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Current Affairs
(Consolidation)

October 2019
(Part – II)

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Polity and Governance

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Second Assembly of ISA

Recently, the **Second Assembly of the International Solar Alliance (ISA)** was hosted by the **Ministry of New and Renewable Energy** in New Delhi.

➤ **India** (represented by the Minister for New and Renewable Energy and Power) is the **President** and **France** is the **Co-President** of the ISA Assembly.

➤ Till now, 81 countries of the 121 prospective member countries have signed the Framework Agreement of the ISA. Of these, **58 countries have ratified** the same.

- ○ During the first Assembly of the ISA, an Indian resolution to extend the Membership of the organization to all countries that are members of the United Nations was adopted.
- ○ The Assembly is the **supreme decision-making body** of the ISA and gives directions on various administrative, financial and programme related issues.

➤ For building the domestic capacity of the ISA member countries, several programmes have been initiated:

- ○ **STAR-C** is a **Solar Technology Application Resource Centre** project.
- ○ **Infopedia** is an **online platform** dedicated to the dissemination of information, best practices, and knowledge on Solar Energy.
- ○ ISA has significantly extended outreach and has partnered with over 40 organizations (including the United Nations (UN), Multilateral Development Banks (MDBs), Development Finance Institutions (DFIs), etc.).

International Solar Alliance

➤ The ISA, is an **Indian initiative** that was launched by the Prime Minister of India and the President of France in 2015 in Paris, France on the side-lines of the Conference of the Parties (COP-21).

➤ The alliance is open to 121 solar resource-rich countries lying fully or partially between the tropic of Cancer and tropic of Capricorn as prospective members.

- ○ The Government of India has also allotted 5 acres of land to the ISA in **National Institute of Solar Energy (NISE) campus, Gurugram** and has released a sum of Rs. 160 crore for creating a corpus fund, building infrastructure and meeting day to day recurring expenditure of the **ISA up to the year 2012-22**.

➤ The overarching objective of the ISA is to collectively address key common challenge of scaling up of solar energy in member countries.

National Institute of Solar Energy

➤ National Institute of Solar Energy (NISE), an autonomous institution of the Ministry of New and Renewable (MNRE), is the **apex National R&D institution in the field of Solar Energy**.

➤ It is located in **Gurugram, Haryana**.

Whistleblowers Protection Act

The recent accusations raised against the Infosys Chief Executive Officer (CEO) and other senior officials have brought back the focus on whistleblowers' safety in India.

Background

➤ **Whistleblowing** is defined as an **act of disclosing information** by an employee or any concerned

stakeholder about an illegal or **unethical conduct** within an organization.

- ○ A whistleblower is a person who informs about a person or organization engaged in such illicit activity.

➤ In 2004, the **Supreme Court of India** directed the Central government that, 'administrative machinery be put in place for acting on complaints from whistleblowers till a law is enacted.'

- ○ The government, in response, notified a resolution in 2004 named, **'Public Interest Disclosure and Protection of Informers Resolution (PIDPIR)'**.
- ○ This resolution gave the Central Vigilance Commission (CVC) the power to act on complaints from whistleblowers.

➤ In 2007, the report of the **Second Administrative Reforms Commission** also recommended that a **specific law** needs to be enacted to protect whistleblowers.

➤ The **UN Convention against Corruption** to which **India is a signatory (although not ratified) since 2005,** encourages states to facilitate reporting of corruption by public officials and provide protection for witnesses and experts against retaliation.

- ○ The Convention also provides safeguards against victimization of the person making the complaint.

➤ To conform with such regulations, in **2011 Whistleblowers Protection Bill** was proposed which **finally became a law in 2014**.

➤ The **Companies Act, 2013**, as well as the **Securities and Exchange Board of India** regulations have made it **mandatory for companies to take notice of all such complaints**.

Key Highlights of Whistleblower Protection Act, 2014

➤ The Act establishes a mechanism to receive complaints related to disclosure of allegations of corruption or wilful misuse of power or discretion, against any public servant, and to inquire or cause an inquiry into such disclosure.

➤ The Act also provides adequate **safeguards against victimization** of the person making such complaints.

➤ The law **does not allow anonymous complaints** to be made and clearly states that no action will be taken by a competent authority if the complainant does not establish his/her identity.

➤ The **maximum time period** for making a complaint is **seven years**.

➤ The Act is not applicable to the **Special Protection Group (SPG) personnel** and officers, constituted under the **Special Protection Group Act, 1988**.

➤ Any person aggrieved by any order of the Competent Authority can make an appeal to the concerned High Court within a **period of sixty days** from the date of the order.

➤ Any person who **negligently or mala-fidely reveals the identity** of a complainant will be **punishable with imprisonment** for a term extending up to 3 years and a fine which may extend up to Rs 50,000.

➤ The Whistleblowers Act **overrides** the **Official Secrets Act, 1923** and allows the complainant to make public interest disclosure before competent authority even if they are violative of the later act but not harming the sovereignty of the nation.

- ○ The Official Secrets Act was enacted in 1923 by the British to keep certain kinds of information confidential, including, but not limited to, information involving the affairs of state, diplomacy, national security, espionage, and other state secrets.

Postal Ballot Facilities for Absentee Voters

The **Election Commission of India** has recently made efforts to ensure that the electors who are **unable to come to polling booth/ absentee voters** are facilitated in every way to ensure their **wider participation in the electoral process**.

➤ Such **absentee voters** include **Persons with Disabilities (PwD), Senior citizens, Persons employed in essential services** (railways, state transport, and aviation, etc.)

Steps Taken to Ensure Wider Participation

➤ The Government amended the Representation of the People's Act, 1951 (RP Act), and the Conduct of Election Rules, 1961. These amendments are as follows:

- ○ A concept of **'absentee voter'** has been introduced and defined for the elections;
  - • 'Absentee voter' means a person belonging to such class of persons as may be notified, under **clause (c) of section 60 of the RP Act, 1951** and who is **employed in essential services** as mentioned in the said notification, and includes an elector belonging to the **class of senior**

Note:

citizens (**80 years or above) or persons with disabilities**;

- These two categories of voters – 'senior citizen' and 'PwD electors' can **vote either as an absentee voter or as a regular voter on the poll day**.

➤ The Commission is also taking a number of steps such as **Systematic Voters' Education and Electoral Participation (SVEEP) initiatives** to make the electors aware of this new facility so that such electors can exercise their voting right in the manner they intend to do.

- ❍ **SVEEP** is the flagship program of the **Election Commission of India for voter education**, spreading **voter awareness and promoting voter literacy** in India.

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Representation of the People Act, 1951

➤ This Act provides for the actual conduct of elections in India. It deals with the following matters :
- ❍ Details like Qualification and Disqualification of members of both the Houses of Parliament and the State Legislatures,
- ❍ Administrative machinery for conducting elections,
- ❍ Registration of Political parties,
- ❍ Conduct of Elections,
- ❍ Election Disputes,
- ❍ Corrupt practices & Electoral offences, &
- ❍ By-elections.

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Jiyo Parsi Scheme

The **Ministry of Minority Affairs** initiated the **Jiyo Parsi Scheme in 2013** to check the declining Parsi population.

➤ The **main objective** of the scheme is to arrest the declining trend of the Parsi population by adopting a scientific protocol and structured interventions, in order to stabilize their population and thereby increasing the population of Parsis in India.

➤ The scheme comprises of **three components**:
- ❍ **Advocacy Component** that includes workshops, advertisement campaigns to create awareness about the dwindling numbers in the community.
- ❍ **Health of the Community Component** which covers Childcare and Creche support, assistance to elderly, etc.

- ❍ **Medical Component** includes financial assistance for the detection and treatment of infertility, fertility treatment, etc.

➤ The scheme also offers **cash assistance** to encourage Parsi couples to have children.

➤ It is a **100% Central Sector Scheme**.

Parsi Community

➤ Parsi community **follow Zoroastrianism**, which is one of the **world's oldest monotheistic religions**. Zoroastrianism was **founded by the Prophet Zoroaster** (or Zarathustra) in ancient Iran around the 6th-7th century.

➤ Nowruz (also spelled as Navroz), the **Iranian New Year** is **celebrated in India by the Parsi community** on **March 21**.

➤ Zoroastrians (Parsis) are **among the six religious communities notified as minority communities** by the Union Government. The other five are: Muslims, Christians, Sikhs, Buddhists, and Jains.

➤ **Decline in Population:**
- ❍ While India's population more than tripled in over 60 years, the number of Parsi has reduced by almost 50% (Census 2011).
- ❍ Maharashtra has the highest Parsi population in the country followed by Gujarat.

➤ **Infertility and late marriages** are among the **main reasons for the rapid decline** in the Parsi population.

Van Dhan Internship Programme

The **Ministry of Tribal Affairs** has launched **"Van Dhan Internship Programme"** organised by the **Tribal Cooperative Marketing Development Federation of India (TRIFED)**.

➤ The selected interns will enhance the output of Van Dhan programme to make the tribal population self-reliant. They will support TRIFED activities to develop a mechanism for determination of a just price or producer price of Minor Forest Products (MFP).

➤ **Van Dhan Yojana was launched in 2018,** in Chhattisgarh. It is an initiative **targeting livelihood generation for tribal population** by harnessing the wealth of forest i.e. Van Dhan.

- ➤ **Van Dhan Vikas Kendras** are set up under the program. These Kendras aim to boost the economic development of tribals involved in the collection of MFP.

> **TRIFED**
> - ➤ TRIFED came into existence in **1987**. It is a **national-level apex organization** functioning under the administrative control of **Ministry of Tribal Affairs**.
> - ➤ Its ultimate objective is **socio-economic development of tribal people** in the country by way of **marketing development of the tribal products** such as metal craft, textiles etc.
> - ➤ It has its **Head Office** in **New Delhi**.

47th Chief Justice of India

Justice **Sharad Arvind Bobde**, has been appointed as the **47th Chief Justice of India (CJI)**, by the **President of India**.

- ➤ As per **convention**, outgoing CJI Ranjan Gogoi recommended the name of Justice Bobde, the most senior judge of the Supreme Court as his successor.
- ➤ The Chief Justice of India and the Judges of the Supreme Court are appointed by the **President under clause (2) of Article 124 of the Constitution**.

BHIM 2.0

The **Ministry of Electronics and Information Technology (MeitY)** has launched a **new version of Bharat Interface for Money (BHIM) app i.e. BHIM 2.0**.

- ➤ **BHIM app,** that was developed by the **National Payments Corporation of India (NPCI)**, was launched in December, 2016.
- ➤ It is a **Unified Payment Interface (UPI)** that allows real time fund transfer.
- ➤ The **new version** of BHIM supports **three additional languages** – Konkani, Bhojpuri and Haryanvi – over and above the **existing 13**.
- ➤ Under BHIM 2.0, the existing **transaction cap of Rs. 20,000 has been increased to Rs. 1,00,000,** from verified merchants.
- ➤ **Other features** include a 'donation' gateway, linking multiple bank accounts, option of applying in Initial Public Offering (IPO), gifting money, etc.

Food Safety Mitra Scheme

The **Union Minister of Health and Family Welfare** launched the Food Safety Mitra (FSM) scheme to mark the occasion of **World Food Day** (16th **October 2019)**.

- ➤ The **theme** for the day was **'Healthy Diets for a Zero Hunger World'**.
- ➤ **Food Safety Mitra (FSM)** will be an **individual professional certified by the** Food Safety and Standards Authority of India (FSSAI) who will assist in compliances related to the Food Safety and Standards Act (FSS Act) and other related rules & regulations.
  - ○ The scheme would create new employment opportunities for youth (particularly with food and nutrition background).
  - ○ FSSAI has partnered with the **Domestic Workers Sector Skill Council** under the Ministry of Skill Development and Entrepreneurship to launch the training course for FSMs.
    - Domestic Workers Sector Skill Council is a **not for profit company** registered under the Companies Act, 2013.
    - Its **purpose** is to define key sectors wherein domestic workers can find employment and to identify critical roles and associated skill gaps.
- ➤ **Aim:** To support small and medium-scale food businesses for ensuring compliance with food safety laws and to facilitate them with the licensing and registration process, hygiene ratings and training programme.

20th Livestock Census

The **Ministry of Fisheries, Animal Husbandry and Dairying** released the **20th Livestock Census** report.

- ➤ The report provides key results reflecting the aggregate counts of various species and compares data with the previous census.

Key Points

- ➤ The **total Livestock population** is 535.78 million in the country showing an **increase of 4.6%** over Livestock Census-2012.
  - ○ **West Bengal observed the highest** increase of 23%, followed by Telangana (22%).
- ➤ The **backyard poultry has increased** by around 46%.

Note:

- This sharp increase is a significant change in the rural landscape which shows a **sign of poverty alleviation**.

➢ The total **number of cattle** in the country has shown an **increase** of 0.8 %.

- The increase is mainly driven by a **sharp increase in cross-bred cattle** and **higher female indigenous** cattle population.

- However, **a decline of 6% in the total indigenous cattle population** has been observed. This has happened despite the government's efforts to promote conservation of desi breeds through the **Rashtriya Gokul Mission (RGM)**.

➢ The total **milch animals** have shown an increase of **6%**.

- Due to higher yields, **foreign breeds constitute more than half** the population of milch animals.

- Nearly 75% of total cattle in the country are female (cows) – a clear sign of dairy farmers' preferences for milk-producing cattle.

  - This has happened owing to the government's assistance in terms of providing **sex-sorted artificial insemination** with semen of high-yielding bulls, free of cost at farmers' doorstep.

- **Challenge:** The more the number of animals that produce milk, the more would be pressure on land and fiercer would be competition between man and animals for survival.

The Livestock Census

➢ The Livestock Census has been conducted in the country **periodically since 1919-20**. The **last livestock census** was conducted in 2012.

➢ It **covers all domesticated animals** and their headcounts.

➢ So far 19 such censuses have been conducted by the **Ministry of Fisheries, Animal Husbandry and Dairying**, in participation with State Governments and UT Administrations.

➢ The census is beneficial not just for policymakers but also for agriculturists, traders, entrepreneurs, dairying industry and masses in general.

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Economic Scenario

Highlights

- *Ease of Doing Business - 2020*
- *India Innovation Index 2019*
- *Industry-UniversityLinkage Index*
- *World IntellectualProperty Indicators - 2019*

- *Share Swap Ratio*
- *Minimum Support Price*
- *MGNREGA Act, 2005*

Ease of Doing Business- 2020

The **World Bank** recently released its **Ease of Doing Business Report, 2020**.

➢ According to the report, **New Zealand retained its 1ˢᵗ position** whereas **Somalia was ranked 190ᵗʰ**.

➢ India was placed at **63ʳᵈ position** this time (2019) **out of 190 countries** marking an **improvement of 14 places from its 77ᵗʰ in 2018**.

  ○ India's score **improved** from **67.23 (2019) to 71.0 (2020)**.

  ○ India for the **third consecutive year** was **present in the list of 10 economies** where the **business climate has improved the most**.

➢ India's ranking improved basically on **four parameters**:

  ○ **Starting a Business -** India made starting a business easier by fully **integrating multiple application forms** into a general incorporation form,

  ○ **Dealing with Construction Permits -** For example, building a warehouse cost around 4% of the warehouse value as compared to 5.7% in the previous year,

  ○ **Trading across Borders -** with a **single electronic platform**- improved electronic submission methods for documents and upgrades to port infrastructure.

  ○ **Resolving Insolvency - Recovery rate under resolving insolvency** has improved significantly from **26.5% to 71.6%**. Also, the **time taken for resolving insolvency** has also come down **significantly from 4.3 years to 1.6 years**.

➢ **India** continues to maintain its **first position** among **South Asian countries**. **It was 6ᵗʰ (in 2014)**.

➢ **The World Bank** will now include **Kolkata and Bengaluru, besides Delhi and Mumbai, for preparing ease of doing business report,** in order to provide a holistic picture of the business environment of the country.

Ease of Doing Business Report

➢ The report was introduced in **2003** to provide an assessment of objective measures of business regulations and their enforcement across 190 economies on ten parameters affecting a business through its life cycle.

➢ The report measures the performance of countries across 10 different parameters namely-

  ○ Starting a Business,
  ○ Dealing with Construction permits,
  ○ Electricity availability,
  ○ Property registration,
  ○ Credit availability,
  ○ Protecting minority Investors,
  ○ Paying Taxes,
  ○ Trading across borders,
  ○ Contracts enforcement, and
  ○ Resolving Insolvency.
  ○ **This time two more parameters** were considered namely, **employing workers** and **contracting with the government** but these are **not included in the score and rankings**.

➢ It ranks countries on the basis of **Distance to Frontier (DTF) score** that highlights the **gap of an economy with respect to the global best practice**. For example, a score of 75 means an economy was 25 percentage points away from the frontier constructed from the best performances across all economies and across time.

Note:

India Innovation Index 2019

NITI Aayog with the **Institute for Competitiveness (Gurugram, Haryana)** has released the **India Innovation Index 2019**.

➤ The index, **developed on the lines of the Global Innovation Index (GII),** would help Indian states and Union Territories (UTs) to design policies to drive innovation across regions.

➤ The India Innovation Index 2019 is calculated as the **average of the scores of two dimensions - Enablers** and **Performance**.

  ○ The **Enablers** examine **innovative capacities**: Human Capital, Investment, Knowledge Workers, Business Environment, and Safety and Legal Environment.

  ○ The **Performance** captures **benefits** that a nation derives **from the inputs**: Knowledge Output and Knowledge Diffusion.

➤ The **states** have been bifurcated into **three categories**:

  ○ Major states,

  ○ North-East and hill states,

  ○ Union territories/Small states

Key Findings

➤ The **innovation ecosystem of the country is strong in south and western parts of India**. In fact, three of the top five major states are from southern India.

➤ **Karnataka emerged topper** in the overall rankings in the **category of major states** with Tamil Nadu and Maharashtra in the second and third positions respectively.

  ○ Karnataka's top position is partly attributed to its top rank in the

The Report Card

Most Innovative States

Rank	States	Score	
1	Karnataka	35.65	
2	Tamil Nadu	32.98	
3	Maharashtra	29.93	
4	Telangana	22.06	
5	Haryana	20.55	
6	Kerala	19.58	
7	Uttar Pradesh	19.08	
8	West Bengal	18.21	
9	Gujarat	16.86	
10	Andhra Pradesh	14.51	

States ranked on **33** indicators

National index needed to help states compete to innovate

India was at 57th position in GII in 2018 among 126 countries

Performance dimension. It is among the top performers in Infrastructure, Knowledge Workers, Knowledge Output and Business Environment.

  ○ **Maharashtra** performs the best in the dimension of Enablers. This implies that it has the best **enabling environment for innovation**.

➤ Among the North-Eastern states and Union territories, **Sikkim** and **Delhi** occupy the top spots respectively.

➤ In terms of attracting **investment, Karnataka topped** the index among major states, followed by Maharashtra and Haryana.

  ○ Bihar, Jharkhand, and Punjab were the least attractive states for investment.

  ○ Among North East and the Hill States, Manipur, Arunachal Pradesh, and Tripura were the top three states; while among the UTs, Lakshadweep, Delhi and Goa were the top three regions.

Suggestions to Improve Rankings

➤ Increased spending on **research and development** with greater collaboration between the industry and educational institutions may help to enhance innovation capability.

➤ A **collaborative platform** consisting of all the stakeholders of innovation - innovators, researchers, and investors from the industry should be developed. This will help to strengthen the industry-academia linkages and will ease the process of technology transfer by providing a platform for innovators to showcase their inventions.

Global Innovation Index

➤ GII is **published annually** by Cornell University, INSEAD and the UN World Intellectual Property Organization (WIPO).

➤ The **theme of GII- 2019** (12th edition) is "Creating Healthy Lives - The Future of Medical Innovation" which aims to explore the role of medical innovation as it shapes the future of healthcare.

➤ **India's ranking** in 2019 is **52**, an improvement of 5 points from 2018 rank (57).

Industry-University Linkage Index

The **PHD (Progress – Harmony – Development) Chamber of Commerce and Industry** in association with the **Ministry of Science and Technology** has released the

Industry-University Index assessing input-output relations between the education sector (universities) and industries.

Key Findings

- ➢ **Performance on Index**
  - ○ Industry linkages were found moderate in India with an overall **score of 4.7** on a scale of 10.
  - ○ **Karnataka, Kerala** and **Gujarat** have **topped** in University-Industry Linkages (UILs).
  - ○ Most of the **northeastern states** are at the **bottom** of the stack and also larger states such as **West Bengal, Madhya Pradesh**, and **Bihar** are **poor performers**.
- ➢ **Concerns**
  - ○ **India is at a very nascent stage** of developing strong linkages between universities and industries.
  - ○ **Absence of a clear policy** for strengthening linkages between the university and industry is the major reason.
- ➢ **Suggestions**
  - ○ The survey identifies **10 sectors for improving industry - university linkage** which include research and development activity, agro and food processing, textiles, Information Technology (IT) and IT-enabled services, energy, cement, pharmaceuticals, and automotive sectors.
  - ○ The index highlighted that the **Bayh Dole Act of US** of the 1980s has been proven the best model in strengthening university-industry linkages.
  - ○ The index emphasized **revival of the Protection and Utilization of Public-Funded Intellectual Property (PUPFIP) Bill** which was tabled in 2008 but later withdrawn from Parliament.

Bayh Dole Act

- ➢ The Bayh-Dole Act added a **new official policy** for the granting of patents in the United States.
- ➢ The Act created a viable route by which **new insights and valuable research results from universities and other institutions can make their way efficiently to start-ups and established firms**.
- ➢ This has been followed by many countries world over.

Protection and Utilization of Public-Funded Intellectual Property (PUPFIP) Bill, 2008

- ➢ It seeks to provide **incentives for creating and commercializing intellectual property** from public-funded research.

- ➢ The Bill requires the scientist who creates an intellectual property to immediately inform the research institution. The institution shall disclose this information to the government within 60 days.
- ➢ Failure of the scientist to intimate the institution, and of the institution to inform the government carries penalties, which include fines and recovery of the grant funds.
- ➢ The PUPFIP bill has been prepared **on the lines of the Bayh Dole Act**.

World Intellectual Property Indicators - 2019

According to the **World Intellectual Property Indicators Report-2019**, global **Intellectual Property (IP)** filing activity continues to grow at a rapid pace.

- ➢ World Intellectual Property Indicators Report is **published annually by the World Intellectual Property Organization (WIPO), a specialised agency of the United Nations**.
- ➢ This Report analyzes IP activity around the globe. It covers the **following areas of intellectual property**: patents, utility models, trademarks, industrial designs, microorganisms and plant variety protection.

Key Findings

- ➢ In 2018, patent filings around the world exceeded by around 3.3 million, representing a **5.2% growth** over 2017 figures.
  - ○ **Asia,** being the global hub for IP applications, accounted for **two-thirds of the total applications** in 2018.
- ➢ **China** was at the **leading position** of global growth in worldwide IP filings in 2018.
- ➢ In **India,** there was a large increase in the number of filings with respect to
  - ○ Trademark filing activity (+20.9%),
  - ○ Patent filings (+7.5%), and
  - ○ Industrial design filing activity (+13.6%), marking almost **double-digit growth** in 2018. For India, 2018 was the third successive year of double-digit growth.
- ➢ The **share of withdrawn or abandoned applications was highest in India (66.2%)**.

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○ However, India reduced the number of pending applications by 25% in 2018 compared over the last year (2017).

> **Trade Mark:** A trademark is a word, phrase, symbol, and/or design that identifies and **distinguishes the source of the goods of one party from those of others**. Unlike patents and copyrights, trademarks do not expire after a set term of years.

> **Patents:** A patent is a **limited duration property right** relating to an invention, granted by the Trademark Office in exchange for public disclosure of the invention. Patentable materials include machines, manufactured articles, industrial processes, and chemical compositions. The duration of patent protection is **20 years in the case of India**.

> **Copyright:** A copyright **protects works of authorship** that have been tangibly expressed in a physical form. Example - songs, books, movies, and works of art.

> **Industrial Design:** In a legal sense, an industrial design constitutes the **ornamental or aesthetic aspect of a product**. It may consist of three-dimensional features, such as the shape of an article, or two-dimensional features, such as patterns, lines or colours.

Share Swap Ratio

At least seven of the **10 public sector banks slated for merger** have invited independent experts to **determine their share swap ratios**.

> When a company pays for acquisition by issuing its own shares to the shareholders of the target company, this is known as a **share swap**.

> The number of shares to be issued in lieu of their existing holdings in the target company is called the **Share Swap Ratio**.

> ○ It is determined by valuing the target company after looking into metrics such as its revenues and profits, as well as its market price.

Importance

> A swap ratio shows the **relative size and strength of both companies**. In general, if more shares of the target company are exchanged for one share in the acquiring company, then the latter is likely to be bigger and stronger.

> It also **determines the control** that each set of shareholders has on the combined company. For example, the acquiring company may have greater control over the firm if the swap ratio is high and, therefore, its Board of Directors could have a larger share in the new Board.

Advantages

> **Confidence to Investors:** A swap ratio's rationale is to give the same amount of confidence to investors even after the merger or acquisition goes through.

> **Maintain Equilibrium:** The swap ratio is kept reasonable to maintain an equilibrium between the investors of both companies.

> **Lower Risks:** As shareholders of the target company will also be shareholders of the merged entity, the risks and benefits of the expected synergy from the merger are shared by both the parties.

> **Non Taxable:** In case of a share swap, when shareholders of the acquired company are given shares of the acquirer company as part of the deal, it is not considered a transfer of shares. Hence, capital gains tax will not arise.

> ○ The tax liability will arise only when the shares of the merged entity are sold.

Capital Gains Tax

> Any **profit or gain** that arises from the sale of a **'capital asset'** is a capital gain. This gain or profit comes under the **category of 'income'**.

> Hence, the capital gain tax will be required to be paid for that amount in the year in which the transfer of the capital asset takes place. This is called the capital gains tax, which can be both short-term or long-term.

Minimum Support Price

The **Cabinet Committee on Economic Affairs (CCEA), headed by the Prime Minister** has **hiked the Minimum Support Price (MSP) for Rabi crops** for the marketing season 2020-21.

> The increase in MSP for Rabi Crops is in line with the principle of fixing the MSPs at a level of at **least 1.5 times** of the all India weighted average **Cost of Production [CoP]**.

Minimum Support Price

> The MSP is the rate at which **the government buys grains from farmers**.

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- ➤ The reason behind the idea of MSP is to **counter the price volatility of agricultural commodities** due to factors like the variation in their supply, lack of market integration and information asymmetry.
- ➤ The MSP is fixed on the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.
  - ○ The CACP is an attached office of the **Ministry of Agriculture and Farmers Welfare,** formed in **1965**.
  - ○ It is a **statutory body** that submits **separate reports** recommending prices for Kharif and Rabi seasons.
- ➤ **Factors taken into consideration for fixing MSP include** demand and supply, cost of production, price trends in the market, both domestic and international, Inter-crop price parity, terms of trade between agriculture and non-agriculture, a minimum of 50% as a margin over the cost of production; and likely implications of MSP on consumers of that product.
- ➤ The Food Corporation of India (FCI), the nodal central agency of the Government of India, along with other State Agencies undertakes procurement of crops.

Rabi Crops

- ➤ Rabi crops are sown in winter from **October to December** and harvested in summer from April to June.
- ➤ Some of the important rabi crops are wheat, barley, peas, gram, and mustard.
- ➤ Though these crops are grown in large parts of India, states from the north and northwestern parts such as Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Uttar Pradesh are important for the production of wheat and other rabi crops.

MGNREGA Act, 2005

The **proportion of young workers** under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 is **rising**.

- ➤ The **ratio** of young workers among total MGNREGA workers has risen to **9.1% in 2018-19** and **10.06% in 2019-20** from **7.73% in 2017-18**.
- ➤ The total number of individuals working under MGNREGA has also gone up in recent years.
- ➤ The rising trend of the young workforce among MGNREGA workers could be a reflection of the following events:

- ○ **Demonetisation**
  - ● Approximately, 1.5 million jobs were lost after demonetization. Alongside this loss of jobs, there has been a decline in the Labour Force Participation Rate (LFPR).
  - ● As a result of job loss, many workers opted for MGNREGA for livelihood.
- ○ **The rollout of Goods and Service Tax (GST)**
  - ● The implementation of GST improved economic efficiency but the complexities of the new tax regime have driven many small enterprises out of business forcing unemployment.
  - ● Uniform tax regime through GST has also pushed many small and medium enterprises in debt.
  - ● Both these events caused disruptions in the economy resulting in a surge of workers opting jobs under MGNREGA.

Mahatma Gandhi National Rural Employment Guarantee Act, 2005

- ➤ The Act aims at **enhancing the livelihood** security of people in rural areas by guaranteeing **hundred days of wage employment** in a financial year to a rural household whose adult members (at least 18 years of age) volunteer to do unskilled work.
- ➤ It is a demand-driven, social security and labour law that aims to enforce the **'right to work'**.
- ➤ The central government bears the full cost of unskilled labour. The **Ministry of Rural Development (MRD)** in association with state governments, monitors the implementation of the scheme.

Impact of MGNREGA

- ➤ Agriculture and allied activities constitute more than 65% of the works taken up under the programme.
- ➤ This has helped to **reduce rural poverty** to a greater extent. It has also been described as a **"stellar example of rural development"** by the World Development Report 2014.
- ➤ Also, the central government is working on an initiative to include skill and training as a part of MGNREGA to make it not only a job creator but also to **increase skilled labourers** across the country.

Challenges

- ➤ **Low Wage Rates**

○ Currently, MGNREGA wage rates of 17 states are less than the corresponding state minimum wages.

○ The low wage rates have resulted in a lack of interest among workers in working for MGNREGA schemes, making way for contractors and middlemen to take control, locally.

➤ **Insufficient budget allocation**

○ Almost every year, more than 80% of funds get exhausted within the first six months.

○ Thus, the fund allocation is insufficient to ensure proper implementation on the ground.

➤ **Regular payment delays**

○ Despite the order of the Supreme Court, no provision has yet been worked out for calculation of full wage delays and payment of compensation for the same.

➤ **Too much centralisation weakening local governance**

○ A real-time Management Information System (MIS) based implementation and a centralised payment system has **left the representatives of the Panchayati Raj Institutions (PRIs) with limited role** in implementation, monitoring and grievance redressal of MGNREGA schemes.

○ PRIs hardly have any power to resolve issues or make payments.

Way Forward

➤ To ensure better implementation of MGNREGA, there should be **debate and discussions,** involving various stakeholders such as MGNREGA workers, contractors, bureaucrats and politicians.

■■■

Note:

International Relations

Highlights

- India-Saudi Arabia
- India-Japan
- India-Philippines
- 18th Non-Alignment Summit
- Catalonian Unrest

- FATF's Grey List
- Kartarpur Corridor
- Tulagi Island
- Developing CountryStatus in WTO

India-Saudi Arabia

Recently,the Prime Minister of India visited Saudi Arabia, which is the second visit to the country in three years.

Key Highlights

➢ **India-Saudi Strategic Partnership Council** was formed to coordinate on strategically important issues. The council will be **headed by the Prime Minister and Crown Prince Mohammad Bin Salman Al Saud** and will meet **every two years**.

   ❍ India is the **fourth** country with which **Saudi Arabia** has formed such a **strategic partnership**, after the UK, France and China.

➢ 12 Memorandum of Understandings (MoUs) including an MoU that will help Hajj pilgrims to travel comfortably in Saudi Arabia during the pilgrimage seasons were signed.

➢ Agreement for the establishment of the independent Palestinian state based on the pre-1967 borders with "Jerusalem as its capital".

➢ Cooperation in the Energy Sector:

   ❍ Saudi Arabia is keen to play a role in the creation of strategic petroleum reserves at Padur in Karnataka.

   ❍ A study is being conducted for the setting up of the world's largest greenfield refinery at Raigarh in Maharashtra by Saudi Aramco, Adnoc of the United Arab Emirates and Indian public sector oil companies.

India - Saudi Arabia Ties

➢ Saudi Arabia is a **strategic partner** of India since the signing of the **Riyadh Declaration** in 2010.

➢ It is currently **India's second-largest supplier of crude oil** – providing about **18% of its energy needs**. It also has a major role in India's Strategic Petroleum Reserves (SPRs).

   ❍ The **largest supplier of crude oil** is **Iraq**.

➢ It is also India's **4th largest trade partner**.

➢ The **2.6 million-strong Indian community** in Saudi Arabia is the **largest expatriate community** in the Kingdom and is the **'most preferred community'** due to their expertise, sense of discipline, law-abiding and peace-loving nature.

➢ **Haj pilgrimage** is another important component of **bilateral relations**.

India-Japan

Recently, the President of India visited Japan. The visit was the first presidential visit to Japan after a gap of 29 years.

Key Highlights

➢ The President attended the **enthronement ceremony of the Emperor Naruhito of Japan** in the Imperial Palace.

- ➢ He also visited the **Shinto Meiji Shrine** and interacted with a delegation from the **Gotemba Pagoda**.
  - ○ The Shrine is dedicated to the deified spirit of **Emperor Meiji**. **The Meiji restoration in 1868** helped Japan to transform itself into a **modern country**.
  - ○ The **chalky stupa** at Gotemba Pagoda keeps the **Buddha's ashes** presented by late Indian Prime Minister Jawaharlal Nehru.
- ➢ The foundation stone for **Sri Sathya Sai Sanathana Samskruti Project** (to develop a temple on the lines of Akshardham) at Sai no Sato, Japan was laid by the president.

India-Japan Ties

- ➢ India and Japan share robust ties with cooperation in areas of **defence, science and technology and trade**.
- ➢ In **2014,** India and Japan upgraded their relationship to **'Special Strategic and Global Partnership'**.
- ➢ **Mumbai-Ahmedabad High-Speed Railway (MAHSR)** is a very important area of cooperation between India and Japan in the Railway Sector.
- ➢ An **"India-Japan Digital Partnership" (I-JDP)** was launched to widen existing areas of cooperation as well as new initiatives within the scope of cooperation in S&T/ICT, focusing more on **"Digital ICT Technologies"**.
- ➢ The **India-Japan Comprehensive Economic Partnership Agreement (CEPA)** that came into force in August 2011 covers trade in goods, services, movement of natural persons, investments, Intellectual Property Rights, custom procedures and other trade-related issues.
- ➢ India and Japan defence forces organize a series of bilateral exercises namely, **JIMEX, SHINYUU Maitri, and Dharma Guardian**. Both countries also participate in **Malabar exercise with USA**.

India-Philippines

The President of India addressed the **India-Philippines Business Conclave** and the **4th Association of Southeast Asian Nations (ASEAN) – India Business Summit** in **Manila**, **Philippines** on 19th October 2019.

- ➢ India is celebrating the **70th anniversary of diplomatic relations** with the Philippines in 2019.
- ➢ The President of India also unveiled the **statue of Mahatma Gandhi** at Miriam College in **Quezon City**.

India-Philippines Business Conclave

- ➢ Both countries aim to integrate India's **"Make in India"** with the Philippines' **"Build, Build, Build"** infrastructure initiative to create immense opportunities for companies and investors on both sides.
- ➢ Both the countries also agreed to sign a **Tourism Promotion Agreement** to bring the people of the two countries further closer.

India-Philippines Relations
- ➢ India and Philippines formally established **diplomatic relations in 1949**, shortly after both countries gained independence (Philippines in 1946 and India in 1947).
- ➢ With **India's Act East Policy (2014),** the relationship with the Philippines has diversified further into political-security; trade, industry, etc.
- ➢ India has a **positive trade balance with the Philippines** (more export from India compared to import from the Philippines to India).

18th Non-Alignment Summit

Recently, the Vice President of India attended the **18th Non-Alignment Movement (NAM)** Summit which was held in **Baku, Azerbaijan**.

Note:

- The **theme** for the 18th NAM Summit is **"Upholding the Bandung Principles to ensure concerted and adequate response to the challenges of the contemporary world."**
  - The theme relates to the forthcoming **65th anniversary of Bandung Principles (2020)** and the **60th anniversary of the establishment of the Non-Alignment Movement (2021)**.
  - Bandung principles promote world peace and cooperation which were formulated at the **Asian-African Conference** in **1955**.
- This **NAM Summit** majorly focussed on contemporary issues such as terrorism, threats to peace and security, UN reform, climate change, sustainable development, economic governance, and south-south cooperation.

India and Non-Alignment Movement (NAM)

- **India** is a **founder member** of NAM. It participated actively in NAM meetings till the 1970s but **India's inclination** towards erstwhile USSR created confusion in smaller members.
  - It led to the **weakening of NAM** and small nations drifted towards either the US or USSR.
- Further **India's New Economic Policy and inclination towards the US** raised questions over India's seriousness over non-alignment.
  - The **disintegration of the USSR** led to the **unipolar world** order dominated by the US.
- Moreover, NAM continued losing relevance for India in a unipolar world, especially after the founding members failed to support India during the crisis.
  - For instance, during the 1962 War with China, Ghana and Indonesia adopted explicitly pro-China positions.
  - During the 1965 and 1971 wars, Indonesia and Egypt took an anti-India stance and supported Pakistan.

- Recently, **the Prime Minister of India skipped the second NAM summit in a row** (17th and 18th NAM Summit).
  - It had been the **customary practice** ever since the inception of NAM that **India had always participated in the summit** meetings **through its prime minister,** with the **single exception** of the **6th NAM Summit** when **Chaudhury Charan Singh** was the caretaker PM and hence missed it.
- Moreover, **India** has started to actively engage with **new and old global powers**.
  - India joining the Quadrilateral Security Dialogue, a coalition seen by many as a counter force to China's rise in the Indo-Pacific and Shanghai Cooperation Organization led by China showning India's balancing approach in the new world order.

Quadrilateral Security Dialogue
- Quadrilateral Security Dialogue is an **informal strategic dialogue** of like-minded democracies converging across the Indian and Pacific oceans.
- It comprises of the **US, Japan, India** and **Australia**.

Shanghai Cooperation Organisation
- SCO is a permanent intergovernmental international organisation created in 2001.
- It's a Eurasian political, economic and military organization aiming to maintain peace, security, and stability in the region.
- The SCO's official languages are Russian and Chinese.

Catalonian Unrest

There has been a constant demand of **separation of Catalonia from Spain**.
- Catalonia is a **semi-autonomous region** in Iberian Peninsula in the **north-eastern Spain**.
- It has a distinct history dating back almost 1,000 years and has its own language, parliament, flag and anthem.

Background
- Before the **Spanish Civil War (1936-1939),** Catalonia enjoyed **broad autonomy** but that was **suppressed under General Francisco Franco**.
- When Franco died, the region was **granted autonomy again under the 1978 constitution** and prospered as part of the new, democratic Spain.

> A 2006 statute granted even greater powers, boosting Catalonia's financial clout and describing it as a "nation", but Spain's Constitutional Court **reversed much of this in 2010**.

Demand For Independence

> The Catalan region has long been the **industrial heartland of Spain** – first for its maritime power and trade in goods such as textiles, but recently for finance, services and hi-tech companies.
> ○ It has been one of the wealthiest regions of Spain, contributing around 25.6% of exports, 19% of GDP and 20.7% of foreign investment.
> Catalan nationalists have long complained that their **region sends too much money to poorer parts of Spain**, as taxes are controlled by Madrid and receives much less from Spain.
> They also claim that Spain's changes to their autonomous status in 2010 undermines Catalan identity.

Catalonian Referendum of 2017

> Referendum was held in October 2017 in which 90% of Catalonian voted for independence but the voter turnout was only 43%.
> The referendum was **declared illegal by Spain's central government** as it was marred by wide scale violence.

FATF's Grey List

The **Financial Action Task Force (FATF)**, after its **5-day plenary** (concluded on 19th October 2019 in Paris), decided to keep **Pakistan on the Grey List**.

> However, it has warned that **Pakistan will be put on the Black List** if it does not control terror funding by February 2020.
> **Immediate blacklisting** of Pakistan **did not garner the consensus** of all FATF members.
> ○ India led a diplomatic offensive against Pakistan for its blacklisting. France, the US and the European Union countries supported India.
> ○ China, Turkey and Malaysia resisted India's efforts.
> By **remaining on the "Grey List"**, it would be **difficult for Pakistan to get financial aid** from the International Monetary Fund (IMF), World Bank and European Union, making its financial condition more precarious.
> Pakistan was **placed on the grey list** by the FATF **in June 2018** and was given a plan of action to complete by October 2019, or face the risk of being placed on the **black list** with **Iran** and **North Korea**.

Financial Action Task Force

> The Financial Action Task Force (FATF) is an **inter-governmental body** established in 1989 during the G7 Summit in Paris.
> The **objectives** of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for **combating money laundering, terrorist financing and other related threats** to the integrity of the international financial system.
> Its **Secretariat** is located at the **Organisation for Economic Cooperation and Development (OECD) headquarters** in **Paris**.
> **Member Countries:** As of 2019, it consists of **thirty-seven** member jurisdictions. **India** is **one of the members**.
> FATF has two lists:
> ○ **Grey List:** Countries that are considered **safe haven for supporting terror funding and money laundering** are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.
> ○ **Black List:** Countries known as **Non-Cooperative Countries or Territories** (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.

Note:

Kartarpur Corridor

India and Pakistan have signed an agreement on to operationalize the **Kartarpur corridor**. The agreement is valid **initially** for **five years**.

➢ **Either party can terminate the agreement at any time by giving notice of one month to the other party** of its intention to terminate this agreement.

➢ Also, the pact could be suspended in case of **exigency or persistent violation of its provisions**.

➢ The Pakistan side has agreed to make sufficient provision for **langar** and **distribution of prasad in the Gurdwara premises**.

➢ On the Indian side, all the required infrastructure, including the highway and the passenger terminal will be built.

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 India's Punjab province.

➢ The agreement will facilitate the **visa-free movement** of Indian pilgrims who would just need a permit to cross over to Pakistan.

➢ The corridor was built to commemorate **the 550ᵗʰ birth anniversary celebrations of Guru Nanak Dev, founder of Sikhism on 12ᵗʰ November 2019.**

Guru Nanak

➢ Guru Nanak Dev Jayanti is observed on the **full-moon day** in the month of Katak to celebrate the **birth of Guru Nanak Dev (1469-1539)**.
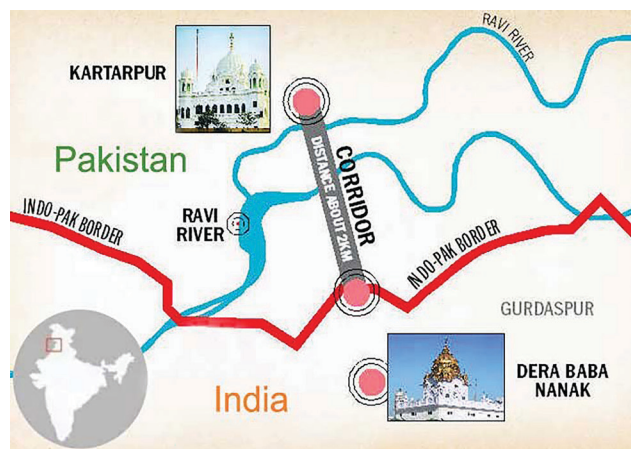
➢ He advocated the **'Nirguna'** form of **bhakti**. He rejected sacrifices, ritual baths, image worship, austerities and the scriptures of both Hindus and Muslims.

➢ He set up rules for congregational worship **(Sangat)** involving collective recitation.

➢ He appointed **one of his disciples, Angad,** to succeed him as the preceptor (guru), and this practice was followed for **nearly 200 years**.

➢ The fifth preceptor, Guru Arjan, compiled Baba Guru Nanak's hymns along with those of his four successors and also 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**.

➢ **Kartarpur gurudwara** is the revered shrine about **4km across the border** where **Guru Nanak Dev** spent the **last 18 years of his life**.

Tulagi Island

➢ Tulagi is an island **within the Solomon Islands**, which are located in the South Pacific, directly between Australia and the U.S.

➢ The Solomon Islands has **recently cut its ties to Taiwan** and allied with Beijing.

➢ The move is line with **'One China' principle**.

  ○ China considers Taiwan to be part of its territory and wants to bring the island back into its fold.

  ○ Taiwan split from mainland China during a civil war in 1949 and set up a rival government.

Developing Country Status in WTO

The South Korean Government has decided not to seek any special treatment as a developing country from

future negotiations at the **World Trade Organization (WTO)**.

➢ However, South Korea would not forego its developing country status at the WTO.
  ❍ South Korea, **Asia's fourth-largest** economy, has maintained its developing country status as a member of the WTO since the body's creation in 1995, mainly to guard its agriculture industry. For ex., it imposes a tariff of more than 500% on rice imports.

Developing Country Status in WTO

➢ There are no **WTO definitions of "developed" and "developing" countries. Members announce for themselves whether they are "developed" or "developing" countries**.
  ❍ However, **other members can challenge the decision** of a member to make use of provisions available to developing countries.
➢ **"Special and Differential Treatment" (S&D) provisions** of WTO give **developing countries special rights**. It includes:
  ❍ Longer time periods for implementing agreements and commitments,
  ❍ Measures to increase trading opportunities for developing countries,
  ❍ Provisions requiring all WTO members to safeguard the trade interests of developing countries,
  ❍ Support to help developing countries build the capacity to carry out WTO work, handle disputes, and implement technical standards, and
  ❍ Provisions related to least-developed country (LDC) Members.
➢ **Benefits to Developing Countries in the WTO:**
  ❍ The WTO Agreement specifies that **international trade** should **benefit** the **economic development of developing and least-developed countries**.

  ❍ **General Agreement on Tariffs and Trade (GATT)** — gives **developing countries the right to restrict imports,** if doing so would promote the establishment or maintenance of a particular industry, or assist in cases of balance-of-payments difficulties.
    ● The concept of **non-reciprocal preferential treatment for developing countries,** i.e. when developed countries grant trade concessions to developing countries they should not expect the developing countries to make matching offers in return.
➢ **Issues:**
  ❍ Recently, the U.S. had put pressure on the WTO to change how it designates developing countries, singling out China, with which the United States is engaged in a trade war, for unfairly getting preferential treatment.

Trade War
➢ Trade war is a subset of Trade Protectionism.
➢ It is a conflict between two or more nations regarding trade tariff imposition on each other's goods.
➢ A trade war is usually initiated when a nation imposes tariffs or quotas on imports and foreign countries retaliate with similar forms of trade protectionism. As it escalates, a trade war reduces international trade.

Way Forward

➢ Thus, negotiations should provide for differentiated treatment taking into account the policy-making challenges in developing countries without establishing permanent exemptions. These provisions should either be time-bound or have clear threshold and phaseout criteria, as in the WTO Agreement on Subsidies and Countervailing Measures.

Note:

Science and Technology

Highlights

- *Nuclear Energy Conclave*
- *Cyber Attacks*
- *Microbial Fuel Cells*
- *Edge Computing*
- *World Polio Day*
- *Guidelines for Evaluationof Nanopharmaceuticalsin India*
- *Artificial Leaf For Clean Gas*

Nuclear Energy Conclave

The **11th Nuclear Energy Conclave,** organized by the **India Energy Forum**, was held in New Delhi on 18th October 2019.

➤ The **theme** of the Conclave was: **"Economics of Nuclear Power-Innovation towards Safer & Cost Effective Technologies"**.

➤ India Energy Forum which was established in 2001 has acquired a unique status as a spokesman of total energy sector. It's Corporate Office is located in New Delhi.

India's Nuclear Energy Programme

➤ The nuclear energy programme in India was launched around the time of independence under the leadership of **Homi J. Bhabha**.

➤ The main objectives of the Indian Nuclear Energy programme are to provide safe and reliable electric power for the country's social and economic progress and to be self reliant in all aspects of nuclear technology.

➤ India has **limited reserves of uranium** but fairly **abundant reserves of thorium**.

➤ Accordingly, India has adopted a **three stage strategy** of nuclear power generation:

  ○ **Stage 1 Pressurised Heavy Water Reactor (PHWR):**
  - The PHWR is a pressure tube type reactor using **heavy water (D2O)** moderator, heavy water coolant and natural uranium dioxide fuel.
  - Considering the growing energy demands and the necessity to increase the energy potential, a second line of **light water reactors** have been added to the current indigenous programme of Pressurised Heavy Water Reactors.

  ○ **Stage 2 Fast Breeder Reactor (FBR):**
  - India's second stage of nuclear power generation uses Plutonium **(Pu-239)** obtained from the first stage reactor operation, as the main fissile element of fuel core in fast breeder reactors (FBR).
  - The Fast Breeder Programme is at the technology demonstration stage.

  ○ **Stage 3 Thorium based Reactor:**
  - Thorium utilization is the long term objective of the Indian Nuclear Power Programme.
  - The third phase of India's Nuclear Power Generation programme is breeder reactor based on Thorium- Uranium cycle.

Status of Nuclear Energy in India

➤ Owing to the **waiver of the Nuclear Suppliers Group (NSG) to India in 2008,** the nuclear programme of country now has much less constraints.

  ○ The waiver paved the way for India to engage in nuclear trade and led to the Indo-US Civil Nuclear Deal. India has also signed civilian nuclear cooperation agreements with the U.S., U.K., France, Canada, Argentina, Australia and Russia, among others.

➤ There is an **early movement on Fast Breeder Reactors (FBR) deployment** and early deployment of indigenous Light Water Reactors (LWRs).

  ○ **Light-water reactors (LWRs)** are power reactors that are cooled and moderated with ordinary water. There are two basic types: the **Pressurized-Water Reactor (PWR)** and the **Boiling-Water Reactor (BWR)**.

  ○ PWR is a power reactor in which the heat is dissipated from the core using highly pressurized

Note:

water (about 160 bar) to achieve a high temperature and avoid boiling within the core. BWR is a nuclear reactor with water as a coolant and as a moderator, boiling in the core. The resulting steam is generally used directly to drive a turbine.

Cyber Attacks

Recently, the Nuclear Power Corporation of India Ltd. (NPCIL) has confirmed that **malware** had infected its system at the Kudankulam Nuclear Power Plant (KKNPP).

➢ The malware named **'Dtrack'** is a **new spyware tool** that is believed to be actively targeting a large number of Indian institutions, in order to steal confidential data as well as a remotely downloading malicious tool- tracking key logs and monitoring IP (internet protocol) traffic.
   ❍ **Dtrack** was **originated** in **North Korea** by the hackers' group Lazarus.

➢ The recent cyberattack revived the memories of the **Stuxnet virus attack on an Iranian nuclear facility in 2018**.
   ❍ Cyberattack is a **malicious and deliberate attempt** by an individual or organization to breach the information system of another individual or organization.
   ❍ There are various types of cyberattacks like malware, phishing, denial of service attacks, etc.

Report on Cyber Attacks

➢ According to the **U.S. global computer security software company McAfee,** the month of **October 2019** saw the **most terrible cyberattacks**.
   ❍ Malware like **'Ghostcat'** infects a user when the user visits a particular website and is served with a malicious advertisement. It collects the device information and eventually leads the user to malicious content. It targets mobile devices in general.
   ❍ **'MedusaLocker'** is ransomware (a type of malware) that makes its way into users' devices by encrypting files.
   ❍ According to the report, a technique called **stenography** is used which can **hide malicious code inside a file** that appears normal and allow hackers **to bypass security software and firewalls**.

Way Forward

➢ Real-time intelligence is required for preventing and containing cyber attacks. To achieve that, India needs to secure its computing environment and the Internet of Things (IoT) with current tools, patches, updates and best-known methods in a timely manner.

Microbial Fuel Cells

Recently, at a London Zoo, a fern started taking its own selfies. The Zoological Society of London (ZSL) scientists had laid the groundwork with the aim of **using plants to power camera traps and sensors in the wild**.

➢ This was achieved by **installing the microbial fuel cells in Pete** (a maidenhair fern).

Microbial fuel cells

➢ A microbial fuel cell (MFC) is a **device** that **converts chemical energy to electrical energy** by the **action of microorganisms**.

➢ It is a bio-electrochemical system that uses bacteria as the catalyst to oxidize organic and inorganic matter, and consequently, generate electric current out of it.
   ❍ **Plants naturally deposit biomatter** as they grow which in turn feeds the natural bacteria present in the soil. This **creates energy that can be harnessed by fuel cells**.

➢ It has **applications** in various fields such as power generation systems, bio-recovery, waste-water treatment, etc.

Edge Computing

Edge computing is defined as the **deployment of data-handling activities** from **centralized and always-connected network segments** (like Dropbox, Gmail, etc.) and toward individual sources of data capture, such as endpoints like laptops, tablets.

➢ It is an **extension of cloud computing,** and differs in terms of time taken in processing the information. The data is analysed locally, closer to where it is stored, in real-time without latency.

Advantages of Edge Computing

➢ Edge computing allows for **quicker data processing** and content delivery while streaming a video.

Note:

drishti

HOW EDGE COMPUTING WORKS

Edge computing allows data from internet of things devices to be **analyzed at the edge of the network** before being sent to a data center or cloud.

- Internet of Things
- Cloud
- EDGE Local Processing
- Edge Gateway
- Corporate Data Center
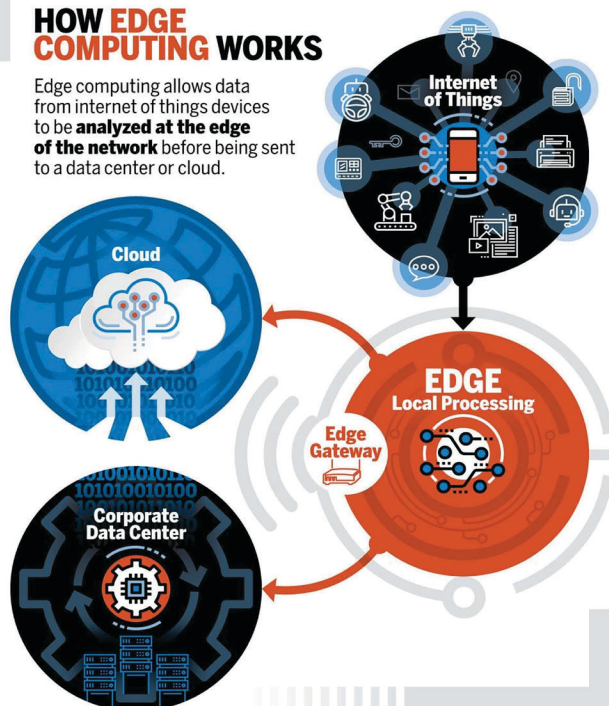
➢ **Future Technology** like 5G wireless technology and artificial intelligence enable faster response times, lower latency (delay), and simplified maintenance in computing.

➢ It is preferred over cloud computing in remote locations, as this works with **local storage**, similar to a mini data centre.

➢ An edge computing network **reduces the amount of data** that travels over the network which makes it **data efficient**.

Cloud Computing

➢ It is the delivery of different services through the Internet. These resources include tools and applications like data storage, servers, databases, networking, and software.

➢ Cloud-based storage saves files on a remote database. As long as an electronic device has access to the web, it has access to the data and the software programs to run it.

World Polio Day

World Polio Day was established by **Rotary International** on **24th October** to celebrate the **birth of Jonas Salk, who developed a vaccine against poliomyelitis**.

➢ The establishment of the **Global Polio Eradication Initiative (GPEI)** in **1988 reduced polio worldwide by 99%**.

➢ **World Polio Day (2019)** marked a milestone in polio eradication as the independent Global Commission for the Certification of Poliomyelitis Eradication (GCC) has declared Wild Polio Virus type 3 to be globally eradicated.

○ It follows the eradication of **smallpox** and **wild poliovirus type 2**.

Wild Polio Virus type 3

➢ There are **three** individual and immunologically distinct wild poliovirus strains: **Wild Polio Virus type 1 (WPV1), Wild Polio Virus type 2 (WPV2) and Wild Polio Virus type 3 (WPV3)**.

➢ Symptomatically, all **three strains are identical but there are genetic and virological differences,** which makes these three strains three separate viruses that must each be eradicated individually.

➢ **WPV2 and WPV3 have been eradicated globally** but **WPV1 remains in circulation** in just two countries namely, **Afghanistan and Pakistan**.

Polio

➢ Polio is a crippling and potentially **fatal viral infectious** disease.

➢ There is **no cure**, but can be prevented through **immunization**.

➢ The strategy to eradicate polio is therefore based on preventing infection by immunizing every child until transmission stops.

➢ There are two types of vaccines to prevent infection.

○ **OPV (Oral Polio Vaccine):** It is given orally as a birth dose for institutional deliveries, then primary three doses at 6, 10 & 14 weeks and one booster dose at 16-24 months of age.

○ **Injectable Polio Vaccine (IPV):** It is introduced as an additional dose along with the 3rd dose of DPT under the universal immunization programme (UIP).

➢ **India** received **polio-free certification** by the **World Health Organisation (WHO)** in **2014**.

○ **Eradication of a disease** refers to the complete and permanent worldwide reduction to zero new cases of an infectious disease through deliberate efforts. If a disease has been eradicated, no

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further control measures are required. For eg-smallpox has been eradicated.

❍ However, **elimination of a disease** refers to reduction to zero (or a very low defined target rate) of new cases of an infectious disease in a defined geographical area. Elimination requires continued measures to prevent re-establishment of disease transmission. Yaws and Leprosy have been eliminated from India.

Guidelines for Evaluation of Nanopharmaceuticals in India

Recently, the Government of India released **"Guidelines for Evaluation of Nanopharmaceuticals in India"**.

➤ There are **no internationally accepted uniform guidelines for nano-pharmaceuticals**.

➤ It takes into account the **physical, chemical and biological characteristics** of the **nano-material used and the product,** and the indication for which the product is intended to be used and other related aspects.

Nanopharmaceuticals

➤ Nanopharmaceuticals is defined as a **pharmaceutical preparation containing nanomaterials** intended for internal use or external application on a human for the purpose of therapeutics, diagnostics and health benefits.

❍ The **nanomaterial** is defined as material having a **particle size in the range of 1 to 100 nm in at least one dimension**.

➤ **Nano-formulations are not entirely new drugs** but medicines that have **better quality** because of the technology-led delivery mechanisms that are used to make its administration in the body more effective.

Nanopharmaceuticals Guidelines

➤ These guidelines have been developed in line with the provisions of **Schedule Y of Drugs and Cosmetics Rules, 1945** as well as **Second Schedule of the New Drugs and Clinical Trials Rules, 2019** with specific requirements for nanopharmaceuticals.

➤ The guidelines include:

❍ The **nano-size range** should be **declared in the product specification**.

❍ The detailed methods of the **manufacturing process** and the **impact of nanomaterial waste disposal** on the environment should also be declared.

❍ The added **advantage and possible disadvantage of nanopharmaceuticals** in comparison to conventional/traditional drug/API should be clearly stated on the products.

● However, **Nanocarrier** based **targeted drug delivery** and nanoformulations have **higher efficacy, lower toxicity** and are **safer than the conventional drugs**.

● A Nanocarrier is a nanomaterial being used as a transport module for another substance like a drug.

❍ The stability testing for **Nanoformulations** should focus on **functionality, integrity, size range of nanopharmaceuticals**.

❍ It will cover nanopharmaceuticals in the form of **finished formulation as well as Active Pharmaceutical Ingredient (API)** of a new molecule or an already approved molecule with altered nanoscale dimensions, properties.

● It also covers the phenomenon associated with the application of nanotechnology intended to be used for treatment, in vivo diagnosis, mitigation, cure or prevention of diseases and disorders in humans.

Advantages of Guidelines

➤ Indian researchers and industry would be facilitated to undertake research in nanopharmaceuticals product development and commercialization.

➤ The guidelines will pave the way for significant benefits through such cutting edge technology and contribute to the mission of "Affordable Health Care for All".

Artificial Leaf For Clean Gas

Scientists have developed an **'artificial leaf'** device that uses sunlight to produce a **syngas** currently made from fossil fuels.

➤ It is a **carbon-neutral device** and could be used to create a sustainable liquid fuel alternative to petrol.

Note:

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- ❍ Unlike the current industrial processes for producing syngas, the leaf does not release any additional carbon dioxide into the atmosphere.
- ➤ **Syngas (Synthesis Gas)** is currently made from a **mixture of hydrogen and carbon monoxide** and is used to produce fuels, pharmaceuticals, plastics, and fertilizers.
  - ❍ The syngas is produced by **gasification of a carbon-containing fuel** to a gaseous product that has some heating value.
  - ❍ The general raw materials used for gasification (creation of syngas) are coal, petroleum-based materials, etc.
- ❍ The name syngas is derived from the use as an intermediate in generating **synthetic natural gas** and to create ammonia or methanol. It is a gas that can be **used to synthesize other chemicals,** hence the name synthesis gas, which was shortened to syngas.
- ➤ Rather than running on fossil fuels, the artificial leaf is powered by sunlight.
  - ❍ The device is inspired by photosynthesis—the natural process by which plants use the energy from sunlight to turn carbon dioxide into food.

■■■

Note:

Environment and Ecology

Highlights

- Wildfires
- Mountain Streams Emits Carbon Dioxide
- Asiatic Water Buffalo
- First Snow Leopard Survey

- Tasmanian Tiger
- Indian Ocean Dipole (IOD)
- SAFAR

Wildfires

As per the latest data from **Sentinel-3 World Fire Atlas** there were almost five times as many wildfires across the world in August 2019 compared to August 2018.

➢ There were 79,000 fires in August 2019 as compared to just over 16,000 fires detected in August 2018.

   ❍ 49% (nearly half) of the fires were detected in Asia, around 28% were detected in South America, 16% in Africa, and the remaining were recorded in North America, Europe and Oceania.

   ❍ It is to be noted that August and September 2019 were the months which witnessed fires in the Amazon rainforest.
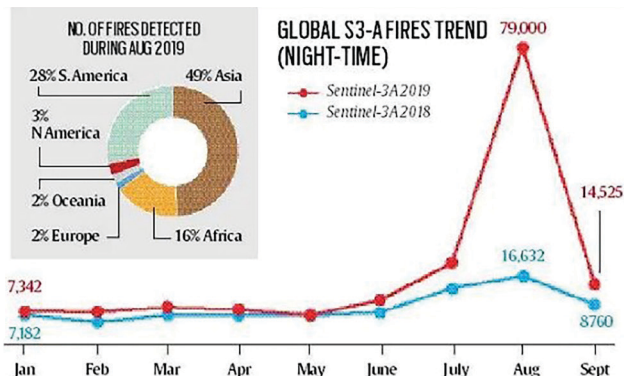
Sentinel-3 World Fire Atlas

➢ The **Sentinel-3 World Fires Atlas** Prototype product has been developed by the **European Space Agency (ESA)**.

   ❍ Sentinel-3 is a multi-instrument mission to measure sea-surface topography, sea and land-surface temperature, ocean-colour and land colour with high-end accuracy and reliability.

   ❍ It is based on a constellation of two satellites: Sentinel-3A and Sentinel-3B.

   ❍ The mission is part of the European Commission Copernicus Programme for Earth Observation.

Mountain Streams Emits Carbon Dioxide

Recently the first large-scale study of the **carbon dioxide emissions from mountain streams, and their role in global carbon fluxes** has been released.

➢ Mountains cover **25%** of the Earth's surface, but the streams make up just 5% of the global surface area of the fluvial networks.

➢ The emissions from mountains form a **major part** of the **Global Carbon Cycle**.

➢ The study specifically focused on their hydrologic and geomorphologic properties as well as the soil organic carbon content within the catchments of the mountainous region.

Findings of the Study

➢ Researchers found that these streams have a **higher average CO_2 emission rate per square meter than streams at lower altitudes,** due to the **additional turbulence** caused as **water flows down the mountain slopes**.

➢ The **gas exchange velocities** across the **air-water interface** in mountain streams occurs **100 times faster** than regular flow.

➢ The findings seem to indicate that the **CO_2 comes from geological sources** as carbonate rock dominates geology in numerous regions around the world.

Note:

Global Carbon Cycle

➢ It refers to the exchanges of carbon within and between four major reservoirs: the atmosphere, the oceans, land, and fossil fuels.

➢ Carbon may be transferred from one reservoir to another in seconds (e.g., the fixation of atmospheric CO_2 into sugar through photosynthesis) or over millennia (e.g., the accumulation of fossil carbon like coal, oil, gas through deposition of organic matter).
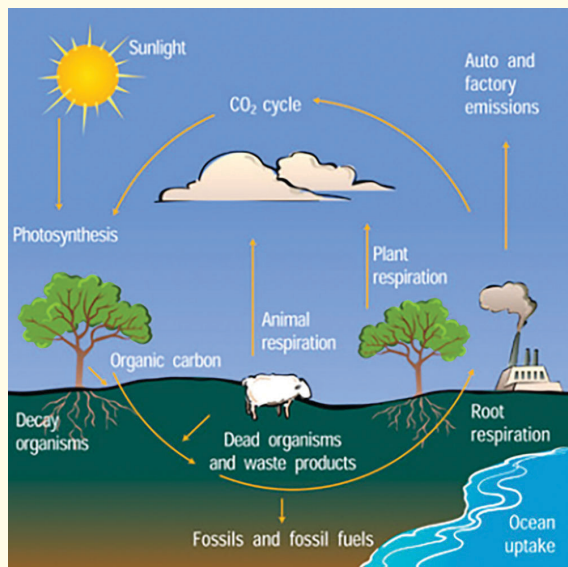
Asiatic Water Buffalo

Recently, **due to anthrax**, two **Asiatic Water Buffaloes** died in the **Pobitora Wildlife Sanctuary**.

➢ The Asiatic Wild Water Buffalo, scientifically known as **Bubalus Arnee**, is known to be found in the Central Indian Forests and is mostly restricted to the states of **Assam, Arunachal Pradesh** and **Madhya Pradesh**.

  ○ It has been recently found in the forests of Maharashtra after which the Maharashtra Government declared the Kolamarka forest area as a conservation reserve for the Asiatic Wild Buffalo.

➢ Asiatic buffalo has the **widest horn span among all bovids** found globally. The wild buffalo is mainly found in the alluvial grasslands, marshes, swamps and river valleys.

➢ The Asiatic wild buffaloes are of **enormous economic significance** as they are the direct ancestors of all the breeds of the domestic buffaloes.

➢ Their **population has decreased** at an alarming rate because of various reasons such as poaching, loss of habitat and breeding with domestic buffaloes.

➢ **Protection Status**

  ○ It has been listed as an **endangered species** by the International Union for Conservation of Nature (IUCN).

  ○ It is listed under **Schedule-1** of the **Wild Life (Protection) Act, 1972**.

  ○ It is included in **CITES Appendix-III** and is legally protected in Bhutan, India, Nepal, and Thailand.

Pobitora Wildlife Sanctuary

➢ Pobitora Wildlife Sanctuary has the **highest density of one-horned rhinos** in the world and **second highest concentration** in Assam after Kaziranga National Park.

  ○ It is often called **'Mini Kaziranga'** due to similar landscape and vegetation.

➢ The wildlife sanctuary is home to endangered one-horned rhinoceros and the other mammals such as Leopard, Leopard cat, Fishing cat, Jungle cat, Feral Buffalo, Wild pigs, Chinese pangolins, etc.

➢ There are **5 national parks in Assam** namely:

  ○ Dibru-Saikhowa National Park,

  ○ Kaziranga National Park,

  ○ Manas National Park,

  ○ Nameri National Park,

  ○ Rajiv Gandhi Orang National Park.

Anthrax

➢ It is a serious infectious disease that is **caused by a bacteria** known as Bacillus anthracis.

➢ Although it is rare but it can **sometimes become fatal for humans** if they get infected with anthrax when they come in contact with infected animals or contaminated animal products.

➢ It is characterized by **symptoms** like blisters on the skin, chest pain, vomiting, diarrhea, and fever.

First Snow Leopard Survey

The Government of India has launched the **First National Protocol on Snow Leopard Population Assessment**, to mark the occasion of **International Snow Leopard Day (23rd October)**.

Note:

- The **first National Snow Leopard Survey of the nation** has been developed by scientific experts in association with the **Snow Leopard States/UTs** namely, Ladakh, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.
- The occasion also marked the inaugural session of the **4th steering committee meeting of the Global Snow Leopard & Ecosystem Protection (GSLEP) Program**.
  - The GSLEP is a **high-level inter-governmental alliance** of all the 12 snow leopard range countries.
    - The snow leopard countries are: **India, Nepal, Bhutan, China, Mongolia, Russia, Pakistan, Afghanistan, Kyrgyzstan, Kazakhstan, Tajikistan, and Uzbekistan**.
  - It majorly focuses on the need for **awareness and understanding of the value of Snow Leopard for the ecosystem**.
  - The GSLEP Program (2019) is being organized by the **Ministry of Environment, Forest and Climate Change at New Delhi**.
  - Currently, the Steering Committee meeting of GSLEP **chaired by Nepal** and **co-chaired by Kyrgyzstan**.
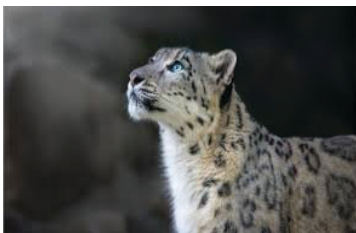
Snow Leopard

- The snow leopard inhabits the **higher Himalayan and trans-Himalayan landscape** in the **five states** of **Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh**.
  - This area contributes to about 5% of the global snow leopard range.
- Snow leopards are categorized as **'Vulnerable'** by **IUCN** and in the **Schedule I** of the **Indian Wildlife (Protection) Act 1972**.
- They are listed in **Appendix I** of the **Convention on International Trade in Endangered Species (CITES)** and the **Convention on Migratory Species (CMS)**, revealing the need for the highest conservation status to the species, both globally and in India.
- **Other conservation efforts** launched by India are:
  - **Project Snow Leopard (PSL):** It promotes an inclusive and participatory approach to conservation that fully involves local communities.

- SECURE Himalaya is a Global Environment Facility (GEF) – United Nations Development Programme (UNDP) funded project on conservation of high altitude biodiversity and reducing the dependency of local communities on the natural ecosystem. This project is now operational in four **snow leopard range states**, namely, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim.

Convention on the Conservation of Migratory Species of Wild Animals (CMS)

- It is an environmental treaty under the aegis of the **United Nations Environment Programme**. It is also referred to as the **Bonn Convention**.
- It is the **only global convention** specializing in the **conservation of migratory species, their habitats and migration routes**.
- India has been **a party** to the **CMS since 1983**.

CITES

- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an **international** agreement.
- It is **legally binding** on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals.
- The CITES Secretariat is **administered by UNEP** and is located at Geneva, Switzerland.

Global Environment Fund (GEF)

- It is a private equity fund focused on seeking long term financial returns by investments in clean energy under climate change.

Tasmanian Tiger

Tasmania's Department of Primary Industries, Parks, Water and Environment **(DPIPWE)** has **released a document** detailing eight reported sightings of the **Tasmanian tiger, or thylacine,** in the last three years.

- The Tasmanian tiger, or thylacine **(a dog headed pouched dog)** is an exclusively **carnivorous marsupial** that is considered to be extinct (as per the IUCN status).
- Thylacine, once, was widespread over continental Australia, extending North to New Guinea and south to **Tasmania (an Island state of Australia)**.
- However, it was confined to Tasmania in recent times and disappeared from mainland Australia over 2000

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What is a Tasmanian tiger?

The thylacine, or Tasmanian tiger, is a large carnivorous marsupial believed extinct for more than 80 years.

Yellowish-brown to grey fur.

15 to 20 distinct dark stripes across its back, shoulders and tail.

Powerful jaws with about 46 teeth.

Stiff tail, with relatively short legs.
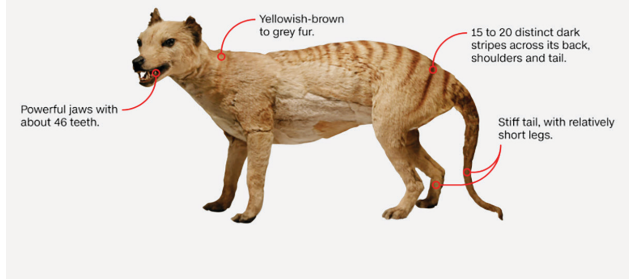
years ago, mainly because of **over-hunting** by humans, **diseases** and **competition from the Dingo (Canis lupus)**, a wild dog native to Australia.
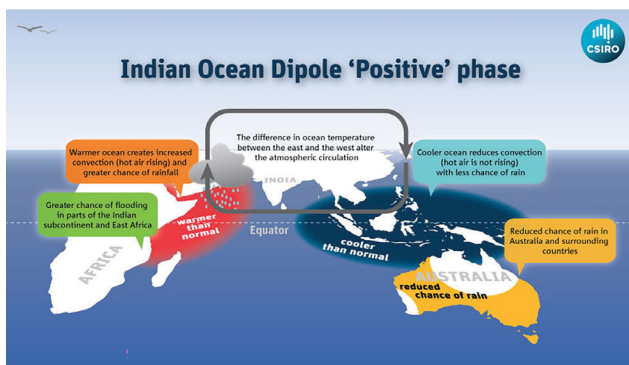
➢ It is **also known as the Tasmanian Wolf** and bears some **resemblance to a dog**, with its distinguishing features being the dark stripes beginning at the rear of its body and extending into its stiff tail and abdominal pouch.

Indian Ocean Dipole (IOD)

➢ It is an **atmosphere-ocean coupled phenomenon** in the tropical Indian Ocean (like the El Nino is in the tropical Pacific), characterised by a **difference in Sea-Surface Temperatures (SSTs)**.

Indian Ocean Dipole 'Positive' phase

Warmer ocean creates increased convection (hot air rising) and greater chance of rainfall

The difference in ocean temperature between the east and the west alter the atmospheric circulation

Cooler ocean reduces convection (hot air is not rising) with less chance of rain

Greater chance of flooding in parts of the Indian subcontinent and East Africa

Reduced chance of rain in Australia and surrounding countries

Equator

warmer than normal

cooler than normal

reduced chance of rain

➢ A **'positive IOD'** — or simply 'IOD' — is associated with **cooler than normal SSTs in the eastern equatorial Indian Ocean** and **warmer than normal SSTs in the western tropical Indian Ocean**.

➢ The **opposite phenomenon is called a 'negative IOD'**, and is characterised by warmer than normal SSTs in the eastern equatorial Indian Ocean and cooler than normal SSTs in the western tropical Indian Ocean.

➢ It has been seen that **positive IOD year sees more than normal rainfall over central India**.

SAFAR

The **System of Air Quality and Weather Forecasting And Research (SAFAR)** is a national initiative introduced by the **Ministry of Earth Sciences (MoES)**.

➢ It **measures the air quality** of a metropolitan city, by measuring the overall pollution level and the location-specific air quality of the city.

➢ The system is **indigenously developed** by the **Indian Institute of Tropical Meteorology (IITM), Pune** and is operationalized by the India Meteorological Department (IMD).

➢ SAFAR is an **integral part of India's first Air Quality Early Warning System operational in Delhi**.
  ○ It monitors all weather parameters like temperature, rainfall, humidity, wind speed, and wind direction, UV radiation, and solar radiation.
  ○ **Pollutants monitored:** PM2.5, PM10, Ozone, Carbon Monoxide (CO), Nitrogen Oxides (NOx), Sulfur Dioxide (SO2), Benzene, Toluene, Xylene, and Mercury.

➢ The World Meteorological Organization has recognized SAFAR as a "prototype activity" on the basis of the high-quality control and standards maintained in its implementation.

Air Quality Index (AQI)

➢ The AQI is an index for reporting daily air quality.

➢ It focuses on health effects one might experience within a few hours or days after breathing polluted air.

➢ AQI is calculated for eight major air pollutants: Ground-level ozone, PM10, PM2.5, Carbon monoxide, Sulfur dioxide, Nitrogen dioxide, Ammonia, Lead.

➢ Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in India.

Note:

Art & Culture

Highlights

- *Lakshmi Narasimha Temple: Hoysala Architecture*
- *Rangdum Monastery*
- *Assamese Bhaona*
- *Hori Habba*
- *Goura Gouri Festival*
- *Excavation Sitesof Sangam Age*
- *76th Anniversaryof Azad Hind Government*
- *Petta Thullal*

Lakshmi Narasimha Temple: Hoysala Architecture

➤ The **13th century Lakshmi Narasimha temple in Bhadravati (Karnataka)** is being renovated.

About Lakshmi Narsimha Temple

➤ The temple was built during **Hoysala rule** in the **early 13th century**.

➤ It is built in **'Trikuta'** style, that is, having **three shrines**-dedicated to Lakshmi Narasimha, Venugopalaswamy and Purushothama.

➤ The outer walls of the temple bear **great detailed carvings** in Hoysala style.

➤ The **concrete flooring on the platform**, also called **jagati**, is used by devotees as pradakshina path (passageway for circumambulation).

About Hoysala Architecture

➤ Hoysala architecture is the building style developed under the rule of the Hoysala Empire between the **11th and 14th centuries**, mostly **concentrated in southern Karnataka**.

➤ **Hoysala** temples are sometimes called **hybrid or vesara** as their unique style seems **neither completely Dravida nor Nagara**, but somewhere in between.

➤ The Hoysala temples, instead of consisting of a simple inner chamber with its pillared hall, contain multiple shrines grouped around a central pillared hall and laid out in the shape of an intricately-designed star.

➤ The most characteristic feature of these temples is that they grow **extremely complex** with so many projecting angles emerging from the previously straightforward square temple, that the plan of these temples starts looking like a **star**, and is thus known as a **stellate-plan**.

➤ Since they are made out of **soapstone** which is a relatively soft stone, the artists were able to carve their sculptures intricately. This can be seen particularly in the jewellery of the gods that adorn the temple walls.

➤ They are easily distinguishable from other medieval temples by their highly original star-like ground-plans and a profusion of decorative carvings.

➤ Some of the famous temples are: **Hoysaleshvara temple** (Lord of the Hoysalas) at **Halebid in Karnataka** that was built in dark schist stone by the Hoysala king

Note:

in 1150, **Chennakeshava temple** in Somnathpura, Karnataka built around AD 1268 under Narasimha III, **Kesava temple** at Belur in Hassan district of Karnataka built by Vishnuvardhana.

Rangdum Monastery

The Archaeological Survey of India (ASI) is planning to declare the **Rangdum Monastery** located in Ladakh (Kargil district) as a monument of national importance.

➢ The move aims to look into the opportunities for expansion of tourism in the Ladakh region in the backdrop of the decision to split Jammu and Kashmir into two Union Territories.

➢ Rangdum Monastery is the 18th century built monastery that is situated at an altitude of 4,031 meters at the head of the Suru Valley, in Ladakh.

   ❍ Suru Valley is drained by the Suru River which is a tributary of the Indus River.

➢ Rangdum Monastery is a Tibetan Buddhist monastery belonging to the Gelugpa sect.

> **Archaeological Survey of India (ASI)**
> ➢ ASI is the **premier organization** for the archaeo-logical research, scientific analysis, excavation of archaeological sites, conservation and preservation of protected monuments.
> ➢ It is an attached office under the Department of Culture, **Ministry of Culture**.
> ➢ ASI was founded in 1861 by Alexander Cunningham-the first Director-General of ASI.

Assamese Bhaona

Recently, Bhaona performers from Assam made a foreign debut in Abu Dhabi.

➢ Bhaona is a **traditional** form of entertainment.

   ❍ A Bhaona involves dialogues, songs, and dances.

   ❍ It usually involves 40-50 performers wearing costumes and ornaments including those playing heavy drums and cymbals.

   ❍ The **actors who perform** it are known as **Bhaoriya**.

➢ It was the creation of **Sankardeva** (a **Vaishnava saint** born in 1449 A.D in Nagaon district of Assam. He started the neo-Vaishnavite movement).

   ❍ **Initially,** he wrote his prose in **Sanskrit** but **later** used **Assamese and Brajavali** (a literary language limited to theatrical usage, in which Sankardeva wrote his songs and plays) to develop the following artforms:

   ● **Borgeet** - a new form of spiritual music,

   ● **Bhaona -** a mythology-based theatrical performance, and

   ● **Sattriya -** a classical dance form which acts as a medium for propagation of the Vaishnava faith.

Hori Habba

'Hori Habba', is a popular **bull-catching** event in Karnataka.

➢ It is held during the **harvest season**. It is an ancient folk game native to Haveri district, and played on the lines of **Jallikattu in Tamil Nadu** and **Kambala in Dakshina Kannada** district.

➢ The government has not been allowing these **traditional games** to be played following a **ban on such sports** by the Supreme Court in **2017**.

Goura Gouri Festival

Goura - Gauri festival celebrates the **pastoral life of the people of Chhattisgarh**.

➢ The gathering sees the rituals of **'gedi', 'raut nacha'** and 'panthi nritya' in the traditional attire.

   ❍ **Gedi** is a form of dance of the **Gond people**, who are spread widely throughout **Madhya Pradesh** and **Chhattisgarh**, and is one of India's prominent tribal groups.

   ● Gedi is a **pair of bamboo stilts with footrests**. The dancers strike the stilts on the ground to produce simple rhythmic beats.

   ❍ **Raut Nacha** is a traditional dance of the **Yadav community**. In this dance, the Rauts, wearing a special costume, sing and dance in a group with sticks in their hands in the pathways of the village.

   ❍ **Panthi Nritya** is performed by **Satnami community of Chhattisgarh**. Songs related to dance depicts the importance of human life with strong spiritual messages with prime focus on omnipotent devotion.

➢ **Surti, Hareli, Pola and Teeja** are some other festivals of the state.

Note:

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Excavation Sites of Sangam Age

The Archaeological Survey of India (ASI) has approved Tamil Nadu's request to continue **excavations at four locations including Keeladi**.

➢ This development is expected to bridge the 1000 year gap in history between the Sangam Age and the Indus Valley civilization.

➢ The excavation will be undertaken at the following sites:
  - ○ **Keeladi:**
    - Located in Sivaganga district on the banks of **river Vaigai**.
    - It is an **urban settlement** of the **Sangam Age**.
    - The recent excavations at Keeladi artifacts are **300 years older than previously believed — 3rd century BCE**.
      1. **The second urbanization** (the first being Indus Valley Civilization) of **Vaigai plains** happened in **Tamil Nadu around the 6th century BCE**.
      2. The second urbanisation of Vaigai plains was **contemporary of the Iron Age in Gangetic plains** and this was also the period of the **rise of various Heterodox sects**.
      3. The society in Keeladi had **used animals predominantly for agricultural purposes**.
  - ○ **Kodumanal**
    - It is a village located in **Erode district, Tamil Nadu**.
    - It was a flourishing ancient trade city, known as **Kodumanam** (as inscribed in Pathitrupathu of Sangam Literature).
    - It is located on the northern banks of **Noyyal River (a tributary of the Cauvery)**.
  - ○ **Sivagalai**
    - It is a village in the Tuticorin district, **Tamil Nadu**.
    - It was once known as **'Small Ceylon'** by Britishers.
    - Evidence of megalithic archaeological remains was found here in 2018.
  - ○ **Adichanallur**
    - It is located in Thoothukudi district, **Tamil Nadu**.
    - In 2004, iron-age (1500 BC to 500 BC) burial sites were unearthed by ASI from here.

Sangam Age

➢ The word 'Sangam' is the Tamil form of the Sanskrit word 'Sangha' which means a group of persons or an association.

➢ The Sangam literature was largely consolidated from the third Sangam and provides information on conditions of life of people around the beginning of the Christian era.

➢ The Age of the Sangam refers to the age to which Sangam literature belonged.

Vaigai River

➢ It is an east-flowing river.

➢ The Vaigai river basin is an important basin among the 12 basins lying between the Cauvery and Kanyakumari.

➢ This basin is bounded by the Cardamom Hills and the Palani Hills on the West and by the Palk Strait and Palk Bay on the East.

Indus Valley Civilisation

➢ It flourished around **2,500 BC**, in the **western part of South Asia**, in **contemporary Pakistan and Western India**.

➢ The Indus Valley was home to the largest of the four ancient urban civilizations of Egypt, Mesopotamia, India, and China.

➢ In the 1920s, the Archaeological Department of India carried out excavations in the Indus valley wherein the ruins of the two old cities, viz. Mohenjodaro and Harappa were unearthed.

76th Anniversary of Azad Hind Government

The 76th anniversary of the formation of the Azad Hind Government was celebrated on **21st October, 2019**, at the Red Fort, Delhi.

Azad Hind Government

➢ **On 21st October 1943, Subhash Chandra Bose** announced the **formation of the Provisional Government of Azad Hind (Free India)** in **Singapore**, with himself as the Head of State, Prime Minister and Minister of War.

➢ The Provisional Government not only enabled Bose to negotiate with the Japanese on an equal footing

but also facilitated the mobilisation of Indians in East Asia to join and support the **Indian National Army (INA)**.

○ The struggle for independence was carried on by Subhash Chandra Bose from abroad. He found the outbreak of the Second World War to be a convenient opportunity to strike a blow for the freedom of India.

○ Bose had been put **under house arrest in 1940** but he managed to **escape to Berlin on March 28, 1941**. The Indian community there **acclaimed him as the leader (Netaji)**. He was greeted with 'Jai Hind' (Salute to the motherland).

○ In **1942,** the **Indian Independence League** was formed and a decision was taken to form the Indian National Army (INA) for the liberation of India.

○ On an invitation from Ras Bihari Bose, **Subhash Chandra Bose** came to East Asia on **June 13, 1943**. He was made president of the Indian Independence League and the **leader of the INA popularly called 'Azad Hind Fauj'**.

○ He gave the famous battle cry **'Dilli Chalo'**. He promised independence to Indians saying, **'tum mujhe khoon do, main tumhe Azadi dunga'** (You give me blood, I will give you freedom).

Petta Thullal

➢ Petta Thullal is the **ritualistic sacred dance** to celebrate the victory of good over evil in the legend of **Lord Ayyappa** who killed the demon princess Mahish.

➢ It denotes the beginning of the last leg of the annual **Sabarimala pilgrimage season in Kerala**.

Note:

Social Issues

Highlights

- *National Health Profile 2019*
- *National Symposiumon Lymphatic Filariasis*
- *Draft Notification for Medical Implants*
- *PM National Dialysis Programme*
- *Mission Indradhanush*

- *Union World Conferenceon Lung Health*
- *Global Tuberculosis Report 2019: WHO*
- *Global Hunger Index-2019*
- *State of the World's Children Report 2019*

National Health Profile 2019

The **14th edition** of National Health Profile and its e-book (digital version) has been released by the **Central Bureau of Health Intelligence (CBHI)**.

➢ **CBHI** has been publishing the **National Health Profile (NHP)** since **2005** and its **digital version since 2015**.

➢ The objective of this publication is to create a versatile database of health information of India and making it available to all stakeholders in the healthcare sector.

➢ The **NHP highlights** substantial health information under **major indicators** viz.

   ❍ **Demographic indicators:** population and vital statistics.

   ❍ **Socio-economic indicators:** education, employment, housing and amenities, drinking water and sanitation.

   ❍ **Health status indicators:** incidence and prevalence of common communicable and non-communicable diseases.

   ❍ **Health finance indicators:** health insurance and expenditure on health.

   ❍ **Health infrastructure:** details of Medical and Dental Colleges, AYUSH Institutes, Nursing Courses, and Paramedical Courses

Key Findings

➢ **Life Expectancy:**

   ❍ Life expectancy in India has **increased** from 49.7 years in 1970-75 to 68.7 years in 2012-16. For females it is 70.2 years and 67.4 years for males.

     ● Life expectancy refers to the number of years a person is expected to live based on the statistical average.

➢ **Infant Mortality Rate (IMR):**

   ❍ The IMR has **declined** considerably (33 per 1,000 live births in 2016), however, differentials of rural (37) & urban (23) are **still high**.

     ● The infant mortality rate is the number of deaths under one year of age occurring among the live births in a given geographical area during a given year per 1,000 live births.

➢ **Population Growth Rate:**

   ❍ There has been a consistent **decline in the birth rate (20.2), the death rate (6.3) and the natural growth rate (13.9)** in India from 1991 to 2017.

     ● The number of live births per thousand of the population per year is termed as **birth rate**.

     ● The number of deaths per year per thousand of the population in a given area is termed as the **death rate**.

     ● The difference between the number of live births and the number of deaths occurring in a year, divided by the mid-year population of that year, multiplied by a factor (usually 1,000) is termed as **Natural Growth Rate**.

➢ **Demographics:**

   ❍ It found the **high incidence of the young** and economically active population.

     ● It reports that 27% of the population below 14 years, 64.7% in the age group of 15-59 and 8.5% above 60 years.

➢ **Total Fertility Rate (TFR):**

   ❍ NHP reports TFR of 2.3 for the country where it is 2.5 for rural areas and 1.8 for urban areas.

     ● TFR measures the number of children born to a woman at the end of the childbearing age.

Note:

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National Symposium on Lymphatic Filariasis

A National Symposium on the theme **'United to Eliminate Lymphatic Filariasis'** was inaugurated recently.

➤ The Indian government has also signed the **'Call to Action to eliminate Lymphatic Filariasis by 2021'**.

Lymphatic Filariasis

➤ Lymphatic filariasis, commonly known as **elephantiasis** and is considered a **neglected tropical disease**.

➤ It **impairs** the lymphatic system and can lead to the **abnormal enlargement of body parts**, causing pain, severe disability, and social stigma.

➤ Lymphatic filariasis is a **vector-borne disease**, caused by infection with parasites classified as nematodes (roundworms) of the family Filariodidea.

India's Initiative

➤ The Government launched the **Accelerated Plan for Elimination of Lymphatic Filariasis (APELF) in 2018,** as part of intensifying efforts towards its elimination.

➤ It has adopted a **twin pillar strategy** - prevention through Mass Drug Administration (MDA) using a combination of 2 anti-filarial drugs (DEC and Albendazole) and providing Morbidity Management and Disability Prevention (MMDP) services to those affected by the disease.

➤ The government is ready to scale-up the use of **Triple Drug Therapy (IDA)** in a phased manner starting from December 2019.

Draft Notification for Medical Implants

A draft notification, issued by the Ministry of Health and Family Welfare, has **proposed** to bring **"all devices" used for medical application, under the purview of Drugs and Cosmetics Act, 1940**. This will make "all devices" to be termed as "drugs".

➤ All devices will include medical instruments, apparatus, appliance, implant, material or other article, whether used alone or in combination, including software or an accessory, especially for human beings or animals.

➤ Manufacturers and importers of most of these devices will have at least 1.5 years to voluntarily register with the Central Drugs Standard Control Organisation.

The Rationale Behind the Draft Notification

➤ Defective implants can cause crippling pain and even death. For ex., Johnson and Johnson's faulty hip implants.

Impact

➤ If implemented, the country's drug regulator will enforce standards to ensure the safety and effectiveness of

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these products while its pricing regulator will monitor the prices.

- ○ **Central Drugs Standard Control Organisation (CDSCO) is drug regulator** in India.
  - It applies the provisions of the Drugs and Cosmetics Act, as well as the Medical Devices Rules 2017 on all medical devices.
  - It can also punish for violations as per the Act.
- ○ The **National Pharmaceutical Pricing Authority (NPPA)** monitor the **prices of drugs**. NPPA is an organization under Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, set up in 1997.

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

PM National Dialysis Programme

Recently, the Health Ministry issued guidelines for establishing **peritoneal dialysis services** under the **Pradhan Mantri National Dialysis Programme**.

➤ There are two main types of dialysis namely- **Hemodialysis, and Peritoneal dialysis**.
- ○ Peritoneal dialysis, **people will have access to the treatment option** that could be performed at home (as in **hemodialysis**, treatment needs to be performed at a designated dialysis centre).
- ○ The peritoneal dialysis **avoids the substantial costs** of infrastructural set-up, maintenance, and staffing.

PM National Dialysis Programme

➤ The programme was announced by the **Ministry of Health & Family Welfare** in **2016** under the **National Health Mission (NHM)** in **PPP (Public-Private Partnership) model**.

➤ It aims to provide **free dialysis services to the poor**.

➤ The **first phase** of the programme envisaged setting up of **hemodialysis centres** in all districts of the country.

➤ **Financing:**
- ○ **For Below Poverty Line (BPL) economic group: 100% expenses** are directly covered under NHM by the government.
- ○ For **non-BPL patients**: They can get treated at the district hospitals by paying the same rates as paid by the government for the BPL patient.

Dialysis
➤ Dialysis is a treatment that does some of the functions by healthy kidneys. It is needed when one develops an end-stage kidney failure.
➤ Dialysis maintains balance of body by:
- ○ Removing waste, salt and extra water to prevent them from building up in the body.
- ○ Keeping a safe level of certain chemicals in your blood, such as potassium, sodium and bicarbonate.
- ○ Helping to control blood pressure.

National Health Mission
➤ National Health Mission (NHM) was launched by the government of India in **2013 subsuming** the National Rural Health Mission and the National Urban Health Mission.
- ○ It was further extended in March 2018, to continue till March 2020.
➤ The NHM envisages achievement of **universal access** to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

Mission Indradhanush

The Government will launch the second phase of nationwide immunisation drive i.e. **Intensified Mission Indradhanush 2.0**, to mark the **25 years of Pulse polio programme**.

➤ Intensified Mission Indradhanush 2.0 aims to achieve **at least 90% pan-India immunisation coverage by 2022**.

➤ **Mission Indradhanush,** that was launched in **December 2014,** has **increased India's immunisation coverage** significantly **to 87% from 67%** in 2014.

➤ However, official data on India's immunisation coverage is still 62%, as given in the National Family Health Survey-4 (2015-16).

Immunization Programme in India

➤ Immunization Programme in India was **introduced in 1978** as 'Expanded Programme of Immunization (EPI)' by the Ministry of Health and Family Welfare.

➤ In **1985**, the Programme was modified as **'Universal Immunization Programme (UIP)'**. The **stated objectives** of the Programme include:
- ○ Rapidly increasing immunization coverage.

Note:

- Improving the quality of services.
- Establishing a reliable cold chain system to the health facility level.
- Introducing a district-wise system for monitoring of performance.
- Achieving self-sufficiency in vaccine production.

➢ UIP prevents mortality and morbidity in children and pregnant women against 12 vaccine preventable diseases. But in the past it was seen that the increase in immunization coverage had slowed down and it **increased at the rate of 1% per year between 2009 and 2013**.

➢ To accelerate the coverage, **Mission Indradhanush** was envisaged and implemented since **2015** to rapidly increase the full immunization coverage to **90%**.

Mission Indradhanush

➢ The aim is to fully immunize more than 89 lakh children who are either unvaccinated or partially vaccinated under UIP.

➢ It **targets children under 2 years of age and pregnant women** for immunization.

➢ It provides **vaccination against 12 Vaccine-Preventable Diseases (VPD)** i.e. diphtheria, Whooping cough, tetanus, polio, tuberculosis, hepatitis B, meningitis and pneumonia, Haemophilus influenzae type B infections, Japanese encephalitis (JE), rotavirus vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR).

- However, Vaccination against Japanese Encephalitis and Haemophilus influenzae type B is being provided in selected districts of the country.

➢ It is a nationwide initiative with a **special focus on 201 high focus districts**. These districts accounted for nearly 50% of the total partially vaccinated or unvaccinated children in the country.

➢ The **rate** of increase in full **immunization coverage increased to 6.7%** per year through the first two phases of 'Mission Indradhanush'.

Intensified Mission Indradhanush

➢ The Intensified Mission Indradhanush (IMI) was launched by the Government of India in **2017** to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.

- Under IMI, **greater focus has been given on urban areas** which was one of the gaps of Mission Indradhanush.

➢ The **target** under IMI was to increase the **full immunization coverage to 90% by December 2018**. However, **only 16 districts** in the country **have achieved 90% coverage so far**.

➢ The **Intensified Mission Indradhanush 2.0** will target the **districts which have immunisation coverage of 70% or below**.

Pulse Polio Immunization Programme

➢ With the global initiative of eradication of polio in 1988 following World Health Assembly resolution in 1988, Pulse Polio Immunization programme was launched in India in the **financial year 1994-95**.

➢ It was started with an objective of achieving **hundred percent coverage under Oral Polio Vaccine**.

➢ Children in the age group of 0-5 years administered polio drops during national and sub-national immunization rounds (in high risk areas) every year.

➢ The **World Health Organization (WHO)** on 24th February 2012 removed India from the list of countries with active endemic wild poliovirus transmission and in 2014, **India was declared Polio free**.

➢ As a risk mitigation measure, the country has also introduced **Inactivated Polio Vaccine** across the country in all states.

Union World Conference on Lung Health

The Vice-President of India inaugurated the **50th Union World Conference on Lung Health** at Hyderabad.

➢ The **theme** of the conference is **'Ending the Emergency: Science, Leadership, Action'**.

- The conference theme **resonates strongly with TB**, but it also **raises awareness** that all threats to **lung health** – TB, air pollution, tobacco and many more – are emergencies that our science, leadership, and action need to meet head-on.

➢ It is the **world's largest gathering of stakeholders** organized by **the International Union Against Tuberculosis (IUAT)**.

- It is being organized since **1920**.

➢ India provides a unique backdrop for discussions on ending Tuberculosis (TB) and lung disease with

the current highest burden of TB in the world, and ambitious targets to eliminate TB by 2025.

➢ An agreement was also reached to lower the price of **rifapentine** (a critically important drug used to prevent tuberculosis).

International Union Against Tuberculosis

➢ International Union Against Tuberculosis (IUAT) was founded at the post-war conference, held in Paris in 1920.

➢ It became the first NGO to be officially recognized by WHO In 1940.

➢ The IUAT plays a central role in international clinical trials to determine the best ways to use the new tools for TB treatment and co-founds the TB Surveillance Research Unit.

Tuberculosis (TB)

➢ It is an infectious disease caused by the bacterium Mycobacterium tuberculosis. It is spread through the air from people suffering from TB.

➢ A single patient can infect ten or more people in one year. TB remains a major public health problem in India, with the country accounting for 26% of all TB cases reported globally.

➢ The Bacillus Calmette–Guérin (BCG) vaccine used for TB was developed by Albert Calmette and Camille Guérin in 1921.

➢ It is treatable and **curable disease**. It is treated with a standard 6 month course of 4 antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer.

➢ **Multidrug-resistant tuberculosis (MDR-TB)** is a form of TB caused by bacteria that **do not respond to isoniazid and rifampicin,** the 2 most powerful first-line anti-TB drugs.

Global Tuberculosis Report 2019: WHO

The **World Health Organization (WHO)** has released its **2019 edition** of the **Global Tuberculosis (TB) Report**.

➢ The report provides a comprehensive and up-to-date assessment of the TB epidemic and progress in the response at global, regional and country levels for India.

➢ WHO has been publishing global TB report every year **since 1997**.

Key Findings

➢ TB remains the **top infectious killer** in the world claiming over 4,000 lives a day.

➢ Geographically, **most TB cases in 2018** were in the WHO regions of **South-East Asia (44%)**, Africa (24%) and the Western Pacific (18%).

➢ **Eight countries** that accounted for **two thirds of the global total** include **India (27%)**, China (9%) and Indonesia (8%).

➢ **MultiDrug Resistant TB**
  ○ In 2018, there were about **half a million new cases** of rifampicin-resistant TB (of which 78% had multidrug resistant TB).
  ○ The three countries with the **largest share** of the global burden were **India (27%)**, China (14%) and the Russian Federation (9%).

➢ **TB Diagnosis**
  ○ Globally, **7.0 million new cases of TB were notified** in 2018 – an increase from 6.4 million in 2017.
  ○ Most of the increase in global notifications of TB cases since 2013 is **explained by trends in India and Indonesia**, the two countries that rank first and third worldwide in terms of estimated incident cases per year.

➢ **Concerns**
  ○ There is a gap between the number of notified TB patients and the number of estimatedTB patients.
  ○ The gap is due to a combination of **underreporting of detected cases and underdiagnosis** (i.e. people with TB do not access health care or are not diagnosed when they do).
  ○ **India (25%),** Nigeria (12%), Indonesia (10%) and the Philippines (8%) account for more than half of the total gap.

➢ **TB Treatment Outcomes**
  ○ The latest treatment outcome data for new cases of TB show a global treatment **success rate of 85%** in 2017, an increase from 81% in 2016. The improvement was mainly **due to progress in India**.

➢ **Financing for TB Prevention**
  ○ Funding for the provision of TB prevention, diagnostic and treatment services has doubled since 2006.
  ○ **In India, domestic funding quadrupled between 2016 and 2019.**

Note:

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➢ **Suggestions**
  ○ Access to TB care and preventive treatment needs to be expanded.
  ○ Substantial costs faced by TB patients and their households should be mitigated.
  ○ **Intensified research and development** is required to meet the Sustainable Development Goals (SDGs) and End TB Strategy targets set for 2030.
    ● **SDG 3** aims to end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases by 2030.
    ● The **End TB Strategy** aims to end the global TB epidemic, with targets to reduce TB deaths by 95% and to cut new cases by 90% between 2015 and 2035.
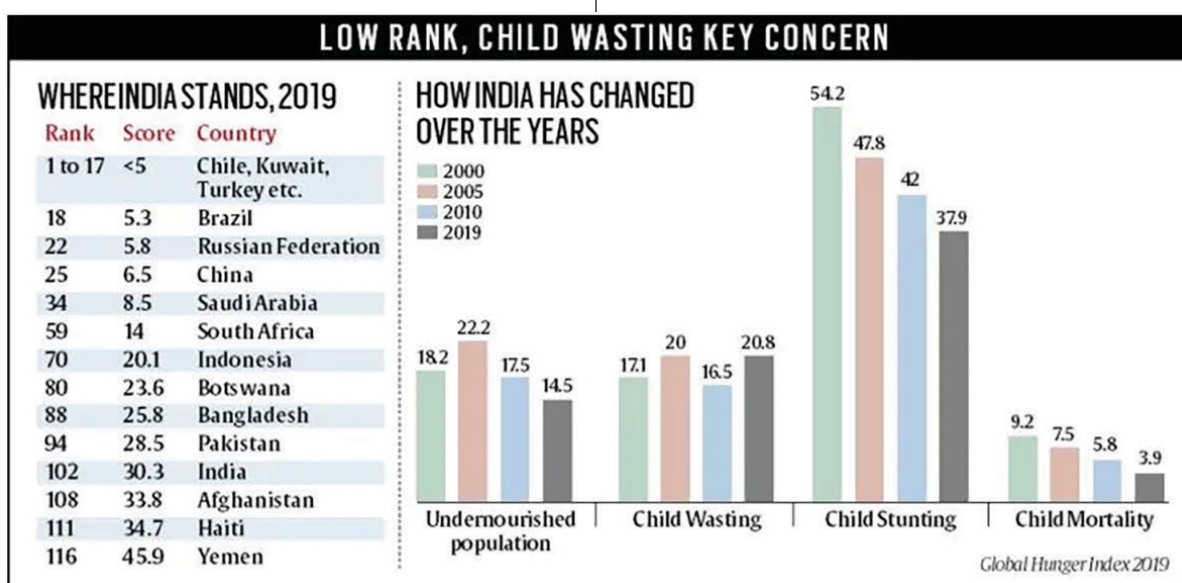
Global Hunger Index-2019

In the recently released Global Hunger Index (GHI) Report-2019, **India** was ranked at **102nd position out of 117 countries**.

➢ The report is an **annual publication** that is jointly prepared by the **Concern Worldwide (an Irish agency)** and the **Welt Hunger Hilfe (a German organization)**.

➢ The report is based on **four indicators** namely,
  ○ **Undernourishment** (which reflects inadequate food availability)
  ○ **Child Wasting** (which reflects acute undernutrition)
  ○ **Child Stunting** (which reflects chronic undernutrition)
  ○ **Child Mortality** (which reflects both inadequate nutrition and unhealthy environment)

➢ A **score is calculated** based on the indicators. A **low score gets a country a higher ranking** and implies a better performance.

Key Findings

➢ **Sharp Decline in the Ranking**
  ○ India's rank slipped from 95th position (in 2010) to 102nd (in 2019).
  ○ Over a longer-term duration, the fall in India's rank is sharper, i.e, from 83rd out of 113 countries in 2000 to 102nd out of 117 in 2019.

➢ **Comparison with Other Countries**
  ○ Among the **BRICS grouping, India is ranked the worst**.
  ○ Within **South Asia, India is behind every other country**. Sri Lanka, Nepal, Bangladesh and Pakistan are all ahead of India.
  ○ In stark contrast to India, which has the world's largest democracy and one of the biggest economies, most of the countries below India on the GHI — Afghanistan, Haiti or Yemen etc — are either poorly governed or war-torn or ravaged by natural calamities.

➢ **Child Wasting**
  ○ The share of wasting among children in India marked a steep rise from **16.5% in the 2008-2012 to 20.8% (highest for any country) in 2014-2018**.

LOW RANK, CHILD WASTING KEY CONCERN

WHERE INDIA STANDS, 2019

Rank	Score	Country
1 to 17	<5	Chile, Kuwait, Turkey etc.
18	5.3	Brazil
22	5.8	Russian Federation
25	6.5	China
34	8.5	Saudi Arabia
59	14	South Africa
70	20.1	Indonesia
80	23.6	Botswana
88	25.8	Bangladesh
94	28.5	Pakistan
102	30.3	India
108	33.8	Afghanistan
111	34.7	Haiti
116	45.9	Yemen

HOW INDIA HAS CHANGED OVER THE YEARS

2000 / 2005 / 2010 / 2019

Undernourished population: 18.2, 22.2, 17.5, 14.5
Child Wasting: 17.1, 20, 16.5, 20.8
Child Stunting: 54.2, 47.8, 42, 37.9
Child Mortality: 9.2, 7.5, 5.8, 3.9

Global Hunger Index 2019

Note:

○ India is the worst among all countries on this parameter.

➢ **Open Defecation**

○ The report took note of open defecation in India as an impacting factor for health.

○ As of 2015–2016, 90% of Indian households used an improved drinking water source while 39% of households had no sanitation facilities.

➢ **Improvement**

○ India improved in **indicators** that include, **under-5 mortality rate**, prevalence of **stunting** among children, and prevalence of **undernourishment** owing to inadequate food.

State of the World's Children Report 2019

The United Nations Children's Fund (UNICEF) has released its 'State of the World's Children' report for 2019.

Key Findings

➢ **Malnutrition:**

○ At least 1 in 3 children under 5 is undernourished or overweight.

○ At least 1 in 2 children suffer from hidden hunger.

➢ **Implications:**

○ The **triple burden of malnutrition – undernutrition, hidden hunger and overweight** – threatens the survival, growth and development of children, young people, economies and nations.

○ **For example,** Iron deficiency (a form of hidden hunger) reduces children's ability to learn and increases women's risk of death during or shortly after childbirth.

➢ **Causes:**

○ The triple burden of malnutrition is driven by the **poor quality of children's diets:** 2 in 3 children are not fed the minimum recommended diverse diet for healthy growth and development.

○ **Globalization, urbanization, inequities, humanitarian crises and climate shocks** are driving unprecedented negative changes in the nutrition situation of children around the world.

➢ **Suggestions:**

○ **Food environments** are crucial.

● There is a need to empower families, children and young people to demand nutritious food.

● Similarly, there is a need to drive food suppliers to do the right thing for children.

○ **Supportive systems –** health, water and sanitation, education and social protection– should be mobilized to scale up nutrition results for all children.

India-Specific Findings

➢ **Malnutrition:**

○ 35% of Indian children suffer from stunting, 17% suffer from wasting, 33% are underweight and 2% are overweight.

○ Indian children are being diagnosed with adult diseases such as hypertension, chronic kidney disease and diabetes.

○ Every second woman in the country is anaemic, as are 40.5% children.

➢ **In comparison with other countries:**

○ Among countries in South Asia, **India fares the worst (54%)** on the prevalence of children under five who are either stunted, wasted or overweight.

● Afghanistan and Bangladesh follow at 49% and 46%, respectively. Sri Lanka and the Maldives are the better performing countries in the region, at 28% and 32%, respectively.

○ India also has the **highest burden of deaths** among children under five per year, with over 8 lakh deaths in 2018.

● It is followed by Nigeria, Pakistan and the Democratic Republic of Congo, at 8.6 lakh, 4.09 lakh and 2.96 lakh deaths per year, respectively.

➢ **Causes:**

○ India is moving away from seasonal food as well as traditional food whereas the consumption of processed food has increased.

○ Over the decades, despite growing incomes, protein-based calories remain low and unchanged, and the calorific share of fruits and vegetables has declined.

➢ **Steps Appreciated:**

○ **POSHAN Abhiyaan or the National Nutrition Mission** is playing a major role in improving nutrition indicators across India.

Note:

○ The **Anaemia Mukt Bharat** programme to fight anaemic prevalence has been recognized as one of the best programmes implemented by governments across the world to address malnutrition.

- The **6×6×6 strategy** (six target beneficiary groups, six interventions and six institutional mechanisms) of the programme has been highlighted for using anaemia testing and treatment as the entry point to provide information on healthy diets.

■■■

Note:

Security

Highlights

- National Anti-Drone Guidelines
- National Security Guard (NSG)
- EX-EASTERN BRIDGE-V
- Danx-19
- Indo-French Joint Exercise Shakti - 2019

National Anti-Drone Guidelines

Recently, the **Ministry of Civil Aviation** has **finalized National Counter Rogue Drone Guidelines** for handling the threats from Unmanned Aircraft Systems.

➢ The genesis of the counter rogue drone guidelines lies in the rising number of drone-related safety incidents across the world including in India.

❍ Recent incidents of the utilization of drones to target VVIPs in Venezuela and Saudi Aramco drone attacks are a stark reminder of the threat level from rogue drones.

❍ India has an estimated over **6 lakh rogue or unregulated Unmanned Aerial Vehicles (UAVs)** of various sizes and capacities

➢ The strategic installations differ from state to state and place to place, based on their geographical condition, criticality and construction type but standard categorization would be:

❍ **Full-scale model:**

- It will work for the protection of vital assets of **critical national importance** like Rashtrapati Bhawan, Parliament House, nuclear installations, major airports, etc;

- Counter-Unmanned Aircraft System (C-UAS) with primary and passive detection means like radar, Radio Frequency (RF) detectors, electro-optical, and infrared cameras to be installed.

❍ **Mid-segment model:**

- It will protect **installations like metro airports, oil refineries, ports, and power plants,** etc.

- A lower level of threat mitigation techniques (compared to the full-scale model) to be installed with Counter-Unmanned Aircraft System (C-UAS).

❍ **Basic model:**

- Aims to protect **state secretariats, important official premises, monuments of national importance** etc.

- The basic threat mitigation technology to be used.

➢ The Counter-Unmanned Aircraft System (C-UAS) includes the following modern weapons:

❍ **Sky Fence:**

- It aims to block a lethal drone that uses a range of signal disruptors to jam the flight path and prevent them from entering their target, a sensitive installation or event venue.

❍ **Drone gun:**

- It is capable of jamming the radio, a global positioning system (GPS) and a mobile signal between the drone and the pilot.

- Further, it forces the drone to the ground in good time before it could wreak any damage.

- Australia has already designed such kind of weapon with an effective range of 2 km.

❍ **Advanced Test High Energy Asset (ATHENA):**

- It works by firing a high energy laser beam on a rogue drone resulting in its complete destruction in the air.

- It is a very costly technology and is currently being tested by the US army.

❍ **Drone Catcher:**

- It swiftly approaches an enemy drone and grabs it by throwing a net around it.

- Such a tool is required when a rogue drone is needed to be captured safely to extract incriminating evidence from it.

❍ **Skywall 100:**

Note:

- It is the ground version of the 'drone catcher' and it works by bringing down a UAV using a parachute that is hurled through a net from 100 meters distance.

➤ In addition to the counter rogue drone deployment models, the civil aviation ministry has also suggested a set of legal procedures to handle rogue drones.

❍ The legislation needs to address the **risk-based use of Counter-UAS authority and coordination** among relevant departments and agencies.

❍ The law shall state a legal framework for authorized use of C-UAS systems by security agencies for protecting vital assets, safeguarding manned aviation, supporting law enforcement activities, protecting national borders and conducting operations.

Radio Frequency (RF)

➤ It refers to the electromagnetic radio waves in the range of 3 kHz to 300 GHz, as well as the alternating currents carrying the radio signals.

➤ This is the frequency band that is used for wireless communications transmission and broadcasting.

➤ The frequency band is being divided into different parts, which are then assigned to different technology industries. This is known as the radio spectrum. For example, the Very High Frequency (VHF) band, which ranges from 30-300 MHz, is being used for FM radio, TV broadcasts, and amateur radio and its counterparts.

National Security Guard (NSG)

The **35th raising day of National Security Guard (NSG)** was observed on **15th October, 2019**.

➤ The NSG is a counter-terrorism unit that formally came into existence in 1986 by an act of Parliament- 'National Security Guard Act, 1986'.

➤ It was established **in the wake of 1984 Operation Blue Star** (an Indian military action carried out to remove militant religious leader from the Golden Temple, Amritsar), for combating terrorist activities with a view to protect states against internal disturbances.

➤ It operates under the **Ministry of Home Affairs** and is a task-oriented force that has two complementary elements in the form of:

❍ **Special Action Group (SAG)** comprising of the Army personnel - the main offensive or the strike wing of the NSG, and

❍ **Special Ranger Groups (SRG)** comprising of personnel drawn from the Central Armed Police Forces/State Police Forces. They generally handle VIP securities.

➤ It's motto is 'Sarvatra, Sarvottam, Suraksha'. Its personnel are popularly referred as Black Cat Commandos.

➤ It has been given the specific role to handle all facets of terrorism in any part of the country as a Federal Contingency Force.

➤ **Operations undertaken:**

❍ Operation Black Thunder (Golden Temple, Amritsar, 1986 & 1988).

❍ Operation Ashwamedh (Indian Airlines Flight-IC427 hijacking, India, 1993).

❍ Operation Thunderbolt or Vajra Shakti (Akshardham Temple attack, Gujarat, 2002).

❍ Operation Black Tornado (Mumbai Blasts, 2008).

EX-EASTERN BRIDGE-V

EASTERN BRIDGE V is the **joint bilateral exercise** between the **air forces of India and Oman**.

➤ It is a **biennial exercise** that aims to enhance interoperability during mutual cooperation between the two air forces.

➤ The 2019 exercise took place at the Air Force Base Masirah, Oman.

➤ In 2017, the exercise was conducted at Jamnagar, India.

➤ Other Exercises Between India and Oman

❍ **Naseem Al-Bahr** is the **naval exercise** conducted between both the countries.

❍ **AL Nagah** is the exercise between the **armies** of two countries.

Danx-19

Andaman and Nicobar Command (ANC) has conducted the **second edition of Defence of Andaman & Nicobar Islands 2019 (DANX-19)** from 14th–18th October 2019.

➤ Indian Army, Navy, Air Force, Coast Guard and special forces from newly formed Armed Forces Special Operations Division (AFSOD), participated in the exercise.

- ➤ The exercise was carried out for mobilisation and field manoeuvres to validate defensive plans of ANC headquarters and ensuring territorial integrity of the A&N Islands.

Andaman and Nicobar Command (ANC)

- ➤ It is the **first and only Tri-Service theatre command** of the Indian Armed Forces, based at Port Blair in the Andaman and Nicobar Islands of India.
- ➤ It was **created in 2001** to safeguard India's strategic interests in Southeast Asia and the Strait of Malacca by increasing rapid deployment of military assets in the islands.

Indo-French Joint Exercise Shakti-2019

'Exercise SHAKTI' is a biennial exercise that is conducted alternately in India and France.

- ➤ The exercise will focus on **counter-terrorism operations** in the backdrop of semi-desert terrain.
- ➤ The exercise aims at enhancing understanding, cooperation, and interoperability between the two Armies.
- ➤ Defence Exercises between India and France:
  - ○ **Varuna – Naval exercise**
  - ○ **Garuda – Air exercise**
  - ○ **Shakti – Army exercise**

Note:
- ➤ **Gagan Shakti** is conducted by the **Indian Air Force** to showcase its **air dominance** over the entire **extended area of the Indian Ocean Region**. It includes all-terrain operations – desert, high altitude, maritime scenarios, and special operations – in real-time with a specific focus on key areas like aerial combat, air to surface combat, paratrooper assault and medical evacuation.
- ➤ **Garuda Shakti** is the **joint military exercise** between **India and Indonesia**.
- ➤ **Mitra Shakti** is the joint military exercise between **India and Sri Lanka**.

Note:

drishti

Miscellaneous

Highlights

- Booker Prize
- National Unity Day
- Nirvik Scheme
- Cyclone Maha
- Dar es Salaam and Zanzibar
- GOAL (Going Online as Leaders)
- Mt Paektu
- Nelloptodes Gretae
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- Aflatoxins
- Thotlakonda Buddhist Monastery
- Liver Transplant Registry
- Bhashan Char Island
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- Siachen Area Opens for Tourism
- Ramgarh Dam

Booker Prize

The Booker Prize 2019 was awarded jointly to **Margaret Atwood** and **Bernardine Evaristo**.

➢ According to the rules, the Booker prize is awarded annualy for a single book and the prize must not be divided. However, the judges insisted they "couldn't separate" **Atwood's "The Testament"** and **"Girl, Woman, Other" by Evaristo**.

➢ Margaret Atwood is the oldest ever booker winner and Bernardine Evaristo is the first black women to win the prize.

➢ It is **awarded annually** to the **best novel** of the year **written in English** and **published in the UK or Ireland**.

National Unity Day

National Unity Day is celebrated every year on **31st October** to commemorate the **birth anniversary of Sardar Vallabhbhai Patel**.

➢ It is also known as **Rashtriya Ekta Diwas**.

➢ In 2018, the Government of India unveiled the 'Statue of Unity' in Gujarat in the honour of Sardar Vallabhbhai Patel.

  ○ It is the tallest statue in the world.

Sardar Vallabhbhai Patel

➢ Sardar Patel was born on **31st October 1875** in **Nadiad, Gujarat**.

➢ He was the **first Home Minister and Deputy Prime Minister of India**.

➢ He played an important role in the integration of many Indian princely states to make an Indian federation.

  ○ At the time of independence, Sardar Patel played a key role in convincing several princely states to align with the Indian Union.

  ○ He also worked hard as a social leader for the Independence of India.

➢ **Women of Bardoli** bestowed the title **'Sardar'** on Vallabhbhai Patel, which means 'a Chief or a Leader'.

➢ He is also remembered as the **'Patron saint of India's civil servants'** as he established the modern all-India services system.

Nirvik Scheme

➢ Export Credit Guarantee Corporation of India (ECGC) has introduced the Export Credit Insurance Scheme (ECIS) called NIRVIK to **enhance loan availability and ease the lending process**.

➢ It is an insurance cover guarantee that will cover up to 90% of the principal and interest. The cover will include both pre and post-shipment credit.

  ○ The ECGC currently provides credit guarantee of up to 60% loss.

➢ The enhanced cover will ensure that Foreign and Rupee export credit interest rates will be below 4% and 8% respectively for exporters.

Note:

Export Credit Guarantee Corporation of India
➢ ECGC Ltd is wholly owned by the **Ministry of Commerce and Industry**.
➢ The Government of India had initially set up **Export Risks Insurance Corporation in 1957**.
➢ Its objective was to promote exports from the country by providing credit risk insurance and related services for exports.

Cyclone Maha

A depression developed in the **Comorin Sea (near the southernmost end of India)** has intensified into a cyclonic storm, named **'Maha'**.

➢ The name has been given by **Oman**.
➢ It lies centered over **Lakshadweep and the adjoining southeast Arabian Sea** and the **Maldives area**.
➢ Cyclone storm 'Maha' is the **second in the 2019 northeast monsoon season,** following close on the heels of super cyclone Kyarr which took its way towards the Arabian peninsula.

Dar es Salaam and Zanzibar

As part of the Indian Navy's Overseas Deployment, four indigenously built ships of the Indian Navy visited the ports at **Dar es Salaam and Zanzibar located in Tanzania**.

Zanzibar
➢ Zanzibar, an **island in the Indian Ocean,** is located **off the coast of east-central Africa**.
➢ It is located on the Indian Ocean trade routes making it accessible to both traders and colonists from Arabia, South Asia, and the African mainland.

Dar es Salaam
➢ It is the **largest city and economic capital of Tanzania**.
➢ It is located in a bay off the Indian Ocean coast.

Mt Paektu

Mount Paektu or Changbai (in Chinese) is considered **sacred by the Koreans**.

➢ It is a **volcanic mountain** that last erupted over 1,000 years ago.
➢ It is **situated** at the border between Democratic People's Republic of Korea (DPRK) and China.
➢ At a height of about 9,000 feet, it has the **highest peak** in the Korean peninsula.
➢ The mountain is considered sacred as Koreans treat the mountain to be the **spiritual origin of the Korean kingdom**, where the founder (Kim Il Sung) was born.

GOAL (Going Online as Leaders)

The **second phase of GOAL (Going Online as Leaders)** has been jointly launched by the **Ministry of Tribal Affairs and Facebook** to digitally mentor 5000 young women in India's tribal-dominated districts.

Note:

- The GOAL is a **Facebook program** aimed at **guiding and encouraging tribal girls** from across India to become **village-level digital young leaders** for their communities
- It will provide economically and socially marginalized young women with the tools and guidance for the development of **livelihood skills**.
- It will help to **close the digital gender gap** by enabling more women to get online and access digital services.

Nelloptodes Gretae

Scientists at the Natural History Museum in London have officially named a tiny species of **beetle Nelloptodes gretae**. It has been named after the **16-year-old Swedish environmental campaigner Greta Thunberg**.

- N. gretae was **first** found in **Kenya in the 1960s** which was later donated to the Natural History Museum in London in 1978.
- The naming signifies Greta's contribution to raising awareness of environmental issues.
  - There are parasites named after Bob Marley (Gnathia marleyi), a genus of fish called after Richard Dawkins (Dawkinsia), a spider called Spintharus leonardodicaprioi after Leonardo DiCaprio are some other species named after famous personalities

Greta Thunberg
The Swedish teenage climate activist Greta Thunberg was recently awarded the Right Livelihood Award-2019, also known as Sweden's alternative Nobel Prize.

Sakhalin Oil Field

Recently the Minister of Petroleum and Natural Gas has visited Sakhalin oil field in Russia.

- During the recent Vladivostok Summit, there was agreement on a roadmap of cooperation over the next five years in the hydrocarbon sector.

- It included strengthening Liquified Natural Gas (LNG) exports to India; encouraging Russian companies to participate in gas projects in India including in Arctic LNG infrastructure projects.
- Sourcing of coking coal from the Russian Far East is now a major priority.

Vladivostok Summit
- Recently **5th meeting** of the Eastern Economic Forum (EEF) was held in Vladivostok.
- This is the **first time** that an **Indian Prime Minister visited the Russian Far East Region (Vladivostok)**.

Coking Coal
- Coking coal, also known as **metallurgical coal**, is used to create coke, one of the key **inputs for the production of steel**.
- Coke is used as a **fuel** and as a **reducing agent in smelting iron ore** in a blast furnace (converting iron oxide (hematite) into iron metal).

Australia's Uluru Rock

Australia's giant **Red Monolith - Uluru (Also known as Ayers Rock)** has been permanently closed for trekking by the Australian government.

- The spiritual significance for **Anangu (An aboriginal tribe of Australia)** is responsible for the ban.

Uluru
- It is the **huge red rock monolith** located in the **Central Australian desert**.
- Ayers Rock (now Uluru) was first declared a national park in 1950 and renamed as **Uluru-Kata Tjuta National Park in 1993**.

Note:

- Uluru-Kata Tjuta National Park is included in the **UNESCO World Heritage List** for **both its natural and cultural values**.

➤ Uluru is made up of **sandstone** and is about half a billion years old.

➤ It stands 348 metres high and has a circumference of 9.4 km.

World Heritage Site

➤ The sites are designated as having **"outstanding universal value"** under the **Convention Concerning the Protection of the World Cultural and Natural Heritage 1972** is included in the UNESCO World Heritage Sites list.

➤ There are three types of sites:

- **Cultural heritage sites** include hundreds of historic buildings and town sites, important archaeological sites, and works of monumental sculpture or painting.

- **Natural heritage sites** are restricted to those natural areas that:

  - Furnish outstanding examples of Earth's record of life or its geologic processes
  - Provide excellent examples of ongoing ecological and biological evolutionary processes.
  - Contain natural phenomena that are rare, unique, superlative, or of outstanding beauty,
  - Furnish habitats for rare or endangered animals or plants or are sites of exceptional biodiversity.

- **Mixed heritage sites** contain elements of both natural and cultural significance.

Aflatoxins

➤ Aflatoxins are **toxins produced by certain fungi** which are generally found in agricultural crops like maize, peanuts, cotton seed and others. They are **carcinogenic** in nature.

➤ According to a World Health Organization (WHO) study, consumption of food containing aflatoxin has been suspected to cause aflatoxicosis, the outcome of which consists of acute liver failure, jaundice, lethargy and nausea, eventually leading to death.

➤ The exposure to **Aflatoxin-M1 (AFM1)** from milk causes stunting among children.

Thotlakonda Buddhist Monastery

Mahastupa of the Buddhist heritage site of **Thotlakonda**, which was reconstructed in 2016 by the State Archaeology department, collapsed recently.

➤ It is **2000 years old monastic complex** with **remnants of stupas, chaitya grihas and viharas** atop **Thotlakonda Hill, Andhra Pradesh**.

- The Buddhist monks arriving from places like China, Burma, and many other countries used to stay at this site for months before finishing their learning.

➤ **Stupas:** These are Buddhist commemorative monument usually housing sacred relics associated with the Buddha or other saintly persons.

➤ **Chaityas:** A Chaitya was a rectangular prayer hall within a stupa placed in the centre, the purpose was prayer.

➤ **Viharas:** Viharas were the residences of the monks.

Liver Transplant Registry

India's **first voluntary liver transplant registry** has been started by the **Liver Transplantation Society of India**. The registry aims to collate **national data of the procedures and their outcomes**.

➤ Nearly **2,000 liver transplants** are carried out in the country annually, the **highest in the world**, yet there is no India-specific data.

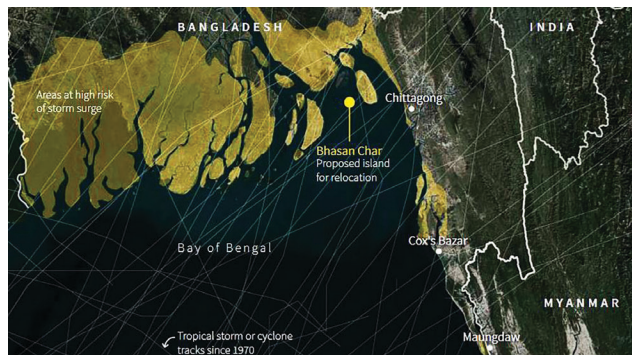➤ **In the Western countries, organ transplants are highly regulated** and permissions are given to hospitals and

doctors based on the outcomes, rate of mortality, morbidity, etc.

Bhashan Char Island

Rohingya refugees living in Bangladesh camps have agreed to move to Bhashan Char Island in the Bay of Bengal.

> The island is also known as **Thengar Char Island**.
> Bhashan Char island was **formed about two decades ago** on the **mouth of river Meghna**.
> This uninhabited island is **located** around 30 kilometres east of Hatiya island in **South-East Bangladesh**.
> The Bhashan Char falls in an ecologically fragile area prone to floods, erosion and cyclone.

United Nations Day

Each year on **24 October**, the **United Nations (UN) celebrates its anniversary**. UN Day marks the **anniversary of the entry into force of the UN Charter** and the **founding** of the Organization in **1945**.

> The name **"United Nations"** was coined by the United States President Franklin D. Roosevelt.
> The main organs of the UN are:
>   ○ the General Assembly,
>   ○ the Security Council,
>   ○ the Economic and Social Council,
>   ○ the Trusteeship Council,
>   ○ the International Court of Justice,
>   ○ the UN Secretariat.
> The forerunner of the United Nations was the League of Nations, an organization conceived in circumstances of the First World War, and established in 1919 under the Treaty of Versailles "to promote international cooperation and to achieve peace and security."
> It will celebrate its **75th anniversary** on **24 Oct, 2020**.

Mole Day

Mole Day is an **unofficial holiday** celebrated among **chemists, chemistry students** and **chemistry enthusiasts on October 23**, between **6:02 AM** and **6:02 PM**, making the date 6:02 10/23 in the US date format.

> The time and date are derived from **Avogadro's number**, which is approximately **6.02×10^{23}**, defining the **number of particles (atoms or molecules) in one mole of a substance**, one of the seven base SI units.
> The **seven base units in the SI** system are:
>   ○ the kilogram (kg), for mass
>   ○ the second (s), for time
>   ○ the kelvin (K), for temperature
>   ○ the ampere (A), for electric current
>   ○ the mole (mol), for the amount of a substance
>   ○ the candela (cd), for luminous intensity
>   ○ the meter (m), for distance

Avogadro's Number

> The number of particles (atoms, molecules or ions) present in 1 mole of any substance is fixed, with a value of 6.022×10^{23}.
> This is an experimentally obtained value. This number is called the Avogadro Constant or Avogadro Number (represented by N0), named in honour of the Italian scientist Amedeo Avogadro.
> 1 mole (of anything) = 6.022×10^{23} in number, as, 1 dozen = 12 nos.
> The Avogadro constant 6.022×10^{23} is defined as the number of atoms in exactly 12 g of carbon-12.

TechSagar

The **National Cyber Security Coordinator's** office in partnership with the **Data Security Council of India (DSCI)** has launched **'TechSagar'**, an **online portal of India's technological capability**.

> It provides actionable **insights about capabilities of the Indian Industry, academia and research** across **25 technology areas** like Internet of Things (IoT), Artificial Intelligence (AI), etc.
> **Agenda**
>   ○ The **losses due to cyber crime** globally on an average is **2.5% of the Gross Domestic Product (GDP)**.

Note:

- Thus, India's dream of growing to $5 trillion economy by 2025 is being seriously threatened by the losses due to cyber crimes.
- TechSagar will facilitate new opportunities for businesses and academia to collaborate, connect and innovate in the future.

National Cyber Security Coordinator

➢ In **2014,** the Prime Minister's Office created the position of the National Cyber Security Coordinator.

➢ The NCSC office coordinates with different agencies at the national level for **cyber security matters**.

Data Security Council of India

➢ DSCI is a **not-for-profit premier industry body** on data protection in India, setup by **NASSCOM**, committed to making cyberspace safe, secure and trusted by establishing best practices, standards and initiatives in cyber security and privacy.

➢ Its **Registered Office** is located in **New Delhi**.

Siachen Area Opens for Tourism

The **Siachen Glacier area of Ladakh** has been declared **open for tourists** by the Government of India.

➢ Siachen, the **world's highest battlefield,** was **closed 35 years ago** for civilians.

➢ The announcement came during the inauguration of **'Col Chewang Rinchen Setu'**.

- Col Chewang Rinchen Setu is built over **River Shyok**, which connects Durbuk and Daulat Beg Oldie in Eastern Ladakh.
- The location of the bridge is sandwiched **between strategic Karakoram and Chang Chenmo ranges**.
- The Setu is a **430-metre bridge** built at an altitude of about 15,000 feet using **Micro Piling Technology**.
  - Micropiles are a deep foundation element constructed using high-strength, small-diameter steel casing and/or threaded bar.
- The bridge is built by **Border Roads Organisation (BRO)**.

Siachen

➢ The entire Siachen Glacier, with all major passes, is under the administration of India since 1984 **(Operation Meghdoot)**.


➢ The Siachen Glacier is located in the **Eastern Karakoram range in the Himalayas**, just northeast of **Point NJ9842** where the Line of Control between India and Pakistan ends.

➢ It is the **second-longest glacier in the world's non-polar areas**.

➢ The Siachen Glacier lies immediately south of the great drainage divide that separates the Eurasian Plate from the Indian subcontinent in the extensively glaciated portion of the Karakoram sometimes called the **"Third Pole"**.

Ramgarh Dam

The Ramgarh dam, located in the state of **Rajasthan**, which earlier supplied drinking water to the city of Jaipur has dried completely in the last decade.

➢ To resolve this problem, it has been recommended that the Chambal river water be supplied to the dam through the proposed **Eastern Rajasthan Canal Project**.

- The Eastern Rajasthan Canal Project proposes to transfer excess water from the Chambal river basin to 13 districts facing water scarcity in Rajasthan.

➢ The dam was **constructed in 1904** during the reign of erstwhile Jaipur ruler Sawai Madho Singh-II.
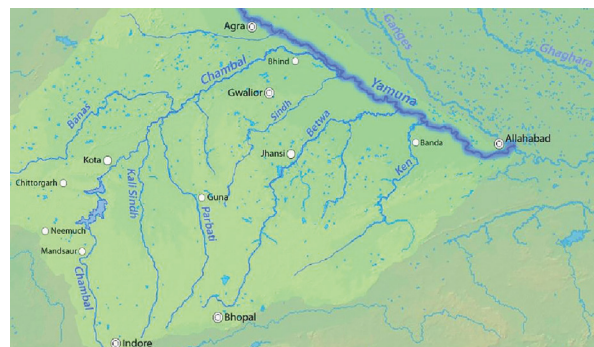
➤ It is to be noted that the Ramgarh lake had **hosted rowing events during the 1982 Asian Games**.

Chambal River

➤ It is the chief **tributary of the Yamuna River**.

➤ It's a 960 km. long river that **originates at the Singar Chouri peak** in the northern slopes of the **Vindhya mountains (Indore, Madhya Pradesh)**.

➤ It flows through the states of **Madhya Pradesh, Rajasthan** and **Uttar Pradesh**.

➤ **Tributaries:** Banas, Kali Sindh, Parbati.

➤ **Main Power Projects/Dam:** Gandhi Sagar Dam, Rana Pratap Sagar Dam, Jawahar Sagar Dam, and Kota Barrage.

➤ The **National Chambal Sanctuary** is located along river Chambal on the tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh. It is known for critically endangered gharial, the red-crowned roof turtle, and the endangered Ganges river dolphin.

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Key Points

Details

Summary

Key Points

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