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Drishti, 641, First Floor, Dr. Mukherjee Nagar, Delhi-110009
Phone: 87501 87501, WhatsApp: 81303 92355
Email: engweb@groupdrishti.com

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Polity and Governance

Highlights

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15-Point Reforms Charter for Parliament

Why in News

For effective and better functioning of the Parliament and State Legislatures, the Vice President of India recently introduced a 15 point reform charter.

Issued Charter

- **Political Conscience:** Call for a new political consciousness amongst legislators to review their roles and responsibilities.
- **Quorum:** Political parties **must ensure attendance** of at least 50% of their legislators throughout the proceedings of the Houses by adopting a **roster system**.
 - This was needed in the backdrop of required **Quorum (10% of the strength of the Houses)**, which if not met, leads to the adjournment of the House.
- **Whip:** Review of **whip system** which **hinders the freedom of expression** of the legislators.
 - This will allow a **reasonable degree of dissent** without impacting the stability of the government.
- **Anti-Defection:** Review of the **Anti Defection Law** to rectify the areas like incentivizing legislators to resort to actions that invite expulsion from the party besides providing for time-bound disposal of defection cases by the Presiding Officer.
- **Department related Standing Committees:** Measures for effective functioning of Department related Standing Committees like longer tenure (instead of the present one year), promoting specialization, etc were needed.
- **Legislative Impact Assessment:** A detailed framework for pre and post Legislative Impact Assessment was needed.
 - Every legislative proposal must incorporate a detailed account of social, economic, environmental and administrative impact for wider awareness and subsequent legal assessment.
- **Voting Preferences:** Need for moving away from **identity-based voting** to that of development-oriented exercise of voting preferences. Role of caste, community, region and religion in influencing the voting preferences needs to be minimized.
- **Responsible Government and Opposition:** Need for responsive governments positively acting on the concerns of the opposition and the need for responsible and constructive opposition while resorting to available parliamentary instruments.
- **Simultaneous Polls:** Building consensus on the proposal of **simultaneous polls** to allow unrestricted governance.

Note:

- **Reservation of Women:** Enacting for reservation of women in legislatures.
- **Rules and Regulations:** Making rules that automatically take action against erring members in case of interruptions and disruptions. Need for timely and effective actions against legislators for non-ethical conduct.
- **Transparency & Accountability:** Regular publication of reports by the Secretariats of Legislatures on the attendance of Members and their participation in debates.
- **Addressing the concern of a rising number of legislators with criminal records.**
- **Setting up of special courts** for time-bound adjudication of criminal complaints against legislators.
- A **minimum number of sittings** for both the Houses of Parliament and State Legislatures per year **need to be appropriately prescribed.**

UTs: J&K and Ladakh

Why in News

Radha Krishna Mathur and Girish Chandra Murmu have been appointed as the first **Lieutenant-Governors (L-G)** of Ladakh and Jammu & Kashmir (J&K), respectively.

Background

- This move has come after the Centre **scrapped provisions of Article 370** and split it into two Union Territories (UTs) under the **J&K Reorganisation Act, 2019**.
 - This is the **first time that a state has been divided into UTs.**
 - Kargil and Leh districts constitute the UT of Ladakh while rest of the region constitutes the UT of Jammu and Kashmir.
 - Now, India has **28 states and 9 UTs.**

Current Status

- The two new UTs **officially came into existence on 31st October 2019**, the **144th birth anniversary of Sardar Vallabhbhai Patel**, who is credited for the merger of over 560 princely states into the Union of India.
 - With this, President's rule imposed in undivided Jammu and Kashmir in June 2018 stands revoked.

- The flag and constitution of Jammu and Kashmir, as well as the Ranbir Penal Code (RPC), cease to exist, with the Indian Penal Code (IPC) now extending to both UTs.
- The UT of J&K will have a 114-member elected Assembly and a Chief Minister whereas the Union territory of Ladakh will be controlled directly by the L-G (i.e. without an Assembly).

Administration of Union Territories

- **Articles 239 to 241** in **Part VIII of the Constitution** deal with the UTs.
- Every **UT is administered by the President acting through an administrator** appointed by him.
 - The President can specify the designation of an administrator which may be **Lieutenant Governor** or **Chief Commissioner** or **Administrator**.
- The Parliament can make laws on any subject of the three lists (i.e. Union, State and Concurrent) for the union territories.

EIU's Financial Inclusion Report

Why in News

According to the **Economist Intelligence Unit's (EIU) 2019 Global Microscope on Financial Inclusion report**, **India** (ranked at **5th position**) is among the top nations with the most conducive environment for financial inclusion.

- The Global Microscope assesses the enabling environment for financial inclusion across **5 categories and 55 countries.**
- It covers five domains:
 - Government and Policy Support.
 - Stability and Integrity.
 - Products and Outlets.
 - Consumer Protection.
 - Infrastructure.
- The 2019 edition featured **11 new gender-focused indicators** that measured financial inclusion for both women and men.
- **EIU is the research and analysis division of The Economist Group**, a sister company to The Economist newspaper. It has its office in London, United Kingdom.

Note:

Summary of India's performance

Category	Score	Rank	Average Score
Overall Score	71	=5	52
1 Government and policy support	76	=8	54
2 Stability and integrity	76	12	65
3 Products and outlets	92	3	57
4 Consumer protection	81	9	60
5 Infrastructure	60	31	59

India: strengths			India: areas for improvement		
Indicator	Rank		Indicator	Rank	
2.3 Customer due diligence	=1		2.4 Supervisory capacity	=29	
3.2 Credit portfolios for middle-and low-income customers	=1		5.3 Connectivity	=45	
3.3 Emerging services	=1		1.1 Broad strategies for financial inclusion	=19	

Key Findings

- The overall **environment for financial inclusion has improved** globally with India, Colombia, Peru, Uruguay and Mexico having the most favourable conditions for inclusive finance.
- However, **only one-third of countries include a gender approach** in their financial inclusion strategies and even fewer have set clear, gender-related goals.

Financial Inclusion and India

- RBI has prepared a **draft National Strategy for Financial Inclusion** to deepen financial services' coverage in the country. It is expected to be finalised in 2019 and will cover a five-year period.
- The RBI has set up a **high-level committee to review the existing status of digitisation** and devise a medium-term strategy for increasing digital payments.
- In August 2019, the RBI released the **Enabling Framework for Regulatory Sandbox (RS)**, which created

the basis for a regulatory sandbox that allows fintech start-ups to live-test innovative products and services.

Entry Law for Visitors in Meghalaya

Why in News

Recently, the Meghalaya Cabinet has approved **amendments to the Meghalaya Residents Safety and Security Act (MRSSA) 2016**.

- The ordinance makes **registration on entry mandatory** for visitors who intend to **spend more than 24 hours** in the state of Meghalaya.
 - This will **require non-resident visitors to register** themselves on the lines of the **Inner Line Permit (ILP)** system of **Arunachal Pradesh, Nagaland and Mizoram**.

Meghalaya Residents Safety and Security Act (MRSSA) 2016

- The Act aims to **ensure the security of the tenants** as well as the safety and security of the **citizens of the state**.
- It provides for **verification and regulation** of the tenants residing in rented houses in the state.
- It also **establishes District Task Force and Facilitation Centres** for effective enforcement of various laws for the safety and security of the citizens.

Inner Line Permit

- It is an **official travel document** issued by the Government of India **to allow inward travel of an Indian citizen into a protected/restricted area** for a limited period.
- It is a **special permit required by "outsiders"** from other regions of the country to enter the **three states (Arunachal Pradesh, Nagaland and Mizoram)**.
- It is based on the **Bengal Eastern Frontier Regulation Act (BEFR), 1873**.
 - This Act was enacted to protect the British interests from the hill tribes who used to invade the British subjects.
 - An imaginary line known as the inner-line was created to divide the two communities so that neither party could go beyond the line without a permit from the appropriate authorities.

Note:

Formation Day

Why in News

Seven Indian states — **Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Punjab, Haryana, Karnataka and Kerala** – observed their **foundation day on 1st November**.

- The **Andhra Pradesh Reorganisation Act of 2014** bifurcated the erstwhile Andhra Pradesh into two separate states, namely **Andhra Pradesh** and **Telangana**.
- In **2000, Chhattisgarh** was created out of **Madhya Pradesh**.
- In **1966**, the State of **Punjab** was bifurcated to create **Haryana**.
- **Kerala and Karnataka** were formed under the **States Reorganisation Act, 1956**.

Constitutional Provision

- **Article 3** authorises the **Parliament** to:
 - Form a new state by separation of territory from any state or by uniting two or more states or parts of states or by uniting any territory to a part of any state.
 - Increase the area of any state.
 - Diminish the area of any state.
 - Alter the boundaries of any state.
 - Alter the name of any state.
- However, Article 3 lays down **two conditions**:
 - The Bill can be introduced in the Parliament only with the prior recommendation of the President.
 - Before recommending the bill, the President has to refer the same to the state legislature concerned for expressing its views within a specified period.
 - The President (or Parliament) is not bound by the views of the state legislature and may either accept or reject them, even if the views are received in time.

Gujarat Anti-Terror Act, 2015

Why in News

The President of India gave assent to the **Gujarat Control of Terrorism and Organised Crime (GCTOC) Bill**, an **anti-terror legislation** passed by Gujarat in 2015.

Key Provisions

- It defines a **'terrorist act'**, as an act committed with the intention to disturb law and order or threaten the unity, integrity, and security of the state.
- It also mentions **organized crime** which are criminal activities run for a **substantial profit**.
 - It includes economic offences namely, Ponzi schemes, multi-level marketing schemes, and organized betting.
- The investigating agencies **can intercept telephonic conversations** and submit them as **legitimate evidence** in court.
 - However, the **approval** for interceptions of telephonic conversations will be cleared at the level of **additional chief secretary**.
- The **confessions made before a police officer** will also be considered as **evidence**.
 - However, the confessions made to an officer of the rank of **Superintendent of Police (SP) or above** would only be admissible in court.
- It provides **180 days' time** for authorities to file a charge sheet **instead of** the usual **90 days** and also proposes **stricter conditions for bail**.
- It also provides for the **creation of a special court** as well as the appointment of special public prosecutors.

Controversial Provisions of GCTOC Bill

- The consideration of **intercepted telephonic conversations** as legitimate evidence is **violative** of the **Right to Privacy (Article 21)**.
- Also, the consideration of **confession made before police officers as evidence** is violative of the fundamental rights of an accused (**Article 20**).
 - **Article 20(3)** of the constitution says that no person accused of any offence shall be compelled to be a witness against himself.
- The **extension of time** for filing the charge sheet has been increased **up to 180 days** from 90 days.
 - The clause keeps a **person under detention** for a **longer** period of time.
- These provisions are **on the lines** of the **Centre's Prevention of Terrorism Act (POTA), 2002**.
 - But **arbitrary use** of such provisions led to the **repulsion of POTA in 2004**.

Note:

Advantages of the Bill

- Gujarat shares a **border with Pakistan**, and hence, such legislation is required for better safety and security, especially in a coastal and border state.
- It will give **sufficient power to police officials** and enhance the security of the state.

Places of Worship Act, 1991

Why in News

The **Supreme Court** in its **recent Ayodhya verdict** mentioned the **Places of Worship (Special Provisions) Act, 1991** which freezes the status of any place of worship as it existed at the time of Independence.

The Places of Worship (Special Provisions) Act, 1991

- The Act imposes a positive obligation on the State to maintain the religious character of every place of worship as it existed at the time of Independence.
- **Section 3** of the Act **bans the conversion of a place of worship or even a section of it** into a place of worship of a different religious denomination or of a different segment of the same religious denomination.
 - This legislative obligation on the State to preserve and protect the equality of all faiths is an essential secular feature and one of the basic features of the Indian Constitution.
- **Exemption**
 - The **disputed site at Ayodhya is exempted** from the Act. Due to this exemption, the trial in the Ayodhya case proceeded even after the enforcement of this law.
 - The Act also does not apply to any place of worship which is an ancient and historical monument or an archaeological site **covered by the Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
- **Penalty:** Section 6 of the Act prescribes a punishment of **maximum three-years imprisonment** along with a fine for contravening the provisions of the Act.

Occupational Safety, Health and Working Conditions Code, 2019

Why in News

The Standing Committee on Labour has invited suggestions from the public on the Occupational Safety, Health and Working Conditions (OSH) Code, 2019.

- The OSH Code was introduced in the Lok Sabha in July, 2019.
- It **aims to regulate the employment of workers**, including those engaged by contractors, and their working conditions across sectors.
- It is **one of the four codes** that are part of the Centre's **labour reforms** agenda.
 - The four labour codes—on **Wages, Industrial Relations, Social Security and Occupational Safety, and Health and Working Conditions**—intend to provide workers with wage security, social security, safety, health and grievance redress mechanisms.

Key Provisions

- **Replaces 13 labour laws** relating to safety, health and working conditions, including the Factories Act, 1948, the Mines Act, 1952, and the Contract Labour (Regulation and Abolition) Act, 1970.
- **Applicability**
 - Establishments employing at least 10 workers,
 - All mines and docks,
 - Provides special provisions for certain types of establishments and classes of employees, such as factories and building and construction workers.
- A **National Occupational Safety and Health Advisory Board** in place of multiple committees at present.
 - The Board will have tripartite representation from trade unions, employer associations and state governments.
 - The Board will advise the government on the standards, rules and regulations on workers' safety, besides overseeing the implementation of the Code.
- **Licensing Requirements**
 - One registration, one licence and one tax return instead of multiple registrations, licenses and returns as required in the existing 13 labour laws.

Note:

- **Formalisation of Employment:** The Code provides for a statutory provision to **issue appointment letter** to every employee of the establishment.
- **Safety and Welfare Provisions**
 - The employer is required to provide a **hygienic work environment** with ventilation, comfortable temperature and humidity, sufficient space, clean drinking water, and toilets.
 - The Code provides for uniform threshold for welfare provisions for all establishments. Welfare Provisions include crèche, canteen, first aid, welfare officer etc.
- **Duties of Employees** include taking care of their own health and safety, complying with the specified safety and health standards, and reporting unsafe situations to the relevant authority.
- **Working Hours For Women:** Women, after their consent, will be permitted to work beyond 7 pm and before 6 am subject to the safety, holidays, working hours or any other condition as prescribed by the state or the central government.
- **Penalty**
 - An offence that leads to the death of an employee will be punishable with imprisonment of up to two years, or a fine up to five lakh rupees, or both.
 - The courts may direct that at least 50% of such fine be given as compensation to the heirs of the victim.
 - If an employee violates provisions of the Code, s/he will be subject to a fine of up to Rs 10,000.

Reconstitution of National Integration Council

Why in News

In the backdrop of due **Ayodhya verdict**, the reconstitution of the National Integration Council (NIC) has **gained prominence**.

National Integration Council

- It is an **extra-constitutional body**.
- It is **chaired by Prime Minister of India**.
- It comprises of Cabinet ministers, Chief Ministers of states, political leaders, Chairman of the University Grants Commission, **Commissioner for Scheduled**

Castes and Scheduled Tribes, representatives of industry, business and trade unions.

- The NIC was constituted to combat the evils of communalism, casteism, regionalism, and linguism as a **follow up of National Integration Conference** held under the chairmanship of the then **Prime Minister Pt. Jawaharlal Nehru in 1961**.
- The **last meeting of the NIC** took place in **2013** which passed a resolution on maintaining communal harmony and ending discrimination by condemning atrocities on Scheduled Castes and Scheduled Tribes.

CJI under the RTI Act

Why in News

The **Supreme Court** has ruled that the **office of the Chief Justice of India (CJI)** is a **public authority** under the **Right to Information (RTI) Act, 2005**.

- The RTI Act provides for right to information for citizens to secure access to information under the control of public authorities in order to promote transparency and accountability in the working of every public authority.

Highlights of the Ruling

- The **Supreme Court is a “public authority”** and the office of the **CJI is part and parcel of the institution**. Hence, if the Supreme Court is a public authority, so is the office of the CJI.
 - The Judiciary cannot function in total insulation as judges enjoy a constitutional post and discharge public duty.
- However, **Right to Privacy** is an important aspect and has to be **balanced with transparency** while deciding to give out information from the office of the Chief Justice of India.
 - RTI cannot be used as a tool of surveillance and judicial independence has to be kept in mind while dealing with transparency.
- On the issue related to the appointment of judges, the Supreme Court held that **only the names of the judges recommended by the Collegium for appointment can be disclosed**, not the reasons.

Outcome of the Ruling

- The **office of the CJI will now entertain RTI applications**.

Note:

- Under the RTI Act, 2005, every public authority has to provide information to persons requesting for the information under the Act.
 - **Public Authority** includes the body constituted by or under the Constitution. **Article 124** of the Constitution deals with the establishment of the Supreme Court of India.
 - **Information** includes any material in any form, including records, documents, memos, e-mails, etc.
- The Ruling is an **example for other bodies** such as political parties, number of schools, trusts and public-private partnerships who resist categorisation as public authorities under the Act.
- However, it has been seen that **Offices** such as those of the Prime Minister and the President which are public authorities under the RTI Act have often **denied information quoting separate observations by the Supreme Court**.
 - For instance, in 2011, the Supreme Court observed that:
 - Officials need to furnish only such information which already exists and is held by the public authority and not collate or create information.
 - The nation does not want a scenario where 75% of the staff of public authorities spends 75% of their time in collecting and furnishing information to applicants instead of discharging their regular duties.

Note:

The **Central Bureau of Investigation (CBI)** is out of the purview of the RTI Act. It was granted exemption in 2011.

Compliance to the RTI Act, 2005

Why in News

The think tank 'Vidhi Centre for Legal Policy' has released a report titled, 'Sunshine in the Courts: Ranking the High Courts on their compliance with the RTI Act'.

- It developed a 'Convenience Index' which evaluates the extent to which the RTI Rules framed by the High Courts make it convenient for citizens to file RTI applications.

- According to the **Right to Information (RTI) Act, 2005**, every High Court is required to draft RTI Rules to lay down a procedure for filing RTI applications.

Key Findings

- There is a **wide gap** between the judiciary's pronouncements on the RTI Act and the manner in which the High Courts are implementing it.
- **Violation of the Act**
 - Despite **Section 8** of the RTI Act restricting the number of grounds for **denying information to citizens**, the RTI rules of several High Courts have included additional grounds for rejecting requests for information.
 - High Courts at Bombay, Delhi, Gauhati and Gujarat are among the ones which have created additional grounds for non-disclosure of information.
 - There is a lack of good quality proactive disclosures by several High Courts on their websites. This is violative of **Section 4(1)(b) of the RTI Act**.
- **Transparency**
 - There is a **lack of administrative and financial transparency** within High Courts.
 - Fewer High Courts are only willing to provide copies of their budgets and audit reports under the RTI Act.
- **Payment of Fees**
 - High Courts of Allahabad, Chhattisgarh and Gauhati are among the ones which do not recognise convenient modes of payments like postal orders.
 - The High Courts of Chhattisgarh and Jharkhand prescribe only court fee stamps as relevant mode of payment.
- **Ranking on the 'Convenience Index'**
 - On the index, **not a single High Court** was able to match the **convenience** offered by the Government of India's RTI Rules.
 - The **High Courts at Patna, Delhi and Kerala** performed the **best** on the index.
 - The **High Courts at Gujarat, Madras, Meghalaya and Chhattisgarh** performed the **worst**.
- **In Comparison with the Government of India**
 - RTI rules of several High Courts provide for a relatively **inconvenient procedure** when compared to the RTI rules of the Government of India.

Note:

- For example, many courts currently charge **five times** the amount charged by the Centre for filing RTI applications.

Recommendations

- The High Courts should publish clearly discernible rules on the website in the local language of the state.
- Having more modes of payment through the RTI fees in order to make it simple for citizens to file RTI applications.

New Water Policy Committee

Why in News

The **Ministry of Jal Shakti** recently constituted a **committee under Mihir Shah** (former Planning Commission member and a water expert) **to draft a new National Water Policy (NWP)**.

- The objective is to update the National Water Policy, 2012.
 - NWP is formulated to govern the planning and development of water resources and their optimum utilisation. The **first NWP** was adopted in September 1987. It was reviewed and updated in 2002 and later in 2012.
- The Committee is expected to recommend key changes in water governance structure and regulatory framework.

Key Features of the National Water Policy, 2012

- **Integrated Water Resources Management:** The policy laid down the concept of an Integrated Water Resources Management approach that took the river basin/sub-basin as a unit for planning, development, and management of water resources.
 - Integrated Water Resources Management (IWRM) is a process that promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.
- **Minimum Water Flow:** To maintain the minimum flow of a portion of a river to meet ecological needs.
- **Inter-basin Transfers:** To meet basic human needs and achieve equity and social justice, inter-basin transfers

of water need to be considered on the basis of the merits of each case after evaluating the environmental, economic and social impacts of such transfers.

- Problems such as decreasing spring sets in Himalayas, budgeting and restructuring of water subsidies, irrigation, etc. demand the prioritization of water usage.

President's Rule in Maharashtra

Why in News

The **state of Maharashtra** has been placed **under the President's Rule** amid a stalemate over government formation after the assembly polls in October 2019.

- The **Union Cabinet recommended the President's rule** in the state **after Governor of the state submitted a report** regarding the same.
 - In his report, the Governor said a situation has arisen that **a stable government is not possible** and the government could not be carried on in accordance with the provisions of the Constitution.
- The **President signed a proclamation** imposing President's rule in Maharashtra **under Article 356(1)**. The **Assembly** has been kept in **suspended animation**.

President's Rule

- **Meaning**
 - President's Rule implies the **suspension of a state government** and the imposition of **direct rule of the Centre**.
 - It is also known as **'State Emergency'** or **'Constitutional Emergency'**.
- **Use of Article 356**
 - **The Supreme Court in Bommai case (1994) enlisted the situations** where the exercise of power under Article 356 could be proper.
 - One such situation is that of **'Hung Assembly'**, i.e. where after general elections to the assembly, no party secures a majority.
- **Constitutional Provisions**
 - The President's Rule is imposed through the **invocation of Article 356** of the Constitution **by the President** on the **advice of the Union Council of Ministers**.
 - Under Article 356, President's Rule is imposed if the President, upon receipt of the report from the

Note:

Governor of the State or otherwise, is satisfied that a situation has arisen in which the government of the State cannot be carried on in accordance with the provisions of the Constitution.

➤ Parliamentary Approval and Duration

- A proclamation imposing President's Rule **must be approved by both the Houses of Parliament within two months** from the date of its issue.
- The approval takes place through **simple majority** in either House, that is, a majority of the members of the House present and voting.
- Initially valid for six months, the President's Rule **can be extended for a maximum period of three years** with the approval of the Parliament, every six months.

➤ Consequences of President's Rule

- The **state governor, on behalf of the President, carries on the state administration** with the help of the chief secretary of the state or the advisors appointed by the President.
- The President can declare that the powers of the state legislature are to be exercised by the Parliament.

Punchii Commission's

Guidelines in case of a Hung Assembly

- The **party or combination of parties which commands the widest support in the Legislative Assembly** should be called upon to form the Government.
- If there is a **pre-poll alliance or coalition**, it should be treated as one political party and if such coalition obtains a majority, the leader of such coalition shall be called by the Governor to form the Government.
- **In case no party or pre-poll coalition has a clear majority**, the Governor should select the Chief Minister in the order of preference as indicated below:
 - The group of parties which had pre-poll alliance commanding the largest number.
 - The largest single party staking a claim to form the government with the support of others.
 - A post-electoral coalition with all partners joining the government.
 - A post-electoral alliance with some parties joining the government and the remaining including independents supporting the government from outside.

- The President either **suspends or dissolves the state legislative assembly**.

➤ Revocation

- A proclamation of President's Rule **may be revoked by the President at any time** by a subsequent proclamation. Such a proclamation **does not require parliamentary approval**.
- This happens, in case, the leader of a party produces letters of support from a majority of members of the Assembly, and stakes his claim to form a government.

India Justice Report, 2019

Why in News

Recently, the **India Justice Report (2019)** prepared by the **Tata Trusts in collaboration with the Centre for Social Justice**, Common Cause, and the Commonwealth Human Rights Initiative has been released.

- This is the **first-ever** ranking of Indian states on **justice delivery**.
- The report has **divided states** on the basis of the **population** into **two parts**:
 - The **large-medium** states (Population 1 crore and above)
 - The **small** states and Union Territories (Population less than 1 crore)

Key Points

- **Maharashtra** has **topped** the list among **large-medium States** followed by Kerala, Tamil Nadu, Punjab, and Haryana.
 - In this category, Jharkhand, Bihar and Uttar Pradesh are at the **bottom**.
- **Goa** leads the list of **smaller states** followed by Sikkim and Himachal Pradesh.
- The report has been prepared based on **publicly available data of different government entities** on the **four pillars** of justice delivery — **police, judiciary, prisons, and legal aid**.
 - Each pillar is analyzed through the prism of budgets, human resources, personnel workload, diversity, infrastructure, and five-year trends.

Issues with Indian Justice System

- **Vacancies**

Note:

- On average, the **police** have a vacancy of **23% (2017)**, and the judiciary between **20%-40%** across the high courts and lower judiciary. **Gujarat is the only state to reduce vacancies across all four pillars.**

➤ Representation

- **No State/ UT is able to meet** all its **diversity quotas** (ST, SC, and OBC). **Karnataka comes closest to achieve** diversity quotas (missed its SC reservation target by 4%).
- **Women are poorly represented** across the Justice system. They account for 7% of the Police, 10% of Prison staff and about 26.5% of all judges in the High Court and subordinate courts.

➤ Budgets

- The Justice system is affected by **low budget allocations**.
- The **per capita expenditure** on legal aid is just **75 paise**.
- **Punjab** is the only large state whose police, prison and judiciary expenditures have **increased** at a pace **higher than the increase in overall state expenditure**.

➤ Judicial Pendency

- Nationally, at the subordinate court level, **on average** a case remains pending for **five years or more**.
- Only six states i.e. Gujarat, Daman and Diu, Dadra and Nagar Haveli, Tripura, Odisha, Lakshadweep, Tamil Nadu, and Manipur managed to clear as many court cases were filed.

➤ Prisons

- Prisons are **over-occupied at 114%**, where 68% are undertrials awaiting investigation, inquiry or trial.

Way Forward

- Judiciary and the government needs to put **collaborative effort** to plug the gaps in the management of the police, prisons, forensics and the **filling up of vacancies**.
- The efficient Indian Justice System will ensure the implementation of **Article 14** (Equality before law), **Article 22(1)** (Protection against arrest and detention in certain cases), **Article 39(A)** (Free legal aid for poor) and **Article 21** (Right to protection of life and personal liberty) of the Indian Constitution.

Justice meter

While Maharashtra emerged as the overall topper among large/medium States in justice delivery, Tamil Nadu and Kerala fared better in individual categories

*Scores out of a total of 10 points



Policing

- Tamil Nadu topped with a score of 6.49*
- U.P. was at the bottom with a score of 2.98, whereas Bihar got 3.77



Prisons

- Kerala ranked on top with a score of 7.18
- Jharkhand fared the worst with a score of 3.46, whereas Uttarakhand scores 3.72, Punjab 4.35, Andhra Pradesh 4.35 and U.P. 4.42



Judiciary

- Tamil Nadu was on top with a score of 6.99 | Bihar was the worst performer with a score of 2.41, while U.P. scored 3.7, Karnataka 3.76, Uttarakhand 4.17 and Jharkhand 4.3



Legal aid

- Kerala topped with a score of 6.58 | U.P. fared the worst, followed by Uttarakhand, Bihar and Odisha

- It will also ensure **SDG 16** which recognizes the need to **provide access to justice** for all and to build effective, accountable and inclusive institutions at all levels.

Constitutional Provision

- **Article 39A** provides that State shall secure that the operation of the legal system promotes justice on a basis of equal opportunity, and shall, in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disability.
- **Articles 14 and Article 22(1)** make it obligatory for the State to ensure equality before the law and a legal system that promotes justice on a basis of equal opportunity to all.

Bonded Labour System in India

Why in News

Recently, the **National Human Rights Commission (NHRC)** conducted a seminar on **“bonded labour”**.

- According to the **International Labour Organization (ILO)** there are **1.17 crores** bonded labourers in India (2014).

Reasons for the Persistence of Bonded Labour

- The lack of awareness among workers and employers
- Low conviction rates
- Social bias towards bonded labour
- Migratory nature of bonded labour

Note:

- Weaker implementation of **Bonded Labour System (Abolition) Act 1976**.

Bonded Labour

- It is a practice in which employers give **high-interest loans** to workers who work at **low wages to pay off the debt**.
- The Supreme Court of India has interpreted bonded labour as the **payment of wages that are below the prevailing market wages and legal minimum wages**.
- The **Constitution of India prohibits** forced labour under **Article 23 (Fundamental Rights)**.
- Bonded labour was historically associated with rural economies where peasants from economically disadvantaged communities were bound to work for the landlords.
- Bonded labour is found to exist in both rural and urban pockets in unorganized industries such as brick kilns, stone quarries, coal mining, agricultural labour, domestic servitude, circus, and sexual slavery.

Bonded Labour System (Abolition) Act 1976

- The Act extends to the whole of India but **implemented by** respective **state governments**.
- It provides for an **institutional mechanism** at the **district level** in the form of **Vigilance Committees**.
 - Vigilance committees advise District Magistrate (DM) to ensure the provisions of this Act are properly implemented.
- The State Governments/UTs may confer, on an Executive Magistrate, the powers of a Judicial Magistrate of the first class or second class for the trial of offences under this Act.

Central Sector Scheme for

Rehabilitation of Bonded Labourers (2016)

- Under this scheme financial assistance to the extent of ₹ 3 lakhs is provided to released bonded labourers along with other non-cash assistance for their livelihood.

Overseas Citizenship of India

Why in News

Kartarpur Corridor is **accessible** to the Persons of Indian origin holding the **Overseas Citizenship of India (OCI) card**.

Overseas Citizenship of India

➤ **Definition**

- The **Ministry of Home Affairs** defines an OCI as a person who:
 - Was a citizen of India on or after 26th January 1950; or
 - Was eligible to become a citizen of India on 26th January 1950; or
 - Is a child or grandchild of such a person, among other eligibility criteria.
- According to **Section 7A of the OCI card rules**, an applicant is **not eligible** for the OCI card if he, his parents or grandparents have ever been a citizen of Pakistan or Bangladesh.
- The **category** was introduced by the government in **2005**. The Government of India via **Citizenship (Amendment) Act, 2015 merged** the Person of Indian Origin (PIO) category with OCI category in 2015.

➤ **Benefits to OCI Cardholders**

- OCI cardholders can enter India multiple times, get a multipurpose lifelong visa to visit India, and are exempt from registering with Foreigners Regional Registration Office (FRRO).
- If an individual is registered as an OCI for a period of five years, he/she is eligible to apply for Indian citizenship.
- At all Indian international airports, OCI cardholders are provided with special immigration counters.
- OCI cardholders can open special bank accounts in India, buy the non-farm property and exercise ownership rights and can also apply for a Permanent Account Number (PAN) card.

Constitutional Provisions

- The Constitution deals with citizenship under Articles 5 to 11 in Part II. However, it contains neither any permanent nor any elaborate provisions in this regard.
- It only identifies the persons who became citizens of India on 26th January 1950 (i.e. when the Constitution commenced).
- It empowers the Parliament to enact a law to provide for matters relating to citizenship. Accordingly, the Parliament has enacted the Citizenship Act, 1955, which has been recently amended in 2015.

Note:



➤ Limitations

- OCI cardholders do not get voting rights, cannot hold a government job and purchase agricultural or farmland.
- They cannot travel to restricted areas without government permission.

Person of Indian Origin

- A Person of Indian Origin (PIO) means a foreign citizen (except a national of Pakistan, Afghanistan, Bangladesh, China, Iran, Bhutan, Sri Lanka and Nepal)
 - Who at any time held an Indian passport or
 - Who or either of their parents/ grandparents/ great grandparents were born as permanent resident in India as defined in Government of India Act, 1935 and other territories that became part of India thereafter or
 - Who is a spouse of a citizen of India or a PIO.
- PIO category was merged with OCI category in 2015.

Disqualification of Karnataka MLAs

Why in News

Recently, the Supreme Court upheld the disqualification of 17 dissident legislators approved by the then Karnataka Assembly Speaker K.R. Ramesh Kumar under the Tenth Schedule (Anti-Defection law).

Background

- In 2019, a **motion of no-confidence was to be considered** in Karnataka Assembly against the ruling party. During this process, a few of the **legislators resigned from their respective parties**. However, their resignation was **not taken under consideration** by the then Assembly Speaker in lieu of the confidence vote that was to be held within a few days.
- As soon as the **trust vote was not achieved** during the floor test by the ruling party, the **Speaker disqualified those rebellious members**. This raised the question of the **disqualification of members under the Anti-defection law** (Tenth Schedule) **versus the role of Speaker to accept their resignations**.
- Also, the **Speaker barred those MLAs from contesting elections** till the time incumbent Assembly's term gets

over, i.e., by 2023. This raised another question whether disqualification under Tenth Schedule can lead to a bar upon legislators to contest by-elections during the tenure of the incumbent Legislative Assembly.

Supreme Court Ruling

- **Tenth Schedule versus Re-contesting elections:** The Supreme Court upheld the disqualification of the dissident legislators however it also held that their ouster **does not put any bar upon them from contesting by-polls**.
 - According to the Court, 'neither under the Constitution nor under the statutory scheme (i.e., **Representation of the People Act, 1951 or the Anti-Defection Law**) it is mentioned that disqualification under the Tenth Schedule would lead to a bar for contesting re-elections.'
 - The court also remarked that even the **91st Amendment Act, 2003** which did not allow a disqualified member to be appointed as a minister, did not give Speaker the power to put a ban upon them to contest elections till the end of the term.

Anti-Defection Law

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

Powers of Speaker with regard to Anti-Defection Law

- Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.
- After Kihoto Hollohan versus Zachilhu case (1993), the Supreme Court declared that the decision of the presiding officer is not final and can be questioned in any court. It is subject to judicial review on the grounds of malafide, perversity, etc.

Note:

➤ Resignation versus Disqualification:

- In this case, the court observed, 'on the one hand, resignation does not take away the effect of a prior act that amounts to disqualification. On the other, Speakers are not given a free power to sit on resignation letters indefinitely.'
- Under **Article 190(3) of the Constitution**, the Speaker has to ascertain the voluntary and genuine nature of a resignation before accepting it.
- It is a limited inquiry process only to check if the letter is authentic and if the intent to quit is based on free will. Once it is clear, the Speaker has no option but to accept the resignation.
- The Court also observed that a **pending disqualification action does not become nonfunctional by mere submission of the resignation letter**. This would defeat the purpose of the Tenth Schedule if it was held that disqualification proceedings would become unfruitful upon tendering resignation.

Supreme Court Ruling on the Finance Act, 2017

Why in News

The Supreme Court of India has struck down the rules framed under the amended Finance Act 2017 for appointments to tribunals.

Key Points

- The Supreme Court has struck down the Tribunal, Appellate Tribunal and other Authorities (Qualifications, Experience and other Conditions of Service of Members) Rules, 2017, saying it suffers from various infirmities.
- The Supreme Court found that these rules formulated by the central government under **Section 184 of the Finance Act, 2017** are contrary to the parent law/enactment.
 - The search and selection committee envisaged under the rules, for making appointments to tribunals, consists predominantly of central government appointees and the Chief Justice of India has been given a "token representation".

- **Excessive interference of the executive in appointment of members and presiding officers of statutory tribunals** can be detrimental to the independence of the judiciary besides being an affront to the doctrine of separation of powers.

- The apex court, however, upheld Section 184 of the Finance Act which had entitled the Central government to frame rules to determine appointment, service conditions, removal and other aspects of tribunals. It said that Section 184 does not suffer from excessive delegation of legislative functions.

Finance Act

- Ordinarily, the Finance Act is enacted at the beginning of every accounting year to give **effect to the government's fiscal policies**.
- The Finance Act **legalises the income side of the budget** and completes the process of enactment of the budget.

ICEDASH and ATITHI

Why in News

The **Ministry of Finance** has launched **two Information Technology (IT) initiatives** – **ICEDASH** and **ATITHI**.

- **ICEDASH** – For improved monitoring of customs clearance of imported goods.
- **ATITHI** – For facilitating arriving international passengers.
- Both the initiatives have been **developed by the Central Board of Indirect Taxes and Customs (CBIC)**.

Central Board of Indirect Taxes and Customs

- CBIC is a part of the Department of Revenue under the **Ministry of Finance**.
- It deals with the tasks of formulation of policy concerning levy and collection of Customs, Central Excise duties, **Central Goods & Services Tax**, Integrated GST (IGST) and prevention of smuggling.

National Informatics Centre

- NIC of the **Ministry of Electronics and Information Technology** provides network backbone and **e-Governance** support to the Central Government, State Governments and UT Administrations.
- It was established in 1976 and is located in **New Delhi**.

Note:



ICEDASH

- It is an **Ease of Doing Business (EoDB) monitoring dashboard of the Indian Customs** that will help public see the daily customs clearance times of import cargo at various ports and airports.
- It will help the businesses in comparing clearance times across ports and thus plan their logistics accordingly.
- It has been **developed in collaboration with the National Informatics Centre (NIC)**.

ATITHI

- It is an **easy to use mobile app for international travelers to file the Customs declaration in advance**.
- Passengers can use this app to file declaration of dutiable items and currency with the Indian Customs even before boarding the flight to India.
- It would encourage tourism and business travel to India.



Note:



drishti

Economic Scenario

Highlights

- Core Sector Output Falls by 5.2%
- Purchasing Manager's Index
- Elephant Bonds
- Relaxation of Fumigation Norms on Import of Onions
- Rising NPAs due to Unrated Loans
- A Special Fund for Housing Projects
- Core Investment Companies
- Base Year for GDP Calculation
- Policy on Credit Rating for MSMEs
- Steel Scrap Recycling Policy
- Index of Industrial Production (IIP)
- NBFC Liquidity Norms

Core Sector Output Falls by 5.2%

Why in News

- The output of **eight Core Infrastructure Industries** has **contracted by 5.2%** in **September 2019**, indicating the severity of the economic slowdown.
- Except for fertilizers (output improved by 5.4% in September), the other seven infrastructure industries experienced a contraction.
 - The **coal sector is the worst performer** on account of an extended monsoon, a surge in renewable energy supply and labour issues at state-run Coal India Ltd.
- The eight Core Industries in decreasing order of their weightage: **Refinery Products > Electricity > Steel > Coal > Crude Oil > Natural Gas > Cement > Fertilizers.**

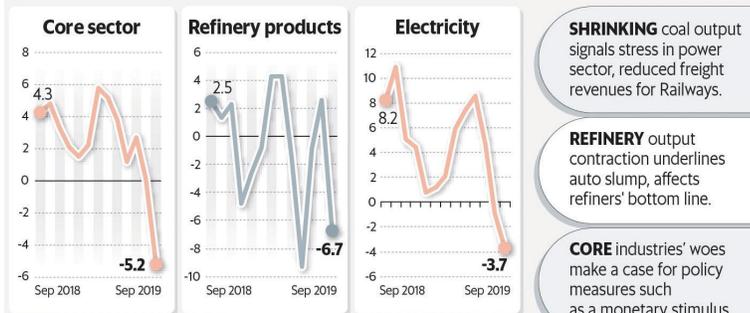
Core Industries

- Core industry can be defined as the main industry which has a multiplier effect on the economy.
- In most countries, there is particular industry that seems to be backbone of all other industries and it qualifies to be the core industry.
- **The Eight Core Industries comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP).**

Industry	Weight (In %)
Petroleum & Refinery production	28.04
Electricity generation	19.85
Steel production	17.92
Coal production	10.33
Crude Oil production	8.98
Natural Gas production	6.88
Cement production	5.37
Fertilizers production	2.63

CORE SHOCK

Production of key primary sources of energy like crude oil and coal as well as refined petroleum products and electricity took a beating in September.



Purchasing Manager's Index

Why in News

The manufacturing **Purchasing Manager's Index (PMI)** was recorded at a **2-year low** in **October 2019**. The score has **decreased from 51.4 in September 2019 to 50.6 in October 2019**.

Definition: PMI is an indicator of business activity – in the manufacturing and services sectors.

Note:

Calculation of PMI

- It is a **survey-based measure** that asks the respondents, about changes in their perception about key business variables as compared with the previous month.
- It is **calculated separately for the manufacturing and services sectors** and then a composite index is constructed.
 - The **latest composite PMI decreased to 49.8 in September 2019 from 52.6 in August 2019.**
- The PMI is a number from 0 to 100.
 - PMI **above 50** represents an **expansion when compared to the previous month.**
 - PMI **under 50** represents a **contraction.**
 - A reading **at 50** indicates **no change.**
 - If **PMI of the previous month is higher than the PMI of the current month** (as is the case mentioned above), it represents that the **economy is contracting.**
- The PMI is usually **released at the start of every month.** It is, therefore, considered a **good leading indicator** of economic activity.

Purpose: To **provide information** about current and future business conditions to company decision-makers, analysts, and investors. As the official data on industrial output, manufacturing and GDP growth comes much later, PMI helps to make informed decisions at an earlier stage.

Elephant Bonds

Why in News

A **High Level Advisory Group on Trade Policy (HLAG)** recently suggested the government to issue '**Elephant Bonds**'. This will help India to **recover up to \$500 billion of black money** that is stashed overseas.

Key Points

- An Elephant Bond is a **25-year sovereign bond** (a bond issued by a national government).
 - It is issued to those people who declare their previously undisclosed income and are then bound to invest 50% of that amount in these securities.
 - The fund gathered by the issuance of these bonds is utilized to finance infrastructure projects only.
- HLAG recommended these bonds in order to boost India's growth by utilizing the collected money (via

this mechanism) to fund infrastructure projects in the country.

- One of the key features of the proposed mechanism is that those disclosing their black money will receive immunity from all local laws including those under foreign exchange, black money laws, and taxation laws.
- Countries like Indonesia, Pakistan, Argentina, and the Philippines have already launched their own tax amnesty schemes for persons who disclose undeclared income without the risk of prosecution.
 - **Tax amnesty** is a limited-time opportunity for a specified group of taxpayers to pay a defined amount, in exchange for forgiveness of tax liability (including interest and penalties).
- The move is also expected to bring down the real interest rate. It will **also strengthen the rupee.**
- The HLAG was set up under the **Ministry of Commerce and Industry in the year 2018.**

Relaxation of Fumigation Norms on Import of Onions

Why in News

The Ministry of Agriculture and Farmers Welfare has allowed the **relaxation of fumigation norms** for the **import of onions** for a limited time period.

- The norms will also provide **relaxation from the endorsement on the Phytosanitary Certificate (PSC)** as per the **Plant Quarantine Order, 2003** for onion imports.
- The imported onions which arrive at Indian ports without fumigation and endorsement to that effect on the PSC would be fumigated in India by the importer through an accredited treatment provider.
 - On a **regular basis**, imported onions are allowed in the country only after the commodity is fumigated and certified by the exporting nation.

Fumigation

- **Fumigation** is a **pest control method** that involves filling the airspace within a structure with toxic gas. Eg. Methyl Bromide, Phosphine, etc.
 - Methyl bromide is forbidden in developed nations, and its use was restricted by the **Montreal Protocol** due to its role in ozone depletion.

Note:

- It is mainly used to **control pests** in storage buildings (structural fumigation), soil, and grains.
- It is also used during processing of goods to be imported or exported to **prevent transfer of exotic organisms**.

Phytosanitary Certificate

- Phytosanitary certificates are issued to indicate that consignments of plants, plant products meet specified phytosanitary import requirements under **International Plant Protection Convention (IPPC), 1951**.
 - **Phytosanitary measures** are aimed at the protection of human, animal and plant health from diseases, pests, and contaminants.
- Usually, **PSCs** are **generated** by the **exporting country**.
- It can **only** be **issued** by an authorized officer from a government department that is authorized by a **National Plant Protection Agency (NPPO)**.
 - NPPO is in force to protect the threat of spreading pests, contamination or diseases into the country of import.

Plant Quarantine Order, 2003

- It ensures the import of pest and fungus free agricultural commodities in the country which is or may be destructive to crops.
- Plant quarantine is a technique that ensures disease- and pest-free plants.

Montreal Protocol

- The Montreal Protocol regulates the release, production and consumption Ozone Depleting Substances (ODS).
- The protocol provides for phasing out halogenated hydrocarbons like tetrachloride, CFCs used in aerosols, halons used in fire extinguishers, HydroChloroFluoroCarbons (HCFCs) used in refrigeration and foams, and methyl used in fumigation activity of agriculture.
- In 2016, Kigali amendment was made to the protocol to phase out HydroFluoroCarbon (HFC), a set of 19 gases in the hydrofluorocarbon family used extensively in the air-conditioning and refrigeration industry. Though HFCs are not ozone-depleting but are thousand times more dangerous than carbon dioxide in causing global warming.
- Under the amendment, developed nations will begin phasing down HFC gases by 2019, while developing countries will follow suit by 2024.

- During the process, a plant is isolated while tests are performed to detect the presence of a problem.

Rising NPAs due to Unrated Loans

Why in News

- According to data from the Reserve Bank of India (RBI), **Non-Performing Assets (NPAs)** for unrated loans has **increased to 24% (2018) from about 6% (2015)**.
 - **Unrated Loans** are loans that are **not rated** by credit rating agencies.
- **High levels of NPAs** in unrated loans indicate **more economical risk** for the banks as unrated loans are not secured through ratings.

Credit rating	Rating description
AAA	Prime
AA+	High grade
AA	
AA-	
A+	Upper medium grade
A	
A-	
BBB+	Lower medium grade
BBB	
BBB-	
BB+	Non Investment grade speculative
BB	
BB-	
B+	Highly speculative
B	
B-	
CCC+	Substantial risks
CCC	
CCC-	
CC	Extremely speculative
C	Default imminent
RD	In default
SD	
D	

Key Points

- Unrated borrowers account for about **60%** of the total number and **40%** of the total exposure of large borrowers.
 - The central bank requires banks to report individual exposure of **more than Rs. 5 crore** with the Central Repository of Information on Large Credits (CRILC), to capture data on large borrowers.
 - The borrowers having an aggregate fund-based working capital of Rs. 150 crore and above are termed as **large borrowers**.

Note:



How Unrated Loans and Related NPAs can be Reduced?

- By regularising credit ratings for loan exposure, RBI has raised **risk-weighted assets** on unrated loans.
 - **Higher risk-weighted assets** on unrated loans **reduce** the capacity of banks to lend such loans, thereby encouraging them to get such loans rated.
 - The risk-weighted assets are used to determine the **minimum amount of capital** that must be held by banks to **reduce the risk** of insolvency.
- Banks also need to consider rated exposures as some of the private sector banks experienced significant stress in their exposures to the credit rating of BB category (and below it) rated loan accounts.
- However, the **RBI's Financial Stability Report** projected the gross NPA ratio of all banks to come down from 9.3% in March 2019 to 9.0% by March 2020.
 - The recoveries pick up pace due to the resolution of some cases under the Insolvency and Bankruptcy Code and banks write off their bad loans.

Central Repository of Information on Large Credits

- It has been constituted by RBI in 2014 to collect, store, and publish data on all borrower's credit exposures.
- Banks will have to provide credit information to CRILC about their borrowers with an aggregate fund-based and non-fund based exposure of and over Rs. 5 crores (Rs. 50 million).
- It also helps financial institutions and banks to assess their non-performing assets (NPAs) and also share this information with other institutions.

A Special Fund for Housing Projects

Why in News

The Union Cabinet has approved the creation of an **Alternative Investment Fund (AIF)** of ₹25,000 crores to **revive stalled affordable and middle-income housing projects** across the country.

Key Points

- **Fund Size**
 - The fund size will initially be ₹25,000 crores. However, the fund is not capped at ₹25,000 crores

and will likely grow as a lot of sovereign funds have shown interest.

➤ **Fund Management**

- The fund will be set up as **Category-II Alternative Investment Fund** registered with the **Securities and Exchange Board of India (SEBI)**.
- It will be managed by SBICAP Ventures Limited (SVL), wholly-owned subsidiary of SBI Capital Markets Ltd.

➤ **Eligible Projects**

- All **affordable and middle-income** housing projects that are
 - Net worth positive
 - Registered with the Real Estate Regulatory Authority (RERA) and
 - That has not been deemed liquidation-worthy.
- Stuck projects classified as **Non Performing Assets** and those undergoing resolution under the **National Company Law Tribunal** will also be eligible for funding — a change from the **announcement made in September 2019**.

➤ **Funding Procedure**

- The fund will provide money in **escrow accounts** that can be used only for the completion of the identified projects.
- The receivables from the project will be used to **repay the fund**.

Expected Benefits

- The fund is expected to revive more than 1,600 housing projects which are stalled.
- **Impact on Other Sectors:** The revival of the real estate sector will also lead to the demand of cement, iron & steel industries, thereby generating employment.
- The fund will also generate a commercial return for its investors.
 - The AIF is expected to pool investments from government-related and private investors, including public financial institutions, sovereign wealth funds, public and private banks, etc.

Alternative Investment Fund

- Alternative Investment Fund means any fund established in India which is a **privately pooled investment** vehicle which collects funds from sophisticated investors, whether Indian or foreign, for

Note:

investing it in accordance with a defined investment policy for the benefit of its investors.

- An alternative investment is a **financial asset** that does not fall into one of the conventional equity/income/cash categories.
- Private equity or venture capital, hedge funds, real property, commodities, and tangible assets are all examples of alternative investments.
- It is **regulated** by the **SEBI**.
- Categories
 - **Category I AIFs:** These generally invest in start-ups or early stage ventures which the government or regulators consider as socially or economically desirable.
 - e.g. venture capital funds, infrastructure funds.
 - **Category II AIFs:** These are AIFs which do not fall in Category I and III and which do not undertake leverage or borrowing other than to meet day-to-day operational requirements and as permitted in the SEBI (Alternative Investment Funds) Regulations, 2012.
 - e.g. real estate funds, private equity funds.
 - **Categories III AIFs:** AIFs which employ diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives.
 - e.g. hedge funds, private investment in Public Equity Funds.

Core Investment Companies

Why in News

A working group formed by the [Reserve Bank of India \(RBI\)](#) has recommended measures to strengthen **Core Investment Companies (CIC)**.

Core Investment Companies

- Core Investment Companies (CICs) are specialized [Non-Banking Financial Companies \(NBFCs\)](#).
- A Core Investment Company **registered with the RBI** has an **asset size** of above **Rs. 100 crore**.
- Their main business is the acquisition of shares and securities with certain conditions.
 - For e.g. they should not hold **less than 90%** of net assets in the form of investment in equity shares,

preference shares, bonds, debentures, debt or loans in group companies.

- Group companies are an arrangement involving **two or more entities** related to each other through any of the following relationships, viz., subsidiary, joint venture, associate, promoter-promotee for listed companies, a related party, common brand name, and investment in equity shares of 20% and above.

Key Recommendations

- **Registration:** The current **threshold of Rs 100 crore asset size** and access to public funds for registration as CIC should be retained.
- **Related to Group Companies:**
 - Every group having a CIC should have a Group Risk Management Committee.
 - The number of layers of CICs in a group should be restricted to two. As such, any CIC within a group shall not make investments through more than a total of **two layers of CICs**, including itself.
 - The word **"layer"**, means **subsidiary or subsidiaries** of the holding company.
- **For Better Governance:**
 - CICs need to induct **independent directors**, conduct **internal audits** and prepare consolidated financial statements.
 - There is a need for ring-fencing boards of CICs by excluding employees/executive directors of group firms from its board.
 - CICs should constitute board-level committees — Audit Committee, Nomination and Remuneration Committee and Group Risk Management Committee.
- **For Step - down CICs:**
 - A Step-down CIC means the subsidiary company of a company which is a subsidiary of another company.
 - Step-down CICs may not be permitted to invest in any other CIC while allowing them to invest freely in other group companies.
 - Capital contribution by a CIC in a step-down CIC, over and above 10% of its owned funds, should be deducted from its adjusted net worth, as applicable to other NBFCs.

Note:



Base Year for GDP Calculation

Why in news

The **Ministry of Statistics and Programme Implementation (MoSPI)** is considering **changing the base year** for the **Gross Domestic Product (GDP)** calculation from **2011-12 to 2017-18**.

GDP calculation in India

- GDP is the **total monetary or market value of all the finished goods and services** produced within a country's borders in a specific time period.
- India's **Central Statistics Office** calculates the nation's GDP.
- In 2015, the Central Statistics Office (CSO) did away with GDP at factor cost and adopted the international practice of GDP at market price and the Gross Value Addition (GVA) measure to better estimate economic activity.
 - GDP at market price = GDP at factor cost + Indirect Taxes – Subsidies
- Presently, India's GDP is calculated with two different methods, one based on GVA (at basic prices), and the second on expenditure (at market prices).
 - **GVA** provides the rupee value for the amount of goods and services produced in an economy after deducting the cost of inputs and raw materials that have gone into the production of those goods and services. It also gives **sector-specific picture** like what is the growth in an area, industry or sector of an economy.
 - The **expenditure-based method** indicates how different areas of the economy, such as **trade, investments, and personal consumption**, are doing.

Base Year

- The base year of the GDP is chosen to enable inter-year comparisons. It gives an idea about changes in purchasing power and allows calculation of inflation-adjusted growth estimates.
- Last time, the base was changed to 2011-12 from 2004-05.

Need for Change

- **Globally Aligned:** Change of base year to calculate GDP is done in line with the global exercise to capture

economic information accurately. The new series will be in compliance with the United Nations guidelines in System of National Accounts-2008.

- **Accuracy:** GDP based on 2011-12 does not reflect the current economic situation correctly. Ideally, the base year should be changed after every five years to capture the changing economy.

Policy on Credit Rating for MSMEs

Why in News

The government is in the process of launching '**Digital data based credit ratings**' of **Micro, Small and Medium Enterprises (MSME)**. These credit ratings will help MSMEs in getting loans from banks.

- The government is thinking rating of enterprises on **two parameters**: prompt repayments and GST payments.

Key Points

- The MSME sector has an important place in the Indian economy. According to the Ministry of MSME's 2017-18 report, the sector employed 111 million people, which is approximately **21% of the overall employment in the country**. The sector also contributed **28.8% to the country's GDP**.
- Despite such an importance, MSMEs face problems in accessing institutional finance.
 - The main problem faced by MSMEs in accessing institutional finance is their **lack of collateral**, which makes it hard for them to offer any security for bank loans.
 - Another significant problem is that often they **do not have credit histories**. This makes lending to them a risky proposition for banks.
 - Another major hurdle for MSME financing is the **information opacity** prevalent in the sector as many units do not have complete accounting records, audited financial statements, or well-articulated business plans. This makes credit assessment by potential lenders very difficult.

How will the digital data-based credit system help the sector?

- Credit scoring based on digital data will give the lender a **holistic view of a borrower's creditworthiness**.

Note:



- **Transaction data and surrogate data** like utility payments, bill payments will give a detailed view of the business.
- Each of the **data points can be treated as variables for credit appraisal** and can be assigned specific weightage depending on the nature of the businesses within the overall MSME segment.
- Further, deployment of credit underwriting mechanisms powered by advanced technologies such as **Artificial Intelligence (AI)**, machine learning and data analytics can provide useful insights.

Steel Scrap Recycling Policy

Why in News

Recently, the **Ministry of Steel** has issued the **Steel Scrap Recycling Policy**.

Key Features

- **Circular Economy in the Steel Sector**
 - That is, utilising steel scrap emanating from **vehicles and white goods (that have reached their end of life)** for quality steel production.
 - This will **reduce dependency on imports** and decongest the Indian cities from End of Life Vehicles (ELVs).
- **Extended Producer Responsibility (EPR)**
 - Automobile manufacturers will design vehicles keeping in mind the **recyclability** of the vehicle at the end of life.
 - The policy envisages a framework to facilitate and promote the establishment of **metal scraping centres** in India.
- **Hub and Spoke model**
 - The Hub and Spoke (H&S) model is used when there are **multiple locations sourcing**, with a central location called the **'Hub'**. The central location provides a single point of contact to the client, whilst the in-country extensions are called **'Spokes'**.
 - Under the Policy, formal and scientific collection, dismantling and processing activities for the end of life products, that are sources of recyclable (ferrous, non-ferrous and other non-metallic) scraps, are being promoted.
- **Focus on the Environment**

- The Policy will work on the Principles of **6Rs: Reduce, Reuse, Recycle, Recover, Redesign and Remanufacture**.
- It aims to **reduce GreenHouse Gas (GHG) emissions**.
- It also aims to create a mechanism for treating waste streams and residues produced from dismantling and shredding facilities in compliance with **Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016** issued by the **Ministry of Environment, Forest and Climate Change (MoEF & CC)**.

Steel Scrap in India

- **Used or reused steel** in the form of scrap is the **secondary raw material** for the Indian steel industry.
 - **Iron ore** is the primary source of steel making.
- The availability of raw materials at competitive rates is imperative for the growth of the steel industry and to achieve the **National Steel Policy (NSP) 2017 target**.
 - NSP-2017 aims to develop a globally competitive steel industry by creating 300 million tonnes per annum steel production capacity by 2030.

Index of Industrial Production (IIP)

Why in News

The **Index of Industrial Production (IIP)** for the month of September 2019 **has contracted by 4.3%** as compared to the month of September 2018.

- This is the first time after November 2012 that all three broad-based sectors (Mining, Manufacturing, and Electricity) have contracted and also the lowest monthly growth in the 2011-12 base year series.

Reasons for Recent IIP Contraction

- **Lower agricultural growth** impacting rural demand adversely: India is witnessing **agricultural distress** because of multiple factors like lack of easy credit, the declining average size of farm holdings, poor policy, and planning, etc.
- **A slowdown in the Indian industrial sector:** Indian **industrial sector is facing slowdown** driven by disruptive technologies, changes in consumer behaviour, changing global industrial scenario, etc.

Note:



- **Structural growth slowdown in the Indian Economy:** India is facing a long-term, **deep-rooted economic slowdown** which would require the government to undertake some structural policies like economic reforms of 1991.

Index of Industrial Production

- The Index of Industrial Production (IIP) is an index that shows the **growth rates in different industry groups** of the economy in a fixed period of time.
- It is compiled and published monthly by the **Central Statistical Organization (CSO), Ministry of Statistics and Programme Implementation.**
- The IIP is basically divided into three sectors, though a use-based classification is also provided by the CSO.
 - The **three sectors** include: Mining, Manufacturing and Electricity.
 - Electricity, crude oil, coal, cement, steel, refinery products, natural gas, and fertilisers are the **eight core industries** that comprise about 40% of the weight of items included in the Index of Industrial Production.
 - **Use based classification include:** Primary Goods, Capital Goods, Intermediate Goods, Infrastructure/Construction goods, Consumer durables and Consumer nondurables.
- **Base Year for IIP is 2011-2012.**
- **Significance of IIP**
 - IIP is the only measure on the physical volume of production.
 - It is used by government agencies including the Ministry of Finance, the Reserve Bank of India, etc, for policy-making purposes.
 - IIP remains extremely relevant for the calculation of the quarterly and advance GDP estimates.

NBFC Liquidity Norms

Why in News

- The **Reserve Bank of India (RBI)** has introduced 'liquidity management framework' for **Non-Banking Financial Companies (NBFCs).**
- The RBI move has come following liquidity crunch among some NBFCs in meeting their recent repayment obligations after the **collapse of the Infrastructure Leasing and Financial Services (IL&FS) group.**

Non-Banking Financial Company

- A **NBFC** is a company **registered under the Companies Act, 1956 engaged in the business** of loans and advances, acquisition of stocks/bonds/debentures issued by Government or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but **does not include** any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property.
- A **non-banking institution** which is a company and has **principal business of receiving deposits** under any scheme or arrangement in one lump sum or in installments by way of contributions or in any other manner is also a **non-banking financial company** (Residuary non-banking company).

Features of NBFCs

- NBFC cannot accept demand deposits.
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself.
- Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs.

Key Points

- **Liquidity Coverage Ratio**
 - All non-deposit taking NBFCs (**NBFC-NDs**) with **asset size of Rs 10,000 crore** and above and **all deposit-taking NBFCs** have to maintain a liquidity buffer in terms of **Liquidity Coverage Ratio (LCR).**
 - However **Type I - NBFC-ND entities are exempt** from the applicability of LCR norms. Type I - NBFC-ND entities are those which do not accept public funds and do not have customer interface and do not intend to engage in such activities.

Note:

- **LCR** refers to the **proportion of highly liquid assets** held by companies to ensure their ongoing ability **to meet short-term obligations.**
- It will promote resilience of NBFCs to potential liquidity disruptions by ensuring that they have sufficient **High Quality Liquid Asset (HQLA)** to

Note:

survive any acute liquidity stress scenario lasting for 30 days.

- **HQLA** means liquid assets that can be readily sold or immediately converted into cash at little or no loss of value, or used as collateral to obtain funds in a range of stress scenarios.
- The LCR requirement **will be binding on NBFCs from 1st December, 2020** with the minimum HQLAs to be held being **50% of the LCR**, progressively reaching up to the level of 100% by 1st December, 2024.
- **Assets to be included as HQLA** include cash, government securities and marketable securities issued or guaranteed by foreign sovereigns. These assets should be free of any financial liability.
- **Significance:** The presence of liquid reserve will prevent a NBFC from going into a default loss if some inflows get delayed.
- NBFCs should adopt **liquidity risk monitoring tools** and metrics in order to capture strains in liquidity position.



Note:



International Relations

Highlights

- India – Germany
- International Civil Aviation Organisation
- Pakistan Suspends Exchange of Postal Mails
- International Seed Treaty
- India and Brazil Signed Amended DTAC
- Bolivia Crisis
- 11th BRICS Summit
- 16th India-ASEAN Summit
- India and Uzbekistan
- 3rd RCEP Summit

India – Germany

Why in News

German Chancellor **Angela Merkel** visited India from 31st October - 1st November 2019 for the **fifth round of Intergovernmental Consultations (IGC)**.

- IGC are held **at the level of Head of Governments** which allow for a comprehensive review of cooperation and identification of fresh areas of engagement.

Key Highlights

- **Pacts signed** in fields such as space, civil aviation, maritime technology, medicine, education, agriculture and **Artificial Intelligence (AI)**.
- **Cooperation in Defence**
 - India has invited Germany to take advantage of opportunities in defence sector in the upcoming **defence corridors** in Uttar Pradesh and Tamil Nadu.
 - The countries agreed to work on bilateral and multilateral platforms to counter terrorism and extremism.
- **Stand on International Issues**
 - To continue cooperation to expedite reforms in the United Nations **(UN) Security Council**.
 - Stressed on restoring full functioning of the **World Trade Organisation (WTO) dispute settlement system** and reforming the organisation without undermining its fundamental principles such as **Special & Differential Treatment** etc.
- **Climate Change**
 - Agreed to provide financial support to climate initiatives aimed at reducing greenhouse gas emissions.

- Germany expressed its readiness to provide 1.1 billion dollar to India for green urban mobility.
- **Economic Sector**
 - To deepen efforts to restart negotiations between the European Union (EU) and India on the **Bilateral Trade and Investment Agreement (BTIA)**.
- **Science and Technology**
 - To conduct joint research on the development and use of Artificial Intelligence (AI).
 - To identify best possible approaches on **cyber security**.

India – Germany Ties

- India and Germany have a '**Strategic Partnership**' since 2001.
- **Germany is India's largest trading partner in Europe.**
- India and Germany are members of **G-4 along with Brazil and Japan**. The G4 nations support each other's bids for permanent seats on the United Nations Security Council.



Note:

- Both countries are also members of the **Financial Action Task Force (FATF)**.

International Civil Aviation Organisation

Why in News

The recent incident of **Pakistan's denial of use of its airspace to India**, has been taken up by the Indian Government to the **International Civil Aviation Organisation (ICAO)**.

- India sought overflight clearance from Pakistan for the Prime Minister's aircraft to go to Saudi Arabia on 28th October, 2019.
- Pakistan cited alleged human rights violations in Jammu and Kashmir to deny the request.

International Civil Aviation Organisation

- It is a **United Nations specialized agency**, established in **1944**, which laid the foundation for the standards and procedures for peaceful global air navigation.
- The **Convention on International Civil Aviation** was signed on **7th December 1944 in Chicago**.
 - It established the core principles permitting international transport by air, and also led to the creation of the ICAO.
- Its one of the **objectives** is to foster the planning and development of international air transport so as to ensure the safe and orderly growth of international civil aviation throughout the world.
- **India** is among its **193 members**.
- It is headquartered in **Montreal, Canada**.

Pakistan Suspends Exchange of Postal Mails

In a unilateral decision, **Pakistan** has stopped the **exchange of postal mails with India without any prior notice**.

- Under **Universal Postal Union (UPU)** rules, when a country decides to suspend postal exchange with a country, it must notify the operator of the other country and, if possible, the duration for which services are being stopped.

- The UPU's International Bureau too has to be notified.

- Apart from UPU rules, **three other agreements** cover postal exchange between India and Pakistan:
 - **Exchange of Value Payable Article, 1948**
 - **Exchange of Postal Article, 1974**
 - **International Speed Post Agreement, 1987**

Universal Postal Union (UPU)

- Universal Postal Union is the **specialized agency** of the **United Nations**.
- It was established in **1874** and is the **second oldest** international organization worldwide after **the International Telecommunication Union (1865)**.
- It's **headquarter** is located in **Bern, Switzerland**, and consists of 192 member countries.
- It **frames rules for international mail exchange and fixes rates for international postal services**.
- It performs advisory, mediating and liaison role, and provides technical assistance where needed.
- **India joined** the UPU in **1876**.

International Seed Treaty

Why in News

The **eighth session** of the governing body of the **International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA)** held in **Rome, Italy** from 11th to 16th November 2019.

- The Governing Body sessions are **held biennially**.
- India highlighted the need for conservation of plant genetic resources and the uniqueness of Indian legislation '**Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act**' to address the related issues.

International Treaty on Plant Genetic Resources for Food and Agriculture

- It was adopted by the **31st session of the Conference of the Food and Agriculture Organization (FAO) of the United Nations** on 3rd November 2001.
- **Objective**
 - To recognize the contribution of farmers to the diversity of crops.

Note:



- To establish a global system to provide farmers, plant breeders and scientists with access to plant genetic materials.
- To conserve and sustainably use plant genetic resources for food and agriculture, and fair and equitable sharing of the benefits arising out of their use, in harmony with the **Convention on Biological Diversity**.
- It is also known as **Seed Treaty** as it is a comprehensive international agreement for ensuring food security through the conservation, exchange and sustainable use of the world's Plant Genetic Resources for Food and Agriculture (PGRFA).
- **India is a signatory to the treaty.**

Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act, 2001

- It aims to **protect farmers' and breeder's rights**.
- The act establishes '**Protection of Plant Varieties and Farmers' Rights Authority**' under the Ministry of Agriculture and Farmers Welfare.
 - The **major functions of Authority** include registration of new plant varieties; documentation of varieties registered; preservation of plant genetic resources; maintenance of the National Register of Plant Varieties and maintenance of National Gene Bank (for conserving seeds of registered varieties).
- According to the Act, a **farmer is entitled to** save, use, sow, resow, exchange, share or sell his farm produce including seed of a variety protected under the **PPV&FR Act, 2001** except the brand name.
- The Act is **compliant to articles of the Seed Treaty**.
- A few months back in April 2019, **PepsiCo sued Gujarati farmers** by invoking the provisions of the act.

India and Brazil Signed Amended DTAC

Why in News

Recently, the Union Cabinet has approved the **signing of the Protocol amending the Convention between India and Brazil for the Double Taxation Avoidance Convention (DTAC)**.

- The amendments aim to implement the recommendations contained in the **G20 OECD Base Erosion and Profit Shifting Project (BEPS)**.

- It will also help to streamline the **existing DTAC with international standards** which will help to provide tax certainty to investors and businesses of both countries.

Double Tax Avoidance Agreements (DTAAs)

- A **DTAA is a tax treaty** signed between **two or more countries**.
- DTAAs are intended to make a country an **attractive investment** destination by providing **relief on dual taxation**.
- It applies in cases where a **taxpayer resides in one country and earns income** in another.
 - The relief is provided by exempting income earned abroad from tax in the resident country or providing credit to the extent taxes have already been paid abroad.

Base Erosion and Profit Shifting (BEPS)

- BEPS is a term used to describe tax planning strategies that exploit mismatches and gaps that exist between the tax rules of different jurisdictions.
- It **minimizes the corporate tax** that is payable overall, by either making tax profits 'disappear' or shift profits to low tax jurisdictions where there is little or no genuine activity.
 - **Corporate tax** is a tax imposed on the net income of the company.
- BEPS is of major significance for **developing countries** due to their **heavy reliance on corporate income tax**, particularly from multinational enterprises (MNEs).
- The BEPS initiative is an **OECD initiative**, approved by the **G20**, to identify ways of providing more standardized tax rules globally.

OECD/G20 Base Erosion and Profit Shifting (BEPS) Project

- In 2013, OECD and G20 countries adopted a 15-point Action Plan to address BEPS.
- The OECD/G20 BEPS Project aims to create a single set of consensus-based international tax rules to address BEPS, and hence to protect tax bases.
- In 2016, the OECD and G20 established an Inclusive Framework on BEPS. Over 100 countries and jurisdictions have joined the Inclusive Framework.

Note:

Difference Between Convention, Agreement, and Protocol

- **Agreement:** It is a negotiated and usually legally enforceable understanding between two or more legally competent parties.
 - A binding contract can (and often does) result from an agreement.
- **Convention:** It is a formal agreement between States. These are normally open for participation of a large number of States.
 - The generic term 'convention' is thus synonymous with the generic term 'treaty'.
- **Protocol:** A protocol is an agreement that negotiators formulate and sign as the basis for a final convention or treaty.

Bolivia Crisis

Why in News

Jeanine Anez became the 66th President of Bolivia by replacing Evo Morales who fled the country to escape a violent crisis. She is the second woman to hold this post in Bolivia.



Crisis

- **Evo Morales** was the first indigenous President of Bolivia who came to power in 2006. The past Presidents were of European descent.
 - The indigenous communities consist of two-thirds of Bolivia's population.
- The recent protests after his re-election to President escalated into a rebellion over the charges of **election rigging**.

Bolivia

- Bolivia is officially known as the **Plurinational State of Bolivia**.
- It is a **landlocked country** located in western-central **South America**.
- The **capital** of Bolivia is **Sucre** while the seat of government and financial centre is located in La Paz.
- Bolivia is a **member** of the **free trade bloc** known as **Andean Community (CAN)**.

Andean Community (CAN) and MERCOSUR

- The Andean Community is a **trade bloc of four countries - Bolivia, Colombia, Ecuador and Peru**.
 - The **Headquarters** of CAN is located in **Lima, Peru**.
 - The regional integration in the Andean countries began with the signing of the **Cartagena Agreement** (by Bolivia, Chile, Colombia, Ecuador and Peru) in 1969 creating the Andean Pact with the objective of creating a Customs Union and a Common Market.
 - **Chile withdrew in 1976** claiming economic incompatibilities.
- Apart from CAN, **MERCOSUR** is the **other major trading bloc of South America**.
 - MERCOSUR was established in **1991** by the **Treaty of Asunción**, which was later amended and **updated by the 1994 Treaty of Ouro Preto**.
 - Its full members are **Argentina, Brazil, Paraguay, Uruguay**. Venezuela's membership was suspended in 2016.
 - **MERCOSUR** and **CAN** signed a Framework Agreement for the creation of a **Free Trade Area** between each other in April 1998.
 - CAN and MERCOSUR, along with nations like Chile, have been spearheading deeper integration of all South America through the **Union of South American Nations (UNASUR)** patterned on the European Union.

11th BRICS Summit

Why in News

- The **11th BRICS Summit** took place from **13th-14th Nov 2019** in **Brasilia, Brazil**. The theme of the 2019 BRICS summit is "**Economic Growth for an Innovative Future**".
- **BRICS** countries adopted the **Brasilia Declaration**.

Note:



Brasilia Declaration

- **Reforming Multilateral Systems:** There is an urgent need to **strengthen and reform** the **United Nations** and other multilateral organisations, including the **World Trade Organisation (WTO)** and the **International Monetary Fund (IMF)**, to address the significant challenges being faced by the developing countries.
- **Support to Multilateralism:** The trade war between China and the U.S. and rising protectionism is hurting the global economy. Multilateralism is crucial for emerging countries to protect their own interests.

India's Stand at the Summit

- **Increase Trade:** Intra-BRICS trade accounts for just **15% of world trade**, it needs to be increased. India invited business leaders of the member nations for investment, particularly in infrastructure development.
- **Address Water Scarcity:** India proposed to hold the **first meeting of BRICS Water Ministers in India**.
- **Terrorism:** India highlighted the menace of terrorism which has resulted in the loss of \$1 trillion to the world economy.

BRICS

- BRICS is an acronym for the grouping of the world's leading emerging economies, namely **Brazil, Russia, India, China** and **South Africa**.
 - In **2001**, the **British Economist Jim O'Neill** coined the **term BRIC** to describe the **four emerging economies** of Brazil, Russia, India, and China.
 - The grouping was **formalised** during the first meeting of BRIC Foreign Ministers in **2006**.
 - **South Africa** was invited to **join BRIC** in December **2010**, after which the group adopted the **acronym BRICS**.
- It comprises **42% of the world's population**, has **23% of the global GDP** and around **17% of the world trade**.
- The **chairmanship** of the forum is rotated annually among the members, in accordance with the **acronym B-R-I-C-S**. **Brazil is the current chair of the grouping**.
- The **BRICS Leaders' Summit** is convened **annually**.
- During the **Sixth BRICS Summit in Fortaleza (2014)** the leaders signed the Agreement establishing the **New Development Bank (NDB)**. They also signed the **BRICS Contingent Reserve Arrangement**.

Meetings on the sidelines of the Summit

- **India - Brazil**
 - India invited the President of Brazil as the Chief Guest at the **Republic Day 2020**.
 - Brazil has decided to grant **visa-free** travel to Indian citizens.
- **India - China**
 - The Chinese President invited the Indian Prime Minister for the **3rd informal summit in China in 2020**. The **first** informal summit took place at **Wuhan (China-2018)** and **second** at **Mamallapuram (India-2019)**.
 - Both the leaders reviewed preparations for celebrating the **70th anniversary** of the establishment of diplomatic relations between the two countries in **2020**.
- **India - Russia**
 - **1st Bilateral Regional Forum** at the level of Russian Provinces and the Indian States will be held in **2020**.
 - India has been invited for investment in the **Arctic region**. The US \$ 25 billion target of bilateral trade by 2025 has already been achieved.

16th India-ASEAN Summit

Why in News

The Prime Minister of India attended the **16th India-ASEAN Summit** in **Bangkok, Thailand** on November 03, 2019.

Key Highlights

- Along with this Summit, the other summits that took place in Thailand are-
 - **35th ASEAN Summit**,
 - **14th East Asia Summit**, and
 - **3rd meeting of RCEP**.
- During the summit, the discussions were held to promote India-ASEAN strategic partnership along with cooperation in the field of maritime security and **blue economy**, trade and investment, connectivity, science and technology, and innovation.
- The Prime Minister also discussed about the mutual coordination between India's vision of the **Indo-Pacific** region and the **Association of Southeast Asian Nations (ASEAN)** outlook for maintaining strategic balance

Note:

in the region, which has been witnessing growing Chinese assertiveness.

- At the **Regional Comprehensive Economic Partnership (RCEP) Summit**, a trade negotiation deal is **yet to be finalized** after considering all issues that concern Indian interests in trade in goods, services, and investments.
- The PM addressed the Indian community at the **'Sawasdee PM Modi'** event in **Bangkok**.
 - In the **Thai language**, the word 'Sawasdee' is used for **greetings and goodbye**.

India-Myanmar

- The Indian Prime Minister highlighted the **importance of Myanmar to India's Act East Policy and the Neighbourhood First policies**.



- The emphasis was laid on building a stable and peaceful border by improving physical connectivity to and through Myanmar to Southeast Asia via building roads, ports, and expansion of air connectivity.
- India plans to host a business event for the **CLMV countries (Cambodia, Laos, Myanmar, and Vietnam)** in Yangon at the end of November 2019.

India-Indonesia

- India and Indonesia discussed the threat of extremism and terrorism and agreed to work closely bilaterally and globally to tackle this menace.
- The Indian PM highlighted the need for **greater market access** for Indian commodities in Indonesia including, pharmaceutical, automotive and agricultural products.
- India shares a **Comprehensive Strategic Partnership with Indonesia**. And this year (2019), **India and Indonesia** commemorated the **70th anniversary of the establishment of diplomatic relations**.



India-Thailand

- India and Thailand agreed to explore opportunities for cooperation in areas such as trade, culture, and defence industries sector.



- Emphasis was laid to enhance connectivity between the two countries, including in the areas of physical and digital connectivity.
- **Thailand 4.0 initiative** of transforming Thailand into a value-based economy is complementary to India's priorities Digital India, Skill India, Swachh Bharat Mission, Smart Cities, Jal Jeevan Mission, etc.
- In the contemporary context, India's **Act East policy** is complemented by Thailand's Look West policy which has made the relationship deep, robust and multifaceted.

India and Uzbekistan

Why in News

- The Defence Minister of India attended the **18th meeting of the Council of Heads of Government (CHG)** of the **Shanghai Cooperation Organization (SCO)** on 2nd November, 2019 in Tashkent, Uzbekistan.
- The meeting was the third CHG meeting after India became a full member of the SCO in 2017.

Note:

- SCO is a **permanent intergovernmental international organisation** that was **created in 2001**.
- It's one of the objectives is to strengthen mutual trust and neighbourliness among the member states.
- At present, it has **eight member states**. Its **Secretariat is located in Beijing, China**.

Highlights from the SCO Meeting

- **Common Challenges:** To work together to defeat challenges like terrorism, climate change, endemic poverty, and inequality.
- **Multilateralism:** India is committed to a transparent, rules-based, open, inclusive and non-discriminatory multilateral trading system with the **World Trade Organisation (WTO)** at its centre.
- **Disaster Management:**
 - India invited SCO Member states to **join the 'Coalition for Disaster Resilient Infrastructure'**.
 - India will soon hold Joint Urban Earthquake Search and Rescue exercise of SCO member States along with SCO Expert level meeting on disaster prevention.
- **Security Cooperation:** Emphasis on the importance of SCO joint military exercise '**CENTER 2019**'.
- India will host the **meeting of Council of Heads of Government in 2020**.

Highlights from India - Uzbekistan Discussions

- The defence minister of India also held bilateral consultations with the defence minister of Uzbekistan.
- Three memorandums of understanding (MoU) were signed to enhance cooperation in military medicine and military education.
- India affirmed its commitment to develop a state-of-the-art Information Technology (IT) complex in Armed Forces Academy of Uzbekistan for the benefit of the soldiers.
- Both the Defence Ministers presided over the inauguration of the **first India-Uzbekistan Joint Exercise, "Dustlik 2019"** which was held at Chirchiq Training Area near Tashkent and will focus on counter-terrorism.

India - Uzbekistan Ties

- **Areas of Cooperation:** Uzbekistan and India have signed Agreements and MoUs in areas such as trade,

investment, education, civil aviation, tourism, science & technology and agriculture.

- **Economic Ties:** Bilateral relations are managed through an intergovernmental Commission, which oversees trade and economic relations.
- **Cultural Relations:**
 - There is a close affinity between the cultures of the two countries. Indian films, actors and songs are extremely popular across Uzbekistan.
 - After the first major co-production of **Alibaba aur Chalis Chor in 1980**, Indo-Uzbek jointly produced film 'Hoichoi Unlimited' premiered in Uzbekistan on 31st March 2019.
 - **The Lal Bahadur Shastri Centre for Indian Culture** teaches Hindi, Yoga and Kathak and holds cultural performances across Uzbekistan.

3rd RCEP Summit

Why in News

In the **recently held Regional Comprehensive Economic Partnership (RCEP) Summit in Thailand, India decided not to finalize the RCEP trade deal**. India has expressed its concerns over lowering and elimination of tariffs on products from other countries, as it would negatively affect the domestic agricultural and industrial sector.

- **All members of RCEP (except India) have concluded the text-based negotiations for the trade deal**. The agreement is **expected to be signed by 2020**.
- The purpose of the deal is to create an integrated market. This would ensure easier availability of products and services across the entire region.

Regional Comprehensive Economic Partnership

- RCEP is a **proposed regional economic integration agreement** among the **10 Association of Southeast Asian Nations (ASEAN) countries** and its six free-trade agreement partners – **Australia, New Zealand, Japan, China, South Korea, and India**.
- It will be one of the largest free-trade bloc accounting for 45% of the world's population, and a combined GDP of about \$21.3 trillion (around 30% of global GDP) and 40% of the world trade.

Note:

Reasons for India's Exit

- **Inadequate Protection against Import-surge:** India has apprehensions that the rising imports due to the signing of the Free Trade Agreement (FTA) would lead to flooding of Chinese products in the Indian market.
 - India had already been demanding an auto-trigger mechanism that would allow it to raise tariffs on products in instances where imports cross a certain threshold; which now won't happen with this deal.
- **Trade Deficit:** Despite having separate bilateral FTAs with most RCEP nations, India has recorded [trade deficits with these countries](#).
 - India already has a trade deficit of over \$50 billion with China, and the current deal will further lead to increasing of this deficit.
- **Lack of Market Access:** India has not received any credible assurance on its demand for more market access with respect to mobility of Indian labour, services and agricultural commodities, and its concerns over non-tariff barriers.
 - RCEP participants (like China) have used non-tariff barriers in the past to prevent India from expanding its exports to the country.
 - A nontariff barrier is a way to restrict trade by using barriers other than a tariff. These include quotas, embargoes, sanctions, and levies.
- **Problem with Base Year:** India's demands regarding the base year that would be used to reduce tariffs on the products (traded as part of the pact) was not considered.
 - India demanded for considering 2014 as the base year for tariff reductions instead of 2013, as India raised import duties on several products between 2014 and 2019. Using a base year before 2014 would lead to a drastic drop in the import duties

on these products which would negatively impact Indian interests.

- **Sectors Impacted:** Due to the availability of cheaper alternatives from other participant countries, some domestic sectors may take a hit.
 - For instance, the Indian dairy industry would face stiff competition from Australia and New Zealand, if India signs this deal.
 - Likewise, steel and textiles sectors have also demanded protection from similar competition.
- **Rules of Origin:** India has concerns over possible circumvention of these rules.
 - **Rules of Origin is the criteria used 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.
 - Current provisions in the deal reportedly do not prevent countries (on which India would originally maintain higher tariffs) from routing their products through other countries.
 - This may allow countries like China to dump in more products into India.

Way Forward

- A mutually beneficial RCEP in which all countries gain reasonably is the need of the hour.
 - **India has a services trade surplus with the world.** Therefore, it is trying to push for a strong agreement on the services trade, including a deal on easier movement of skilled manpower.
- RCEP provides a chance for India to bring in historic trade reforms in the economic sector, which in itself will cement India's position as a major global economy and make Indian industry globally competitive.



Note:



Science and Technology

Highlights

- DNA Bill, 2019
- Pegasus Spyware
- Semi - Dirac Metals
- New Subtype of HIV Discovered
- Devices to Control Air Pollution
- Geochemical Baseline Atlas
- NavIC
- Length of a Day on Each Planet
- Vigyan Samagam
- World's First Drug for Alzheimer's Disease

DNA Bill, 2019

Why in News

Recently, the **scope for violations of privacy** in the proposed DNA data bank was discussed by a parliamentary panel on the contentious **DNA Technology (Use and Application) Regulation Bill, 2019**.

Key Highlights

- The Bill provides for the establishment of a **National DNA Data Bank** and **Regional DNA Data Banks for states**.
 - DNA laboratories are required to share DNA data with the National and Regional DNA Data Banks.
 - Every Data Bank will be required to maintain **indices for the following categories** of data-
 - a crime scene index
 - a suspects' or undertrials' index
 - an offenders' index
 - a missing persons' index
 - an unknown deceased persons' index
- It aims to **store the unique genetic information** for administrative purposes.
- It also provides for the establishment of a **DNA Regulatory Board**, which will supervise the DNA Data Banks and DNA laboratories.
- **The Secretary, Department of Biotechnology**, will be the **ex officio Chairperson** of the board and the additional members will be-
 - Experts in the field of biological sciences.
 - Director General of the National Investigation Agency.
 - Director of the Central Bureau of Investigation.

Concerns

- **Threat of data Hacking:** After the incident of **malware infection at the Kudankulam Nuclear Power Plant** there is a risk of this sensitive data bank being hacked.
- **Violation of Human Rights:** It also puts human rights at stake as it can lead to misuse and miscarriages of justice.
- **Not Cost Effective:** Creating large databases is not a very budget friendly option with limited resources.
- **Inadequate Resources:** Currently, laboratories are able to assess only one or two samples at a time which results in delayed investigations.
- **Possibility of misuse of DNA samples:** Through DNA, the identity as well as other characteristics can be known which can be misused for blackmailing the person who has submitted his/her DNA samples.
- **Single Use:** Bill envisages the use of a DNA sample for a particular specified purpose only. For any other purpose, the DNA sample will have to be processed again.

Way Forward

- **Modernisation of Technology:** Processing around 40 to 50 samples will help in quick resolution of various cases.
- **Multiple usage:** Situations may arise that demand usage of a DNA sample multiple times so use of DNA should not be restricted to a particular purpose.
- **Effective implementation:** It is required to ensure the proper storage and usage of DNA samples.
- **Securing Human Rights:** The authorities need to regulate three broad areas of concern – capacity, training and consent before unleashing the DNA Bill in India.

Note:



Pegasus Spyware

Why in News

WhatsApp recently filed a **lawsuit in the U.S court against Israel's NSO Group**, alleging that the firm was incorporating **cyber-attacks** on the application by infecting mobile devices with malicious software.

Key Points

- Users across at least **20 countries** in Africa, Asia, Europe, the Middle East and North America were affected by the spyware.
 - Targeted users in India included journalists, human rights activists, political dissidents, lawyers, and diplomats.
- The spyware named '**Pegasus**' is developed by the Israeli cyber arms firm NSO in 2016.
 - Pegasus exploited a **weakness in WhatsApp's video-call feature** that allowed attackers to inject the spyware on to phones simply by ringing the number of targets' device. It **enters the phone even if the call is not answered**.
 - Once Pegasus is installed, it can access the targeted users' private data including passwords, contact lists, calendar events, text messages and live voice calls from popular mobile messaging apps.
 - It can also **turn the phone into a spying device** by switching on its camera or microphone.

Semi - Dirac Metals

Why in News

Researchers from the Indian Institute of Technology - Bombay have discovered special properties in a class of materials called "**semi-dirac metals**".

How Semi - Dirac

Metals differ from other metals?

- In general, metals are **good conductors** of electricity.
- A key aspect that decides the quality of conduction is the way **energy depends on the momentum of electrons**.
- **Dirac metals** differ from normal metals in that the **energy depends** linearly on the **momentum**. This difference is also responsible for its unique properties.

- Semi-Dirac metals behave like Dirac metals in one direction and like normal metals in the perpendicular directions (since their microscopic structure is different along with the two directions).
- Examples of **semi-dirac metals** are systems such as **TiO₂/V₂O₃ nanostructures** (Oxides of Titanium and Vanadium).

Properties Discovered

- The direction-dependence of microscopic properties gives Semi - Dirac material special optical properties.
 - Semi-Dirac materials have **very high optical conductivity of electromagnetic waves (light waves)**. These waves are of a specific frequency and a specific polarisation.
 - **Optical conductivity** is a measure of the **opacity** offered by the material to the passage of light through it.
 - Semi - Dirac materials would be transparent to light of a given frequency and polarisation when it is incident along a particular direction. These materials would be opaque to the same light when it falls on it from a different direction.
 - There are many known applications for **transparent conducting films** – the common example being touch **screens used in mobiles**.
- The material possesses interesting **thermoelectric properties**.
 - **Thermoelectricity** is a **clean** energy technology that uses waste heat to produce electricity typically in low power applications.
 - This technology is used in cars, where it is used to keep the lights on and to warm seats.

New Subtype of HIV Discovered

Why in News

Recently, the researchers have discovered a new subtype of the Human Immunodeficiency Virus (HIV) called **HIV-1 Group M, subtype L**. It is the **first time** a subtype of HIV has been found in almost two decades.

- There are **two** types of HIV: **HIV-1 and HIV-2**.
- HIV-1 is considered the **predominant type**, representing the vast **majority of infections** worldwide, while **HIV-2** is far **less common** and primarily concentrated in the west and central African regions.

Note:



Human Immunodeficiency Virus – Acquired Immunodeficiency Syndrome

- HIV is a type of retrovirus. The combination of drugs used to treat it is called **Antiretroviral Therapy (ART)**.
- HIV attacks **CD4-a type of White Blood Cell (T-cells)** in the body's immune system.
- It is transmitted from person to person through bodily fluids, including blood, semen, vaginal secretions, anal fluids, and breast milk.
- The **total number of people living with HIV** was estimated at 21.40 lakh in 2017. India saw a **decline of 85%** compared to 1995.
- **World AIDS Day** is observed on **1st December**.

Key Points

- Researchers used a tailored method of the next-generation **genome sequencing** technology to identify the new subtype.
 - **Genome sequencing** is the process of **determining the complete DNA sequence of an organism's genome**.
 - The technology is helping scientists to detect mutating viruses and avoid a new pandemic.
- **Group M viruses** are responsible for the **global pandemic** – which can be traced back to the **Democratic Republic of Congo** in Sub-Saharan Africa.

Devices to Control Air Pollution

Why in News

The **air purifiers installed** on the roads and on top of the buses have **failed to combat air pollution** in Delhi NCR.

- The air purifying devices include **WAYU (Wind Augmentation Purifying Unit)** and **High-Efficiency Particulate Arrestance (HEPA) filters**.

WAYU (Wind Augmentation Purifying Unit)

- It is developed to **address air pollution at traffic intersections** and dense traffic zones.
- It has been **indigenously developed by the Council of Scientific and Industrial Research - National Environmental Engineering Research Institute (CSIR-NEERI)**.
- The device has the capacity to purify the air in an area of the 500-meter square. It is energy efficient and has a low maintenance cost.

- The device works on **two principles**:
 - **Wind generation for dilution of air pollutants**: It comprises a fan that sucks in air and removes dust and particulate matter.
 - **Active Pollutant removal**: The carbon monoxide and hydrocarbons are oxidized into **less harmful carbon dioxide** using activated carbon coated with titanium dioxide.

High-Efficiency Particulate Arrestance (HEPA) filters

- These filters are able to **trap 99.97% of particles that are 0.3 microns**.
- It traps air contaminants in a complex web of fibers.

Geochemical Baseline Atlas

Why in News

Recently, **CSIR-National Geophysical Research Institute (NGRI)** has released the **first 'Geochemical Baseline Atlas of India'** for **environmental management**.

- The atlas aims to document the **concentration and distribution of the chemical elements** in the soils of India.
- It consists of **44 maps of metals, oxides and elements** present in **top and bottom soils** across India.

About CSIR-NGRI

- The National Geophysical Research Institute (NGRI) is a geoscientific research organization established in 1961 under the **Council of Scientific and Industrial Research (CSIR)**.

International Union of Geological Sciences (IUGC)

- It is a non-governmental scientific organization founded in 1961 which promotes and encourages the study of geological problems, and facilitates international and interdisciplinary cooperation in the earth sciences.
- The Union consists of 121 member nations. India is the member.
- At present IUGC gives considers issues related to:
 - Geoscience education,
 - Geoscience information,
 - Environmental management and hazards.

Note:

Significance

- Both **human activities and natural processes** are continuously **modifying** the chemical composition of our environment. Hence, it will help to assess the chemical compositional changes on the Earth's surface.
- It will help the country to **assess the presence of toxic chemicals** in soil and how it varies from place to place. It also helps in identifying how soil pollution is contributing to groundwater contamination.
- Further, the map will also support in **choosing the right soil that's rich** in certain **micronutrient elements** required for each plant growth.
- The geochemical data presented in these maps will be a part of the global map to be prepared by the **International Union of Geological Sciences (IUGC)**.

NavIC

Why in News

- The **Indian Space Research Organisation (ISRO)** and its commercial arm **Antrix Corporation Ltd.** are set to commercialize India's regional navigation satellite system - Navigation in Indian Constellation (NavIC).
- **Potential Uses:**
 - Terrestrial, aerial and marine navigation;
 - Disaster management;
 - Vehicle tracking and fleet management (especially for mining and transportation sector);
 - Integration with mobile phones;
 - Precise timing (as for ATMs and power grids);
 - Mapping and geodetic (the science of measurement of the earth) data capture.

Navigation in Indian Constellation

- Navigation in Indian Constellation (NavIC) is an **Indian Regional Navigation Satellite System (IRNSS)**, developed by the Indian Space Research Organization (ISRO).
- IRNSS consists of **eight satellites**, **three** satellites in **geostationary orbit** and **five** satellites in **geosynchronous orbit**.
- The **main objective** is to provide **reliable position, navigation and timing services** over India and its neighbourhood.
 - It works just like the established and popular U.S. Global Positioning System (GPS) but within a 1,500 km radius over the sub-continent.

- It has been certified by the 3rd Generation Partnership Project (3GPP), a global body for coordinating mobile telephony standards.

Length of a Day on Each Planet

Why in News

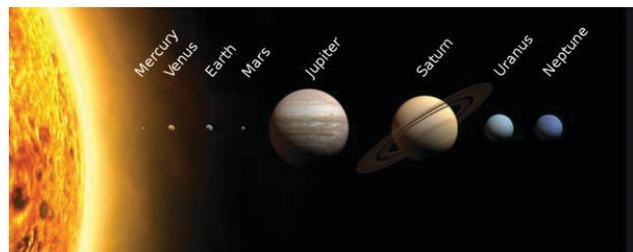
- Recently, the research was undertaken to **calculate the accurate length of a day on Venus and Saturn** which has been **changing since 1963**.
 - **Venus:**
 - The recent observation of the **Magellan spacecraft's observations (1991)** concluded that the **rotation period for Venus** has an **uncertainty of about 9 seconds**.
 - **Saturn:**
 - The recent, the **Cassini spacecraft** showed that there is an **uncertainty of 6 minutes** with a **rotation period of Saturn**.

The Solar System

- The Solar System consists of the **Sun and eight planets**.
 - It also consists of **bodies** such as **comets, asteroids, and meteors**.

Planets vs Dwarf Planets

- The definition of a planet was adopted by the **International Astronomical Union** in **2006**. A planet must:
 - Orbit a star (in our system, it is the Sun).
 - Be big enough to have enough gravity to force it into a spherical shape.
 - Be big enough that its gravity cleared away any other objects of a similar size near its orbit around the Sun.
- On the other hand, **dwarf planet** is a celestial body orbiting a star that is **massive** enough to be rounded by its **own gravity** but has **no clear orbit** (Gravitationally not dominant in its orbit).



Note:



drishti

Planets	Facts
Mercury	<ul style="list-style-type: none"> ➤ It is the nearest to the Sun and also the smallest planet in our solar system. ➤ It has no satellite of its own. ➤ It takes 1408 hours to complete a rotation.
Venus	<ul style="list-style-type: none"> ➤ It is called morning or an evening star, although it is not a star. ➤ Sometimes it is called as Earth's twin. ➤ Venus has no moon or satellite of its own. ➤ It rotates from east to west while the Earth rotates from west to east. ➤ It takes 5,832 hours to complete a rotation.
Earth	<ul style="list-style-type: none"> ➤ The Earth is the only planet in the solar system on which life is known to exist. ➤ The axis of rotation of the Earth is 23.5 degrees relative to the orbital plane – the plane of Earth's orbit around the sun. The tilt is responsible for the change of seasons on the Earth. ➤ The Earth has only one moon. ➤ The Earth takes 24 hours to complete a rotation.
Mars	<ul style="list-style-type: none"> ➤ It appears slightly reddish and, therefore, it is also called the red planet. ➤ Mars has two small natural satellites. ➤ It takes 25 hours to complete a rotation.
Jupiter	<ul style="list-style-type: none"> ➤ Jupiter is the largest planet of the solar system. ➤ Jupiter has 53 named satellites and another 26 awaiting official names. ➤ It also has faint rings around it. ➤ It takes only 10 hours to complete a rotation.
Saturn	<ul style="list-style-type: none"> ➤ The Saturn is yellowish in colour. ➤ It has an icy ring around it. ➤ It has 82 moons (Planet with the highest number of moons). ➤ It takes 11 hours to complete a rotation (second-shortest day in the solar system).
Uranus	<ul style="list-style-type: none"> ➤ Uranus also rotates from east to west (like Venus). ➤ It has a highly tilted rotational axis. ➤ It takes 17 hours to complete a rotation.

Neptune	<ul style="list-style-type: none"> ➤ It is the eighth and most distant planet in our solar system. ➤ The Neptune is dark, cold and has a presence of supersonic winds. ➤ It takes 16 hours to complete a rotation.
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Vigyan Samagam

Why in News

India's **first-ever global mega-science exhibition 'Vigyan Samagam'** was inaugurated at the **Science City of Kolkata**.

- The Science City of Kolkata is the **largest science centre in the Indian subcontinent**. It is managed by the **National Council of Science Museums, Ministry of Culture**.

Key Points

- The exhibition **showcases India's participation in the world's major Mega Science projects**, where several developed countries are participating collectively.
 - The Mega Science Projects in which India is participating are:
 - **Large Hadron Collider (LHC)** at the European Organization for Nuclear Research (CERN),
 - Facility for Antiproton and Ion Research (FAIR),
 - **India-based Neutrino Observatory (INO)**,
 - International Thermonuclear Experimental Reactor (ITER),
 - **Laser Interferometer Gravitational-Wave Observatory (LIGO)**,
 - **Thirty Meter Telescope (TMT)**, and
 - Square Kilometre Array (SKA).
 - From the discovery of the Higgs particle to that of **gravitational waves**, these projects throw light on crucial questions related to the origin of the Universe and its evolution through its various stages.
- The **primary goal** of such an exhibition is **to expose young minds to the deep mysteries of the Universe and various facets of its evolution**. The exhibition encourages them to take up science as a career option and contribute to the nation's intellectual growth.
- **'Connecting with School Children, Students'** is one of the key objectives of Vigyan Samagam. For this, in each city, a number of activities engaging the curiosity,

Note:

attention, and imagination of school children and students will be taken up.

- Vigyan Samagam is a **valuable addition to the India International Science Festival (IISF) programme-2019.**

CERN Large Hadron Collider

- **European Organisation for Nuclear Research (CERN)** is the **world's largest nuclear and particle physics laboratory** and best known as operator of the Large Hadron Collider, which found the elusive Higgs boson in 2012. **India** in 2016 became an **associate member of CERN.**
- **LHC** is a kind of **atom smasher machine.** It is the world's largest and most powerful particle accelerator.

Facility for Antiproton and Ion Research

- FAIR is an international accelerator facility for the research with antiprotons and ions which is being developed and built in **Darmstadt (Germany)** in cooperation with international partners.

India-based Neutrino Observatory (INO) Project

- It is a multi-institutional effort aimed at building a **world-class underground laboratory** with a rock cover of approx. 1200 m for **non-accelerator based high energy and nuclear physics research in India.** Located in **Theri, Tamil Nadu.**

International Thermonuclear Experimental Reactor

- ITER is an experimental fusion reactor facility under construction in Cadarache, South of France to prove the feasibility of nuclear fusion for future source of energy.

Laser Interferometer

Gravitational Wave Observatory

- The **LIGO project** operates **three gravitational-wave (GW) detectors.** Two are at **Hanford** in the State of Washington, north-western USA, and **one** is at **Livingston** in Louisiana, south-eastern USA.
- **LIGO India** is a planned advanced gravitational-wave observatory to be located in India as part of the worldwide network.

Thirty Meter Telescope

- Thirty Meter Telescope (TMT) is a **new class of extremely large telescopes** that will allow us to

see deeper into space and observe cosmic objects with unprecedented sensitivity. It is getting built at **Mauna Kea, Hawaii, USA.**

Square Kilometre Array

- The Square Kilometre Array (SKA) project is an international effort to build the **world's largest radio telescope**, with eventually over a square kilometre (one million square metres) of collecting area. It will be co-hosted by **South Africa and Australia.**

India International Science Festival

- IISF is the **largest science festival in the world.** It is an annual festival to celebrate the achievements of India's scientific and technological advancements with students, innovators, craftsmen, farmers, scientists and technocrats from India and abroad.
- It was **started** from the year **2015.**
- It is organized by the **Ministry of Science & Technology, Ministry of Earth Sciences and Vijnana Bharati (Vibha).**

World's First Drug for Alzheimer's Disease

Recently, **China** has approved the **world's first multi-targeting and carbohydrate-based drug GV-971 for Alzheimer's disease.**

- Multi-target drugs hit several targets in the body, which is often necessary to do in order to yield a therapeutic effect in complex diseases like Parkinson's or Alzheimer's. This is different from most drugs which target only a single biological substance, like a protein or enzyme.

GV-971

- It has been **extracted from brown algae** and can treat mild to moderate forms of the disease and improve cognition.
- This is the only drug out of more than 320 developed by pharmaceutical companies around the globe to pass clinical trials for treating Alzheimer's.
- The medicine **can be taken orally** by the patients.

Alzheimer's Disease

- It is an **irreversible and progressive brain disorder.**

Note:



- The disease slowly destroys memory, thinking ability and the capability to carry out simple tasks.
 - The possibility of Alzheimer's increases as the age of the population increases.
- **Nearly 50 million people are affected** by the disease and the number is expected to increase.
 - **China has the highest Alzheimer's affected population** in the world.



Note:

Environment and Ecology

Highlights

- BASIC Environment Ministers Meet
- Health Emergency in New Delhi
- New Species of Tree Frog
- Butterfly Survey
- Satpura Tiger Reserve
- Nagarjunasagar Srisaillam Tiger Reserve
- Olive Ridley Turtles
- Punjab Water Law Responsible for Air Pollution in Delhi

BASIC Environment Ministers Meet

Why in News

- Recently, the **29th meeting** of environment ministers from the **BASIC nations (Brazil, South Africa, India and China)** was held in **Beijing, China**.
- A statement was issued calling for a comprehensive implementation of the **Paris Agreement (2015)**.

Key Points

- The group of ministers also **called on the developed nations** to deliver on their **commitment to provide \$100 billion climate finance** to the developing countries.
 - The developed world under the **Copenhagen Accord** (established during the **2009 United Nations Climate Change Conference, COP-15**) had promised \$100 billion per year from 2012 to 2020.
 - This fund is known as the **Green Climate Fund** which aims to help the developing and least developing countries to mitigate climate change issues as the Paris agreement comes into effect.
 - However, only about \$10-20 billion has been contributed so far.
- The meeting is in **accordance with the principles of equity, common but differentiated responsibilities and respective capabilities (CBDR-RC)**.
 - Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) is a **principle**

within the United Nations Framework Convention on Climate Change (UNFCCC) that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

- The Group also underlined the importance of a full, effective and sustained implementation of the UNFCCC, its Kyoto Protocol (1997-2012) and its Paris Agreement.

Health Emergency in New Delhi

Why in News

- Recently, the **Environment Pollution (Prevention and Control) Authority - (EPCA)** declared a **public health emergency** in **New Delhi** as pollution levels entered the **'severe plus'** category.
- An **Air Quality Index (AQI) above 500** falls in **'severe plus'** category. According to the **Central Pollution Control Board (CPCB)**, the overall AQI score of **New Delhi crossed 500 mark**.

CHILDREN MOST VULNERABLE

They breathe faster than adults, taking in more pollutants



99%

of children under 5 are exposed to dangerous levels of PM2.5

WHAT POLLUTION CAN CAUSE

FOR FETUSES

- Raised risk of preterm birth
- Underdeveloped lung, other organs
- Increased risk of infant mortality

FOR PRE-TEENS & TEENS

- Chronic coughs, bronchitis and/or asthma attacks

FOR INFANTS

- Eye, lungs and skin allergies and infections
- Conditions like cough, pneumonia
- Chances of long-term cognitive impairment

- Increased risk of cardiovascular disease and leukaemia

Note:



Key Points

- Deterioration in air quality is due to a combination of several factors:
 - **Local pollution produced by vehicular and industrial pollution.**
 - **Stubble burning in states of Punjab and Haryana.**
 - **Extremely adverse weather conditions.**
- **Symptoms** associated with this pollution are irritation in the eyes and throat, dry skin, skin allergies, chronic cough and breathlessness.
- **Steps taken by the Government:**
 - **Odd-even scheme:** Vehicles with odd last digit in the registration number will ply on odd days and those with even last digit on even days
 - **Imposition of Environment Compensation Charge (ECC)** at toll plazas.
 - **Distribution of N95 mask:** It covers the nose and mouth and protects the wearer from breathing in hazardous pollutants like **PM 2.5**.
 - **Graded Response Action Plan (GRAP):** Schools are shut down until the air quality remains severe. It was prepared by the Ministry of Environment, Forests & Climate Change (MoEFCC) after the order of Supreme Court on December 2016.

Environment Compensation Charge

- It is a **Supreme Court directed green tax.**
- Green Taxes are one of the policy measures formulated by the government to control activities that affect the environment.
- It is a type of 'cess' which has no legislative backup that usually accompanies the imposition of tax on public activities.

Environment Pollution (Prevention and Control) Authority

- It was constituted under **section 3 of the Environment (Protection) Act, 1986** for the **National Capital Region** in compliance with the **Supreme Court order dated January 1998.**
- It has the power suo-moto or on the basis of complaints made by any individual, representative body or organization functioning in the field of environment.
- It takes all necessary steps to for controlling vehicular pollution, ensuring compliance of fuel quality standards, monitoring and coordinating action for traffic planning and management.

Central Pollution Control Board

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

New Species of Tree Frog

A new species of tree frog is discovered in **West Bengal**. It has been named **Brown Blotched Bengal Tree Frog (Polypedates bengalensis)** due to a series of six to nine dark brown blotches present on its body.



- It is a **mid-sized tree frog** and is the **26th species** under the genus Polypedates.
 - Polypedates is a genus of tree frog found throughout South and Southeast Asia.

Butterfly Survey

Why in News

The **Kerala government** has carried out a **butterfly survey** in the **Wayanad Wildlife Sanctuary (WWS)** and **Chinnar Wildlife Sanctuary (CWS)** located in **Western Ghat region**.

- The survey aims at assessing the butterfly diversity in the forest areas of the western ghats region, which is vulnerable to climatic changes.
- The **survey coincides with the annual butterfly migration** in south India from the plains to the Western Ghats areas.
- The **butterfly is an indicator species** thus a survey will help to study the interrelation and effects of climate change on ecology.
 - An **indicator species** provides information on the overall condition of the ecosystem and of other species in that ecosystem. They reflect the quality and changes in environmental conditions as well as aspects of community composition.

Note:

Wayanad Wildlife Sanctuary

- It is **part of the Nilgiri Biosphere Reserve** along with Mudumalai Wildlife Sanctuary, Bandipur National Park, Nagarhole National Park, Mukurthi National Park, and Silent Valley.
- Wayanad Wildlife sanctuary is significant because of ecological and geographic **continuity with other protected areas** such as Bandipur Tiger Reserve and Nagarhole National Park of Karnataka in the north-eastern portion and Mudumalai Tiger Reserve of Tamil Nadu in the south-east.
- It has the **world's largest recorded population of the Asiatic elephant**.
- Almost the entire Wayanad district is drained by **Kabini** and its three tributaries, the Panamaram, Mananthavady and Kalindy rivers.
 - The **Kabini River**, one of the three east flowing rivers of Kerala, is an important **tributary of the Kaveri River**.

Chinnar Wildlife Sanctuary

- Chinnar Wildlife Sanctuary is one of the 13 sanctuaries in the protected areas of the state of **Kerala**.
- It is located in the Idduki district of Kerala near the Annamalai hills.
- It comes under the **jurisdiction of Eravikulam National Park**.

Satpura Tiger Reserve

Why in News

Recently, the **Satpura Tiger Reserve** located in the Hoshangabad district of **Madhya Pradesh** came into limelight because of the presence of **Mahuva tree** in its buffer zone. The people residing there have a superstitious belief that Mahuva tree can bring instant relief/cure to their ailments or misfortunes.

- The Reserve was established in **2000** and is located **south of Narmada River**.
- Satpura tiger reserve **comprises of three protected areas**:
 - Satpura National Park
 - Bori Sanctuary
 - Pachmarhi Sanctuary

- **Water Source: Denwa river** is the main water source of the park. It originates from south-eastern part of the Hoshangabad district in Madhya Pradesh and flows from east to west direction before **joining the Tawa river (a tributary of the Narmada river)** at the south of Ranipur.
- **Diversity:** These forest enclaves provide habitat for several endangered species, including tigers. Other prime species found here are Black Buck, Leopard, Dhole, Indian Gaur, Malabar Giant Squirrel and Sloth Bear.
- **Archaeological Significance:** Presence of more than 50 rock shelters with paintings, which are 1500 to 10,000 years old. Some of them are having very rare depictions of elephants, lions, tigers, porcupines, and pangolins.

Note:

- **Mahuva Tree (Mahua Longifolia)** is an **Indian tropical tree** found largely in the central and north Indian plains and forests.
- **Buffer Zone** are areas created to enhance the protection of a specific conservation area. They are areas peripheral to a specific protected area, where restrictions on resource use and special development measures are undertaken in order to enhance the conservation value of the protected area.

Nagarjunasagar Srisaillam Tiger Reserve

Why in News

- The number of tigers in the Nagarjunasagar Srisaillam Tiger Reserve (NSTR) in Andhra Pradesh has **increased**, reversing the steady decline in their number over a period.
- NSTR is the **largest** tiger reserve in **India**.
- **Historical Background:** It was notified in **1978** and came under the protection of **Project Tiger** in **1983**. In **1992**, it was retitled as **Rajiv Gandhi Wildlife Sanctuary**.
- **Geographical Aspects:**
 - The Tiger reserve is spread over two states, namely, **Andhra Pradesh** and **Telangana**. The area consists mostly of the **Nallamala Hills**.
 - The multipurpose reservoirs – **Srisaillam** and **Nagarjunasagar** are located in the reserve.

Note:



- The Krishna river cuts the basin of this reserve.

Project Tiger

- Project Tiger is a **Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change** launched in **1973**.
- It aims to provide central assistance to the tiger States for tiger conservation in designated tiger reserves in India. The project is administered by the **National Tiger Conservation Authority (NTCA)**.

Olive Ridley Turtles

Why in News

The Odisha government would compensate 8,000 fishermen families who would bear losses due to the **fishing ban imposed for the protection of the Olive Ridley sea turtles**.

- The ban is an annual fishing ban that would be in force from November, 2019 to May 31, 2020. During this period, lakhs of turtles would arrive at the Odisha coast for mass nesting.

Olive Ridley Turtles

- The Olive ridley turtles are the **smallest and most abundant** of all sea turtles found in the world, **inhabiting warm waters of the Pacific, Atlantic and Indian oceans**.
- They are best known for their **unique mass nesting called Arribada**.
 - An arribada is a mass-nesting event when thousands of turtles come ashore at the same time to lay eggs on the same.
- The enormous number of Olive ridleys nest in **Odisha** (namely at three river mouths: **Dhamara, Devi and Rushikulya**) in India.
- The species is listed as **Vulnerable** in the **IUCN Red List, in Appendix 1 of CITES, and in Schedule 1 of Wildlife Protection Act, 1972**.
- Olive ridleys face serious threats across their migratory route, habitat and nesting beaches due to human activities such as unfriendly turtle fishing practices, development and exploitation of nesting beaches for ports, etc.

Dhamara River

- The Brahmani river (second largest river in Odisha) enters into the Bay of Bengal along with Mahanadi (longest rivers in Odisha) & forms a combined mouth known as Dhamara.

Devi River

- Devi river is one of the principal distributaries of Mahanadhi.
- It flows through Jagatsinghpur district and Puri district across Odisha state in India and joins the Bay of Bengal.

Rushikulya River

- It originates from Rushikulya hills of the Eastern Ghats in Phulbani district.
- It is 165 kms. long with 8900 sq.kms of catchment areas.
- It covers entire catchment area in the districts of Kandhamal and Ganjam district of Odisha.

Note:

Punjab Water Law Responsible for Air Pollution in Delhi

Why in News

The severe **air pollution crisis in NCR-Delhi region** is found to be **related to the timing of stubble burnings** in the neighbouring states of **Punjab, Haryana**.

- Farmers in these states have been setting fire to their fields after harvesting of paddy since the 1980s. But “the timing” of stubble burning has significantly changed after **Punjab Preservation of Subsoil Water Act, 2009 (PPSW)** came into effect.

Practice Prior to the PPSW Act, 2009

- The farmers in Punjab were **sowing paddy nurseries** from mid-to-late April and transplanting the seedlings from mid-May to late-May.
 - For the first three weeks after transplanting, the plants have to be irrigated almost daily to ensure water-logged conditions to prevent weed growth.
 - But nursery sowing and transplanting, during peak summer, led to massive groundwater depletion.
- As a result, the paddy, including 155-day varieties such as Pusa-44, got harvested by early October — and the **burning of the stubble used to get over around mid-October**.
 - The stubble burning period and the onset of winter in Northern India had a **considerable time gap** which avoided the air pollution crisis in the area.

Implementation of PPSW Act, 2009

- The act was brought in **to prevent the groundwater crisis during summer**.
- The Act barred any nursery sowing and transplanting of paddy before May 15 and June 15, respectively.

- This ensured that a significant part of the crop’s water requirement is met from monsoon rains and also, lesser water loss due to evaporation after mid-June.
- **Late transplanting left farmers with little time between harvesting and preparing the field for the next crop** and hence farmers are resorting to the burning of stubble.

Positives of PPSW Act, 2009

- The delayed paddy transplantation has been helping to **save 1,000 billion litres of water**.
 - It is equal to the total water consumption of Ludhiana, an industrial town, for two years.

Impact of PPSW Act, 2009

- Implementation of the PPSW Act (2009) made the **time period of stubble burning coincident with the onset of winter in Northern India**.
- Also, wind movement remains very slow and moisture levels in the lower atmosphere remain high during this period.
- It **creates a layer**, due to which all the **particulate matter and gases** from the burnt stubble, vehicles and industries **get accumulated** instead of moving away.
- At this time of the year, **winds in Punjab generally blow from the northwest to the southeast**.
 - Haryana and Delhi are to the south and southeast of Punjab.
 - Also, these northwesterly winds are calm with a speed of less than 2 kmph which results in ‘**air locking**’ at many places.
- Thus, the PPSW Act (2009) may have helped in arresting the rapid decline in the groundwater table and aquifers but it has contributed to the **unprecedented deterioration in Air Quality Index (AQI) in the National Capital Region**.



Note:



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Art & Culture

Highlights

- Gottiprolu – An Early Trade Centre of Andhra Pradesh
- 550th Birth Anniversary Celebrations of Sri Guru Nanak Dev
- Suranga Bawadi
- World Monuments Watch
- Thiruvalluvar
- Dhrupad
- Brahmaputra Pushkaram Festival

Gottiprolu – An Early Trade Centre of Andhra Pradesh

Why in News

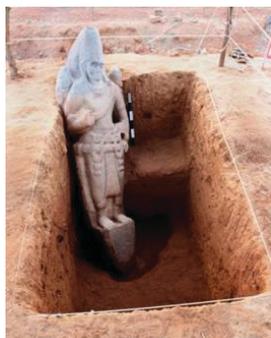
- Excavation by the **Archaeological Survey of India** at **Gottiprolu** near **Nellore** (now renamed as **Sri Potti Sriramulu**) district, **Andhra Pradesh** has **discovered the remains of a huge settlement**.

Key Points

- The site lies on the **right bank of a distributary of river Swarnamukhi**.
- The proximity of the site (at southern coastal location) to the seacoast suggests that the site could have served as a **strategic settlement involved in maritime trade**.
- Detailed topographical studies have identified an early historic settlement surrounded by a fortification and the possibility of a moat encircling it.

Discovered Items

- **Sculpture:** Life-size Vishnu sculpture with following specifications:
 - **Four-armed Vishnu** standing over a pedestal,
 - Carrying **chakra and conch** in his upper right and left hands respectively.
 - The lower right hand is in **bestowing boon** position and the left hand in **'Katihastha'** (**resting on the hip**) posture.



- Features like the elaborate headgear, thick holy thread, and decorative drapery dates it back to the **Pallava period (c. 8th cent. AD)**.
- **Pottery: Conical jars** that are considered to be imitated variety of **Roman Amphorae jars** (ancient Greek or Roman jar/jug used to **transport liquid commodities**).
 - These settlements could have been an important trade centre due to the presence of imitated amphorae wares.
- The conical pieces of broken terracotta pipes found fitted into one another revealed about the **civic amenities and drainage system pattern** maintained by the occupants at the site.
- The ceramic assemblage of the site consisted of fine quality **black and redwares** collected from the conical jars, russet coated ware, etc.
- **Brick-built structures** in different sizes and forms like elliptical, circular, rectangular and curvilinear pattern.
 - The size of bricks can be compared to those found in the **Satavahana/Ikshvaku** period structures in the **Krishna valley viz. Amaravati and Nagarjunakonda**.
 - This dates back to the site to the 2nd century to 1st century BC.
- Molded female terracotta figurine with two hands lifted upwards.
- Varied **stone tools of Palaeolithic and Neolithic periods** were also found which suggest that prehistoric people also occupied this area.



Note:



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- Other major retrieved antiquities unearthed are **copper and lead coins, iron spearhead, stone celts, terracotta beads, ear stud in semi-precious stone and hoppers.**
- **Important Remnants of the Site:** Fortified early historic settlement at Puduru, Sunbrahmanya temple at Mallam, unique rock-cut laterite stepped well at Yakasiri, Vishnu temple at Tirumuru.

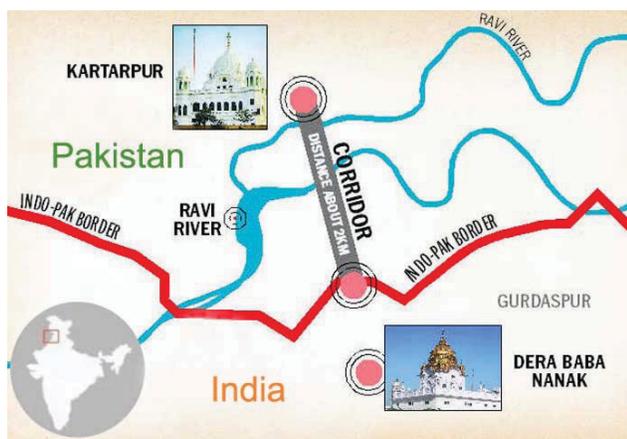
550th Birth Anniversary Celebrations of Sri Guru Nanak Dev

Why in News

Recently, the Prime Minister of India participated in the special event organised at **Dera Baba Nanak** (Punjab) to inaugurate the **Kartarpur Corridor**. He also released a **commemorative coin** celebrating **550th Birth Anniversary of Guru Nanak Dev Ji** (12th November, 2019).

Guru Nanak Dev Ji

- Guru Nanak Dev Jayanti is observed to **celebrate the birth of Guru Nanak Dev (1469-1539)**, who is the **first of the 10 Sikh Gurus** and the **founder of Sikhism**.
- He advocated the '**Nirguna**' (devotion to and worship of formless divine) form of bhakti.
- He rejected sacrifices, ritual baths, image worship, austerities and the scriptures of both Hindus and Muslims.
- He **organised his followers into a community**. He set up rules for congregational worship (**Sangat**) involving collective recitation.



- The fifth preceptor, Guru Arjan, compiled **Baba Guru Nanak's hymns** along with those of his four successors with other religious poets like Baba Farid, Ravidas (also known as Raidas) and Kabir in the **Adi Granth Sahib**.
- These hymns, called '**Gurbani**', are composed in many languages.
- In the late seventeenth century the **tenth preceptor, Guru Gobind Singh**, included the compositions of the ninth guru, Guru Tegh Bahadur, and this scripture was called the **Guru Granth Sahib**.

Kartarpur Corridor

- The Kartarpur corridor **connects** the Darbar Sahib Gurdwara in Narowal district of Pakistan with the Dera Baba Nanak shrine in Gurdaspur district in Punjab, India.
- The corridor was built to commemorate 550th birth anniversary celebrations of Guru Nanak Dev on **12th November 2019**.

Suranga Bawadi

Suranga Bawadi, situated in **Bijapur, Karnataka**, has been added to the **World Monuments Watch List**. The monument has been selected under the '**Ancient Water System of the Deccan Plateau**' by **World Monuments Fund**.



- Suranga Bawadi is an integral **part of the ancient Karez System** of supplying water through subterranean tunnels.
- It was **built by Adil Shah-I of Adilshahi dynasty of Bijapur in the 16th century** to supply water to the city of Bijapur in Karnataka

Karez System

- Karez is a **water harnessing technology** in which groundwater is brought to the surface by a tunnel.
- In this system, no mechanical pump or lift is used. Gravity alone brings the water from the underground source.
- The technology **originated in Persia/Iran** and was widely used during the medieval period.

Note:

World Monuments Watch

- The World Monuments Watch is a **biennial selection program** of 'at-risk cultural heritage sites' that combine great historical significance with contemporary social impact.
- It was **launched in 1995 on the occasion of the 30th anniversary of World Monuments Fund** to identify imperiled cultural heritage sites and provide direct financial and technical support for their preservation.
 - **World Monuments Fund** is a private nonprofit organization founded in 1965 by individuals concerned about the accelerating destruction of important artistic treasures throughout the world. It is located in New York (the United States).
- Anyone can nominate a site to the World Monuments Watch, including private individuals and representatives of civil society organizations, community groups, government agencies, educational institutions or other entities.

Thiruvalluvar

- Thiruvalluvar, also called Valluvar, was a **Tamil poet-saint**.
- The period, when he lived, is debated as is his religious identity.
 - He is believed to have lived between 3rd-4th century or 8th-9th century.
 - He is thought to be linked to Jainism. However, Hindus have also claimed that Thiruvalluvar belonged to hinduism.
- Dravidian groups also count him as a saint, as he **dismissed the caste system**.
- He had contributed the **Tirukkural or 'Kural'** to the **Sangam literature**.
- Tirukkural is comprised of 133 sections of 10 couplets and each is divided into three books: **Aram (virtue), Porul (government and society) and Kamam (love)**.

Sangam Literature

- The word 'Sangam' is the **Tamil form of the Sanskrit word Sangha** which means a group of persons or an association.
- The **Tamil Sangam was an academy of poets** which flourished in three different periods and

at different places under the patronage of the **Pandyan kings**.

- The Sangam literature which was largely consolidated from the **third Sangam**, throws information on conditions of life of people around the beginning of the Christian era.
 - It deals with the **secular matter** relating to the public and social activities like government, war, charity, trade, worship, agriculture, etc.
 - Sangam literature consists of the earliest Tamil works (such as the Tolkappiyam), the ten poems (Pattupattu), the eight anthologies (Ettutogai) and the eighteen minor works (Padinenkilkanakku) and the three epics.

Dhrupad

Why in news?

Padma Shri awardee and renowned **Dhrupad vocalist Ramakant Gundecha** passed away in Bhopal.

Key Points

- The word Dhrupad is derived from **Dhruva**, the steadfast **evening star** that moves through the galaxy, and Pada meaning poetry.
- Traditionally, the dhrupad style of singing was performed with a **tanpura and pakhawaj**.
- The lyrics sung in Dhrupad are in a medieval form of **Hindi** and typically **heroic in theme** or **praise** of a particular deity.
- It is a form of **devotional music** that traces its **origin** to the ancient text of **Samveda**.
- One significant characteristic of Dhrupad is the emphasis on maintaining the **purity of the Raga**.
- Hindustani classical music is primarily **vocal-centric**. The primary vocal forms associated with Hindustani music are the Khayal, Ghazal, Dhrupad, Dhammar, Tarana and Thumri.

Brahmaputra Pushkaram Festival

Why in News

The **Assam government** is celebrating Brahmaputra Pushkaram, a 12-day mega river festival from 5-16th

Note:

November, 2019. Earlier, the **Brahmaputra Pushkaram festival** was held in **2007**.

- It will be the **second biggest river festival** ever to be celebrated in the state of Assam **after Namami Brahmaputra**.
- **Pushkaram** festival is a **festival of rivers** that pertains to the 12 important rivers in India. It occurs once in 12 years for each river.

- In 2018, the Pushkaram festival was celebrated on the banks of the Tamiraparani river in Tirunelveli district, Tamil Nadu.

Namami Brahmaputra

- Namami Brahmaputra is an **international festival** that celebrates the beauty of the Brahmaputra river.
- It is **organized by Assam Government**. The first edition was celebrated in 2017.



Note:



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Social Issues

Highlights

- Mercy Petition
- Anaemia Among Men
- Acute Respiratory Infections
- Premature Deaths in India
- Declining Maternal Mortality Ratio in India
- Cancer Care Infrastructure
- World Diabetes Day 2019

Mercy Petition

Why in News

The Tihar Jail administration has asked the convicts in the **Nirbhaya case, 2012** to apply for mercy petition before the President.

- Even if one of the convicts applies for it, it becomes applicable to all.
- For seeking **mercy petition**, the death sentence by a sessions (trial) court must be confirmed by the High Court.
 - The death sentence convict has an option to appeal to the Supreme Court. If the Supreme Court refuses to hear the appeal or upholds the death sentence, then the convict or his relatives can submit a mercy petition to the **President of India (Articles 72)** or to the **Governor of a State (Article 161)**.

Sessions Court: District court is referred to as sessions court when it exercises its jurisdiction on criminal matters under the Code of Criminal procedure (CrPc).

Grounds of Appeal

- In the mercy petition, the person concerned is required to state the grounds upon which the request for the grant of pardon is made.
- These grounds may not have any value in the eyes of law for exonerating the accused person from the offence, but they may play an important role in the release of the person by the President.
 - The grounds, such as the convicted person is the **only bread earner** of the family or the **physical fitness** of the convict, his **age** or even the **law** was

quite harsh or the **court by chance committed any mistake or error** inadvertently, may be taken into consideration at the time of disposal of the mercy petition.

- Supreme Court in **Kehar Singh v Union of India, 1988** case reiterated its stand and held that the grant of pardon by the President is an act of grace and, therefore, cannot be claimed as a matter of right.

Need for Pardoning Power

- The philosophy underlying the pardon power is that “every civilized country recognizes and provides for the pardoning power as an **act of grace and humanity in course of law**”.
- The pardoning power is founded on the consideration of **public good** and is to be exercised on the grounds of **public welfare**, which is the legitimate objective of all punishments.

Constitutional Provisions

- **Article 72** provides the pardoning power to the **President of India**, it says:
 - The President shall have the power to grant **pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute** the sentence of any person convicted of any offence-
 - in all cases where the punishment or sentence is by a Court-martial;
 - in all cases where the punishment or sentence for an offence against any law relating to a matter to which the executive power of the Union extends;
 - in all cases of death sentences.
- **Article 161** provides that the **Governor of a State** shall have the power to grant pardons, reprieves, respites

Note:

or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.

- In **Dhananjoy Chatterjee alias Dhana v State of West Bengal, 1994** case the Supreme Court has said that “The power under Articles 72 and 161 of the Constitution can be exercised by the Central and State Governments, not by the President or Governor on their own”.
 - The advice of the appropriate Government binds the Head of the State.

- **Pardon:** The president can totally absolve/acquit the person for the offence and let him go free like a normal citizen.
- **Commute:** To reduce the type of punishment into a less harsh one. For example rigorous imprisonment to simple imprisonment.
- **Remission:** To reduce the punishment without changing the nature of the punishment. For example 20 years rigorous imprisonment to 10 years rigorous imprisonment.
- **Reprieve:** A delay is allowed in the execution of a sentence, usually a death sentence for a guilty person to prove his innocence.
- **Respite:** To reduce the degree of punishment looking at specific grounds like pregnancy, old age etc.
- **Court-martial:** It is a trial in a military court, of a member of the armed forces who is charged with breaking military law.

Difference between the pardoning power of President and Governor

- **Death sentence:** President can pardon the death sentence but the Governor has no power to pardon the death sentence.
- **Court-martial:** The President can pardon in case of Court-martial but the Governor cannot pardon in the court-martial.
- **Jurisdiction:** President exercises his/her judicial powers for the punishment which is given under the law made by the Union. Whereas the Governor exercises his/her judicial powers for the punishment which is given under the law made by the State.

Procedure Involved

- A convict under the sentence of death is allowed to file a mercy petition within a period of seven days after the date on which the Superintendent of Jail informs him/her about the dismissal of the appeal or special leave to appeal by the Supreme Court.
- The petitions are to be presented to the President of India. The President office seeks the cabinet advice.
 - The appeal is examined by the **Ministry of Home Affairs** and the Ministry before giving recommendations to the President, takes the view of State concerned.
 - There is no written procedure to deal with mercy petition.
- **Judicial review:** President’s pardon/rejection/delay is also subjected to judicial review.
 - However, if a court finds that the process of the decision taken is not arbitrary or unreasonable, the decision then cannot be interfered with.
 - A **curative petition** is the last judicial corrective measure which can be pleaded in any judgment or decision passed by the Supreme Court which is normally decided by Judges in-chamber.

Curative petition: The concept of the curative petition was first evolved by the Supreme Court of India in the matter of **Rupa Ashok Hurra vs. Ashok Hurra and Anr. (2002)** where the question was whether an aggrieved person is entitled to any relief against the final judgement/order of the Supreme Court, after the dismissal of a review petition.

Article 137: It provides that in the matter of laws and rules made under **Article 145**, the Supreme Court has the power to review any judgement pronounced (or order made) by it. Such a petition needs to be filed within 30 days from the date of judgement or order.

Anaemia Among Men

Why in News

A recent study published in ‘The Lancet Global Health’ has observed that **23.5% of men (15-54 years age group) in India are affected with anaemia.**

- It needs to be noted that **population-based studies on anaemia in India have mostly focused on women and children** whereas men with the anaemia have received much less attention.

Note:



Anaemia

- The **World Health Organization (WHO)** defines anaemia as a condition in which the **number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiological needs.**
 - **Iron deficiency** is the **most common cause** of anaemia, although other conditions, such as folate, vitamin B12 and vitamin A deficiencies, chronic inflammation, parasitic infections, and inherited disorders can all cause anaemia.
 - In its severe form, it is associated with fatigue, weakness, dizziness and drowsiness. **Pregnant women and children are particularly vulnerable.**
 - In 2018, the government of India launched **Anaemia Mukh Bharat (AMB)** as part of the Intensified National Iron Plus Initiative (NIPI) Program for accelerating the annual rate of decline of anaemia from one to three percentage points.
- An estimated 1.9 billion people (27%) in the world had anaemia in 2013 and 93% of these cases occurred in low- and middle-income countries.

Key Findings

- The prevalence of anaemia in men **varied widely between states**, ranging from 9% in Manipur (lowest) to 33% in Bihar (highest).

ANAEMIA AMONG MEN IN THE STATES	
HIGHEST 5	
Bihar	32.86
West Bengal	30.46
Jharkhand	30.3
Meghalaya	29.13
Odisha	28.45
LOWEST 5	
Manipur	9.19
Mizoram	9.78
Nagaland	10.23
Goa	10.68
Kerala	11.77

 - It was noted that men with less education, less household wealth and those living in rural areas are more likely to have anaemia.
- **Higher prevalence has been observed for younger age groups** while the lowest prevalence has been observed for the age group of 50-54 years.
 - Ideally, men in the group 20-34 years have the lowest probability of having anaemia.
 - But, factors such as consuming smokeless tobacco, being underweight, level of urbanisation and household wealth are associated with a higher probability of developing the disease.

- Geographic and sociodemographic patterns of anaemia for men and **women** in India appear to be similar.

Consequences of Anaemia Among Men

- Although male anaemia does not affect the intergenerational cycle of malnutrition but it may **reduce overall work performance and quality of life.**
- Anaemia can decrease productivity by causing fatigue, creating difficulty in concentrating, and lethargy.

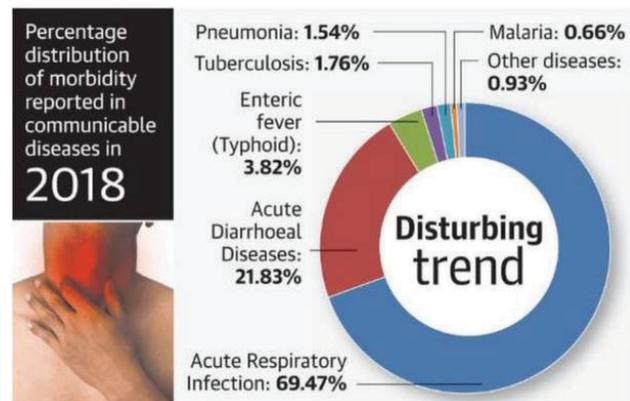
Way Forward

- The existing anaemia control measures in the country are majorly focussed on women and children. The **inclusion of the males in the target population** will help to eliminate anaemia completely from the country.
- Steps that can be taken include distribution of iron tablets, food fortification with iron and spreading awareness about anaemia and various nutritional deficiencies.

Acute Respiratory Infections

Why in News

Recently, the data released by the **National Health Profile (NHP)-2019** showed a **higher** number of people affected by **Acute Respiratory Infections (ARI)** in the country.



Key Points

- According to the **World Health Organisation (WHO)**, ARI is a **serious ailment** that **prevents normal breathing function.**
- ARI accounted for **69.47%** of morbidity in 2018.

Note:

- It was the **highest** in the communicable disease category leading to 27.21% mortality.
- Andhra Pradesh, Gujarat, Karnataka, Kerala, Tamil Nadu, Uttar Pradesh and West Bengal reported a large number of patients and fatalities as per NHP-2019.

What Happens When You Breathe Polluted Air?

- When you breathe in polluted air, particles and pollutants penetrate and inflame the linings of your bronchial tubes and lungs.
- This leads to respiratory illness such as chronic bronchitis, emphysema, heart disease, asthma, wheezing, coughing and difficulty in breathing.

Impact on Health

- **Children:** Indians face the **double burden of heavy air pollution** in addition to the high rate of ARI which hits children the hardest.
 - The mortality rate among children due to ARI is 2.6 million annually across the world.
- **Pregnant Women:** Prenatal exposure to pollutants increases the risk of pre-term delivery and low birth weight that can lead to developmental disabilities.
- **Senior Citizens:** The progressive declining of body functioning due to old age makes air pollution more fatal for them.
 - They face frequent breathing problems which may lead to respiratory illness such as chronic bronchitis, emphysema, heart disease, asthma, wheezing, coughing, etc.

The existing disease burden with increasing air pollution is deteriorating the human capital of the country and therefore needs to be checked regularly.

National Health Profile

- The 14th edition of the National Health Profile with digital version has been released by the **Central Bureau of Health Intelligence (CBHI)**.
- CBHI has been publishing the National Health Profile **since 2005** and its **digital version since 2015**.
- The purpose is to provide relevant information for planning and decision making on an informed basis to the planners, policymakers, health administrators, research workers and others engaged in raising the health and socio-economic status of the community.

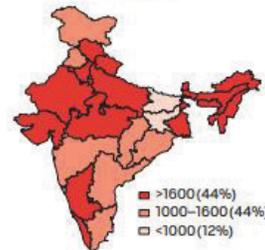
Premature Deaths in India

Why in News

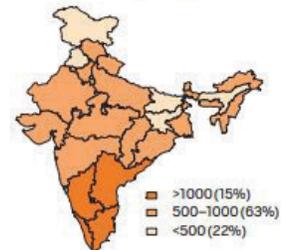
A recently released **study by the Lancet Global Health** shows that **different states in India have different causes for premature deaths** in the country.

- The study shows that **9.7 million people face premature deaths in India (2017)**.
 - Premature deaths are death that occurs before the average age of death in a certain population.
- **Premature deaths** due to various causes **expressed as Years of Life Lost (YLL)** are **unevenly distributed** in terms of the burden on the states.
 - **YLL** estimates the years of potential life lost due to premature deaths.

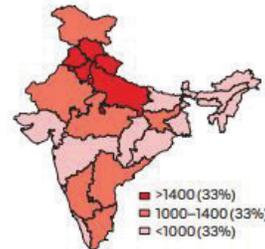
CANCERS (5.44 LAKH DEATHS)



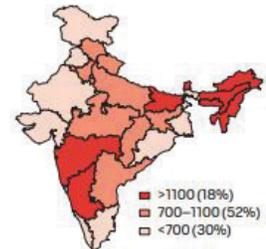
SUICIDE (1.99 LAKH DEATHS)



ROAD TRAFFIC INJURIES (2.75 LAKH DEATHS)



LIVER & ALCOHOL RELATED (2.73 LAKH DEATHS)



Source: The Lancet Global Health

Key Findings

- The **different causes of premature deaths** in India include:
 - **Liver and alcohol related issues:**
 - These are high in the northeastern states, Bihar, Karnataka, and Maharashtra, accounting for 18% of national YLLs.
 - **Suicides:**
 - These are highest in the southern states, accounting for 15% of national YLLs.

Note:

○ Cancer:

- The Northeastern states, Uttar Pradesh, Rajasthan, West Bengal, Haryana, Gujarat, Kerala, Karnataka, and Madhya Pradesh account for 44% of India's cancer burden.

○ Road traffic injuries:

- These are high in the northern states of Uttar Pradesh, Punjab, Uttarakhand, Haryana, and Himachal Pradesh, accounting for 33% of national YLLs.

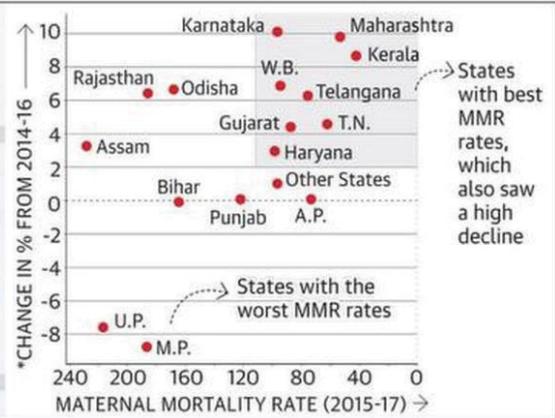
- More than **three-quarters of premature deaths and Disability-Adjusted Life Years (DALY)** occurred in rural areas, and males accounted for 54.3% of all DALYs.

- **DALYs** for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for people living with the health condition or its consequences. Simply, it can be written as **DALY = YLL + YLD**.

- India had 486 million DALYs in 2017.
- DALY rates in rural areas of India are at least twice those of urban areas.

Between life & death

The Maternal Mortality Rate (MMR) of U.P. and M.P. increased by more than 7% in 2015-17 compared to 2014-16, while it declined in other States. Kerala, Maharashtra and Tamil Nadu have the lowest MMR



- Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy.

Key Points

➤ State Wise Progress:

- Kerala secures the **first position in MMR reduction (from 46 to 42)**, followed by Maharashtra (from 61 to 55) and Tamil Nadu (from 66 to 63).
- Karnataka has shown the **highest percentage decline** in MMR.
- The decline has been **most significant in EAG States from 188 to 175**. Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, UP, Uttarakhand and Assam fall under EAG States group.
 - The **independent MMR** data of **Jharkhand (76)**, **Chhattisgarh (141)** and **Uttarakhand (89)** has been released for the **first time** in the SRS 2015-2017 bulletin.
 - **Uttar Pradesh** and **Madhya Pradesh** have shown an **increase by 15 points** each in MMR.
- So far, **11 states** have achieved the **National Health Policy target of MMR** well ahead of 2020. The National Health Policy aims to **reduce Maternal Mortality Ratio (MMR) to 1/1000 live births**.

Reasons for Declining MMR

- Focus on quality and coverage of health services through public health initiatives have contributed majorly to the decline. Some of these initiatives are:
 - LaQshya
 - Poshan Abhiyan
 - Janani Suraksha Yojana
 - Pradhan Mantri Surakshit Matritva Abhiyan
 - Pradhan Mantri Matru Vandana Yojana

Declining Maternal Mortality Ratio in India

Why in News

India's Maternal Mortality Rate (MMR) has **declined from 130 per 1 lakh live births in 2014-2016 to 122 per 1 lakh live births in 2015-2017** as per the recently released **Sample Registration System (SRS) 2015-2017** bulletin for MMR. A decline of 8 points (6.2%) has been observed.

- This indicates that a **loss of 2000 maternal deaths per year** has been prevented.
- The bulletin categorizes the country into **three** groups: **Empowered Action Group (EAG), Southern States and other states**.

Maternal Mortality Ratio

- MMR is the **annual** number of **maternal deaths per 100,000 live births**.

Note:

- The implementation of the **Aspirational District Programme** and inter-sectoral action has helped to reach the most marginalized and vulnerable population.
- Recently launched **Surakshit Matritva Aashwasan Initiative (SUMAN)** especially focuses on zero preventable maternal and newborn deaths.

The continuous progress in reducing the MMR will help the country to achieve the **SDG 3** target of MMR below 70 by 2030.

Cancer Care Infrastructure

Why in News

Recently, the **Parliamentary Standing Committee on Science, Technology, and Environment** submitted its **report** to the Chairman of Rajya Sabha. The committee was **constituted to examine an expanded role of the Department of Atomic Energy to address India's rising cancer burden.**

Key Highlights

- **Incidence Rate in India:** The number of newly diagnosed cases of cancer annually is about 16 lakh. Around 8 lakh people die annually due to cancer.
 - **Prevalence among women**
 - Breast cancer – 140,000 cases,
 - Cervical cancer – 100,000 cases, and
 - Oral cancer – 45,000 cases.
 - **Among men, the top three cancers with the highest incidence are:**
 - Oral cavity – 1,38,000 cases,
 - Cancer of the pharynx – 90,000 cases, and
 - The gastrointestinal tract – 2,00,000 cases.
 - The incidence of cancer is very **high in all North Eastern States** (higher than the national average) for several types of cancer, showing a consistently rising trend over the past few decades.
 - The **International Agency for Research on Cancer** expects cancer deaths in India to rise from 8.8 lakh in 2018 to 13 lakh in 2035.
- **Inadequate Infrastructure**
 - India's cancer care infrastructure is highly inadequate which forces a majority of patients to travel thousands of kilometres for treatment.

- This leads to a **20% higher mortality** among Indian cancer patients than those in countries with a high **Human Development Index (HDI)**.

➤ Mortality to Incidence Ratio:

- In India, the rate stands at **0.68** which is higher than that in countries with very high HDI (at 0.38) and high HDI countries (0.57).

- The report highlights the significance of **India's National Cancer Grid** which is the prominent centre for cancer treatment in the country. It treats over 7,00,000 new cancer cases.

➤ Recommendation

- **Hub and Spoke Model:** The committee recommended this model to enhance the accessibility and reach out to cancer patients nationally.
 - It has a **network of centres (or hubs)** - capable of treating complex forms of cancer. They would be connected to **other centres (spokes)** capable of treating less complex variants of cancers.
 - The underlying idea is to ease access and minimize travel time for patients- as one hub would cover about 4 crore patients and a spoke 50 lakh – 1 crore patients annually.
 - The model is already in **practice in Punjab.**

National Cancer Grid

- National Cancer Grid (NCG) is a **network** of major cancer centers, research institutes, patient groups and charitable institutions across India with the mandate of establishing uniform standards of patient care for prevention, diagnosis, and treatment of cancer, providing specialized training and education in oncology and facilitating collaborative basic, translational and clinical research in cancer.
- It was formed in **August 2012.**

International Agency for Research on Cancer

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

Note:



World Diabetes Day 2019

Why in News

The **World Health Organisation (WHO)** has launched an initiative to expand access to **affordable insulin** on the occasion of **World Diabetes Day (14th November)**.

- This year's **theme** for World Diabetes Day is "**Family and Diabetes**".
- 14th November marks the birthday of **Sir Frederick Banting**, who **co-discovered insulin** along with **Charles Best** in 1922.

Key Points

- **The burden of disease**
 - More than **420 million people** worldwide are affected by **diabetes**.
 - **China** has the **highest number** of patients (11.43 cr.) **followed by India (7.29 cr.)** in 2017.
- **Issues related to treatment**
 - High costs of insulin
 - Insufficient essential medicines and **technologies**
- **Steps taken by Government of India**
 - India's **National Non-Communicable Disease (NCD) Target** is to prevent the rise in obesity and diabetes prevalence.
 - **National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in 2010** to provide support for diagnosis and cost-effective treatment at various levels of health care.

Diabetes

Diabetes is a **Non-Communicable Disease (NCD)** that occurs either when the **pancreas does not produce enough insulin** (a hormone that regulates blood sugar, or glucose), or when the **body cannot effectively use the insulin** it produces.

➤ Types

- **Type 1 diabetes:** It is also known as **juvenile diabetes** (as it mostly affects children of age 14-16 years), this type occurs when the body fails to produce sufficient insulin. People with type 1 diabetes are **insulin-dependent**, which means they must take artificial insulin daily to stay alive.
- **Type 2 diabetes:** It affects **the way the body uses insulin**. While the body still makes insulin, unlike in type 1, **the cells in the body do not respond** to it as effectively as they once did.
 - The **population with 45 and above age group** is the most affected with it.
 - This is the **most common type** of diabetes and it has strong **links with obesity**.
- **Gestational diabetes:** This type **occurs in women during pregnancy** when the body sometimes becomes less sensitive to insulin. Gestational diabetes does not occur in all women and usually resolves after giving birth.
- Diabetes **affects the five major organs** namely, Kidney, Heart, Blood vessels, Nervous System, and Eyes (retina).
- The **factors responsible** for the increase in diabetes are an unhealthy diet, lack of physical activity, harmful use of alcohol, overweight/obesity, tobacco use, etc.



Note:



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Security

Highlights

- Special Protection Group
- INS Baaz
- Proposal for Merging Assam Rifles and Indo-Tibetan Border Police
- Def Connect 2019
- Tiger Triumph

Special Protection Group

The central government has withdrawn the Special Protection Group (SPG) cover of the President of Congress.

- The SPG security cover provides **security** to the **Prime Minister of India, former Prime Minister (PM)** and their **immediate family members**.
- It was **raised in 1985**, a year after Indira Gandhi was assassinated by her bodyguards.
- Recently, the **Special Protection Group (Amendment) Bill, 2019** has been introduced in Lok Sabha to amend the **Special Protections Group Act, 1988**.

INS Baaz

Why in News

Recently, the Navy Chief Admiral Karambir Singh visited **INS Baaz**, the **southernmost air station of the Indian Armed Forces**.

- The Indian Naval Ship (INS) Baaz is **located at Campbell Bay on the Great Nicobar island**, the southernmost and largest island of the Nicobar islands, in the Union Territory of Andaman and Nicobar Islands.
- It was **commissioned in July 2012**.
- It is a **part of the Andaman and Nicobar Command**, the only tri-services formation of the Indian Armed Forces that was started in 2001.

Functions of INS Baaz

- Helps in **building maritime domain awareness** by providing information via airborne surveillance using aircraft and Unmanned Aerial Vehicles (UAVs).
- **Ensures maritime security** in the Bay of Bengal and the Andaman Sea and substantially enhances the Indian Navy's maritime surveillance capability.
- **Assists the local populace in times of need** such as facilitating evacuation during medical emergencies.

Significance of the Location

- INS Baaz is less than 250 km by sea from Banda Aceh in Indonesia, enhancing its strategic relevance. It is also **close to the Strait of Malacca**.
- The Andaman & Nicobar Islands are **strategically important for India's national security** as they provide a critical capability to monitor sea areas in the region.
- The location has been described as **India's "window into East and Southeast Asia"**, and is in **close vicinity**



Note:



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of the Six Degree Channel, also called the Great Channel, one of the Indian Ocean's busiest shipping lines, carrying strategic cargo to East Asian countries.

Proposal for Merging Assam Rifles and Indo-Tibetan Border Police

Why in News?

Recently, the **Ministry of Home Affairs (MHA)** proposed the merger of Assam Rifles with the **Indo-Tibetan Border Police (ITBP)**.

Key Points

- Currently, the **Assam Rifles** falls under the **administrative control** of the **Ministry of Home Affairs** and **operational control** under the **Ministry of Defence**.
- This duality of administrative control and operational control leads to problems of coordination.

Assam Rifles	Indo-Tibetan Border Police
<ul style="list-style-type: none"> ➤ The Assam Rifles came into being in 1835. ➤ It plays an important role in internal security (counter insurgency and border security operation). ➤ It also provides aid to civilians in times of emergency. ➤ Since 2002 it has been guarding the Indo-Myanmar. ➤ Headquarters of Assam Rifles is located at Shillong. 	<ul style="list-style-type: none"> ➤ Indo-Tibetan Border Police (ITBP) was raised in 1962. ➤ ITBP is deployed on border guarding duties from Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh covering 3488 km of Sino-India Border. ➤ Being the first responder for natural disasters, ITBP has been carrying out numerous rescue and relief operations across the country. ➤ Headquarters of ITBP is located at New Delhi.

Def Connect 2019

The **Ministry of Defence** organised the inaugural session of '**Def Connect 2019**' to showcase the

accomplishments of the Innovation for Defence Excellence (iDEX) initiative in New Delhi.

- **iDEX portal** and **Defence India Start-up Challenge (DISC)-III** was also launched.

Innovation for Defence Ecosystem

- **iDEX, launched in 2018**, is an ecosystem to foster innovation & technology development in Defence and Aerospace by engaging innovators & entrepreneurs to deliver technologically advanced solutions for **modernizing Indian Military**.
- **Core Objectives:**
 - **Indigenization:** Rapid development of new, indigenized and innovative technologies.
 - **Innovation:** Creates a culture of engagement with innovative startups to encourage co-creation.
- It provides **funding/grants** to MSMEs, start-ups, individual innovator, R&D institutes and academia to carry out research and development.
- **iDEX is funded and managed by "Defence Innovation Organisation (DIO)".**
 - DIO is a **not for profit organisation** formed under section 8 of the Companies Act 2013.
 - It is funded by Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL).
 - It provides high level policy guidance to iDEX.
- **iDEX portal** was launched to provide **wider publicity and better visibility of iDEX activities**.

Defence India Startup Challenge

- DISC is aimed at supporting Startups/MSMEs/Innovators to create prototypes and/or commercialize products/solutions in the area of National Defence and Security.
- It has been **launched by the Ministry of Defence in partnership with Atal Innovation Mission (AIM)**.
 - **AIM** is the **NITI Ayog's initiative** to promote a **culture of innovation** and entrepreneurship in the country.
- The vision of the DISC is two-fold:
 - **Prototyping:** Help create functional prototypes of products/technologies relevant for national security, and spur fast-moving innovation in Indian defence sector.
 - **Commercialization:** Help new tech products/technologies find a market and early customer in the form of the Indian Defence Establishment.

Note:

- Under **DISC-III**, three challenges from the Army, Navy and Air Force were thrown open to prospective start-ups.
- Under the program, the start-ups, Indian companies and individual innovators (includes research & academic institutions) can participate.

Tiger Triumph

The **first-ever India-US joint tri services Humanitarian Assistance and Disaster Relief (HADR) exercise**,

named **'Tiger Triumph'**, was from **13th - 21st November, 2019**.

- The exercise was conducted off **Visakhapatnam** and **Kakinada coasts** in **Andhra Pradesh**.
- It aims to develop interoperability for conducting HADR operations.
- **Other joint exercises**
 - **Military training:** Yudh Abhyas and Vajra Prahar
 - **Air Forces:** Cope India
 - **Naval Exercise along with Japan:** Malabar



Note:



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Miscellaneous

Highlights

- African Swine Fever
- UNESCO's Network of Creative Cities
- Iran's New Oil Field
- Ptilosaurs
- Tort Law and Polluter Pays Principle
- Conference of Central and State Statistical Organizations
- NEERI-IndAIR
- Kyasanur Forest Disease
- Kalapani Territory
- Cyclone Bulbul
- Exercise Samudra Shakti
- Pamba-Achankovil-Vaippar River Project
- Fordow Nuclear Facility
- Shilpotsav – 2019
- Liberhan Commission
- National Waterway-2
- Tawang Festival
- Danakil Depression
- Glyphosate

African Swine Fever

Why in News

Recently, **China** has witnessed rise in pork prices because of the rampant spread of **African Swine Fever (ASF)**. The country is the **world's largest pork (meat from a pig) producer**.

About ASF

- ASF is a **highly contagious** and **fatal** animal disease that infects **domestic and wild pigs**. It leads to an acute form of hemorrhagic fever. It was **first detected in Africa** in the 1920s.
- The **mortality is close to 100%** and since the fever has **no cure**, it can only be stopped from spreading by culling the animals.

- ASF is **not a threat to human beings** because it only spreads from animals to other animals.

Key Points

- Historically, outbreaks have been reported in Africa and parts of Europe, South America and the Caribbean.
- However, more recently (since 2007), the disease has been reported in multiple countries across Africa, Asia and Europe, in both domestic and wild pigs.

African swine fever (ASF)



The infographic provides a comprehensive overview of African Swine Fever (ASF). It features a central image of a pig and a tick, with various text boxes and icons explaining the disease's characteristics, transmission, and impact. Key elements include:

- Transmission:** ASF can be transmitted through direct contact between sick and healthy animals, indirectly through infected meat, and via biological vectors like ticks and contaminated inanimate objects.
- Resistance:** The virus is highly resistant to low temperatures and can survive for extended periods in blood, feces, and tissue.
- Contagiousness:** ASF is a highly contagious, transboundary viral disease (Asfarviridae family, Asfivirus genus).
- Human Impact:** It can affect both domestic and wild pigs (wild boars and peccaries) but is harmless to humans.
- Global Spread:** Global alarms were raised in August 2018 when an ASF outbreak was first reported in China, which then spread to Mongolia, Vietnam, Cambodia, and Hong Kong.
- Mortality:** According to the OIE, 24% of member countries (48 out of 200) have reported the disease as present since 2016. More than 2.5 million domestic pigs have died or been killed—67.6% of them in Asia over the past 10 months.
- Outbreaks:** Between 2016 and May 2019, there were a total of 10,211 outbreaks in Africa, Europe, and Asia.
- Clinical Signs:** Typical signs are similar to classical swine fever (which is endemic in several countries of the Americas); therefore, a laboratory test is required to distinguish them.
- Peracute Form:** The peracute form of the virus causes sudden death with few signs.
- Symptoms:** Symptoms include fever, loss of appetite, low energy, abortion, internal hemorrhages, visible hemorrhages, and even death.

Note:

- ASF is a disease listed in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code and thus, reported to the OIE.

World Organisation for Animal Health

- It is an **intergovernmental organisation** responsible for improving animal health worldwide.
- In 2018, it had a **total of 182 member** countries. India is one of the member countries.
- OIE **develops normative documents** relating to rules that member countries can use to protect themselves from the introduction of diseases and pathogens. One of them is the Terrestrial Animal Health Code.
- OIE standards are recognised by the **World Trade Organization** as reference international sanitary rules.
- It is headquartered in **Paris, France**.

UNESCO's Network of Creative Cities

Why in News

- **United Nations Educational, Scientific and Cultural Organization (UNESCO)** has included **Mumbai and Hyderabad** in its network of 'Creative Cities' among the **66 cities** selected on the occasion of **World Cities Day 2019 (31st October)**.
 - With the addition of 66 new cities, the UNESCO Creative Cities Network has total 246 cities now.
- **Mumbai** has been designated as **Creative City of Films** and **Hyderabad** as a **Creative City of Gastronomy**.
 - Earlier, Indian cities like **Chennai and Varanasi** have been included in UNESCO **Cities of Music** while **Jaipur** has been included in the **City of Crafts and Folk Arts**.

Significance

- By joining the UNESCO Creative Cities Network (UCCN), the cities pledge to **share** best practices and **develop** partnerships involving public and private sectors as well as civil society to **strengthen the creation, production and distribution of cultural activities**.

UNESCO Creative Cities Network (UCCN)

- It was created in **2004**.

- **Currently (2019), 246 cities make up this network** which aims towards a common objective of placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level.
- The UNESCO Creative Cities aims to achieve **Sustainable Development Goals** through innovative thinking and action.
 - Also, cities are championing sustainable development actions that directly benefit communities at the urban level.
 - **Sustainable Development Goal 11** aims for Sustainable Cities and Communities.
- The network covers **seven creative fields**: crafts and folk arts, media arts, film, design, gastronomy, literature and music.

World Cities Day 2019

- The **United Nations General Assembly** has designated the **31st of October** as World Cities Day.
- The **theme** for World Cities Day, 2019 is, **"Changing the world: innovations and a better life for future generations"**.

Iran's New Oil Field

Iran has discovered a **new oil field** in its southwestern province of **Khuzestan**. The field covers 2,400 square kilometres and contains over 50 billion barrels of crude.

- The new oil field could become **Iran's second-largest field** after one containing 65 billion barrels in **Ahvaz (capital of Khuzestan Province)**.
- The discovery has come at a time **when Iran is facing American sanctions** against it after the US pulled out of the **2015 nuclear deal**.



Note:

Iran's Oil Reserves

- Iran **already has proven oil reserves** of roughly **150 billion barrels**.
 - Oil reserves refer to crude that's economically feasible to extract.
 - **Khuzestan** is home to Iran's crucial oil industry.
- Iran currently has the **world's fourth-largest proven deposits of crude oil** after Venezuela, Saudi Arabia and Canada.
 - It also has the **world's second-largest deposits of natural gas** after Russia.
- It shares a **massive offshore field in the Persian Gulf** with Qatar.
 - "Offshore" refers to the development of oil fields and natural gas deposits under the ocean.

Pliosaurus

Recently, the bones of pliosaurus were discovered in Poland.



- Pliosaurus are the **predatory reptiles** that lived in seas over 150 million years ago.
- They are one of the **largest aquatic carnivorous reptiles** that have ever lived and are often referred to as **sea monsters**.
- They had powerful large skulls and massive jaws with large sharp teeth.

Tort Law and Polluter Pays Principle

Why in News

- The Supreme Court has directed the governments of Punjab, Haryana and Uttar Pradesh to prevent stubble burning. The failure to implement the Supreme Court's directive may force respective state governments to pay hefty penalties under **tort law**.
- The court has also directed that the **Polluter Pays Principle** applies to all states and local bodies.

Tort Law

- Tort law is the set of laws that enables people to seek **compensation for wrongs committed against them**.

- When someone's actions cause some type of harm to another, whether it be physical harm to another person or harm to someone's property or reputation, harmed or injured person or entity may seek damages through the court.
- Generally, the compensations are monetary awards ordered by the court to be paid to an injured party, by the party at fault.
- The **types of damages** that may be awarded by the court for civil wrongs, called "**tortious conduct**" of an individual or entity include:
 - Reimbursement for property loss or property damage
 - Medical expenses
 - Pain and suffering
 - Loss of earning capacity
 - Punitive damages

Polluter Pays Principle

- It is the commonly accepted practice that those who produce pollution should bear the cost of managing it to prevent damage to human health or the environment. For example, a factory that produces a potentially poisonous substance as a byproduct of its activities is usually held responsible for its safe disposal.
- It is **part** of the **Rio Declaration (1992)** which gives broader principles to guide sustainable development worldwide.

Conference of Central and State Statistical Organizations

The 27th Conference of Central and State Statistical Organizations (COCSSO) was inaugurated at Kolkata, West Bengal on 11th November, 2019.

- The Conference is **organized by the Ministry of Statistics and Programme Implementation (MoSPI)** every year. It was first organized in the year 1971.
- It is a **major national forum** for coordination between the Central and State Statistical Agencies with the objectives of putting in coordinated efforts for making available reliable and timely statistics to planners and policy makers.
- The **theme** for 2019 is the "**Sustainable Development Goals (SDGs)**".

Note:

- In September 2016, MoSPI developed a **National Indicator Framework (NIF)** for monitoring of SDGs.
 - It needs to be noted that the **NITI Aayog** has also developed the **SDG India Index** that aims to measure India and its States' progress towards the SDGs for 2030.
- The discussion at the conference will be centred around the enabling of the State Governments to develop their State Indicator Frameworks in line with the NIF and to strengthen the statistical system of the country.

Sustainable Development Goals

- The Sustainable Development Goals (SDGs) also known as the **Global Goals** were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.
- The **17 SDGs** are integrated—that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.
- The SDGs **replace the Millennium Development Goals (MDGs)**, which started a global effort in 2000 to tackle the indignity of poverty.

NEERI-IndAIR

Why in News

The **Council of Scientific Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI)** recently launched the **country's first interactive online repository** named as **IndAIR (Indian Air quality Studies Interactive Repository)**.

Key Points

- The aim of the project is **to make air quality research available to everyone**. It presents these studies in an easily accessible web format for the media, researchers, and academics.

TRACKING AIR POLLUTION STUDIES IN INDIA

- First air pollution study in India was done for Bengal Smoking Nuisance Act in 1905
- Studies by SC Roy from Meteorological Office examined cloud seeding for dealing with famine-ridden areas in 1954
- In 1970, Bhabha Atomic Research Centre, Central



- Public Health Engineering Research Institute (now NEERI) and National Productivity Council were assigned task of fabricating air pollution monitoring equipment
- Prior to that, dust and Ringelmann's charts were used to study plume from stack and decide on pollution levels



- Seminars and events to discuss ills of air pollution began wholeheartedly in 1970s...
- ..But studies were done as early as 1950s by key researchers in India
- Delhi-NCR has most number of studies – **262** – on air pollution

- It is the **first** comprehensive effort to enlist existing Indian research and analysis on **air pollution, its causes and effects**.
- IndAIR has archived scanned documents from pre-Internet times (1950-1999), research articles, reports and case studies, and over 2,000 statutes to provide the history of air pollution research and legislation in the country.
 - It includes all major legislations in the country dating back to 1905.

Council of Scientific & Industrial Research- National Environmental and Engineering Research Institute

- CSIR-NEERI is a research institute **created and funded by the Government of India**.
- It functions under the **Ministry of Science & Technology**.
- It was established in Nagpur in 1958 with a focus on water supply, sewage disposal, communicable diseases and to some extent on industrial pollution and occupational diseases found common in post-independent India.

Kyasanur Forest Disease

Why in News

Recently, the **Karnataka State Government** proposed to establish a **'monkey park'** in Malnad region to contain the problem of crop-raiding primates.

- Environmentalists fear that this may trigger infections like **Kyasanur Forest Disease (KFD)** and also upset the natural food chain.

Kyasanur Forest Disease

- It is caused by **Kyasanur Forest Disease Virus (KFDV)**, a member of the virus family Flaviviridae.

Note:



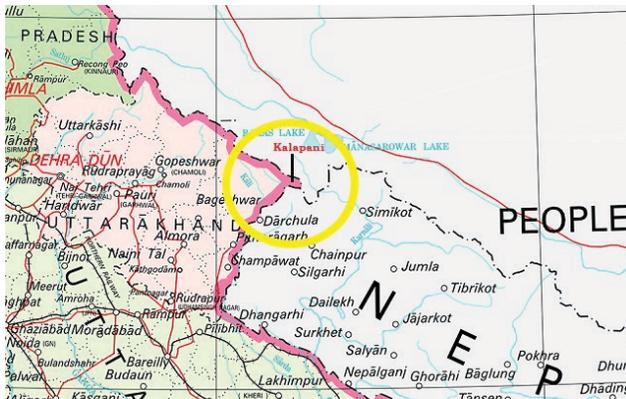
- It was **first identified in 1957** in a sick monkey from the **Kyasanur Forest in Karnataka**. Since then, **between 400-500 humans cases per year** have been reported.
- KFD is **endemic to the Indian state of Karnataka**.
- Rodents, Shrews and Monkey are common host for KFDV after being bitten by an infected tick.
- It **may infect humans** after a tick bite or contact with an infected animal (a sick or recently dead monkey).
- There is **no specific treatment** for KFD although a **vaccine is available**.

Kalapani Territory

Why in News

Recently, released political map of India has made the **Kalapani territory** as the bone of contention between **India and Nepal**.

- The political map has been released to mark the bifurcation of the state of Jammu and Kashmir (J&K) into the Union Territories of J&K and Ladakh.



Key Points

- In the latest political map, India **reiterated its claims** on the Kalapani region which is the part of the Pithoragarh district of **Uttarakhand**.
- It is situated on the **Kailash Mansarovar route**.
 - The **Kali River** in the Kalapani region demarcates the **border between India and Nepal**.
 - The **Treaty of Sugauli** signed by the **Kingdom of Nepal and British India** (after Anglo-Nepalese War) in 1816 marked the Kali River as Nepal's western boundary with India.
 - The **discrepancy** in locating the **source of the river** led to **boundary disputes** between India

and Nepal, with each country producing maps supporting their own claims.

- **Susta area** is one of the **disputed territories** between **India (Uttar Pradesh) and Nepal**.
 - Susta is located on the bank of the **Gandak river** (called **Narayani river** in **Nepal**).
 - The **change of course by the Gandak river** is the main reason for disputes in the Susta area.
 - The area is **very fertile for agriculture** because of the alluvial soil brought by the river.

Kali River

- It is also known as Sharda river or Kali Ganga in Uttarakhand.
- It joins Ghagra river in Uttar Pradesh, which is a tributary of Ganga.
- River Projects: Tanakpur hydro-electric project, Chameliya hydro-electric project, Sharda Barrage.

Cyclone Bulbul

Why in News

The **India Meteorological Department (IMD)** has issued an **orange alert** in Indian states of **West Bengal and Odisha** over **Cyclone Bulbul** in the **Bay of Bengal**.

- The depression over the **east-central and southeast Bay of Bengal and North Andaman Sea** has turned into a **severe** cyclonic storm.
- The landfall of the cyclone is expected between **Sagar Islands (West Bengal) and Khepupara (Bangladesh)**.
- The cyclone **has been named** by **Pakistan**.

Stage of Warning	Colour Code
Cyclone Alert	Yellow
Cyclone Warning	Orange
Post Landfall Out Look	Red

Exercise Samudra Shakti

Why in News

Recently, **India and Indonesia** have carried out the bilateral maritime exercise "**Samudra Shakti**" in the **Bay of Bengal**.

Note:



- The joint exercises focussed on surface warfare exercises, air defence exercises, weapon firing drills, helicopter operations, and boarding operations.
- **Garuda Shakti** is the **joint military exercise** between **India and Indonesia**.

Pamba-Achankovil-Vaippar River Project

Why in News

The Kerala government is preventing the implementation of the Pamba-Achankovil-Vaippar river link project as it will lead to diversion of water from Kerala to Tamil Nadu.

Project

- The project was **envisaged in 1995** for producing 500 MW of **power for Kerala and irrigating the lands in Tamil Nadu**.
- The river link proposal envisages the diversion of water from the Pamba and Achankovil rivers in Kerala to the Vaippar basin in Tamil Nadu.

Pamba River

- It rises at an altitude of 1650m in the Peermade Plateau in the **Idukki district of Kerala**.
- It joins the **Arabian Sea** branching into a number of channels. The entire catchment area of Pamba lies in Kerala state.

- The Pamba basin is bounded on the east by Western Ghats and on the west by Arabian Sea.

Achankovil River

- The river rises in the **Western Ghats in Pathanamthitta district of Kerala** at an elevation of 700m.
- It **joins the Pamba River** at Veeyapuram.
- The river basin extends over an area of 1484 km² and lies entirely in Kerala State.

Vaippar River

- The river rises from the eastern slopes of the **Varushanad hill range** of the Western Ghats at an elevation of about 1500m in **Tirunelveli district of Tamil Nadu**.
- It flows in an easterly and southeasterly direction before **joining the Gulf of Mannar**.
- The basin is bounded on the west by the Western Ghats, on the east by the Bay of Bengal.

Fordow Nuclear Facility

Why in News?

Recently, **Iran** has resumed uranium enrichment at its **underground Fordow plant** located near Tehran.

Key Points

- The recent move of Iran is a **step away** from the agreement it signed in 2015 with a group of world powers to limit its nuclear activities in exchange for sanctions relief.
 - In 2015, Iran, with the P5+1 group of world powers



Note:



- the US, UK, France, China, Russia and Germany agreed on a long-term **Joint Comprehensive Plan of Action (JCPOA)**, also known as Iran Nuclear Deal.
- Under the JCPOA, Iran agreed to limit its nuclear activities by stopping uranium enrichment and allowing the international agencies to inspect its nuclear facilities in return for the lifting of economic sanctions.
- In May 2018, the US pulled out of Iran Nuclear Deal and it **imposed sanctions on Iran and nations** doing the significant amount of trade with Iran.

Shilpotsav – 2019

- Recently, Shilpotsav – 2019 held in New Delhi.
- It is the **annual fair** of artisans from across the country, belonging to the **weaker sections of the society**.
- The artisans are assisted by the **apex corporations** of the **Ministry of Social Justice and Empowerment**.
- The range of products in this **fair** include - silk sarees, durries, readymade garments, terracotta products, jute products, marble artefacts and handloom etc.

Liberhan Commission

Why in News

The **Supreme Court** in its judgement in **Ayodhya land dispute case affirmed the conclusion of the Liberhan Commission (1992)** that demolition of the Babri Masjid was planned.

- However, the Supreme Court has cleared the way for the construction of a Ram Temple at the disputed site at Ayodhya, and directed the Centre to allot a 5-acre plot to the Sunni Waqf Board for building a mosque.

Liberhan Commission

- Liberhan Commission of Inquiry was appointed on 16th December, 1992, 10 days after the demolition of the Babri Masjid.
- It was a **one man commission** headed by **Justice Manmohan Singh Liberhan**.
- It was assigned the task of probing the sequence of events that led to the occurrences at the Ram Janmabhoomi-Babri Masjid complex on 6th December, 1992.

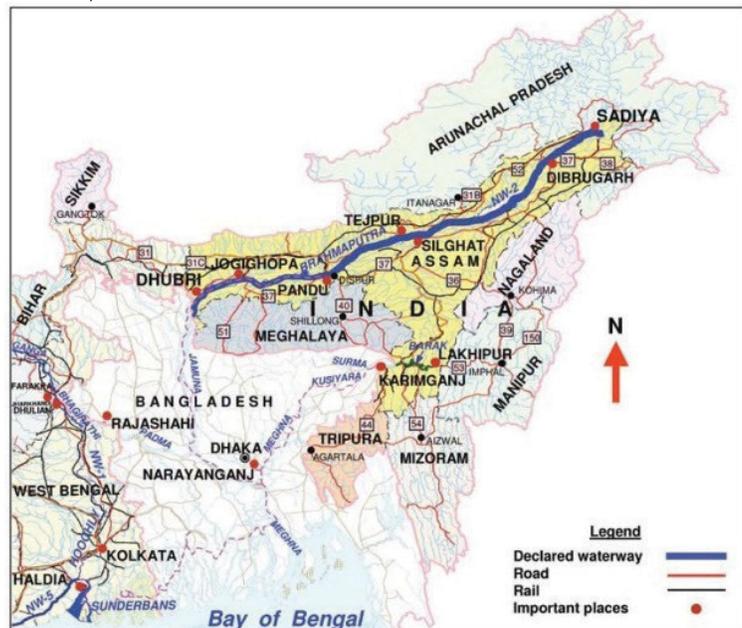
- Initially, the Commission had to submit the report within 3 months. However, with 48 extensions, it became the **longest Commission of Inquiry in the history of Independent India**.
- The report recommended a law providing for exemplary punishment for misusing religion to acquire political power.
 - It also said that the demolition of the Babri Masjid was planned, systematic, and was the intended outcome of a climate of communal intolerance deliberately created by religious extremists.

National Waterway-2

- The first-ever container cargo movement on Brahmaputra (National Waterway-2) will sail via **National Waterway-1 (River Ganga)**, **Indo-Bangladesh Protocol (IBP) route** and **National Waterway-2 (River Brahmaputra)**.

National Waterway-2

- The **Sadiya-Dhubri** stretch of the **Brahmaputra river** (891 Km) declared as **National Waterway-2** in 1988 is located in the state of **Assam**.
- As per the **National Waterways Act, 2016**, 111 waterways have been declared as NWs.
 - **National Waterway-1 (Prayagraj-Haldia)** with length 1620 km is the **longest** National waterway in India.



Note:

Tawang Festival

Why in News

Recently, Tawang Festival was concluded in **Arunachal Pradesh**.

- Tawang Festival is an annual festival which was **started in 2012** and celebrates Arunachal's rich cultural heritage, including Buddhist religious functions, traditional dances, indigenous sports, films and documentaries, food festivals and more.
- It starts with the religious tradition known as "**Sebang**" which is the process of monks of Tawang town moving to the festival spot in rallies from the **Tawang monastery**.
- Major attractions are the **Dance of Yak** and the **Aji-Ihamu Dance**.
- Arunachal Pradesh also hosts **Orange Festival**, **Ziro** musical festival, **Bascon organic** festival and **Mechuka** Adventure festival.

Other festivals celebrated by the tribes of Arunachal Pradesh

Festivals	Tribes
Mopin and Solung	Adis
Lossar	Monpas
Boori-boot	Hill Miris and Sherdukpens
Dree	Apatanis
Si-Donyi	Tagins
Reh	Idu-Mishmis
Nyokum	Nishs

Danakil Depression

Why in News

A recent study stated that an **active and naturally occurring life cannot be sustained at Danakil, Ethiopia**.

- The **two barriers** to the survival of life in the Danakil region are:
 - **Magnesium-dominated brines** that cause cells to break down.
 - An environment having simultaneously **very low pH and high salt**, a combination that makes adaptation highly difficult.



Danakil Depression

- It is located in **northeastern Ethiopia**.
 - At the northern end of the Great Rift Valley, and separated by live volcanoes from the Red Sea.
- Danakil is **one of the world's lowest places** at 100 metres below sea level.
- The plain was **formed by the evaporation of an inland water body**.
- All the water entering Danakil evaporates, and no stream flows out from its extreme environment.
- It is covered with more than 10 lakh tonnes of salt.

Glyphosate

Why in News

A German pharma company is facing thousands of lawsuits over its **herbicide** products which are based on a compound called **glyphosate**.

- Herbicide is an agent, usually chemical, for killing or inhibiting the growth of unwanted plants, such as residential or agricultural weeds and invasive species.

Glyphosate

- **Scientific Name:** It was developed in **1970**, and its scientific name is N-(phosphonomethyl) glycine under the **International Union of Pure and Applied Chemistry (IUPAC)** system of nomenclature.
- **Application:** It is applied to the **leaves of plants to kill weeds**.
- **Usage in India**
 - It has a very good market size in the tea sector of West Bengal and Assam.

Note:

- Presently, its consumption is **highest in Maharashtra** as it is becoming a key herbicide in sugarcane, maize and many fruit crops.

➤ **Concerns**

- In 2015, the World Health Organization published a

study that found glyphosate “probably carcinogenic to humans”. However, no advisory has been issued yet.

- **France, Italy, and Vietnam banned** its use after the finding.



Note:



drishti

