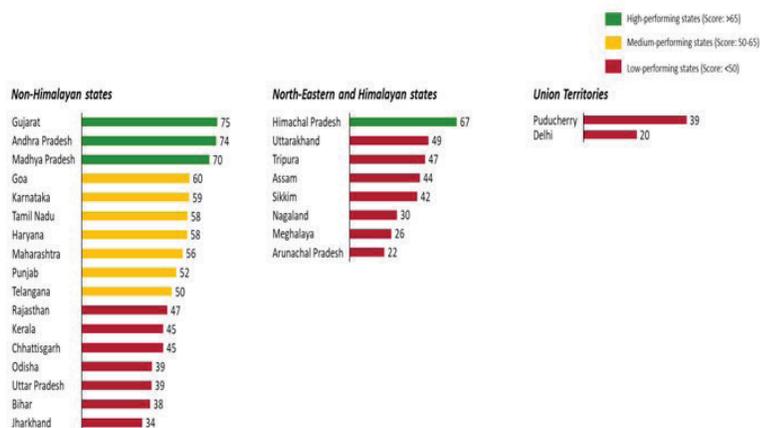
- CWMI 2.0 ranks various states for the reference year 2017-18 as against the base year 2016-17.
- **Gujarat** (continues to hold on to its rank one in the reference year (2017-18), followed by Andhra Pradesh, Madhya Pradesh, Goa, Karnataka and Tamil Nadu.
- In North-Eastern and the Himalayan States, Himachal Pradesh has been awarded rank 1 in 2017-18 followed by Uttarakhand, Tripura and Assam.

- For the first time, Union Territories have submitted their data and Puducherry has been declared the top performer.
- 80% of the states have shown improvement in their water management scores over the last three years.

## Land Degradation

India is facing a severe **problem of land degradation** i.e. soil becoming unfit for cultivation. **About 29% or about 96.4 million hectares are considered degraded.**

- To fight this menace, India will convert degraded land of nearly 50 lakh (5 million) hectares to fertile land in the next 10 years (between 2021 and 2030).
- 5 million hectares are part of the **Bonn Challenge** commitment.
  - “Bonn Challenge” is a global effort to bring 150 million hectares of the world’s deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.
  - At the **United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 2015** in Paris, India joined the voluntary Bonn Challenge and pledged to bring into restoration 13 million hectares of degraded and deforested land by 2020, and an additional 8 million hectares by 2030. India’s pledge is one of the largest in Asia.
- The government sees schemes such as the **Pradhan Mantri Fasal Bima Yojana, Soil Health Card Scheme, and Pradhan Mantri Krishi Sinchayee Yojana** as tools to tackle the problem of land degradation.
- Also, India, for the first time, will be hosting the **14<sup>th</sup> session of the Conference of Parties (COP-14)** of the **United Nations Convention to Combat Desertification (UNCCD)** from 2<sup>nd</sup>-13<sup>th</sup> September 2019 in Greater Noida.



- The UNCCD was entered into force in December 1996. It is one of the three Rio Conventions along with United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD).
- India became a signatory to the UNCCD on 14<sup>th</sup> October 1994 and ratified it on 17<sup>th</sup> December 1996.

Note:

- The main objective of the convention is to **combat desertification** and mitigate the effects of drought in countries experiencing serious drought and/or desertification.

## Compensatory Afforestation Fund

The Union Environment Ministry has transferred ₹47,436 crore to 27 States for afforestation. The funds are long-pending dues, part of the **Compensatory Afforestation Fund (CAF)**, that has been collected for nearly a decade as environmental compensation from industry.

- The funds transferred are in addition to State Budget. The centre expects that states will utilize the funds towards forestry activities to achieve the **objectives of the Nationally-Determined Contributions (NDCs)** of increasing forest & tree cover.
- The Fund will be used as per provisions of the CAF Act and Rules.

### **Compensatory Afforestation Fund**

- The CAF Act was passed by the centre in 2016 and the related rules were notified in 2018.
- The CAF Act was enacted to manage the funds collected for compensatory afforestation which till then was managed by **ad hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA)**.
  - **Compensatory afforestation** means that every time forest land is diverted for non-forest purposes such as mining or industry, the user agency pays for planting forests over an equal area of non-forest land, or when such land is not available, twice the area of degraded forest land.
- As per the rules, **90% of the CAF money is to be given to the states while 10% is to be retained by the Centre.**
- The funds can be **used for treatment** of catchment areas, assisted natural generation, forest management, wildlife protection and management, relocation of villages from protected areas, managing human-wildlife conflicts, training and awareness generation, supply of wood saving devices and allied activities.



Note:



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# Art & Culture

## Highlights

- Deciphering Indus Script
- Adarsh Smarak Scheme
- A 3600 Years Old Site Found
- Virasat-e-Khalsa Museum
- 77<sup>th</sup> Anniversary of Quit India Movement
- India's First and Longest Sea Ropeway
- Aadi Mahotsav
- Maharshi Badrayan Vyas Samman
- Kondapalli Toys
- Geographical Indication Tag

## Deciphering Indus Script

According to the research paper titled '**Interrogating Indus inscription to unravel their mechanism of meaning conveyance**', the Indus inscriptions can be compared to the structured **messages found on stamps, coupons, tokens and currency coins of modern times**.

- The Indus inscriptions have not been deciphered due to the absence of bilingual texts, extreme brevity of the inscriptions, and ignorance about the language(s) encoded by Indus script.

### Findings

- The majority of the **Indus Valley inscriptions** were written **logographically** (by using word signs) and not by using **phonograms** (speech sounds units), claims a recent research paper published in Palgrave Communications, a Nature group journal.
- The paper mainly focuses on understanding how Indus inscriptions conveyed meanings, rather than on deciphering what they conveyed.
- The inscribed seals and tablets were **used in some administrative operation** that controlled the commercial transactions of the ancient Indus Valley Civilisation.
- According to paper, though many ancient scripts use **rebus methods** to generate new words, the inscriptions found on the Indus seals and tablets have not used rebus as the mechanism to convey meaning.
- The researcher also rejected the popular hypothesis that the seals were inscribed with Proto-Dravidian or Proto-Indo-European names of the seal-owners.

### Rebus Method

- A common perception among some scholars is that the Indus script is logo-syllabic, where one symbol can be used as a word sign at one time and as a syllable-sign at another.
- This method, where a word-symbol also gets sometimes used only for its sound value, is called the rebus principle. **E.g.:**
  - The pictures of a honey bee can be combined with a leaf to signify the word "belief" (bee+leaf).

## Adarsh Smarak Scheme

Recently, the **Union Ministry of Culture** has released its **100-day agenda** which also includes digging rainwater harvesting pits at over 100 major monuments covered under the **Adarsh Smarak scheme**.

- The other initiatives include installing big screens and audio systems at two dozen spots where a large number of devotees gather for prayers or aarti, rolling out 25 science museums on wheels to reach out to rural students.

### Adarsh Smarak Scheme

- The scheme was launched in 2014 for providing improved visitor amenities, especially for the physically challenged.
- The scheme comes under the Ministry of Culture.
- A total of **100 Monuments** protected by the **Archaeological Survey of India (ASI)** are being developed and maintained as Adarsh Monuments under the scheme.
- The **civic amenities** are being augmented at these sites.

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### Objectives of the Scheme

- To make monument **visitor friendly**.
- To **upgrade/provide washrooms**, drinking water, signages, cafeteria, and wi-fi facility.
- To provide **interpretation and audio-video centers**.
- To **streamline wastewater, garbage disposal and a rainwater harvesting system**.
- To make the monument **accessible to differently-abled**.
- To implement **Swachh Bharat Abhiyan**.

## A 3600 Years Old Site Found

As per the **Archaeological Survey of India (ASI)**, a **rural settlement had thrived at Bharati Huda in Jalalpur village in Odisha's Cuttack district**, about **3600 years ago**.

- This is based on the ancient artefacts and grain discovered by the ASI from the mentioned site in the year 2018.
- The age of the settlement was arrived at after **radiocarbon dating of charcoal samples** found at the site by the **Inter University Accelerator Centre (IUAC)** in New Delhi using **Accelerator Mass Spectrometry (AMS)**.

### Other Findings

- **Chalcolithic Culture:** The excavated remains indicate the existence of Chalcolithic culture in the valley as attested by the presence of mud structural remains, large quantity of potsherds, ground and polished stone tools, bone tools, beads of semi-precious stones, terracotta objects, huge quantity of faunal remains and carbonized grains.
  - The site has cultural similarity with **Golabai Sasan, Suabarei** and other excavated and explored sites in the **Mahanadi delta** and **partial similarity** with the chalcolithic sites of middle **Mahanadi valley** and sites of central and eastern India.
- **Economy:** The inhabitants practised **agriculture and animal husbandry** as attested by the findings of **domesticated varieties of rice and jute** and evidence of domesticated cattle among the faunal remains as well as terracotta bull figurine.
- **Worship:** A new religious belief emerged in the form of **nature worship** as evident from a single specimen of the **Sun motif** found arrayed in chocolate-slipped pottery.

- **Sun worship** dated back to 1099 BCE in the Prachi Valley. Devotees from different parts of Odisha as well as the neighbouring states congregated at Chandrabhaga on the shore of the Bay of Bengal on the occasion of Magha Saptami to pay homage to Sun God.
- The world famous **Sun temple of Konark**, located some 30 kilometres from the excavation, was built in the 13<sup>th</sup> century CE. The **tradition of Sun worship seems to have evolved with human settlements in the region**.

- **Co-existence:** The excavation confirmed that a **separate ethnic group** that was using **non-black-and-red ware** might have existed during the early chalcolithic cultural horizon and a new class of ethnic group might have come into contact with the rural settlers at **Bharati Huda** during the mature phase of chalcolithic culture.

## Virasat-e-Khalsa Museum

The **Asia Book of Records** has listed the **Virasat-e-Khalsa Museum** in **Punjab's Anandpur Sahib** as the most visited museum in the Asian sub-continent (on a single day).

- The museum had witnessed a **record footfall** of 20,569 visitors on a single day on March 20.
- The **Limca Book of Records and India Book of Records** had also listed 'Virasat-e-Khalsa' as the country's top-ranked museum in terms of the number of visitors.
- The museum has been conferred an award by the **Punjab Energy Development Agency** in state-level energy conservation competition, for cutting down electricity consumption.
- The Virasat-e-Khalsa Museum (the second most important Sikh shrine in Anandpur Sahib, after the Golden Temple complex) was built to commemorate **300 years** of the founding of the '**Khalsa Panth**' by the Guru Gobind Singh (10<sup>th</sup> Sikh guru).
- Museum also helped grow the economy of Anandpur Sahib in Punjab.

## 77<sup>th</sup> Anniversary of Quit India Movement

The 77<sup>th</sup> anniversary of the **August Kranti Din**, which is considered as one of the important milestones in the

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history of freedom struggle of our country, was observed on **August 8, 2019**.

- On **8<sup>th</sup> August 1942**, **Mahatma Gandhi** gave a clarion call to end the British rule and launched the Quit India Movement at the session of the All-India Congress Committee in Mumbai.
- The movement had begun from **Gawalia Tank Maidan** in Mumbai and the day is observed as **August Kranti Day** every year.
  - After the failure of the **Cripps Mission**, Gandhiji gave the call "**Do or Die**" in his speech delivered at the Gowalia Tank Maidan, now popularly known as August Kranti Maidan.
- Gandhiji was soon imprisoned at **Aga Khan Palace** in Pune and almost all leaders were arrested.
- New leaders like **Aruna Asaf Ali** emerged out of the vacuum of leadership.
- The Britishers declared the INC to be an unlawful association.
- Over 100000 people were arrested and the **government resorted to violence** in order to crush the agitation.
- Gandhiji was released in 1944 on health grounds. However, in the absence of any central leadership, there were some **incidents of violence**.
- **Muslim League, the Communist Party of India and the Hindu Mahasabha did not support the movement.** The Indian bureaucracy also did not support the movement.
  - The League was not in favour of the British leaving India without partitioning the country first.
  - The Communist party supported the British since they were allied with the Soviet Union.
- Meanwhile, Subhas Chandra Bose organised the **Indian National Army** and the Azad Hind government from outside the country.
- As **C Rajagopalachari** was not in favour of complete independence he resigned from the INC.
- There were **strikes and demonstrations** all over the country and workers provided support by not working in the factories.
- At some places (Ballia, Tamluk, Satara etc.) **parallel governments** were also set up.
- Women took active participation in the movement. Female leaders like **Usha Mehta** has helped set up an underground radio station which led to the awakening about the movement.

- **Aruna Asaf Ali** popularly known as the 'Grand Old Lady' of the Independence Movement is known for hoisting the Indian flag at the Gowalia Tank Maidan in Mumbai during the Quit India Movement.
- While the Quit India campaign was **crushed in 1944**, with the British refusing to grant immediate independence, saying it could happen only after the war had ended, they came to the important realization that India was **ungovernable in the long run due to the cost of World War II**.

#### Cripps Mission

- **Japanese aggression** in South-East Asia, keenness of British Government to secure the full participation of India in the war, mounting pressure from China and the United States, as well as from the **Labour Party in Britain**, led British Prime Minister **Winston Churchill** to send Cripps Mission to India in March 1942.
- Under Stafford Cripps, the mission was sent to **resolve the Indian question of a new constitution and self-government**.
- Main proposals of the mission were:
  - An Indian Union with a **dominion status** would be set up; it would be free to decide its relations with the Commonwealth and free to participate in the international bodies.
  - A constituent assembly would be convened after the war to frame a new constitution.
  - Members of the assembly partly elected by the provincial assemblies and partly nominated by the princes.
  - Any province not willing to accept the constitution would be given '**the same full status as the Indian Union**' – designed to appease the Muslim League's call for Pakistan.
  - The constitution making body and the British Government would negotiate a treaty to effect the transfer of power and to safeguard racial and religious minorities.
- The Indian National Congress, however, was not satisfied as its **demand for immediate complete independence had been rejected**.
- Mahatma Gandhi said that Cripps offer of Dominion Status after the war was a "**post-dated cheque drawn on a failing bank**".

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## India's First and Longest Sea Ropeway

India's first and longest sea ropeway project that will connect Mumbai with the Elephanta Caves, is scheduled to start by the end of the year 2019.

- The **8 km ropeway** will begin from **Sewri** in Mumbai's east coast and end at **Raigad** district's Elephanta Island.
- **Need:** The caves see an annual footfall of nearly seven lakh visitors and are one of the must-visit places around Mumbai. Presently, it takes around an hour for the 10-km cruise from Mumbai and vice versa.
- The **14-minute ride by 30-seater cable cars** will give a major boost to tourism.
- It is Rs. 700 crore **PPP (Public-Private Partnership) project** which will be executed by the Mumbai Port Trust, under the **Ministry of Shipping**.

### Elephanta Caves

- The Elephanta caves, located on the **Elephanta Islands (in the Arabian Sea)**, off Mumbai, was declared a **world heritage site** by UNESCO in 1987.
- Known locally as **Gharapuri Caves**, these were constructed about the **mid-5<sup>th</sup> to 6<sup>th</sup> centuries AD**.
- The **seven caves** constitute one of the most striking collections of rock-art in India.
  - There are two groups of caves. To the east, Stupa Hill (named because of a small brick Buddhist monument at the top) contains two caves, one of which is unfinished, and several cisterns.
  - To the west, the larger group consists of five rock-cut Hindu shrines.
- The main cave is universally famous for its **carvings to the glory of Shiva**, who is exalted in various forms and actions. The cave consists of a square plan mandapa whose sides measure about 27m.



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## Aadi Mahotsav

The Aadi Mahotsav, a **nine-day tribal festival** and the Centre's first official function in Ladakh after the government decided to make it a Union Territory, to start in Leh on the evening of 17<sup>th</sup> August, 2019.

- This is the **first time that the Aadi Mahotsav is being held in Ladakh** as earlier, the Tribal Ministry never got a response from the J&K administration.
- Aadi Mahotsav is a **national tribal festival and a joint initiative of Ministry of Tribal Affairs, Government of India & Tribal Cooperative Marketing Development Federation of India (TRIFED)**.
  - TRIFED came into existence in **1987**. It is a **national-level apex organization** functioning under the administrative control of Ministry of Tribal Affairs, Govt. of India.
  - TRIFED has its registered and **Head Office** located in New Delhi and has a network of 13 Regional Offices located at various places in the country.
  - The ultimate objective of TRIFED is **socio-economic development of tribal people** in the country by way of marketing development of the tribal products.
- The festival showcases traditional art and handicrafts and cultural heritage of the country.
- **The theme of the festival is: "A celebration of the spirit of Tribal Craft, Culture and Commerce"**. An effort is being made to take tribal commerce to the next level of digital and electronic transactions.
- Mahotsav will identify:
  - Food and Forest Produces, which can be processed, value-added and marketed under the **Van Dhan Scheme** of the Ministry of Tribal Affairs.
  - Artisans and master craftsmen and women of Ladakh for empanelling them as suppliers of **TRIBES India, a brand under the TRIFED**. The products can then be marketed all over the country through the 104 retail outlets run by TRIBES India across the country and 190 countries across the world through Amazon, with whom TRIBES India has an agreement.
- In line with the national aspiration to go cashless, **for the first time, the tribal artisans will be accepting payment through major credit/debit cards** for which Point of Sale (POS) machines have been provided in each stall.



## Maharshi Badrayan Vyas Samman

The President of India has awarded the selected scholars with the Maharshi Badrayan Vyas Samman for the year 2019.

- The Maharshi Badrayan Vyas Samman was instituted by the Government of India to honour young scholars, aged 30-45 years, in recognition of their significant contribution in the field of Persian, Arabic, Pali, Prakrit and Classical Indian languages.
  - As of now, six languages i.e. Tamil, Sanskrit, Telugu, Kannada, Malayalam and Odia have been given the status of classical languages.
  - The criteria evolved by the Government to determine declaration of a language as a Classical language is as under:
    - High antiquity of its early texts/recorded history over a period of 1500-2000 years.
    - A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers.
    - The literary tradition is original and not borrowed from another speech community.
    - The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

## Kondapalli Toys

Kondapalli toys, **cultural icons of Andhra Pradesh**, are one of the most sold handicrafts in India and abroad, across online, wholesale, and retail platforms.

- The '**Tella Poniki**' wood gives the toys a unique character. No other wood can be a replacement to make these toys as Tella Poniki is malleable and can be easily chiselled into the desired shape.

- Kondapalli Toys have been granted the **Geographical Indications (GI)** tag.

## Geographical Indication Tag

The government has allotted Geographical Indication (GI) tags to four new products from the states of **Tamil Nadu, Mizoram and Kerala**.

- These products are:
  - **Palani Panchamirtham**, is one of the main religious offerings to Lord Dhandayuthapani Swamy, the presiding deity of Arulmigu Dhandayuthapani Swamy Temple, situated in Palani hills in Dindigul District of Tamil Nadu.
    - It is a combination of five natural substances, namely, bananas, jaggery sugar, cow ghee, honey and cardamom in a definite proportion.
    - This is the first time a temple '**prasadam**' from **Tamil Nadu** has been bestowed with the GI tag.
  - **Tawlhlohpuan**, a medium to heavy, compactly woven, good quality fabric from Mizoram is known for warp yarns, warping, weaving & intricate designs that are made by hand.
  - **Mizo Puanchei**, a colourful Mizo shawl/textile, from **Mizoram**, is considered as the most colourful among the Mizo textiles.
    - It is an essential possession for every Mizo lady and an important marriage outfit in the state. The weavers insert the designs and motifs by using supplementary yarns while weaving to create this beautiful and alluring textile.
  - **Tirur betel vine** from **Kerala**, which is mainly cultivated in Tirur, Tanur, Tirurangadi, Kuttippuram, Malappuram and Vengara block panchayats of Malappuram District, is valued both for its mild stimulant action and medicinal properties.



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# Social Issues

## Highlights

- Census 2021
- TechEx: Technology and Innovation Platform
- Urkund Software
- World Breastfeeding Week
- Sabki Yojana Sabka Vikas Campaign
- Inverted-J Pattern in Education and Fertility
- Improvement in Sex Ratio at Birth
- NISHTHA: Teachers' Training Programme
- Population Explosion and Fertility Rates
- National Essential Diagnostics List
- Free Medicine Scheme of Rajasthan
- Janaushadhi Sugam
- HIV/AIDS Outreach
- Scheme to Screen Children for Leprosy & TB
- TB Drug Pretomanid

## Census 2021

The next census of India to be conducted in 2021 with March 1, 2021 as the reference date, except for the states of Jammu & Kashmir, Himachal Pradesh and Uttarakhand.

- The Census 2021 **will be conducted in 18 languages out of the 22 scheduled languages (under 8<sup>th</sup> schedule) and English**, while Census 2011 was in 16 of the 18 scheduled languages declared at that time.
- It also **will introduce a code directory** to streamline the process
- The option of "Other" under the gender category will be changed to "**Third Gender**".
  - There were roughly 5 lakh people under "other" category in 2011.
- For the first time in the 140 year history of census in India, data is proposed to be collected through a mobile app by enumerators and they will receive an additional payment as an incentive.
- The Census data would be **available by the year 2024-25** as the entire process would be conducted digitally and data crunching would be quicker.
  - Data from the Census 2011 is still being released. **E.g.:** The **dataset on migration was published recently**.

### Issue of Caste Data Collection

- Earlier in 2018, the Ministry of Home Affairs had declared that the Other Backward Class (OBC) category would be included in the Census 2021.

- However, the Registrar-General of India (RGI) has said that only SC/ST will be included as the unreliable nature of caste data collection decreases the credibility of the results. **E.g.:** A person belonging to the Yadav caste writes Yadu, Yaduvanshi, etc. in the form; there is no standardisation. People sometimes even confuse caste with gotra.
- The 2011 caste data, collected as part of the Socio Economic Caste Census (SECC), is yet to be released by the Centre.
  - Even a committee formed under former vice-chairman of NITI Aayog, Arvind Panagariya to find a way to publish the 2011 Socio-economic and Caste Census data failed to provide any tangible outcome.
- The last caste-based census was conducted by the British in 1931.

### Census

- The census provides information on size, distribution and socio-economic, demographic and other characteristics of the country's population.
- '**Rig-Veda**' reveals that some kind of population count was maintained during 800-600 BC in India.
- **Arthashastra** by '**Kautilya**' written in the **3<sup>rd</sup> Century BC** prescribed the collection of population statistics as a measure of state policy for taxation.
- During the regime of the **Mughal king Akbar**, the **administrative report 'Ain-e-Akbari'** included comprehensive data pertaining to population, industry, wealth and many other characteristics.

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- A systematic and modern population census, in its present form was conducted non synchronously between 1865 and 1872 in different parts of the country.
- However, **the first synchronous census in India was held in 1881**. Since then, censuses have been undertaken uninterruptedly once every ten years.
- India's **last census was carried out in 2011 when the country's population stood at 121 crore**. The Indian Census is one of the largest administrative exercises undertaken in the world.

## TechEx: Technology and Innovation Platform

The **Union Ministry of Human Resource Development** has inaugurated the **TechEx - technology** exhibition at IIT Delhi.

- TechEx was organized to demonstrate products and prototypes developed under the Ministry of Human Resource Development's **IMPacting Research INnovation and Technology (IMPRINT)** and **Uchhatar Avishkar Yojana (UAY)** schemes.

### Uchhatar Avishkar Yojana

- **Uchhatar Avishkar Yojana (UAY)** was announced with a view to **promote innovation** of a higher order that directly impacts the needs of the Industry and

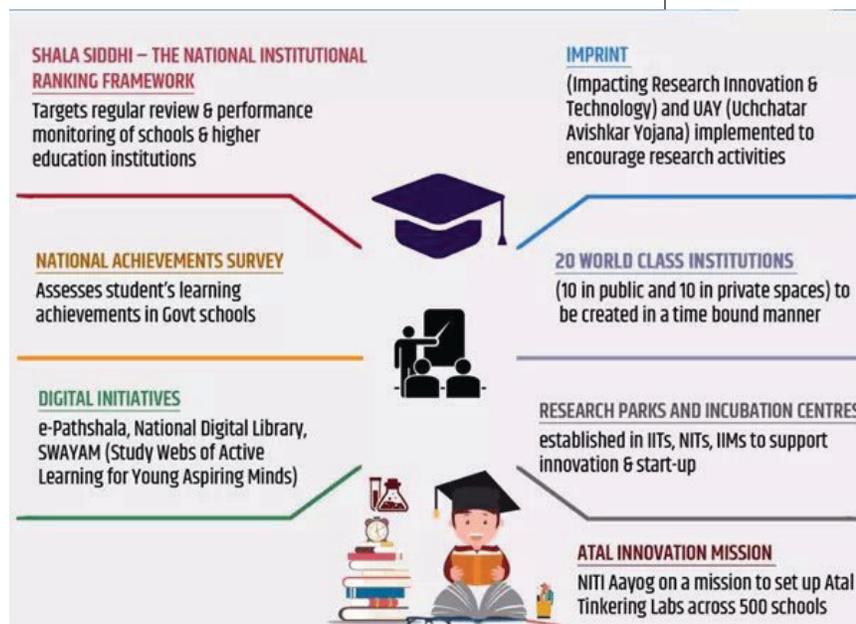
thereby improves the competitive edge of Indian manufacturing.

- The scheme focuses on a viable industry-academic collaboration where industry shares a part of the cost of research.

### Other Initiatives/Schemes to Promote Research and Technology Ecosystem

- **Setting up of Research Parks:** The Government has approved setting up of Research Parks at IIT Kharagpur, IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Hyderabad, IIT Gandhinagar and IISc Bengaluru.
- **Prime Minister's Research Fellowship:** The scheme offers direct admission to meritorious students in the Ph. D programmes in IITs, IISERs and IISc.
- **Smart India Hackathons:** It is a nationwide initiative to provide students a platform to solve some of the pressing problems of daily lives.
- **SETU (Self Employment and Talent Utilization):** It is a techno- financial, incubation and facilitation program to support all aspects of start-up particularly in technology driven areas.
- **Institution's Innovation Council (IIC)** is established in **Higher Educational Institutions (HEIs)** for promoting innovation ecosystem within their campus.
- **Trainee Teacher Scheme:** It had been initiated in National Institute of Technologies (NITs) with the objective to attract, motivate and sponsor best graduate engineers for part time M.Tech and Ph.D. programmes.

- **VAJRA (Visiting Advanced Joint Research Faculty):** This enables NRIs and overseas scientific community to participate and contribute to research and development in India through monetary support by the government.
- **Prime Minister's Science, Technology & Innovation Advisory Council (PM-STIAC):** It is an overarching body which assesses the status of specific S&T domains, comprehends challenges, formulates immediate, mid and long term interventions and presents a roadmap to the Prime Minister.



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## Urkund Software

According to a **University Grants Commission (UGC)** notice, all universities in India will get final subscription to access the **Swedish anti-plagiarism software 'Urkund'** from September 1, 2019.

Plagiarism is the practice of taking someone else's work or ideas and passing them off as one's own.

- The Urkund software was chosen through a **global tender process**.
- While **Turnitin** (US anti-plagiarism software) is more commonly used by global academics, it was found to be 10 times more expensive without a proportionate increase in features or reliability.
- The central government is following a **two-pronged approach** to prevent plagiarism.
  - As a part of this process, in the coming years the **software will be available free of cost** to all 900 universities, including teachers, students and researchers.
  - The Centre also notified the **University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018** to prescribe the graded punishment for plagiarism.

### UGC Panel on Improving Research Culture

- A **UGC panel on improving research culture**, headed by **P. Balaram**, noted that Indian academics have contributed 35% of all articles published in about 11,000 fake journals between 2010 and 2014.
- The panel found that most of these articles were in **fake engineering journals**, followed by articles in fake journals of biomedicine and social sciences.
- According to the panel report, primary responsibility to ensure high standards of academic research should lie with institutions themselves.
- Central rules and regulations can only complement the vigilant internal processes of institutions.
- The report submitted by the panel in July 2019 said that, "**Institutions must take the responsibility** for ensuring academic standards and for emphasising, to both students and faculty, the importance of maintaining the **highest standards of integrity in academic research**".

## World Breastfeeding Week

The **World Breastfeeding Week (WBW)** has been observed from **1<sup>st</sup> to 7<sup>th</sup> Aug 2019**. The **Food and Nutrition Board, Ministry of Women and Child Development**, has organized a number of activities on the theme "**Empower Parents, Enable Breastfeeding**". The focus is on protection, promotion, and support of breastfeeding.

- The **objectives** of World Breastfeeding Week are:
  - To create awareness among the parents about breastfeeding
  - Encourage parents to adopt breastfeeding
  - Creating awareness about the importance of initiation and exclusive breastfeeding, and adequate & appropriate complementary feeding
  - Providing advocacy material about the importance of breastfeeding
- Importance of Breastfeeding
  - It **promotes better health** for mothers and children alike
  - It **prevents infections** like diarrhoea and acute respiratory infections in early infancy and thus reduce infant mortality
  - It **decreases the risk of mothers developing breast cancer**, ovarian cancer, type 2 diabetes, and heart disease and
  - It **protects infants from obesity**-related illnesses, diabetes and increases the IQ.

### MAA – "Mothers Absolute Affection"

- It is a nationwide programme of the **Ministry of Health and Family Welfare** to promote breastfeeding and provision of counselling services for supporting breastfeeding through health systems.
- The programme has been named 'MAA' to signify the support a lactating mother requires from family members and at health facilities to breastfeed successfully.
- The following are the **objectives of the Programme** in order to achieve the above mentioned goal:
  - Build an enabling environment for breastfeeding through awareness generation activities, targeting pregnant and lactating mothers, family members and society in order to promote optimal breastfeeding practices.

Note:



- Breastfeeding to be positioned as an important intervention for child survival and development.
- Reinforce lactation support services at public health facilities through trained healthcare providers and through skilled community health workers.
- To incentivize and recognize those health facilities that show high rates of breastfeeding along with processes in place for lactation management.
- **'Vatsalya – Maatri Amrit Kosh'**, a National Human Milk Bank and Lactation Counselling Centre has been established at the Lady Hardinge Medical College (LHMC), Delhi. It has been established in collaboration with the Norwegian government, Oslo University and Norway India Partnership Initiative (NIPI).

## Sabki Yojana Sabka Vikas Campaign

The central government has decided to launch the **People's Plan Campaign**, also known as "Sabki Yojana Sabka Vikas" from September 2019.

- It aims to draw up **Gram Panchayat Development Plans (GPDPs)** in the country and place them on a website where anyone can see the status of the various government's flagship schemes.

### Background

- A pilot exercise conducted in 2018 suggests that a majority of the GPs scored between 41% and 50% on a scale of 100, showing glaring deficiencies.
  - **Merely 0.1% and 0.6% GPs fell in the high 91-100 and 81-90 score respectively.**
- A comparison of the performance among the larger states shows that **Kerala, Tamil Nadu, and Andhra Pradesh**, in that order, were the top scorers, while GPs in **Jharkhand, Assam, Bihar, and Madhya Pradesh were at the bottom.**
- A recent study of 100 randomly chosen GPs by **National Institute of Rural Development** has shown that several GP has reported improvements while others have slipped down over the past year. A fresh survey is, therefore, significant.

### Gram Panchayat Development Plans

- Gram Panchayats have been mandated for the preparation of GPDP for economic development and social justice **utilizing the resources** available to them.
- The GPDP planning process will be comprehensive and participatory by involving **full convergence** with the schemes of all related Central Ministries / Line Departments.
- The People's Plan Campaign initiated under "Sabki Yojana Sabka Vikas" is an intensive and structured exercise for planning at Gram Sabha through **convergence between Panchayati Raj Institutions (PRIs) and concerned departments of the State.**

### About the process

- Gram Panchayat Development Plans (GPDPs) will include **48 indicators** covering various aspects such as health and sanitation, education etc.
- After each GP is scored out of 100 — **with 30 marks for infrastructure, 30 marks for human development, and 40 marks for economic activity** — the GPs will be ranked.
- The data on the 48 indicators would come from Census 2011 (for physical infrastructure), **Socio-Economic Caste Census 2011** (for Household-level deprivation data), and fresh survey starting in September 2019 that will be carried out by **local facilitators.**
- The score for each GP will reflect the **local needs and priorities.**
  - For instance, for a drought-prone area, water conservation would be accorded the highest priority.
  - Within this ranking, households suffering the worst deprivations would be prioritised further.
- The entire ranking exercise is **meant to identify the gaps at the GP level, make an assessment of where it stands, and accordingly plan the interventions.**

### National Institute of Rural Development and Panchayati Raj

- The National Institute of Rural Development and Panchayati Raj (NIRD&PR) is an **autonomous organisation under the Union Ministry of Rural Development.**
- It is recognized internationally as one of the **United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)** Centres of Excellence.

Note:



- It **builds capacities** of rural development functionaries, elected representatives of PRIs, bankers, NGOs and other stakeholders through interrelated activities of training, research and consultancy.
- Establishment in 1958, the Institute is **located at Hyderabad in Telangana**.
- In addition to the main campus at Hyderabad, this Institute has **North-Eastern Regional Centre** at Guwahati, Assam to meet the NE-regional needs.

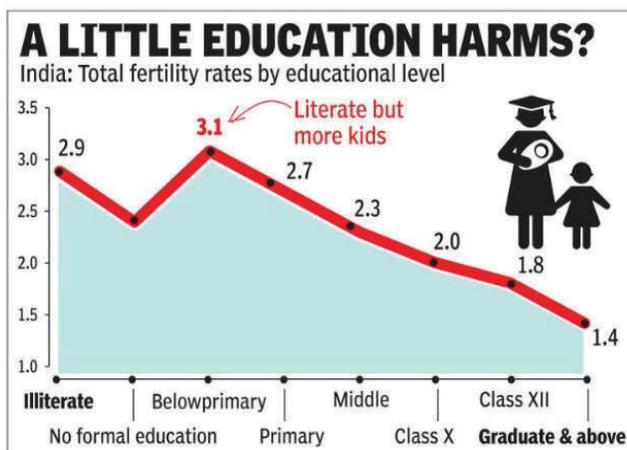
## Inverted-J Pattern in Education and Fertility

Recently released official data from 2017 on the **Total Fertility Rate (TFR)**, reflects a complex **relationship between literacy level and fertility rate**.

- According to **conventional wisdom**: The higher the educational level of a woman, the lower the fertility rate.
- However, there's a consistent pattern across states of illiterate women and those with no formal education having lower fertility rates than those with below primary level education.
  - **Culture of the state** is believed to have a greater influence than **education**.

### Pattern from TFR data

- The relationship between fertility and education resembles an **inverted-J pattern**.
  - Usually, there is an **inverse relationship between education or income and fertility**, but it has been observed that fertility could go up with a slight increase in education or income level.



- But eventually, fertility declines with higher levels of education.

### Highlights of the Report

- In Bihar, the TFR of women who have not completed primary schooling is 4.4 compared to 3.7 for illiterate women.
- Similarly, in Odisha with an overall low fertility rate of just 1.9, the TFR of illiterate women was 2 compared to a TFR of 3.6-3.5 among those with primary level schooling or below.
- At the all-India level, the TFR for women with below primary education was 3.1 compared to 2.9 for illiterate women and 2.4 for those without formal education.
- However, according to demographers and population experts, It is **very early to come up with some conclusion**. Similar pattern has to emerge for three or four years (above mentioned pattern is only for the year 2017), so that this Inverted J-curve can be approved as a theory.

## Improvement in Sex Ratio at Birth

According to the fourth **National Family Health Surveys (NFHS) 2015-16**, the **sex ratio at birth (SRB)** in India has improved from 914 to 919.

- **SRB is defined as the number of female births per 1,000 male births**.
- Survey held that the **highest improvement in SRB** was noted in **Punjab** at 126 points, but it's SRB remained at 860 (one of the lowest SRB in the states).

### 2015-16: TOP 6 & BOTTOM 6

|                      |       |
|----------------------|-------|
| Kerala               | 1,047 |
| Dadra & Nagar Haveli | 1,013 |
| Meghalaya            | 1009  |
| Chhattisgarh         | 977   |
| Tripura              | 966   |
| Goa                  | 966   |
| Punjab               | 860   |
| A&N Islands          | 859   |
| Puducherry           | 843   |
| Haryana              | 836   |
| Delhi                | 817   |
| Sikkim               | 809   |

Source: NFHS-4 via Ministry of Health

- This success can be attributed to the **Beti Bachao Beti Padhao (BBBP) Scheme**.
- Despite the North-Eastern societies traditionally being matriarchal, the sharpest decline was in Sikkim, where the SRB dropped 175

Note:



points to reach 809, the lowest among all states in 2015-16.

- Next, to Sikkim, the five states with the highest declines included four more from the Northeast.

## **NISHTHA: Teachers' Training Programme**

The **Union Human Resource Development Minister** has launched '**National Initiative for School Heads and Teachers Holistic Advancement (NISHTHA)**', a national mission to improve learning outcomes at the **elementary level**.

- NISHTHA Website, Training Modules, Primer Booklet and a Mobile App were also launched by the Minister.

### ***About 'National Initiative for School Heads' and Teachers' Holistic Advancement'***

- NISHTHA is the largest teachers' training programme of its kind in the world.
- **Objective:** To motivate and equip teachers to encourage and foster critical thinking in students.
- Teachers will get awareness and develop their skills on various aspects related to:
  - Learning Outcomes,
  - Competency-Based learning and Testing,
  - Learner-centered Pedagogy,
  - School Safety and Security,
  - Personal-social qualities,
  - Inclusive Education,
  - ICT in teaching-learning including Artificial Intelligence,
  - Health and well-being including yoga,
  - Initiatives in School Education including library, eco-club, youth club, kitchen garden,
  - School Leadership qualities,
  - Environmental Concerns,
  - Pre-school, Pre-vocational Education and School-Based assessment.
- **Aim:** To build the capacities of around 42 lakh participants.
  - Covering all teachers and heads of schools at the elementary level in all Government schools,

- Faculty members of State Councils of Educational Research and Training (SCERTs) and District Institutes of Education and Training (DIETs),
- Block Resource Coordinators and Cluster Resource Coordinators in all States and UTs.

- **Implementation:** Training will be conducted directly by 33120 Key Resource Persons (KRPs) and State Resource Persons (SRP) identified by the State and UTs, who will in turn be trained by 120 National Resource Persons identified from National Council of Educational Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), etc.
  - **States and UTs** have an option to contextualize the training modules and use their own material and resource persons also, keeping in view the core topics and expected outcomes of **NISHTHA**.
  - The prominent features of the programme are activity based modules including in-built continuous feedback mechanism, online monitoring and support system, training need and impact analysis (Pre and Post training).
- A Mobile App and **Learning Management System (LMS)** based on MOODLE (Modular Object-Oriented Dynamic Learning Environment) have been developed by NCERT.
  - LMS will be used for registration of Resource Persons and Teachers, dissemination of resources, training gap and impact analysis, monitoring, mentoring and measuring the progress online.

## **Population Explosion and Fertility Rates**

The Prime Minister highlighted "**population explosion**" and underscored the need for "social awareness" to deal with this concern while addressing the nation on 73<sup>rd</sup> Independence Day.

- However, trends indicate that the country has **consistently made gradual improvements** in curbing its fertility rates.

### ***Total Fertility Rate***

- The national Total Fertility Rate (TFR) is estimated to be still marginally higher than the replacement rate.
- The latest estimates (for 2017) by the **Sample Registration System (SRS)** under the Registrar General of India (RGI) has pegged the country's **TFR at 2.2**,

Note:

marginally more than the replacement rate which stands at 2.1.

- **TFR** measures the number of children born to a woman at the end of childbearing age.
- **Replacement Rate** is the average number of children a woman needs to have to keep the population at a constant size.

#### Sample Registration System

- The **Sample Registration System (SRS)** is a large-scale demographic survey for providing reliable annual estimates of Infant mortality rate, birth rate, death rate and other fertility & mortality indicators at the national and subnational levels.
- The field investigation consists of **continuous enumeration of births and deaths in selected sample units** by resident part time enumerators, generally anganwadi workers & teachers, and an independent survey every six months by SRS supervisors. The data obtained by these two independent functionaries are matched. The unmatched and partially matched events are re-verified in the field. The SRS sample is replaced every ten years based on the latest census frame.

#### States with higher TFR

- Seven states have recorded a higher TFR than the national average of 2.2 — Uttar Pradesh (3.0), Bihar (3.2), Madhya Pradesh (2.7), Rajasthan (2.6), Assam (2.3), Chhattisgarh (2.4) and Jharkhand (2.5) — that account for about 45% of the total population in the 2011 Census.
- Gujarat and Haryana, too, recorded a TFR of 2.2, which is above the replacement rate but is equal to the national average.

#### States with Lower TFR

- Relatively well off states in the south — Kerala (1.7), Tamil Nadu (1.6), Karnataka (1.7), Maharashtra (1.7), Andhra Pradesh (1.6) and Telangana (1.7) — demonstrate fertility rates and TFR below the rate required for population replacement,
- West Bengal (1.6), Jammu and Kashmir (1.6) and Odisha (1.9), too, were estimated to have lower TFRs in 2017.

#### Reasons for trends in TFR

- The latest report of 2017 underlined that the TFR has declined from 5.2 to 4.5 between 1971 and 1981 and from 3.6 to 2.2 between 1991 and 2017.

- Trends vary along the **rural-urban divide as well as the literacy levels** of women.
  - The SRS reveals that while an **“illiterate” woman** is likely to give birth to 2.9 children on average, a **“literate” woman** will produce fewer (2.1) children. The TFR for a woman with education levels of a **graduate or above is 1.4 children**.
  - Likewise, urban areas have been usually found to have a lower TFR than rural areas.
- This decline in fertility rates is also reflected in the total population growth recorded in the Census. The decadal population growth in the intervening period between the 2001 Census and the 2011 Census has seen a decline after the 1971 Census.

## National Essential Diagnostics List

The Indian Council of Medical Research (ICMR) has finalised the country's first National Essential Diagnostics List (NEDL).

- India has become the **first country in the world to compile such a list** that would provide guidance to the government for deciding the kind of diagnostic tests that different healthcare facilities in villages and remote areas require.
- The **World Health Organisation (WHO)** released the first edition of essential diagnostics list (EDL) in May 2018. Even though WHO's EDL acts as a reference point for development of national EDL, **India's diagnostics list has been customised** and prepared as per the landscape of India's health care priorities.
- In India, diagnostics are regulated under the regulatory provisions of the **Medical Device Rules, 2017**.
- Diagnostics (medical devices and in vitro diagnostics) follow a regulatory framework based on the drug regulations under the **Drugs and Cosmetics Act, 1940 and Drugs and Cosmetics Rules 1945**.

#### NEDL

- **Level of Healthcare:** NEDL has been developed for all levels of health care — village level, primary, secondary and tertiary care.
  - It builds upon the **Free Diagnostics Service Initiative (FDI)** and other diagnostics initiatives of the Health Ministry to provide an expanded basket of tests at different levels of the public health system.

Note:

- FDI was launched in July 2015. Under this initiative, the **National Health Mission (NHM)** is supporting all states to provide essential diagnostics – laboratory and radiology at their public health facilities, free of cost.
- **Scope:** It includes a group of general laboratory tests for routine patient care and for diagnosis of communicable and non-communicable diseases.
- Inclusion of the diagnostic test on **specific diseases selected on the basis of disease burden:** Vector borne diseases (Malaria, Dengue, Filariasis, Chikungunya, Japanese encephalitis); Leptospirosis, Brucellosis, Tuberculosis, Hepatitis A, B C and E, HIV, Syphilis.
  - Certain tests have been put as desirable tests and should be included in regions or states with high disease burden of that disease.
  - It also encompasses tests relevant for new programmes such as Health and Wellness Centres (HWCs) under the **Pradhan Mantri Jan Arogya Yojana**.
  - In addition to tests, corresponding **In Vitro Diagnostics (IVD)** products have also been recommended. In vitro diagnostics are tests done on samples such as blood or tissue that have been taken from the human body
- A **guidance document on “Regulatory framework for diagnostics: National and International”** has been included.
- It also recommends a list of human resources such as **ASHA workers, lab technicians pathologists** for different levels of health care as per the proposed list of diagnostics.

### Importance

- Availability of quality assured diagnostics would be helpful in the **optimal utilization of Essential Medicine List (EML)**.
- It will help India in achieving **Sustainable Development Goal (SDG) 3.8** i.e. Universal Health Coverage (UHC).
- Implementation of NEDL will enable **improved health care delivery** through evidence-based care, improved patient outcomes and reduction in **out-of-pocket expenditure**; effective utilization of public health facilities; effective assessment of disease burden, disease trends, surveillance, and outbreak identification; and address antimicrobial resistance crisis.

### Indian Council of Medical Research

- The Indian Council of Medical Research (ICMR), New Delhi, is the **apex body** in the country for the formulation, coordination and promotion of **biomedical research**.
- It is one of the oldest medical research bodies in the world.
  - As early as in 1911, the then Government of India set up the Indian Research Fund Association (IRFA) with the specific objective of sponsoring and coordinating medical research in the country.
  - After independence, several important changes were made in the organisation and the activities of the IRFA. It was redesignated in 1949 as the Indian Council of Medical Research (ICMR) with considerably expanded scope of functions.
- It will also enable standardization of technology/diagnostic services and will aid in the **promotion of R&D** for new appropriate and effective diagnostics which in turn will lead to reduction in costs.
- The ICMR is **funded by the Government of India through the Ministry of Health & Family Welfare**.

## Free Medicine Scheme of Rajasthan

The flagship **free medicine scheme** of Rajasthan government has bagged 1st position amongst 16 states, in the monthly rankings issued by the **National Health Mission (NHM)**.

### About the Scheme

- Rajasthan **Mukhyamantri Nishulk Dava Yojana** was launched on 2<sup>nd</sup> October 2011, by the then Chief Minister Ashok Gehlot.
- It had 2 components:
  - **Free Medicines:** To provide commonly-used essential medicines free of cost to patients visiting government healthcare institutions (introduced on 2<sup>nd</sup> October 2011), and
  - **Free Tests:** To provide free tests (introduced on 7<sup>th</sup> April 2013).
- For the successful implementation of the same, **Rajasthan Medical Services Corporation Limited (RMSCL)** was incorporated as a Public Limited Company.

Note:

- Since 2011, it has benefitted around 67 crore patients, and a record number of 712 medicines are covered under it.
- National Health Mission under its **Free Drug Service Initiative**, started giving rankings to the states, in order to encourage them to provide free drugs to their patients coming to public health facilities.
- The performance of the states was assessed by NHM on the basis of 10 parameters. A few of them are,
  - The stock of drugs,
  - Value of drugs about to expire, and
  - Effective compliance with the Drugs and Vaccine Distribution Management System (DVDMS), etc.
- The main aim of this initiative was **to reduce out of pocket expenditure** of patients suffering from cancer, heart and kidney-related diseases, and other severe ailments.
- This initiative of NHM is implemented by the **Ministry of Health & Family Welfare** in order to support the states.

### Way Forward

- Rewarding the states will act as a catalyst for ensuring the inclusive accessibility and affordability of health care services to the most downtrodden and the poorest sections of our society.
- This will also promote the spirit of co-operative and competitive federalism, whereby other states can take the lead and follow similar successful initiatives

## Janaushadhi Sugam

Recently, the Union Minister for Chemicals and Fertilizers has launched a **mobile application** called “**Janaushadhi Sugam**”, which will help people locate nearby Janaushadhi Kendras.

- **Janaushadhi Sugam mobile application** would help people to:
  - Locate nearby Janaushadhi Kendra (through Google Map).
  - Search Janaushadhi **generic medicines**.
  - Analyse product comparison of Generic vs Branded medicine in form of MRP & overall savings, etc.
    - The app will augment the government vision to provide affordable healthcare to all Indians through the **Pradhan Mantri Bhartiya**

**Janaushadhi Pariyojana (PMBJP)** Kendras across the country and this had already led to substantial savings to poor on medicines.

- The Minister also announced that “**Jan Aushadhi Suvidha Oxo-Biodegradable Sanitary Napkin**” will now be available at only One Rupee per pad.
- **Jan Aushadhi Suvidha Oxo-Biodegradable Sanitary Napkin.**
  - In a huge push for women hygiene, the government slashed the price of sanitary napkins sold from its Jan Aushadhi Kendras to Rs 1 per piece from Rs 2.50 earlier.
  - According to the Ministry of State Chemicals & Fertilizers, about 28 million girls are reported to be leaving education because of lack of availability of good quality Sanitary Napkin” pads at a reasonable cost.
  - This will ensure ‘**Swachhta, Swasthya and Suvidha**’ for the underprivileged women of the country
  - These napkins biodegrade automatically when it comes in contact with oxygen after being discarded.
- These steps will help in fulfilling of vision of **Affordable and Quality Healthcare for all** and dream of **Clean India & Green India**.

## HIV/AIDS Outreach

The Ministry of Health and Family Welfare signed a Memorandum of Understanding (MoU) with the Ministry of Social Justice and Empowerment (MoSJE) for enhanced HIV/AIDS outreach.

- The MoU signing ceremony took place between the National AIDS Control Organisation (NACO) and the Department of Social Justice and Empowerment (DoSJE).
- **Objective:** To reduce the incidence of social stigma and discrimination against victims of drug abuse and People Living with HIV/AIDS.
- **Expected Outcome:** The MoU will help in developing specific strategies and action plans for **HIV** and **AIDS** prevention and mechanisms for drug addiction treatment and extending social protection schemes to the vulnerable population.

### Situation in India

- The **National AIDS Control Organisation (NACO)** is a division of the **Ministry of Health and Family**

Note:



**Welfare** that provides leadership to HIV/AIDS control programme in India through 35 HIV/AIDS Prevention and Control Societies.

- NACO has played a very big role in significantly reducing the prevalence of HIV/AIDS in the country and that too faster than the global rates.
  - More than 80% decline in estimated new infections from the peak of epidemic in 1995.
  - **Estimated AIDS-related deaths declined by 71% since its peak in 2005.**
  - As per the UNAIDS 2018 report, the global average for the decline in new infections and AIDS-related deaths from peak has been 47% and 51% respectively.
    - Established in 1996, **UNAIDS** has been leading and inspiring global, regional, national and local leadership, innovation and partnership to consign HIV to history. It is headquartered in **Geneva, Switzerland**.

### **India's Role in the Global Fight against AIDS**

- There are 2 million new AIDS infections every year, and **about 66% of the world population** currently on antiretroviral therapy consumes drugs manufactured in India.
- Globally, the ART market is valued at 0.48 billion (in 2018) and is expected to reach 0.83 billion by 2025.
- Thus, **Indian pharmaceutical companies**, with their ability to **manufacture high-quality, affordable medicines** are very important in the global battle against AIDS.

### **Antiretroviral Therapy**

- With neither a vaccine nor a cure in sight, **Antiretroviral Therapy (ART) is the only option available for people living with HIV-AIDS.**
- HIV is a type of virus called a retrovirus, and the combination of drugs used to treat it is called Antiretroviral Therapy (ART).
- According to the **World Health Organization**, standard ART consists of a combination of at least three antiretroviral drugs to suppress the HIV virus and stop the progression of the disease.
- Significant reductions have been seen in rates of death and suffering by the use of potent ART regimen, particularly in the early stages of the disease

## **Scheme to Screen Children for Leprosy & TB**

The Union government has rolled out a scheme for universal screening of children below 18 years for leprosy and tuberculosis (TB).

- It is going to benefit almost 25 crore children and adolescents annually. This will help in ensuring timely screening for the diseases and will put them on treatment (if required).
- **Rashtriya Bal Swasthya Karyakram (RBSK)** Mobile Health teams will act as a delivery agent for the scheme. They will perform the screening of children for TB and Leprosy.
  - Earlier, the screening of children of age group 0-6 years was done at **Anganwadis** and children of 6-18 years group were enrolled in government and government-aided schools.
- RBSK is aimed at **early identification and intervention of diseases** in children from their birth to 18 years of age so as to cover the 4 Ds:
  - Defects at birth,
  - Deficiencies,
  - Diseases, &
  - Developmental delays, including Disability.

### **Leprosy & TB burden in India**

- India eliminated leprosy in 2005. All states except Chhattisgarh and the Union Territory of Dadra and Nagar Haveli have eliminated leprosy, but still, 1.15-1.2 lakh new **leprosy cases are detected every year.**
- Tuberculosis kills an estimated **4.8 lakh Indians every year** and more than 1,400 every day.
  - India has the highest TB burden in the world.
  - More than a million missing cases are notified every year.
  - Most such cases remain either undiagnosed, or are inadequately diagnosed, and are treated in the private sector.

### **Way Forward**

- There is still stigma attached to leprosy, because of which authorities need to **administer preventive medication** to all the peer groups- family, parents, etc, very discreetly.

Note:



- Early detection and timely intervention will help in preventing disability and completely curing the disease.

## **TB Drug Pretomanid**

**Pretomanid** is the third new drug developed for the treatment of people with **Extensively Drug-Resistant TB (XDR-TB) or Multi Drug-Resistant TB (MDR-TB)** affecting the lungs. The drug was developed and tested in clinical trials by New York based non-profit organisation TB Alliance.

- It is a part of three-drug, six-month, all-oral regimen treatment along with the other two drugs namely,
  - Bedaquiline, &
  - Linezolid.
- India has the highest TB burden in the world. **In 2018, 2.15 million TB cases were reported**, which is 16% more than in 2017. This new drug will be beneficial in reducing the burden.

### **Challenges**

- To get this regimen into trials there is a need to get it registered and put it into drug trials along with Bedaquiline.
- The **revised National TB Control Program (RNTCP)** will have to negotiate the price, procure & deliver the drugs on time.

### **Way Forward**

- Recently, the central TB Division of the Health Ministry has signed a Memorandum of Understanding (MoU) with **Wadhvani Institute for Artificial Intelligence** to explore the application of **cutting-edge Artificial Intelligence technology** in its fight against TB is a welcome step.
- TB control requires the slowing down of infection, progression, and transmission. Continuous efforts are needed in this regard for slowing down its progression and **eliminating it completely by 2025** five years ahead of Global Sustainable Development targets.



Note:



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# Security

## Highlights

- Chief of Defence Staff
- Left-Wing Extremism in India
- India Security Summit

## Chief of Defence Staff

The Prime Minister has announced the establishment of the post of Chief of Defence Staff (CDS) for the three services – the Indian Army, the Indian Navy and the Indian Air Force.

- The Chief of Defence Staff (CDS) is a post that will act as the **single-point advisor** to the Government of India.
- It will **synergise long term planning, procurement, training and logistics** of the three Services, and ensure better coordination between them.
- The creation of a CDS to act as a single point military adviser to the Prime Minister on strategic issues was one of the key recommendations of the **Kargil review committee** on **higher military reforms** after the 1999 conflict.
- An additional Department of Military Affairs in the Ministry of Defence and the post of Permanent Chairman Chiefs of Staff Committee (PC-CoSC) has also been created.

### Need for Chief of Defence Staff

- **Incoherency:** In general, the policy formulation is done by Defense Secretary, who is a bureaucrat, while its execution rests with Chiefs of armed forces. This makes defence policy incoherent.
- **Modern Warfare:** The emergence of **modern warfare domains** like Space, Cyber etc, requires a more integrated approach to defense strategy.
- A **group of ministers that was formed in 2001** to explore necessary reforms required to improve India's national security had also favoured creating the post of Chief of Defence Staff.
- In **2012 Naresh Chandra task force** recommended the appointment of a permanent chairman of chiefs of staff committee.

- The permanent chairman of chiefs of staff committee is the senior most of the three Chiefs.

- The CDS is also one of the 99 recommendations made by the **Lt. General D.B. Shekatkar (retd.) committee (2016)**.

### Significance

- The creation of the CDS will eventually lead to the formation of **tri-service theatre commands** intended to create vertical integration of the three forces.
- This is expected to **save money** by avoiding duplication between the Services, at a time of shrinking capital expenditure within the defence budget.
- It will help India in **Defense diplomacy**.

## Left-Wing Extremism in India

In the review meeting on LWE, the Union Home Minister has termed **Left-Wing Extremism (LWE)** as one of the **major internal security threats** faced by the nation.

- However, events of Left Wing Extremism (LWE) violence came **down from 2258 in 2009 to 833 in 2018**.

### Left-Wing Extremism

- LWE organizations are the groups that try to **bring change through violent revolution**. They are against democratic institutions and use violence to subvert the democratic processes at ground level.
- These groups prevent the developmental processes in the least developed regions of the country & try to misguide the people by keeping them ignorant of current happenings.

### Government Strategy to Curb LWE

- SAMADHAN doctrine is the one-stop solution for the LWE problem. It encompasses the entire strategy of

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government from short-term policy to long-term policy formulated at different levels. SAMADHAN stands for-

- **S** - Smart Leadership,
  - **A** - Aggressive Strategy,
  - **M** - Motivation and Training,
  - **A** - Actionable Intelligence,
  - **D** - Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas),
  - **H** - Harnessing Technology,
  - **A** - Action plan for each Theatre,
  - **N** - No access to Financing.
- The **national strategy to counter LWE** was formed in **2015** as a multipronged approach to combat LWE. Its main aim was to ensure participatory governance and protection of the rights of local tribals, inter alia.
  - Intelligence sharing and raising of a separate 66 Indian Reserve Battalion (IRBs) was done by the government to curb the menace of LWE organizations.

### **Development of LWE Affected Areas**

- Few schemes being implemented by the government for LWE affected areas are:
  - **Special Central Assistance (SCA)** - for filling critical gaps in public infrastructure and services of emergent nature.
  - **Road Connectivity Project** - for construction of 5,412 km roads.
  - **Skill Development** - for construction of 47 ITIs (01 ITI per district) and 68 Skill Development Centers (02 SDCs per district) by 2018-19.
  - **Education Initiatives** - for building new Kendriya Vidyalayas (KVs) & Jawahar Navodaya Vidyalayas (JNVs) where they are not present. It is also planned to open more schools under the **Eklavya model**.
  - **Installation of Mobile Towers** - for endless telecom connectivity.
  - **Financial inclusion** - for ensuring the presence of banking facilities within 5 km to all citizens residing in LWE affected areas.

### **Way Forward**

- Though the number of incidents of **LWE violence** has come down in the recent past, continued efforts and focus are needed in eliminating such groups.

- Innovative measures are required to be employed in preventing IED (Improvised Explosive Device) related incidents which have caused significant casualties in recent years.
- States play a vital role in maintaining law and order. So, emphasis should be laid on the capacity-building and modernization of the local police forces. Local forces can efficiently and effectively neutralize the LWE organizations.
- States should rationalize their **surrender policy** in order to bring innocent individuals caught in the trap of LWE in the mainstream.
- States also need to adopt a **focused time-bound approach** to completely eliminate LWE groups and ensure all-round development of the affected regions.
- For the holistic last-mile development of "**New India**", it is necessary to get rid of the menace of such radicalized groups, & the synergized efforts of the Centre and the States are crucial in achieving the same.

## **India Security Summit**

The 12<sup>th</sup> India Security Summit with the theme "**Towards New National Cyber Security Strategy**" was held on the 28<sup>th</sup> of August, 2019 in **New Delhi**.

- During the conference, many issues were discussed such as protection of critical national infrastructure, emerging cyber threats: incidents, challenges and responses.
- It was also highlighted that in a digital world, security is one of the challenging areas and new tools and technologies must be developed at a faster rate for **cybersecurity**.

### **Some Measures Taken to Counter Cyber Threats**

- **Indian Cyber Crime Coordination Centre (I4C)**: This scheme has been rolled out by the Ministry of Home Affairs (MHA) for the period 2018-2020, to combat cybercrime in the country, in a coordinated and effective manner.
- **Cyber Swachhata Kendra**: The "Cyber Swachhata Kendra" (Botnet Cleaning and Malware Analysis Centre) is a part of the Government of India's **Digital India initiative** under the **Ministry of Electronics and Information Technology (MeitY)**.

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- It intends to create a secure cyberspace by detecting botnet infections in India and to notify, enable cleaning and securing systems of end users so as to prevent further infections.
- It has been set up in **accordance** with the objectives of the **National Cyber Security Policy**, which envisages creating a secure cyber ecosystem in the country.
- This centre is being **operated by the**

**Indian Computer Emergency Response Team (CERT-In)** under the provisions of Section 70B of the Information Technology Act, 2000.

- Further, the Central Government has taken steps to spread awareness on cybercrime, issue cyber-related alerts/ advisories, capacity building/ training of law enforcement officers/ judges/ prosecutors, improving cyber forensics facilities etc. to prevent cybercrime and expedite investigations.



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# Miscellaneous

## Highlights

- *Ramon Magsaysay Award 2019*
- *Global Honour for Indian Scientist*
- *Toni Morrison*
- *Area 51*
- *Strait of Magellan*
- *5th National Handloom Day*
- *Women Transforming India Awards*
- *UAE Awards Highest Civilian Honour to the Prime Minister*
- *e-Courts*
- *Quick Response Code for Buildings*
- *State Rooftop Solar Attractiveness Index–SARAL*
- *World Youth Conference For Kindness*
- *Dindigul Lock and Kandangi Saree*
- *Campaign Angikaar and E-Course*
- *War on Nature Must End*

## Ramon Magsaysay Award 2019

Indian journalist Ravish Kumar has been awarded the 2019 Ramon Magsaysay Award for “**harnessing journalism to give voice to the voiceless**”.

- The other winners of the award are:
  - Myanmar’s Ko Swe Win- Journalist;
  - Thailand’s Angkhana Neelapajit- Human Rights Activist;
  - Philippines’ Raymundo Pujante Cayabyab- Musician; and
  - South Korea’s Kim Jong-Ki- Activist working with violence and mental health issues in youth.
- **Last year (2018), Sonam Wangchuk** (an educational reformer from Ladakh) and **Bharat Vatwani** (a psychiatrist who works for mentally ill street person in Mumbai) were among the winners of the award.

### Ramon Magsaysay Award

- The **Ramon Magsaysay Award** was established in 1957 and is considered as Asia’s premier prize and highest honour.
- It is named after **Ramon Magsaysay, the third president of the Republic of the Philippines**.
- Till 2009 awards have traditionally been given in five categories: government service; public service; community leadership; journalism, literature, and creative communication arts; and peace and international understanding.

- However, post 2009, the Ramon Magsaysay Award Foundation annually selects the awardees for the field of **Emergent Leadership**. Awardees are presented with a certificate, a medallion with an embossed image of Ramon Magsaysay and cash prize.
- The award is internationally-recognized as the **Nobel Prize counterpart of Asia and is the highest award given to Asian individuals and organizations**.

## Global Honour for Indian Scientist

**Atish Dabholkar**, a **theoretical physicist** from India, known for his research on **string theory and quantum black holes**, has been appointed as the next director of the Italy-based **International Centre for Theoretical Physics (ICTP)**.

- Dabholkar will succeed **Fernando Quevedo** from November 2019.
- He is the **second Indian appointed** to the post in ICTP history after **Katepalli Sreenivasan**, who was Quevedo’s predecessor.
- Dabholkar is currently the head of the High Energy, Cosmology and Astroparticle Physics section of ICTP based in **Trieste, north-east Italy**.
- He is also the winner of the 2006 **Shanti Swarup Bhatnagar Award** for Science and Technology.
- He completed his school education in Kolhapur district of Maharashtra and did his graduation from

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IIT, Kanpur, and earned a PhD in theoretical physics from Princeton University.

- Until 2010, he was a professor of theoretical physics at **Tata Institute of Fundamental Research** in Mumbai, and has been a visiting professor at Stanford University and a visiting scientist at CERN.

#### International Centre for Theoretical Physics

- International Centre for Theoretical Physics (ICTP) was founded in 1964 by the late Nobel Laureate **Abdus Salam**.
- Its mandate is to provide education and skills to scientists from developing countries for their productive careers.
- It has helped in stemming the scientific brain drain from the developing world.

#### String Theory

- It is an attempt to combine the **quantum mechanics** (body of scientific laws that describe the behavior of photons, electrons and other particles that make up the universe) and **Albert Einstein's theory of relativity** — with an overarching framework that can explain all of physical reality.
- It tries to do so by positing that particles are actually **one-dimensional**, string-like entities whose vibrations determine the particles' properties, such as their mass and charge.

#### European Organization for Nuclear Research

- European Organization for Nuclear Research (CERN) is an **European Organization** founded in 1954 for **Nuclear Research**.
- It aims to provide a unique range of particle accelerator facilities that enable world-class research in fundamental physics.
- It operates the **world's largest and most powerful particle accelerator** i.e **Large Hadron Collider (LHC)**.

#### Theoretical Physics

- It is the development of mathematical formalisms and computational protocols for describing all aspects of objects found in the world around us and their interaction.
- This can involve both providing models for understanding empirical results or constructing self-logical theories for explaining phenomena beyond current experiments.

#### Shanti Swarup Bhatnagar Award

- The award is named after the founder Director of the **Council of Scientific & Industrial Research (CSIR)** India, the late Dr (Sir) Shanti Swarup Bhatnagar and is known as the 'Shanti Swarup Bhatnagar (SSB) Prize for Science and Technology'.
- The Prize is given each year for outstanding contributions to science and technology.

### Toni Morrison

Toni Morrison, the **first African American woman** to win the **Nobel Prize for Literature**, has passed away. Morrison was born in Ohio (US) on 18th February, 1931.

- Morrison wrote **11 novels**, many of them touching on life as a black American, in a glittering literary and award-laden career that lasted over six decades.
  - "The Bluest Eye," her first novel, was published in 1970. She followed up with "Sula" in 1973, going on to publish another nine novels.
- She won the **Pulitzer Prize** and the **American Book Award** in 1988 for her 1987 novel "Beloved".
- Morrison received numerous other accolades including the **Nobel Prize for Literature** in 1993.

### Area 51

Hundreds of thousands of people have signed up to a **Facebook event**, promising to storm the alleged secret **US military base, Area 51**, located in the **Nevada desert**.

- On a Facebook event titled "**Storm Area 51, They Can't Stop All of us**", two million people on September 20, plan to storm a US Air Force facility called Area 51.
- Officially known as the **Nevada Test and Training Range**, Area 51 is part of the **Nellis Air Force Base** and is used as a training centre for the US Air Force. The name originates from its location of the Nevada map.

### Strait of Magellan

The Strait of Magellan is located **near southern Chile along the southern edges of the South American continent and links the Atlantic and Pacific oceans**.

- It is named after the Portuguese adventurer, **Ferdinand Magellan**, the first explorer to circumnavigate the globe.

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- Sheltered by mainland South America and the islands of **Tierra Del Fuego archipelago**, this route was considered much safer than the **Drake Passage**, a more violent stretch of chaotic water between Antarctica and South America.
- Located on the Strait of Magellan, Chile's port city, **Punta Arenas** was once one of the most important supply stops for mariners, until the **Panama Canal** opened in 1914.

### Ferdinand Magellan

- He **set off from Spain 500 years ago** on an audacious voyage to sail all the way around the globe for the first time, a landmark in the history of exploration.
- While crossing the strait, the explorer and his crew observed **two galaxies visible** to the naked eye from the southern hemisphere, now known as the **Magellanic Clouds**.
- The voyage also contributed to Europeans' knowledge of the universe.

### Magellanic Clouds

- They are comprised of two irregular galaxies, the **Large Magellanic Cloud (LMC)** and the **Small Magellanic Cloud (SMC)**, which orbit the **Milky Way** once every 1,500 million years and each other once every 900 million years.
- Lying only about 200,000 light years away, they were the closest known galaxies to the Milky Way

until recently, when the Sagittarius and Canis Major **dwarf galaxies** were discovered and found to be even closer.

- Although very close to us, the Magellanic Clouds have played a significant role in our understanding of the distant Universe.

## 5<sup>th</sup> National Handloom Day

The 5<sup>th</sup> **National handloom day** is being celebrated across the country on 7<sup>th</sup> August 2019.

- The National handloom Day is observed to honour the **handloom weaving community** and highlight the importance of India's handloom industry.
- **Bhubaneswar, Odisha** has been chosen as the venue for the celebration of handloom day, due to its rich tradition of handlooms and to empower women and girls of the region.
  - More than 50% of total weavers population of India resides in Eastern and North Eastern region of the country.
- August 7 was chosen as the National handloom day to commemorate the **Swadeshi movement** which was based on the **Gandhian ideology of Swadeshi**.
  - Swadeshi movement was launched on **7<sup>th</sup> August, 1905 in Calcutta town hall to protest against the partition of Bengal** (by the British Government) by reviving domestic products and production processes.
- The **first National handloom day** was inaugurated on **7<sup>th</sup> August 2015**.
- National handloom day seeks to focus on the **contribution of handloom** to the **socio-economic development of the country**.

## Women Transforming India Awards

The Women Transforming India awards (4th edition) are being launched by **NITI Aayog** in collaboration with the **United Nations**.

- For WTI-2019 awards WhatsApp (facebook owned messaging platform) has collaborated with NITI Aayog.
- The theme of the Women Transforming India-2019 awards is **Women and Entrepreneurship** (same as in 2018).

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### National Entrepreneurship Awards

- The National Entrepreneurship Awards aim to honour outstanding young first-generation entrepreneurs and ecosystem builders for their exceptional contribution in entrepreneurship development.
- They recognise individuals or organizations that have made outstanding contributions to the entrepreneur ecosystem of India.
- The National Entrepreneurship Awards are announced annually by the Ministry of Skill Development and Entrepreneurship.
- To be eligible for National Entrepreneurship Awards the nominee (entrepreneur) must be:
  - Under the age of 40 years
  - First-generation entrepreneur
  - Hold 51% or more equity and ownership of the business
  - Women entrants must individually or collectively own 75% or more of the enterprise.

### Women Transforming India Awards

- WTI awards were launched by NITI Aayog and the United Nations in India in 2016, to honour the **women entrepreneurs**, who are breaking the glass ceiling and challenging stereotypes, through businesses, enterprises and innovative initiatives.
- WTI award recognizes women who are flag bearers of the next wave of business innovations and connect with potential business opportunities, through NITI Aayog's **Women Entrepreneurship Platform (WEP)**.
  - Women Entrepreneurship Platform (unified access portal to help women realise their entrepreneurial aspirations) is an initiative by NITI Aayog to promote and support aspiring as well as established women entrepreneurs in India.

## UAE Awards Highest Civilian Honour to the Prime Minister

The United Arab Emirates (UAE) has awarded **ZAYED Medal**, the highest civilian award to the Prime Minister of India for consolidating the long-standing friendship and joint strategic cooperation between the two nations.

- It can be noted that recently India was invited by the host UAE as the "Guest of Honour" to attend the **46<sup>th</sup> Session of the Council of Foreign Ministers of the**

**Organisation of Islamic Cooperation (OIC)** held in Abu Dhabi, United Arab Emirates (UAE).

- This was the **first time that India was invited to any OIC meeting** as a guest of honor.

### Zayed Medal

- The **Order of Zayed** is awarded to the Head of Government/Head of State for their international relations with UAE.
- The order is in the name of **Sheikh Zayed bin Sultan Al Nahyan**, the founding father of the UAE.
- It consists of a collar cantered by a medallion bearing the name 'Zayed'.
- In the past, this award has been conferred to
  - Russian President Vladimir Putin,
  - Former US President George W Bush,
  - Former French President Nicholas Sarkozy,
  - German Chancellor Angela Merkel,
  - Chinese President Xi Jinping,
  - UK's Queen Elizabeth II.

## e-Courts

The High Court of Punjab and Haryana to launch its **first virtual court (e-Court) at Faridabad**.

- This e-Court would deal with **traffic challan cases** from across the State.
- The project will be launched under the guidance of **e-Committee of the Supreme Court of India**.
- Virtual courts will remove the need for the litigant to be present in the court and facilitate adjudication of the case online through the use of Information and Communication Technology (ICT).

### e-Courts Project

- The e-Courts project was conceptualized on the basis of the "**National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary – 2005**" submitted by e-Committee, Supreme Court of India with a vision to transform the Indian Judiciary by ICT enablement of Courts.
- The e-Courts Mission Mode Project, is a **Pan-India Project, monitored and funded by the Department of Justice, Ministry of Law and Justice**, Government of India for the District Courts across the country.

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### **The project envisages**

- To provide efficient & time-bound citizen-centric services delivery as detailed in e-Court Project Litigant's Charter.
- To develop, install & implement decision support systems in courts.
- To automate the processes and provide transparency in the accessibility of information to its stakeholders.
- To enhance judicial productivity, both qualitatively & quantitatively, and make the justice delivery system affordable, accessible, cost-effective, predictable, reliable and transparent.

### **Quick Response Code for Buildings**

- The Haryana government will implement an ambitious project of installing an 18-digit **Quick Response (QR) code** carrying metal plates outside all built-up structures across the state. The move is intended to streamline property-tax collection.
  - The metal plates to be affixed to the buildings will contain a **Unique Property Identification and QR code (Digital Door Number)**.
  - Each QR code will have accurate plot area measurement, floors constructed at the time of the survey using both base map service and on-ground field measurements.
- The government has already begun a drone-based **Geographic Information Survey (GIS)** to analyse all residential, commercial, industrial, institutional and vacant properties in the state.

### **Benefits**

- The system will result in enhancing the property-based **tax revenues** manifold. It will increase funds for the Urban Local Bodies for future development through a real-time property tax collection mechanism.
- **Geo-tagged** property data will be helpful for planning and day-to-day developmental work. In case of any alteration of the building/ structure, the QR code will also enable residents for faster building approvals and Change of Land Use.
  - Not only tax collection, but once the records are digitised, it will enable the government to link other government schemes and transfer of benefits to citizens using the same QR codes.

### **State Rooftop Solar Attractiveness Index–SARAL**

Recently, the **Ministry of New and Renewable Energy (MNRE)** has launched the **State Rooftop Solar Attractiveness Index–SARAL**.

- SARAL is the first of its kind index to provide a comprehensive overview of state-level measures adopted to **facilitate rooftop solar deployment**.
- It would create a more conducive environment for solar rooftop installations, encourage investment and lead to the accelerated growth of the sector, **by creating healthy competition among the States**.
  - **Karnataka has been placed at the first rank in the index followed by Telangana, Gujarat and Andhra Pradesh.**
- SARAL currently captures five key aspects:
  - Robustness of policy framework,
  - Implementation environment,
  - Investment climate,
  - Consumer experience,
  - Business ecosystem
- It has been designed collaboratively by the MNRE, Shakti Sustainable Energy Foundation (SSEF), Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Ernst & Young (EY).
- SARAL is in concurrence with the **Government's target of installing 175 GW of renewable energy capacity by 2022**, of which **100 GW of solar power** is to be operational by March 2022, (40 out of 100 GW is expected to come from grid-connected solar rooftops).
- The rooftop solar deployment will make **power sector sustainable and viable** (as the cost of solar energy is reducing) and it will help to ensure 24/7 power supply to all consumers.
- Along with that, it will help in India in fulfilling its **Intended Nationally Determined Contributions (INDCs) highlighted at Paris climate deal**.

### **World Youth Conference For Kindness**

The first-ever **World Youth Conference for Kindness** was organised by the **UNESCO's Mahatma Gandhi**

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Institute of Education for Peace and Sustainable Development (MGIEP) and Ministry of Human Resource (MHRD) at New Delhi.

### About Conference

- The theme of the conference was ‘**Vasudhaiva Kutumbakam: Gandhi for the Contemporary World: Celebrating the 150<sup>th</sup> birth anniversary of Mahatma Gandhi**’.
- The main purpose of the conference was to impart critical competencies (i.e. empathy, compassion, mindfulness and critical inquiry) in global youth to inspire, empower and enable them to transform themselves and build long-lasting peace in their communities.
- The conference comprises of following:
  - intensive **youth-led capacity building workshops** to enhance the capacities of youth on social and emotional learning skills and competencies such as empathy, mindfulness, compassion, kindness and critical inquiry through the prism of identity and global issues.
  - a platform to **celebrate inspiring acts of kindness** that are effecting change in the world and action programming for youth agency.
  - a generative space consisting of experts panels and TAGe plenary for youth and experts to share and critically engage with the concept of peace through kindness and nonviolence.

### Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP)

- It is the first **UNESCO** institute of its kind in the **Asia-Pacific region** situated in New Delhi.
- It is UNESCO’s **category 1 Research Institute** that focuses on Sustainable Development Goal (SDG) 4.7 towards education for building peaceful and sustainable societies across the world.
- It has developed a **social and emotional learning (SEL)** curriculum called Libre, which was designed to build four competencies – **critical inquiry, mindfulness, empathy and compassion**.
- The flagship publication of MGIEP i.e. “**Blue Dot**” focuses on social and emotional learning.

## Dindigul Lock and Kandangi Saree

The **Geographical Indications Registry** has granted the **Geographical Indication (GI) tag** to two products from Tamil Nadu: **Dindigul lock and Kandangi saree**.

- The **Dindigul locks** are known throughout the world for their **superior quality and durability**, so much so that even the city (Dindigul) is called Lock City.
  - Government institutions such as prisons, godowns, hospitals, and even temples use these locks instead of other machine-made ones.
- The **Kandangi sarees** are manufactured in the entire **Karaikudi taluk in Sivaganga district**.
  - Worn in summer, these are characterised by **large contrast borders**. Some are known to have borders covering as far as two-thirds of the saree which is usually around 5.10 m-5.60 m in length.

## Campaign Angikaar and E-Course

The **Ministry of Housing and Urban Affairs** has launched two initiatives: **Angikaar**, a campaign for **behavioural change** and an e-Course on ‘**Vulnerability Atlas of India**’.

### Campaign Angikaar

- The objective of Angikaar is to bring social behaviour change with focus on issues such as water & energy conservation, waste management, health, tree plantation, sanitation and hygiene for beneficiaries of completed houses under **Pradhan Mantri Awas Yojana - PMAY (U)**.
  - The campaign will converge with schemes and missions of other Ministries dealing with the stated subjects.
  - The convergence would especially focus on **Ujjwala** for gas connection and **Ayushman Bharat** for health insurance to the beneficiaries of PMAY (U).
- The campaign will be initiated in all target cities on 2<sup>nd</sup> October 2019 commemorating **150<sup>th</sup> Gandhi Jayanti** and culminate on the **occasion of Human Rights Day**, 10<sup>th</sup> December, 2019.

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### ***E-course on Vulnerability Atlas***

- It is a unique course that offers **awareness and understanding about natural hazards**, helps **identify regions with high vulnerability** with respect to various hazards and specifies district-wise level of damage risks to the existing housing stock.
- The e-course will work as a tool for effective & efficient disaster mitigation & management in the field of Architecture, Civil Engineering, Urban & Regional Planning, Housing & Infrastructure Planning, Construction Engineering & Management and Building & Materials Research.

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### **War on Nature Must End**

Recently the teenage climate campaigner **Greta Thunberg** after completing her 15-day journey across the

Atlantic via **Zero-emission** yacht urged **“to end the war on nature”**.

- She led the popular initiative **#FridaysForFuture**.

### ***#FridaysForFuture***

- It is a movement that began in Sweden in August 2018 to protest against the lack of action on the climate crisis.
- **The hashtags #FridaysForFuture and #Climatestrike** became so popular that many students and adults began to protest outside their respective Parliaments and local city halls all over the world.
- **#Climatestrike** is a global event to demand an end to the age of fossil fuels & climate justice for everyone. It is a wake-up call to our generation to solve the greatest environmental challenge in human history.



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