drishti

Current Affairs
(CONSOLIDATION)

SEPTEMBER 2019
(PART – II)

Contents

Polity and Governance

Highlights

- *National Population Register*
- *Regulating Right to Freedom of Religion*
- *Rural Sanitation Strategy: 2019-2029*
- *Hindi Divas 2019*
- *J&K Public Safety Act*

- *Special Expenditure Observers*
- *Right To Be Forgotten*
- *Access to Internet*
- *Inclusive Programming*

National Population Register

The National Population Register (NPR) updation exercise will be undertaken alongside **Census 2021**.

➢ It will be conducted by the **Office of the Registrar General of India (RGI)** under the **Home Ministry**.

➢ Only Assam will not be included, given the recently completed **National Register of Citizens (NRC)**.

➢ **Definition:**
  ○ It is a list of **"usual residents of the country"**.
  ○ A **"usual resident of the country"** is one who has been residing in a **local area for at least the last six months,** or **intends to stay in a particular location for the next six months**.

➢ **Legal Provisions:**
  ○ The NPR is being prepared under provisions of the **Citizenship Act 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003**.
  ○ It is mandatory for every "usual resident of India" to register in the NPR.

➢ **Background:**
  ○ The data for the NPR was first collected in 2010 along with the house listing phase of Census 2011.
  ○ In 2015, this data was further updated by conducting a door-to-door survey.
  ○ However, with the use of **Aadhaar** as the key vehicle for transfer of government benefits in the last few years, the NPR has taken a backseat.

➢ **Scope:**
  ○ The NPR exercise is conducted at the local, sub-district, district, state and national levels.

  ○ The NPR will collect both demographic data and biometric data. Biometric data will be updated through Aadhaar details.
    ● In the 2010 exercise, the RGI had collected only demographic details.
    ● In 2015, it updated the data further with the mobile, Aadhaar and ration card numbers of residents.
    ● For the 2020 exercise, it has dropped the ration card number but added other categories.

➢ **Advantages:**
  ○ It will streamline data of residents across various platforms.
    ● For instance, it is common to find a different date of birth of a person on different government documents. NPR will help eliminate that.
  ○ It will help the government formulate its policies better and also aid national security.
  ○ It will help to target government beneficiaries in a better way and also further cut down paperwork and red tape in a similar manner that Aadhaar has done.
  ○ It will help in implementing the idea of 'One Identity Card' that has been recently floated by the government.
    ● **'One Identity Card'** seeks to replace duplicate and siloed documentations of Aadhaar card, voter ID card, banking card (such as a debit card), passport, and more.

➢ **Privacy Concern:**
  ○ There is no clarity on the mechanism for protection of the vast amount of data that will be collected through NPR.

Note:

drishti

- ➢ **NPR and the NRC:**
  - ❍ Unlike the NRC, the **NPR is not a citizenship enumeration drive,** as it would **record even a foreigner** staying in a locality for more than six months.
  - ❍ With the government insisting that the NRC would be implemented across the country, the NPR has raised anxieties around the idea of citizenship in the country.
    - ● All this is happening in the backdrop of the NRC in Assam which has excluded 19 lakh among the 3.3 crore who had applied.
    - ● NRC countrywide would only happen on the basis of the upcoming NPR.
    - ● After a list of residents is created (i.e. NPR), a nationwide NRC could go about verifying the citizens from that list.

Census

- ➢ The responsibility of conducting the decennial census rests with the **Office of the Registrar General and Census Commissioner, India under Ministry of Home Affairs, Government of India**.
- ➢ 'Rig-Veda' reveals that some kind of population count was maintained during 800-600 BC in India.
- ➢ During the regime of the Mughal king Akbar, the administrative report **'Ain-e-Akbari'** included comprehensive data pertaining to population, industry, wealth and many other characteristics.
- ➢ A systematic and modern population census, in its present form was conducted non synchronously between 1865 and 1872 in different parts of the country.
- ➢ However, the **first synchronous census in India was held in 1881**. Since then, censuses have been undertaken **uninterruptedly once every ten years**.
- ➢ India's **last census** was **carried out in 2011** when the country's population stood at 121 crore.

Census 2021

- ➢ The **Census 2021** will be conducted in **18 languages out of the 22 scheduled languages** (under 8th schedule) and English, while Census 2011 was in 16 of the 18 scheduled languages declared at that time.
- ➢ It will also introduce a code directory to streamline the process.
  - ❍ Code directory will provide different codes for different aspects such as location, caste etc.

- ➢ The option of **"Other"** under the gender category will be changed to **"Third Gender"**.
- ➢ For the first time in the 140 year history of census in India, data is proposed to be **collected through a mobile app** by enumerators and they will receive an additional payment as an incentive.
- ➢ The Census data would be available by the year 2024-25 as the entire process would be conducted digitally and data crunching would be quicker.

Regulating Right to Freedom of Religion

The High Court of Karnataka has issued guidelines to **all city municipal corporations** regarding granting permission for temporarily using public roads and footpaths.

- ➢ **Major Observation:**
  - ❍ The **right under Article 25 (freedom to the free profession, practice and propagation of religion)** of the Constitution of India **does not extend** to public road and footpath.
  - ❍ One cannot get the rights to use public roads and streets just because it is for religious purposes.
- ➢ **Inspection is Mandatory:**
  - ❍ Authorities cannot mechanically process applications filed under the State Municipal Corporations Act for grant of permission to temporarily use public roads or footpaths for any purposes, including for the celebration of religious festivals or functions.
  - ❍ The authorised officers will have to compulsorily inspect the premises, including roads and footpaths, and will have to take a report from the traffic police on the impact on traffic, before granting any permission.
  - ❍ Putting up temporary structures can be permitted only after ensuring that such structures would not cause any obstruction to the free flow of traffic or curtail the right of citizens to free use of footpaths.
  - ❍ The corporations have been directed **not to permit digging up of roads** or footpaths while granting permission to put up temporary structures.
    - ● The Supreme Court has already held that it is a **fundamental right of citizens to use public roads for passage of vehicles**, and footpaths to walk (in line with Article 21 of the Constitution).

Note:

drishti

➢ **Display of the Permission at the Location:**

  ❍ The copy of the permission and conditions imposed for putting up temporary structures, including the period of permission, should be displayed prominently by those to whom the permission has been granted.

  ❍ Any structures not displaying a copy of the permission can be treated as illegal and removed.

Article 25: Freedom of Conscience and Free Profession, Practice and Propagation of Religion

➢ Article 25 says that all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion.

➢ **The implications of this are:**

  ❍ **Freedom of conscience:** Inner freedom of an individual to mould his relation with God or Creatures in whatever way he desires.

  ❍ **Right to Profess:** Declaration of one's religious beliefs and faith openly and freely.

  ❍ **Right to Practice:** Performance of religious worship, rituals, ceremonies and exhibition of beliefs and ideas.

  ❍ **Right to Propagate:** Transmission and dissemination of one's religious beliefs to others or exposition of the tenets of one's religion.

➢ **Scope:**

  ❍ Article 25 covers **religious beliefs (doctrines)** as well as **religious practices (rituals)**.

  ❍ Moreover, these rights are **available to all persons—citizens as well as non-citizens**.

➢ **Restrictions:**

  ❍ These rights are **subject to public order, morality, health** and other provisions relating to fundamental rights.

  ❍ The State is permitted to regulate or restrict any economic, financial, political or other secular activity associated with religious practice.

Article 21: Protection of Life and Property

  ❍ It declares that no person shall be deprived of his life or personal liberty except according to the procedure established by law.

  ❍ This right is available to **both citizens and non-citizens**.

Rural Sanitation Strategy: 2019-2029

Recently, the Department of Drinking Water and Sanitation (DDWS) under the **Ministry of Jal Shakti** has launched the **10-year Rural Sanitation Strategy starting from 2019 to 2029**.

➢ The strategy has been prepared by DDWS, in consultation with the State Governments and other stakeholders.

➢ It lays down a framework to guide local governments, policy-makers, implementers and other relevant stakeholders in their **planning for Open Defecation Free (ODF) Plus status, where everyone uses a toilet, and every village has access to solid and liquid waste management**.

➢ The strategy aims to sustain the **behavioral change** regarding sanitation that has been achieved under the **Swachh Bharat Mission Grameen (SBM-G)** and ensure that the focus is shifted to increasing access to solid and liquid waste management in the rural areas of the country.

➢ The 10-year strategy also demands focused intervention through capacity strengthening, IEC (Information, Education, and Communication), organic waste management, plastic waste management, and water management.

➢ Public financing has played an important role in the ODF journey but for the maintenance of toilets and infrastructure, the need is there for innovative models for sanitation financing.

  ❍ With regard to waste management elements, there will have to be a convergence of funds from the Centre, States, Panchayati Raj Institutions (PRIs) and alternative sources of financing, including private funds.

  ❍ Discussions are still underway on the budget requirement and whether funds will be disbursed via a centrally sponsored scheme or through Finance Commission transfers to PRIs.

  ❍ The strategy highlights the potential collaborations with development partners, civil society and intergovernmental partnerships.

Open Defecation Free (ODF), ODF+, ODF++ Status

➢ **ODF:** An area can be notified or declared as ODF if at any point of the day, not even a single person is found defecating in the open.

drishti

> ➤ **ODF+:** This status is given if at any point of the day, not a single person is found **defecating and/or urinating in the open, and all community and public toilets are functional and well maintained**.
> ➤ **ODF++:** This status is given if the area is already ODF+ and the faecal sludge/septage and sewage are **safely managed and treated, with no discharging or dumping of untreated faecal sludge and sewage into the open drains, water bodies or areas**.

Background

➤ India has seen a sanitation revolution in the form of SBM-G that transformed itself into a Jan Andolan (a people's movement).

➤ Since the launch of the **SBM-G** in 2014, over 10 crore toilets have been built in rural areas.
  ○ Till now, over 5.9 lakh villages in 699 districts and 37 States/UTs have declared themselves as Open Defecation Free (ODF).

Conclusion

➤ It is because of the SBM-G that India is now an inspiration, in terms of sanitation for other countries.

➤ To mark the 150th birth anniversary of Mahatma Gandhi on 2nd October 2019, the Central government started Swachh Bharat Mission in 2014.
  ○ The State Governments ensured that no one is left behind, and in case any household does not have access to a toilet, they are facilitated to build a toilet on priority.

Hindi Divas 2019

Rashtriya Hindi Divas is observed across India **every year** on **14th September**.

➤ The Hindi language is the single largest spoken language **(43.63% of people in India)**.

➤ It is also the **fourth most spoken language in the world,** after Mandarin, Spanish and English.

Background

➤ The Constituent Assembly of India adopted **Hindi written in Devnagari Script along with English as the official language** of the country on **September 14, 1949, under Article 343(1)**.
  ○ Initially, English was granted the official language status for only 15 years since the adoption of the

constitution. During these 15 years, Hindi's reach was to be promoted for official purposes as well as in the education sector so that English would fade out, giving ground to Hindi.

➤ The imposition of Hindi was contested in many non-Hindi states, especially in the southern state of Tamil Nadu. Violent protests broke out in southern India leading the then Prime Minister Jawaharlal Nehru, to introduce the **'Official Languages Act' in 1963**, which assured the continuation of English along with Hindi as the official language of the Union of India.

➤ Anti-Hindi protests of 1965 marked an important turn in India's official language policy. The 'Official Languages Act' was amended in 1967 guaranteeing the "virtual indefinite policy of bilingualism" for all official purposes of the Union.

➤ Given the linguistic diversity of India, there is **no national language** as all the states are free to decide their own official languages.

Constitutional Provisions

➤ **Article 343(1)** states that the Official Language of the Union government shall be Hindi in Devanagari script.

➤ **Article 351** gives power to the Union Government to issue a directive for the development of the Hindi language.

➤ The **Hindi language** is one of the **22 languages of the Eighth Schedule** of the Constitution of India.

Worldwide Promotion for the Hindi Language

➤ In **2018,** the Indian Prime Minister became the **first head of government to address the World Economic Forum in a national language other than English**.

➤ The Government of India in collaboration with the Government of Mauritius has set up the **World Hindi Secretariat in Port Louis, Mauritius** for promotion and propagation of Hindi globally.

➤ Indian Government's effort led to the creation of **Hindi Twitter account of the UN in 2018**.

➤ The **first World Hindi Conference** was organized in **Nagpur** on January 10, **1975**. To commemorate the occasion, the government of India since 2006 is celebrating 10th January as World Hindi Day.

➤ The then Minister of External Affairs Atal Bihari Vajpayee was first to give a speech in Hindi at the **United Nations** in 1977.

J&K Public Safety Act

The former Jammu and Kashmir Chief Minister Farooq Abdullah has been detained under the state's **Public Safety Act (PSA)**.

Public Safety Act

➢ **Preventive Detention Law:** Under **Jammu & Kashmir Public Safety Act, 1978,** a person is taken into custody to prevent him or her from acting in any manner that is prejudicial to the security of the state or the maintenance of public order.

➢ **Period of Detention:** Up to 2 years.

➢ **Enforcement:** Detention order is passed either by Divisional Commissioner or the District Magistrate.

➢ **Challenging the Detention:** The **only way** the administrative preventive detention order can be challenged is through **a habeas corpus** petition filed by relatives of the detained person.

  ○ The High Court and the Supreme Court have jurisdiction to hear such petitions and pass a final order seeking quashing of the PSA.

  ○ If the order is quashed, there is no bar on the government passing another detention order under the PSA and detaining the person again.

  ○ There can be no prosecution or any legal proceeding against the official who has passed the order.

➢ The **similarity to the National Security Act (NSA)** that is used by other state governments for preventive detention.

  ○ The NSA empowers the Central or a State government to detain a person to prevent him from acting in any manner prejudicial to national security.

  ○ The government can also detain a person to prevent him from disrupting public order or for maintenance of supplies and services essential to the community.

  ○ The maximum period for which one may be detained is **12 months**. But the term can be extended if the government finds fresh evidence.

Preventive Detention and Constitutional Provisions

➢ Preventive detention involves the detainment (confinement) of a person in order to keep him/her from committing future crimes and/or from escaping future prosecution.

  ○ It is **different from 'being arrested'** Where 'Arrest' is done when a person is charged with a crime.

  ○ **Punitive detention** is punishment for **illegal acts** done.

➢ **Article 22(1)** of the Constitution states that no person who is arrested shall be denied the right to consult, and to be defended by, a legal practitioner of his choice.

  ○ However, under Preventive Detention Laws like the PSA, the detained person does not have the right to move a bail application before a criminal court, and cannot engage any lawyer to represent him or her before the detaining authority.

➢ When a person is arrested he/she has to be produced before a magistrate within the next 24 hours. However, in the case of 'preventive detention', **a person can be detained for three months**.

  ○ **Article 22(2)** states that every person arrested and detained shall be produced before the nearest magistrate within a period of 24 hours (excluding the time necessary for the journey from the place of arrest to the court) and no such person shall be detained beyond this period without the authority of a magistrate.

  ○ **Article 22(3)(b) allows** for preventive detention and restriction on personal liberty for reasons of state security and public order.

  ○ **Article 22(4)** states that no law providing for preventive detention shall authorise **the detention of a person for a longer period than three months unless**:

    ● **An Advisory Board** reports sufficient cause for extended detention.

    ● Such a person is detained in accordance with the provisions of any law made by the Parliament.

Note:

The **44th Amendment Act of 1978** has reduced the period of detention without obtaining the opinion of an advisory board from three to two months. However, this provision has not yet been brought into force, hence, the original period of three months still continues.

➢ **Controversies:**

  ○ **No democratic country in the world** has made preventive detention an integral part of the Constitution as has been done in India.

drishti

❍ The governments sometimes use such laws in an extra-judicial power. Also, there remains a **fear of arbitrary detentions**.

Habeas Corpus

➢ It is a Latin term which literally means **'to have the body of'**.

➢ This writ is a **bulwark of individual liberty** against arbitrary detention.

➢ The writ of *habeas corpus* **can be issued** against **both public authorities as well as private individuals**.

➢ The writ, on the other hand, is **not issued** where the:

❍ detention is lawful,

❍ the proceeding is for contempt of a legislature or a court,

❍ detention is by a competent court, and

❍ detention is outside the jurisdiction of the court.

Special Expenditure Observers

The **Election Commission of India (ECI)** appointed two **Special Expenditure Observers** for the elections to the Legislative Assembly of Maharashtra.

➢ The Special Expenditure Observers are **appointed in the exercise of the powers conferred on ECI under Article 324 of the Constitution** and the **Representation of the People Act, 1951**.

➢ The **functions** of the Special Expenditure Observers include:

❍ To watch the conduct of Elections with special emphasis on **controlling the abuse of money power**, in consultation with the Chief Electoral Officer at respective constituencies.

❍ To **supervise and monitor the work** being done by the electoral machinery.

❍ To ensure **stringent and effective enforcement action** is undertaken **based on intelligence inputs and complaints received through C-VIGIL** and Voter Helpline.

● The Citizens' Vigil (C-VIGIL) app allows people to record any violation of the code of conduct and send it to the relevant election authority.

Right To Be Forgotten

The European Union's (EU's) top court has ruled that **Google does not have to apply the right to be forgotten globally**.

Right to be forgotten

➢ Right to be forgotten **refers to the ability of an individual to limit, delink, delete, or correct the disclosure of the personal information on the Internet** that is misleading, embarrassing, or irrelevant.

❍ It allows for the lawful removal of personal information of an individual if such request is made.

➢ The right to be forgotten is **distinct from the right to privacy** because **right to privacy comprises of information that is not publicly known**, whereas the **right to be forgotten involves removing information that was publicly known at a certain time** and not allowing third parties to access the information.

Background

➢ According to the EU's General Data Protection Regulation (GDPR), the right to be forgotten empowers individuals to ask organisations to delete their personal data.

➢ After a search engine company like **Google gets requests under the privacy law** to get information deleted, it first reviews and then **removes links on country-specific sites** within the European Union.

➢ In 2015, **the internet regulating agency** of France required that Google go beyond its practice of region-specific delinking, and **ordered the search engine to delete links from its global database**. Google challenged the order at the European Court of Justice (ECJ).

➢ The case between France and Google, to remove sensitive information available globally on Google related to certain class of people, was a test of whether individuals have the right to demand the removal of personal data from internet search results without stifling free speech and legitimate public interest.

Highlights of the Ruling

➢ The court in its judgment **limited the reach of the online privacy law known as 'right to be forgotten'**, restricting people's ability to control what information is available about them on the Internet.

Note:

drishti

- ○ Google only needs to remove links from its search results in Europe - and not elsewhere - after receiving an appropriate request.

➢ It stated that the **balance between privacy and free speech** must be taken into account while deciding if websites should be delisted over the Internet.

➢ Also, the EU cannot enforce the 'right to be forgotten' on countries which do not recognise such a right.

Right to be Forgotten in Indian Context

➢ **Legislative Stand:** In India, there are **no legal provisions** related to it.

- ○ Neither the **Information Technology (IT) Act, 2000 (amended in 2008)** nor the IT Rules, 2011 deals with right to be forgotten.

- ○ Only **Section 27 of the draft Data Protection bill** has listed out **three scenarios** in which an individual will have the right to restrict or prevent continuing disclosure of personal data (i.e. the right to be forgotten).

  - • This will be applicable if data disclosure is no longer necessary, or the consent to use data has been withdrawn, or if data is being used contrary to the provisions of the law.

➢ **Judicial Stand:** There have been instances, where the High Courts have upheld the right of an individual to be forgotten.

- ○ For instance, the **Karnataka High Court upheld a woman's right to be forgotten** stating that the right is in line with the trend in the western countries. In the sensitive cases involving women in general and highly sensitive cases involving rape or affecting the modesty and reputation of the person concerned, it must be adhered to.

- ○ The **Delhi High Court,** in another case had asked the Centre and Google whether the right to privacy included the right to delink from the Internet the irrelevant information.

➢ **Way Forward**

- ○ There must be a **balance between the right to privacy and protection of personal data** (as covered under Article 21 of the Indian constitution), on one hand, **and the freedom of information of internet users** (under Article 19), on the other.

- ○ A comprehensive data protection law must address these issues and minimize the conflict between

the two fundamental rights that form the crucial part of the golden trinity (Art. 14,19 and 21) of the Indian constitution.

Access to Internet

Recently, the Kerala High Court upheld the **right to have access to the Internet** as a **part of the fundamental right to education** along with the **right to privacy under Article 21** of the Indian Constitution.

Observations by the Court

➢ The Court observed that the **internet acts as a learning tool** and nobody can impose restrictions on it, citing discipline.

➢ The petitioner argued that the restriction on the use of internet amounted to a **violation of the fundamental right to freedom of speech and expression under Article 19(1)(a)** of the Constitution.

➢ The Kerala HC in response cited the Supreme Court judgment in the **S. Rengarajan and others v/s P. Jagjivan Ram case (1989)** that the fundamental freedom under **Article 19(1)(a) can be reasonably restricted** only for the purposes mentioned in **Article 19(2)**.

➢ It is noteworthy that the **Human Rights Council of the United Nations** also regards the **Right of access to the Internet as a fundamental freedom** and a tool to ensure the right to education.

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

Article 19(2) confers the right on the State to impose reasonable restrictions on the exercise of the freedom of speech and expression on the grounds of,

➢ Sovereignty and integrity of India,

➢ Security of the state,

➢ Friendly relations with foreign states,

➢ Public order, decency or morality,

➢ Contempt of court, defamation, and incitement to an offence.

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

Note:

Article 21-A states that the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State by law may determine.

Inclusive Programming

The Ministry of Information and Broadcasting has mandated the **captioning for TV programs, in order to make it accessible to the deaf** or hard of hearing population (**aurally challenged** people).

➢ India's phase-wise implementation plan requires **all channels to start captioning, on at least one programme per week,** starting from August 15, 2019.

  ❍ The target is to ensure that 10% of all programming channels have captions by 2020, which will grow by 10% every year.

  ❍ It is expected to finally cover up to 50% of all the programming by 2025.

➢ The **Rights of Persons with Disabilities Act, 2016** made subtitles on TV a right of an individual.

➢ **Same Language Subtitling (SLS),** if implemented in India, can make a massive contribution to **Sustainable Development Goal (SDG-4)** on quality education, as quality education foundationally depends on good reading skills.

➢ The major challenge for the Ministry is to ensure compliance by all channels both state and private-owned.

➢ The Ministry of Information and Broadcasting together with the Ministry of Electronics and Information Technology needs to mandate a policy of SLS in Indian languages on all digital **Over-The-Top (OTT) platforms**.

Right of Persons with Disabilities Act 2016

➢ **Article 41** of the **Directive Principles of State Policy (DPSP)** states that State shall make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness, and disablement, within the limits of its economic capacity and development.

➢ This **act defines disability** based on an evolving and dynamic concept.

➢ Under the act, the types of disabilities have been increased from **7 to 21**.

  ❍ In addition, the Government has been authorized to notify any other category of specified disability.

➢ The act is implemented by the Ministry of Social Justice & Empowerment.

Over-The-Top (OTT) Platform

➢ An Over-The-Top (OTT) platform is any application service that provide a product over Internet and bypasses traditional distribution.

➢ Services that come over-the-top are most typically related to media and communication.

➢ For example, Netflix (replacing regular TV provider) and Skype (replacing long distance provider).

■■■

Note:

drishti

Economic Scenario

Highlights

- Steps To Spur Economic Growth
- Certificates of Origin
- Saudi-Aramco Drone Attack
- Draft National Resource Efficiency Policy (NREP), 2019
- Liberalised Remittance Scheme
- Enterprise Development Centres
- GST Council and Corporate Tax
- Unitary Taxation System for Multinational Enterprises

Steps To Spur Economic Growth

The Finance Minister has announced a number of measures **to help reignite the slowing economy**.

➢ The **primary reasons for slowdown** include **weak consumption** (e.g. reduction in auto sales, housing sales, etc.) and a **deteriorating global environment** (US-China trade war, Brexit, etc.).

Measures to Boost Export Sector

➢ **Use of Information and Communications Technology (ICT):**

❍ A fully **Electronic Refund Module** for a quick and automated refund of Input Tax Credits (ITC) to be implemented by the end of September 2019.

- ITC means deducting the tax paid on inputs from the tax payable on the final output.

❍ An **Online "Origin Management System"** for exporters to enable them to obtain Certificates of Origin (CoO) will be launched.

- **Certificate of Origin** is an instrument which establishes evidence on the origin of goods imported into any country. These certificates are essential for exporters to prove where their goods come from and therefore stake their claim to whatever benefits goods of Indian origin may be eligible for in the country of exports.

❍ Technology will be further leveraged to further **reduce "Time to export"** – through seamless process digitization of all export clearances (port/airport/customs, etc) and elimination of offline/manual services.

➢ **Remission of Duties or Taxes on Export Product (RoDTEP):**

❍ It will **replace the Merchandise Exports from India Scheme (MEIS),** which is **not compliant with world trade rules**.

❍ It will be more than adequately incentivize exporters than existing schemes put together.

➢ **Export Financing:**

❍ To increase bank credit to exporters, the Export Credit Guarantee Corporation (ECGC) will expand the scope of its Export Credit Insurance Scheme (ECIS) to provide a higher insurance cover to banks that are lending working capital for exports.

- At present, banks are covered for 60% of what they lend to exporters for working capital. With the new move, it is expected to be increased to 90%.

- It has been seen that the credit flow to exporters has come down by 35%.

Export promotion : Steps taken so far

Export promotion measures taken in last few years	- Interest Equalization Scheme (IES) on pre and post shipment rupee export credit introduced from 1.4.2015 providing interest equalisation at 3% to exporters on 416 lines and for all MSME exporters. - *The IES rate increased to 5% for MSME exporters with effect from 2.11.2018 and merchant exporters were covered under the scheme with effect from 2.1.2019.* - India's rank in World Bank 'Ease of doing business' ranking improved from 142 in 2014 to 77 in 2018, with the sub-rank in 'Trading across borders' moving up from 122 to 80. - "Trade Infrastructure for Export Scheme (TIES)" launched with effect from 1st April 2017 to address the export infrastructure gaps in the country. - Comprehensive "Agriculture Export Policy" launched on 6th December, 2018 with an aim to double farmers' income by 2022 - "Transport and Marketing Assistance" (TMA) scheme launched in 05th March 2019 for mitigating disadvantage of higher cost of transportation for export of specified agriculture products. - Scheme for Rebate of State and Central Taxes and Levies (RoSCTL) covering export of garments and made-ups notified on 7.3.2019 providing refund of duties/taxes at higher rates.

○ At present banks are covered for 60% of what they lend to exporters for working capital. With the new move, it is expected to be increased to 90%.

○ It would also enable a **reduction in the overall cost of export credit** including interest rates, especially to MSMEs.

● Effective monitoring of export financing will be done by the Department of Commerce.

➢ **Effective Use of FTAs:**

○ **Free Trade Agreement (FTA) Utilisation Mission** will be set up under the **Ministry of Commerce**, to work exclusively with export houses to utilise concessional tariffs in each FTA.

➢ **Mega Shopping Festivals:**

○ To boost exports, Dubai- like annual mega shopping festivals in India will be organized in 4 places across March 2020.

○ These will focus on four themes: **Gems & Jewellery, Handicrafts/Yoga/Tourism, Textiles** and **Leather**.

Measures to Boost Housing Sector

➢ **Increasing Bank Credit for Homebuyers:**

○ The **External Commercial Borrowing (ECB)** guidelines will be relaxed to facilitate financing for homebuyers who are eligible under the **Pradhan Mantri Awas Yojana**.

● External Commercial Borrowing refers to commercial loans, in the form of bank loan and buyers' credit etc., availed of from non-resident lenders with a minimum average maturity of 3 years.

○ The **interest rate on house building advances will be lowered** and linked with the 10 Year Government Security yields.

➢ **A Special Window Fund**

○ It aims to provide **last-mile funding to non-NPA** (Non-Performing Assets) and non-NCLT (National Company Law Tribunal) projects in the affordable and middle-income housing category.

○ The government will contribute up to Rs 10,000

crores alongside other investors including LIC and private banks.

The Merchandise Exports from India Scheme (MEIS)

➢ It was introduced in the Foreign Trade Policy (FTP) 2015-20 with the objective to offset infrastructural inefficiencies and associated costs involved in exporting goods/products which are produced / manufactured in India including products produced/manufactured by MSME Sector.

Export finance

➢ It refers to financial assistance extended by banks and other financial institutions to businesses for the shipping of products outside a country or region.

Pradhan Mantri Awas Yojana

➢ Pradhan Mantri Awas Yojana – Gramin is managed by the **Ministry of Rural Development** which aims to help rural people below the poverty line (BPL) in construction of dwelling units and upgradation of existing unserviceable kutcha houses.

➢ Pradhan Mantri Awas Yojana – Urban is managed by **Ministry of Urban Affairs** which aims to provide central assistance to Urban Local Bodies (ULBs) and other implementing agencies through States/UTs.

National Company Law Tribunal (NCLT)

➢ It was constituted under section 18 of the Companies Act, 2013

➢ The National Company Law Tribunal (NCLT) is a **quasi-judicial body** that adjudicates issues relating to Indian companies.

Steps taken so far

- **Affordable Housing - Additional deduction** up to Rs. 1.5 lakhs for interest paid on loans borrowed up to 31st March, 2020 for purchase of house valued up to Rs. 45 lakh.
- **Banks to launch Repo rate /external benchmark linked loan products**
  - Reduced EMI for housing loans by directly linking Repo rate to interest rates
- **Support to NBFCs/HFCs**
  - More credit support for purchase of houses, vehicles, consumption goods.
  - Additional liquidity support to HFCs Rs. 20,000 Cr by NHB thereby increasing it to Rs. 30,000 Cr.
  - Partial Credit Guarantee scheme for purchase of pooled assets of NBFCs/ HFCs upto Rs 1 lakh Cr - to be monitored at highest level in each bank
- Establish an organisation to provide Credit Enhancement for infrastructure and housing projects
- Requirement for creation of a Debenture Redemption Reserve (DRR) of outstanding debentures in respect of listed companies, NBFCs and for HFCs removed.
- **Pradhan Mantri Awas Yojana – Gramin** (PMAY-G) aims to achieve "Housing for All" by 2022:Eligible beneficiaries to be provided 1.95 crore houses with amenities like toilets, electricity and LPG connections during its second phase (2019-20 to 2021-22).

Note:

Certificates of Origin

Recently the Ministry of Commerce & Industry launched a **common digital platform** for the issuance of **Electronic Certificates of Origin (CoO)**.

➢ This platform will act as a **single access point** for all exporters, all Free Trade Agreements (FTAs)/Preferential Trade Agreements (PTAs), and all concerned agencies.

➢ The platform also provides administrative access to the Department of Commerce for reporting and monitoring purposes.

➢ Authorities of the partner countries will now be able to verify the authenticity of certificates from the website.

New Platform	Existing Process
The issuance process is electronic, paperless and transparent.	The current process requires the exporter to visit the agency thrice for each certificate.
Real-time tracking of FTA utilization at the product level & country-level.	Real-time tracking is not possible as data is fragmented across various agencies.
Electronic Certificate of Origin is issued.	Physical Certificates of Origin are currently issued by the concerned authorities manually.
It is possible now to electronically exchange CoO with the partner countries.	The electronic exchange of CoO is not possible.
Reduces transaction costs and time for the exporters.	The current process takes more time and is costly.

A Certificate of Origin

➢ It is an instrument which establishes evidence on the origin of goods imported into any country.

➢ These certificates are essential for exporters to prove where their goods come from and therefore stake their claim to whatever benefits goods of Indian origin may be eligible for in the country of exports.

Saudi-Aramco Drone Attack

The twin drone attacks on Aramco crude oil production in Saudi Arabia have caused the biggest-ever disruption in global crude oil supplies and has further escalated tensions in the Persian Gulf.

➢ **Yemen's Shia Houthi rebels,** who have been locked in war with a Saudi-UAE-led coalition since 2015, claimed responsibility for the attacks.

The Extent of the Oil Price Shock

➢ Saudi Arabia supplies **10% of the global world oil** and is **the world's largest crude oil** exporter.

➢ Crude oil prices have already shot up by over 10% and oil prices are likely to trend around the $75 per barrel mark in the coming months.

Global Impact

➢ The attack, executed by drones, has **suspended** the production of **6% of global oil supply** which may hike oil prices.

➢ The attack would be the adding of a **geopolitical tensions as well as Security premium** to the price of oil worldwide

➢ The **discovery of oil reserves in the USA** made it less reliant on oil from the middle east which **helped to prevent a situation of "World Oil crunch"** which would have been otherwise.

Impact on India

➢ India **imports 80% of the oil** it consumes, which means there are multiple ways in which the country will be impacted by this disruption.

➢ India is already trying to make up for the loss of supply from Iran after US-imposed sanctions.

- **Saudi Arabia is India's second-largest supplier of crude oil** — it accounts for almost 17% of the country's imports.

- If the process of restoration takes more time than anticipated then India may face a crisis, as global supply has been fairly volatile because of disruptions in some of the other big suppliers such as Venezuela, Libya, and Nigeria.

- As the dollar prices of crude oil rise, India would need to buy more dollars for the same amount of oil, thus **depreciating the value of the rupee** vis-à-vis the dollar.

- As a result, rise in oil prices may worsen the **Indian government's fiscal balance**.

Drone Attacks

- With growing animosity between Iran and Saudi Arabia, **besides having a war-torn Yemen in the neighbourhood,** the Gulf, which has been far from being peaceful, faces a new challenge in the form of drone attacks.

- The primary reason for this proliferation is that drones are relatively **cheaper** in comparison to conventional weapons and yet can achieve far **more destructive** results.

- The biggest **advantage** that comes with using a drone for combat purpose is that it **can be controlled from a remote distance** and **does not endanger any member of the attacking side**.

Houthis

- The Houthis, a group of **Zaidi Shia Muslims** who ruled a kingdom there for nearly 1,000 years, used widespread anger against President Hadi's decision to postpone the long-awaited elections and his stalled negotiations over a new constitution to protest against the government.

- They marched from their stronghold of Saada province to the capital Sanaa and surrounded the presidential palace, placing Hadi under house arrest.

- A military coalition led by Saudi Arabia intervened in Yemen on March 26, 2015, at Hadi's request, after the Houthis continued to sweep the south and threatened to conquer the last government stronghold of Aden, prompting one of the world's worst humanitarian crises ever.

Draft National Resource Efficiency Policy (NREP), 2019

The Ministry of Environment, Forest and Climate Change (MoEFCC) has released Draft National Resource Efficiency Policy (NREP) 2019.

- The draft policy is guided by the **5 principles**:
  - Reduction in primary resource consumption to 'sustainable' levels,
  - Creation of higher value with less material through resource-efficient and circular approaches,
  - Waste minimization,
  - Material security, and
  - Creation of employment opportunities and business models beneficial to the cause of environment protection and restoration.

Key Highlights

- **National Resource Efficiency Authority:**
  - The policy envisions setting up a National Resource Efficiency Authority which will **help develop resource efficiency strategies for different sectors** and adopt them into a **three-year action plan**.
  - To begin with, seven key sectors have been identified—automobile, plastic packaging, building and construction sector, electrical and electronic equipment sector, solar photo-voltaic sector, and steel and aluminium sector.

- **Circular Economy:**
  - The agenda is to develop a circular economy. This can be achieved by two measures – firstly by recycling the materials, and secondly, by increasing the efficiency of use of these resources.
  - The aim is to **double the recycling rate of key materials to 50% in the next five years** and enable upcycling of waste.

- **Dismantlers:**
  - The National Green Tribunal had imposed ban on diesel vehicles more than ten years old in the National Capital Region in view of the rising pollution levels. Following which, more vehicles will end up as end-of-life vehicles.
  - Under the policy, the government plans to **set up centres to collect such vehicles and carry out the deregistration process,** and shredding centres which would segregate materials for recycling.

Note:

drishti

- ○ As many as **20 official dismantlers** would be established across major urban centres by 2020.
- ➤ **Tackling Plastic Waste:**
  - ○ The draft policy aims to achieve a **100% recycling and reuse rate of polyethylene terephthalate (PET) plastic** by 2025.
- ➤ **Secondary Raw Materials:**
  - ○ The draft policy aims to gradually **reducing dependence on virgin materials** and **enhance re-use of construction and demolition waste**.
  - ○ There will be emphasis on **developing codes and standards for quality of secondary raw materials** to ensure confidence in the product, so that by 2025, at least 30% of total public procurement of materials for civil construction can be from recycled materials.

Plan of action

Rising factory output, urbanization and population are putting pressure on the country's existing resources.

CURRENT STATUS
- 20-25% of recycling rate, much lower compared to 70% in developed countries
- 1,580 tonnes/acre is India's resource extraction. (World average is 450 tonnes/acre)
- Third highest CO_2 emitter, responsible for 6.9% of global CO_2 emissions
- Highest water withdrawal globally for agriculture
- 30% of land undergoing degradation

TARGETS
- 50% recycling rate to be achieved by 2025 for aluminium, and 90% by 2030
- By 2030, domestic scrap to fulfil 50% of the total aluminium scrap requirement
- 40% is the targeted rate of utilization of dross by 2025 and 80% by 2030
- Zero import of steel scrap for recycled steel production by 2030
- By 2020 penalty mechanism for violation of e-waste management rules

POLICY STEPS
- Setting up solar panel recycling infrastructure
- Transition to 'zero waste' by converting solid waste to value added products
- Promotion of aluminium scrappage and recycling
- Creation of zonal scrap collection, segregation and treatment facilities
- Quality standards for recycled products, develop codes and standards

Background

- ➤ There has been **growing concerns over resource depletion in India** owing to **rising factory output, urbanization and population**. India is also import-dependent for critical materials such as molybdenum, copper and nickel which makes it vulnerable to the global supply shocks as well.
- ➤ **Linear production and consumption are leading to a lot of wastage** in the entire value chain.

Way Forward

- ➤ Opportunities exist at each and every stage of the product cycle which can be utilized, especially at a time when the economy is going through a rough patch.
- ➤ Be it the electronics and telecommunication sector, plastic industry, photovoltaic, battery manufacturing and storage, **the future depends on how efficiently the raw materials needed are used**.
- ➤ The document has come at the right time when **sustainable uses of resources really need to be pushed forward**. The policy is like a guiding document. It is up to the respective ministries and departments to take action on the ground.

Liberalised Remittance Scheme

India has witnessed its **highest-ever monthly outflow of $1.69 billion** under the Liberalised Remittance Scheme (LRS) in July 2019.

- ➤ The sharp rise in the outflow of funds under LRS scheme over the last five years indicates the **flight of capital from the country**.

Liberalised Remittance Scheme

- ➤ It was introduced by the **Reserve Bank of India** in 2004.
- ➤ Under the scheme, all resident individuals, **including minors**, are allowed to freely remit **up to USD 2,50,000** per financial year for any permissible current or capital account transaction or a combination of both.
- ➤ The scheme is **not available** to corporations, partnership firms, Hindu Undivided Family (HUF), Trusts etc.
- ➤ **Remitted Money can be used** for:
  - ○ Expenses related to travelling (private or for business), medical treatment, study, gifts and donations, maintenance of close relatives and so on.
  - ○ Investment in shares, debt instruments, to buy immovable properties in the overseas market or to open, maintain and hold foreign currency accounts with banks outside India.

Note:

drishti

➢ **Prohibited Transactions:**
  ○ Any purpose specifically prohibited under Schedule-I (like the purchase of lottery tickets, proscribed magazines, etc.) or any item restricted under Schedule II of Foreign Exchange Management (Current Account Transactions) Rules, 2000.

Foreign Exchange Management Act, 1999 (FEMA)

➢ The legal framework for the **administration of foreign exchange transactions** in India is provided by the Foreign Exchange Management Act, 1999.

➢ All transactions undertaken by a resident that do not alter his/her assets or liabilities, including contingent liabilities, outside India are **Current Account Transactions**.
  ○ **Example:** payment in connection with foreign trade, expenses in connection with foreign travel, education etc.

➢ **Capital Account Transactions** includes those transactions which are undertaken by a resident of India such that his/her assets or liabilities outside India are altered (either increased or decreased).
  ○ **Example:** investment in foreign securities, acquisition of immovable property outside India etc.

Foreign portfolio investment (FPI)

➢ It consists of securities and other financial assets passively held by foreign investors.

➢ It **does not provide the investor with direct ownership of financial assets** and is **relatively liquid** depending on the volatility of the market.

➢ Foreign portfolio investment is **part of a country's capital account** and is **shown on its Balance of Payments (BOP)**.

Enterprise Development Centres

The Union Micro, Small and Medium Enterprises Sector (MSME) Minister will soon launch Enterprise Development Centres (EDCs) for developing a cadre of indigenous entrepreneurs in the MSMEs.

➢ Planned for every district, the ministry is targeting the launch of 20 EDCs out of a planned 500 by the end of the current financial year (2019-20).

➢ **Structure**
  ○ The EDCs will be similar to incubators for start-ups.
  ○ The centres will be broad-based and shall be run by special purpose vehicles in partnership with the private sector, business management organisations, local industry associations.

➢ **Focus Areas**
  ○ **Incubation:**
    ● For the first time, an integrated unit will help new and existing businesses develop by providing services such as management training, and office space etc.
    ● It will also offer "enterprise development courses, vocational guidance and skill development for budding entrepreneurs".
  ○ **For Struggling Firms:**
    ● The EDCs will also have "enterprise clinics" for struggling firms, which the government hopes to reduce the number of small businesses falling into a debt trap financed by bank loans.
  ○ **Plugging Financial Difficulties:**
    ● The centres would offer credit facilitation and syndication, export promotion and supplier inclusion.
    ● In the distant future, incentives and loans by the government for the sector will also flow through the EDCs, after determining the capabilities of the firm through set parameters.
  ○ **Expanding Entrepreneur Base:** The government hopes that EDCs will also expand the entrepreneur base by drawing individuals from diverse demographics such as youth, women, scheduled castes and tribes and disabled backgrounds.

Micro, Small and Medium Enterprises

➢ In India, enterprises have been classified broadly into **two categories**:
  ○ Manufacturing.
  ○ Those engaged in providing/rendering of services.

➢ Both categories of enterprises have been further classified into micro, small and medium enterprises based on their investment in plant and machinery (for manufacturing enterprises) or on equipment (in the case of enterprises providing or rendering services).

➢ The present ceiling on investment to be classified as micro, small or medium enterprises is as follows:

Note:

Classification	Manufacturing Enterprises	Services Enterprises
Micro	Up to Rs.25 lakh	Upto Rs.10 lakh
Small	Above Rs.25 lakh & upto 5 crore	Above Rs.10 lakh & upto 2 crore
Medium	Above Rs.5 crore & upto 10 crore	Above Rs.2 core & upto 5 crore

GST Council and Corporate Tax

Recently, The Goods & Services Tax (GST) Council held to **decide on tax moderation, keeping in mind the revenue position and the need to boost** sagging economic growth.

➤ To factor in the creation of Union Territories of Jammu and Kashmir as well as Ladakh, suitable amendments in the Central GST Act, the Union Territories' GST Act, and the corresponding State GST Acts were approved.

➤ It also slashed tax rates on various products and services, including jewellery stones, hotel stay and outdoor catering, besides easing the compliance burden for small and medium enterprises.

Corporate Tax Rate Slashed

➤ The central government has also **slashed corporate tax rates for domestic firms from 30% to 22%** and for **new manufacturing companies from 25% to 15%** to boost economic growth.

  ○ Corporate tax is a tax imposed on the net income of the company.

➤ The **new effective tax rate inclusive of surcharge and cess** for domestic companies would be 25.17% and for new domestic manufacturing companies would be 17.01%.

  ○ These rates would be applicable to those companies **who forego the current exemptions and incentives**.

Key Decisions

Cheer for hospitality
Lower tax rate and slab rejig for room tariffs
Tax cut to 5% on outdoor catering

Easier compliance
Small taxpayers needn't file returns
New returns only from next fiscal yr

Higher tax load
Caffeinated beverages to attract 28% tax + 12% cess
Rail wagons to be taxed at 12%, up from 5%

Minor relief for auto
Lower cess of 1-3% (on top of 28% tax) for passenger vehicles carrying up to 13 people

No decision on biscuits

  ○ Also, the **Minimum Alternate Tax (MAT) will not apply** to such companies

➤ The reduction in the corporate tax rate for domestic companies **would be effective from 1st April 2019**.

➤ The **provisions** affecting these changes have been **inserted in the Income-tax Act through an ordinance**.

➤ **Impact of slashing corporate tax:**

  ○ The move will cost the government Rs 1.45 lakh crore annually which **increases the chances of higher fiscal deficit** and government may have to resort to spending cuts or embark on higher disinvestments.

  ○ It is expected that it will give a **great stimulus to 'Make In India'**, attract private investment from across the globe, improve the competitiveness of the private sector, create more jobs.

  ○ The reduction in corporate tax, effectively, **brings India's 'headline' corporate tax rate broadly at par with an average of 23% rate in Asian countries**.

GST Council

➤ It is a **constitutional body** for making recommendations to the Union and State Government on issues related to Goods and Service Tax.

➤ It is **chaired by the Union Finance Minister** and other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States.

➤ It is considered as a **federal body** where both the centre and the states get due representation.

Minimum Alternate Tax (MAT)

➤ A taxpayer being a company, may have generated income during the year, but by taking advantage of various provisions of Income-tax Law (like exemptions, deductions), it may have reduced its tax liability or may not have paid any tax at all.

➤ Due to an increase in the number of zero tax paying companies, Minimum Alternate Tax (MAT) was introduced by the GOVERNMENT.

➤ MAT is calculated at 18.5% on the book profit (the profit shown in the profit and loss account) or at the usual corporate rates, and whichever is higher is payable as tax.

Unitary Taxation System for Multinational Enterprises

Recently, the United Nations Conference on Trade and Development (UNCTAD) in its Trade and Development Report 2019 has recommended for the adoption of a unitary taxation system for Multinational Enterprises (MNEs).

➢ The **theme** of the report was **'Financing a Global Green New Deal'**.

➢ The report stated that such an approach would simplify the global taxation system and is expected to increase tax revenues for all countries.

➢ The report took cognizance of the fact that the profits of MNEs are generated collectively at the group level. Hence, unitary taxation should be applied by combining it with a global minimum effective corporate tax rate on all MNE profits.

➢ There was a dire need for this change, as the current international corporate taxation norms consider affiliates of MNEs as independent entities and treat taxable transactions between different entities of MNEs as unrelated.

  ❍ This move facilitates the tax-motivated illicit financial flows.

  ❍ According to the report, the tax-motivated illicit financial flows of MNEs are estimated to deprive developing countries of $50 billion to $200 billion a year in terms of the fiscal revenues.

➢ The report also highlights that the fiscal revenues of a country could be augmented through fair taxation of the digital economy. The rapid digitalization of economic activities is changing the way how values are created, measured and distributed, adding new challenges to the international tax framework.

United Nations Conference on Trade and Development (UNCTAD)

➢ UNCTAD is a permanent intergovernmental body established by the United Nations General Assembly in 1964.

➢ Its headquarters are located in Geneva, Switzerland.

➢ It is part of the UN Secretariat.

  ❍ It reports to the UN General Assembly and the Economic and Social Council, but UNCTAD has its own membership, leadership, and budget. It is also a part of the United Nations Development Group.

➢ It supports developing countries to access the benefits of a globalized economy more fairly and effectively. Along with other UN departments and agencies, it also measures the progress made in the Sustainable Development Goals, as set out in Agenda 2030.

➢ Some of the reports published by UNCTAD are:

  ❍ Trade and Development Report

  ❍ World Investment Report

  ❍ Technology and Innovation Report

  ❍ Digital Economy Report

∎∎∎

Note:

International Relations

Highlights

- Solomon Islands and Taiwan
- President's Three Nations Visit
- India – The Top Source of Immigrants
- India and Belgium-Luxembourg Economic Union
- India – Mongolia Relations
- 74th UNGA
- PACEsetter Fund Programme

Solomon Islands and Taiwan

The Solomon Islands' government has **cut official ties** with Taiwan and is **switching diplomatic allegiance to China**.

- ➤ This 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.
- ➤ Now **only 16 countries worldwide continue to recognise Taiwan** as an independent state and **India is not among them**.
  - ○ With a population of 660,000, the **Solomon Islands were easily Taiwan's largest remaining ally in the Pacific**.
  - ○ Taiwan's economy relies on agriculture, fishing and forestry, and the country has a wealth of undeveloped mineral resources.
  - ○ The **Solomon Islands** are located **directly between Australia and the U.S.** and was the site of fierce battles during World War II.

President's Three Nations Visit

The President of India recently concluded his visit to the three nations namely, Iceland, Switzerland, and Slovenia.

India-Iceland

- ➤ Iceland was the **first Nordic country** that publicly **extended support to India's candidature** for permanent membership at the **United Nations Security Council (UNSC)**.
- ➤ Iceland was one of the countries that co-sponsored the resolution at the UN to declare **June 21 as the International Day of Yoga**.

Note:

drishti

- Recently, India and Iceland signed and exchanged three agreements in the fields of,
  - Fisheries collaboration,
  - Cultural cooperation, and
  - Visa waiver for the holders of diplomatic and official passport.
- India's long-pending demand for setting up a **Hindi Chair at the University of Iceland has been fulfilled recently**.
- The Hindi language will now be taught at the University of Iceland.
- Iceland's pioneering efforts in **green technologies**, be it carbon capture, energy-efficient buildings or waste-to-wealth projects can leverage significant benefits to India.
- The **future areas** of cooperation between India and Iceland lie in the field of pharma, healthcare and biotech space, finance, hospitality and tourism services.

India-Switzerland

- India is one of Switzerland's **principal partners in Asia**. The two countries signed the **Treaty of Friendship** in the year **1948**.

- Recently, the Indian President addressed the Federal Council of Switzerland (which is the highest executive authority of Switzerland) and unveiled a statue of Mahatma Gandhi at Villeneuve, Switzerland.

- Both the countries **agreed** to have their **first automatic exchange of information on tax matters**.
- Switzerland is the **largest exporter to India from Europe**.

India-Slovenia

- India recognized the independent state of Slovenia in **1992** and supported its **candidature for the membership at the UN**.

- The balance of trade between the **two nations is tilted in favour of India**.
- **First time Indian President** visited Slovenia recently in **2019**.
- India and Slovenia signed and exchanged seven MoUs and Programmes of Cooperation in the fields of Investment, Sports, Culture Science & Technology and Standards.
- India sought for Slovenia's support in its bid to get permanent membership at the UN Security Council and the membership of the **Nuclear Suppliers Group**.

International Yoga Day 2019
- The theme for the **fifth** International yoga 2019 day is **'Yoga for Heart'**.
- Yoga is inscribed in the list of **UNESCO Intangible Cultural Heritage of Humanity of India**.

Nuclear Supplier Group
- The Nuclear Suppliers Group (NSG) was created following the explosion in **1974 of a nuclear device by a non-nuclear-weapon State (India)**.
- It is a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of Guidelines for nuclear exports and nuclear-related exports.
- The grouping has 48 participating governments where decisions are taken by consensus.

Note:

India – The Top Source of Immigrants

According to the **International Migrant Stock 2019 report,** released by the **United Nations Department of Economic and Social Affairs (UNDESA), India** has emerged as the leading country of **origin for immigrants** across the world.

Highlights of the Report

➢ The report provides the latest estimates of the number of international migrants **as per their age, sex, and origin**, for all countries and areas of the world.

➢ **India** remained the top source of international migrants constituting **6.4% of the total world's migrant population**.

   ❍ The **most preferred destination of the Indian migrants** was the **UAE** followed by the **US** and then **Saudi Arabia**.

   ❍ **In India,** the highest number of international migrants **came from Bangladesh, Pakistan** and **Nepal**.

➢ **The percentage of international migrants** of the total global population has increased to **3.5% from 2.8%** in 2000.

➢ The **one-third of all international migrants originated** from mostly 10 countries.

   ❍ India (17.5 million international migrants) followed by Mexico (12 million migrants), China (11 million), Russia (10 million) and Syria (8 million).

➢ The **European region** hosted the **highest number of immigrants** (82 million), followed by North America (59 million) and Northern Africa and Western Asia (49 million).

   ❍ Among **countries**, the **U.S. hosted the highest number of international migrants** that constitute about **19% of the global population**.

United Nations Department of Economic and Social Affairs (UNDESA)

➢ It was formed in the year **1948** as the development pillar of the United Nations.

➢ UN DESA is a **pioneer of the Sustainable Development Goals (SDGs)**.

➢ It helps countries translate their global commitments into national action in the economic, social and environmental spheres.

➢ The **share of women and girls** in the global number of **international migrants fell slightly from 49% in 2000 to 48%** in **2019**.

➢ In terms of **age, one out of every seven** international migrants is **below the age of 20 years**.

India and Belgium-Luxembourg Economic Union

The 16th Session of the **Joint Economic Commission (JEC)** between India and Belgium Luxembourg Economic Union (BLEU) was held in New Delhi.

➢ India and BLEU reiterated the importance of the **Joint Economic Commission (JEC)** towards the development of bilateral economic and trade relations.

➢ It was established in **1997** organized **biennially** at the **respective capital cities** of the **three countries alternatively**.

Belgium Luxembourg Economic Union

➢ Belgium Luxembourg Economic Union (BLEU) was created by a treaty signed in **1921**.

   ❍ Under the terms of the treaty, the economic frontier was lifted and the Belgian franc and Luxembourg franc were set at a fixed parity establishing a monetary union, which existed until the introduction of the euro.

   ❍ A new convention was signed in 2002, between the two nations.

➢ Most of the aims of BLEU have largely been taken up by the **Benelux Union (between Luxembourg, Belgium, and the Netherlands)** and **the European Union**.

➢ The Belgium–Luxembourg Economic Union is the **world's 13th largest export** economy.

India-Belgium

➢ Belgium was among the **first European countries** to establish **diplomatic relations** with **independent India** in 1947.

➢ India is **Belgium's second-largest export destination** and **fourth-largest trade partner outside the European Union**.

Note:

drishti

○ Trade in **diamonds** dominates India-Belgium bilateral trade.

➤ Belgium is the **22nd largest investor in India**.

India-Luxembourg

➤ India and Luxembourg established diplomatic relations in **1948**.

➤ Luxembourg is the **16th most important investor in India** and among EU member states it ranks **4th among the combined FDR and FII investors in India**.

➤ The sectors that attracted maximum investments from Luxembourg include trading, computer software & hardware, services sector, agricultural machinery, and chemicals.

➤ India and Luxembourg have had **longstanding cooperation in the steel sector**.

India – Mongolia Relations

Recently, the Mongolian President visited India as both the countries emphasized not only the expansion of strategic partnerships but also **the conversion of a strategic relationship into the spiritual brotherhood**.

➤ The two countries have also signed **Memorandum of Understandings (MoUs) on Space Cooperation and Disaster Management** that will provide a new dimension to the India-Mongolia strategic partnership.

○ A joint statement on space cooperation would allow **peaceful exploration of outer space and include remote sensing and weather forecasting services** for both the countries.

➤ Both sides took stock of the project to build a **Cyber Security Training Centre** to be established in Mongolia with Indian support.

➤ The scope of India and Mongolia regular military exercises named **" N o m a d i c**

Elephant" and **"Khaan Quest"** is expected to be broadened.

➤ The year **2020** will mark the **65th anniversary** of the establishment of diplomatic relations between India and Mongolia.

Timeline of India-Mongolia Relations

➤ The common **Buddhist heritage and civilizations** link two countries and peoples.

➤ India established diplomatic relations with Mongolia in **1955** as Mongolia declared India as a **"spiritual neighbour"** and strategic partner

➤ Mongolia along with India and Bhutan co-sponsored the famous **UN Resolution for the recognition of Bangladesh as an independent country in 1972**.

➤ The **first-ever visit by Prime Minister of India to Mongolia** was in **2015** marked the **60th anniversary** of the establishment of diplomatic relations between India and Mongolia.

➤ Mongolia voted in favour of India's proposal to **Yoga's inscription into the list of UNESCO's Intangible Cultural Heritage**.

➤ **Mongolia** has **publicly reiterated its support** for India's membership to the permanent seat of expanded UNSC.

SAMVAAD dialogue

➤ SAMVAAD dialogue brings Buddhist religious leaders, experts and scholars from different countries together to deliberate on contemporary issues related to Buddhism.

➤ The conference urged open and truthful global dialogue on conflicts and the environment.

General Assembly of Asian Buddhist Conference for Peace (ABCP)

➤ It was initiated at **Ulaanbaatar, (Mongolia) in 1969-70** as a **voluntary movement** of followers of Lord Buddha, both monks and lay, striving to disseminate and implement the teachings of the Enlightened One on peace and harmony, compassion and loving-kindness for all sentient beings on Earth.

➤ It aims to bring together the efforts of Buddhists in support of consolidating universal peace, harmony, and cooperation among the peoples of Asia.

➤ The year 2019 marks the 50th anniversary of the Assembly of Asian Buddhist Conference for Peace (ABCP).

Note:

drishti

74th UNGA

The Prime Minister of India addressed the 74th session of the United Nations General Assembly (UNGA) on September 27, 2019.

➤ The **General Assembly is the main deliberative**, policymaking and **representative organ of the UN**.

➤ All **193 Member States** of the UN are represented in the General Assembly, making it the only UN body with universal representation.

➤ **Each year, in September,** the full UN membership meets in the General Assembly Hall in **New York** for the **annual General Assembly session** and general debate, which many heads of state attend and address.

Events on the sidelines of the Meeting

Climate Action Summit

It was hosted by the UN Secretary. It had the key focus on raising ambition and accelerate action to implement the **Paris Agreement**.

Key Takeaways

➤ **Renewable Energy:** India will increase renewable energy capacity to beyond 175 GW (capacity as committed under the Paris Climate Agreement) by 2022.

➤ **Water Conservation:** Spend approximately $50 billion in the next few years on the Jal Jeevan Mission to conserve water, harvest rainwater and develop water resources.

➤ **Two International Initiatives:**

  ○ **Leadership Group:** India and Sweden together with other countries have announced a new 'Leadership Group for Industry Transition' that will drive transformation in hard-to-decarbonize and energy-intensive sectors.

  ○ **Coalition for Disaster Resilient Infrastructure (CDRI):** An international partnership that will support countries- developed and developing- to build **climate and disaster resilient infrastructure**.

    ● The Government of India, the United Nations Office for Disaster Risk Reduction (UNDRR) and partners have together worked on the CDRI initiative.

    ● The Coalition's secretariat is based in Delhi.

➤ **Gandhi Solar Park and Gandhi Peace Garden:** These were inaugurated by the Prime Minister of India at the headquarters (New York) of the United Nations. A special **UN Postage stamp on Gandhi's 150 years** was also released.

Gandhi Solar Park

➤ It is a **first of its kind symbolic Indian effort at the UN** that highlights India's willingness to go beyond the talk on climate change and climate action.

➤ At a contribution of about USD 1 million, India has **gifted solar panels** that have been installed on the roof of the UN Headquarters, **one panel each for every 193 UN member states**.

Gandhi Peace Garden

➤ It is an innovative initiative under which the Consulate-General of India in New York, Long Island-based NGO Shanti Fund and the State University of New York-Old Westbury have entered into an agreement **to plant 150 trees**.

➤ It is a crowd-sourced project, with people adopting trees in memory of their loved ones.

➤ The garden is in an open site within the 600-acre campus of the university.

High-Level Meeting on Universal Health Coverage

The Prime Minister of India, while addressing the **first-ever high-level meeting on Universal Health Coverage,** underscored that 'a healthy life is the right of every person'. He also outlined the **four main pillars of healthcare** that India focuses on:

➤ **Preventive Healthcare:** India has laid special emphasis on yoga, ayurveda and fitness which has helped in controlling lifestyle diseases such as diabetes, blood pressure and depression.

  ○ Fit India Movement has been launched recently.

  ○ The Clean India Campaign has contributed towards saving millions of lives.

  ○ Apart from introducing new vaccines, the government has improved access to vaccination in far flung areas.

➤ **Affordable Healthcare:** For this the government has rolled out the world's largest health insurance scheme: **Ayushman Bharat**.

  ○ Under this scheme, 500 million poor people have been given the facility of free treatment worth up to Rs. 500,000 every year. In 2018, 4.5 million people availed of this facility.

  ○ India has also helped in providing access to affordable healthcare by way of **telemedicine to several other countries**, especially African countries.

Note:

- ➢ **Supply Side Intervention:** India's focus has been on **establishment of modern institutions for quality medical education**.
- ➢ **Mission Mode Intervention:**
  - ○ In order to improve the health of women and children, a National Nutrition Campaign and other new programmes have been launched in mission mode.
  - ○ Also, India is commited to eliminate Tuberculosis by 2025, five years ahead of the global goal of 2030.

> **Note:**
> At the meeting, the world leaders adopted a high-level **United Nations Political Declaration on Universal Health Coverage (UHC)**, to be achieved by 2030.
> - ➢ **Universal health coverage** means that **all people have access to the health care they need, when and where they need it,** without facing financial hardship.
> - ➢ The declaration is said to be the most comprehensive set of health commitments ever adopted.
> - ➢ Countries, including India, made a financial and political commitment to accelerate progress towards universal health coverage by scaling up essential health services, affording financial risk protection and ensuring access to safe, quality, effective and affordable medicines and vaccines for all.

Line of Credit to Pacific Island Nations

India has announced a **$150 million worth line of credit to the group of Pacific island nations** for undertaking solar, renewable energy and climate-related projects.

- ➢ The Indian PM also invited the leaders of the Pacific Small Island Developing States (PSIDS) to join the Coalition for Disaster Resilient Infrastructure (CDRI).
- ➢ In the health sector, the Prime Minister **offered to organize a Jaipur Foot Artificial Limb Fitment Camp** in a Pacific regional hub **under 'India for Humanity'** programme.

> **India for Humanity**
> - ➢ As **part of the 150th Birth Anniversary celebrations of Mahatma Gandhi,** the 'India for Humanity' initiative was launched in **2018 in honour of Gandhiji's service to humanity**.
> - ➢ The initiative was launched by the **Ministry of External Affairs**.
> - ➢ It features a year-long series of **artificial limb fitment camps** in a number of countries spanning the globe.

India and PSIDS Relations

- ➢ With the evolution of the **Act East Policy of India,** India's relationship with Pacific Island nations has deepened.
  - ○ This resulted in the setting up of an action-oriented multinational grouping named Forum for India-Pacific Island Cooperation (FIPIC) in 2014, between India and the 14 Pacific Island nations.
- ➢ The PSIDS **comprises of the 14 Pacific Island countries** viz. The Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

- ➢ India and PSIDS have shared values and a shared future. The need today is for inclusive sustainable development policy in order to reduce inequalities and improve the quality of people's lives.

Quad Meet

The foreign ministers of the **Quad countries – India, US, Australia and Japan –** met on the sidelines of the UNGA meeting on 27th September 2019.

- ➢ The group is seen as a **regional counterweight to China** and has only met at the Joint or Assistant Secretary level since 2017. The latest meeting is seen as an upgrade by at least three levels.

Quad

- ➢ The Quadrilateral security dialogue or Quad was **first mooted by the Japanese Prime Minister in 2007**.
- ➢ However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- ➢ In **November 2017, India, the US, Australia and Japan gave shape to the long-pending "Quad"** Coalition to develop a new strategy to **keep the critical sea routes in the Indo-Pacific free of any influence (especially China)**.

➤ **India has been hesitant about the Quad,** in part because it does not want to isolate China and because it has had a history of staying clear of security alliances.

➤ **Members of the Quad, barring Australia,** are currently engaged in the annual **Malabar exercises** – military exercises that started between India and the U.S. in 1994 and became trilateral (with Japan) in 2015.

❍ India has not permitted Australia to participate in these exercises, concerned about what message it would send to China, which is wary of the exercise.

G-4 Meeting

➤ The foreign ministers of G-4 grouping also held a meeting on the sidelines of the 74th session of the United Nations General Assembly (UNGA).

➤ **G-4** is a group of four countries i.e. **Brazil, Germany, India and Japan which support each other's bids for permanent seats on the United Nations Security Council (UNSC)**.

➤ The G-4 countries have decided to **prepare for a fresh push for reforms at the UNGA in 2020** when the **UN celebrates its 75th anniversary**.

➤ It was highlighted that there is a clear **need for an enhanced role of developing countries** and of major contributors to the United Nations to make the UNSC more legitimate, effective and representative.

❍ This means that India and Brazil — the two developing countries in G-4 grouping — should get a place along with China, which is the only developing country in the UNSC.

❍ The countries also put a focus on the role of the African continent in the Council.

➤ G-4 said that the **reforms-related decisions should be by a two-third majority in the UN General Assembly,** which was enshrined in the 1998 resolution of the UNGA.

❍ This is contrary to the position taken by China, which has always said that the decisions should be taken through "comprehensive consensus".

India – CARICOM

Indian Prime Minister met 14 leaders of the CARICOM group of countries.

➤ The meeting deliberated on the steadily intensifying and deepening relations between India and partner countries of the Caribbean, not only in the bilateral but also in the regional context.

➤ India has provided immediate financial assistance of USD 1 million to recover from the destruction caused by **Hurricane Dorian** in the region and the worst-hit island of Bahamas.

➤ India also announced a USD 14 million grant for community development projects in the CARICOM and another **150 million Line of Credit for solar, renewable energy and climate-change-related projects**.

Caribbean Community (CARICOM)

➤ The Caribbean Community was **formed in 1973**.

➤ CARICOM has **15 members** – Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad & Tobago.

➤ The **Chairmanship** of the Community is **rotated every six months** among the member countries.

➤ The CARICOM Single Market and Economy are intended to benefit the people of the region by providing more and better opportunities to produce and sell goods and services and to attract investment.

➤ The **Government of India funded the US$ 1.166 million information technology** and communication infrastructure, computer software and community studio **at the CARICOM Secretariat in 2005-2006**.

PACEsetter Fund Programme

Recently the **Ministry of New and Renewable Energy** awarded grants to the awardees of the **second round of PACEsetter fund programme**.

➤ The PACEsetter fund was constituted by **India and the USA in 2015** as a **joint fund**.

➤ The mission of the PACEsetter Fund is to accelerate the commercialization of innovative off-grid clean energy access solutions by providing early-stage grant funding that would allow businesses to develop and test innovative products, business models and systems.

∎∎∎

Note:

Science and Technology

Highlights

- Indigenous Fuel Cell System
- Radiative Cooling & Electricity Generation
- Darknet
- Coal Gasification Plant for Urea Project
- Genetically modified Aedes aegypti
- Carcinogen Substances in Ranitidine
- Goldschmidtite
- Controlled Human Infection Model (CHIM)
- Methane: Space Fuel

Indigenous Fuel Cell System

On the occasion of the Council of Scientific and Industrial Research (CSIR) Foundation Day, the President introduced India's first indigenously developed high-temperature based Fuel Cell System.

➢ It is developed under the Public-Private Partnership (PPP) model by the Council of Scientific and Industrial Research (CSIR) in partnership with Indian industries.

➢ It is built under India's flagship programme named **'New Millennium Indian Technology Leadership Initiative (NMITLI)'**.

Specifications

➢ The developed fuel cells are based on High-Temperature Proton Exchange Membrane (HTPEM) technology.

➢ It is a 5.0 kW fuel cell system that generates power in a green manner.
  - ❍ It takes methanol or bio-methane as the input and produces heat and water as its by-products, which can be further used.

➢ This helps to attain an efficiency that is greater than 70%, which is difficult to achieve by other energy sources.

Applications

➢ This fuel system is most suitable to fulfil distributed stationary power applications demands like in small offices, commercial units, data centres, etc. where highly reliable power is essential with simultaneous requirement for air-conditioning.

➢ This system will meet the requirement of efficient, clean and reliable backup power generators that are demanded by telecom towers, remote locations, and strategic applications.

High-Temperature Proton Exchange Membrane (HTPEM) Technology

➢ High - Temperature Proton - Exchange - Membrane (HTPEM) is the core of the fuel cells that run above 150°C. It works on two modes of operations with respect to the source of fuel.

➢ One mode is based on the conversion of natural gas into hydrogen by means of steam reforming. This mode is used to fulfill stationary power demands.
  - ❍ Steam reforming or steam methane reforming is a chemical synthesis process for producing syngas (hydrogen and carbon monoxide) from hydrocarbons such as natural gas.

➢ The second mode is based on the operation of Hydrogen with Oxygen obtained by the process of electrolysis. This is generally used in the space-related applications.
  - ❍ Electrolysis is a chemical decomposition process in which an electric current is passed through a liquid or a solution containing ions.

Council of Scientific and Industrial Research (CSIR)

➢ CSIR is an autonomous research and development body established by the Government of India on 26th September 1942.

➢ It is established under the Ministry of Science and Technology.

➢ It covers a wide spectrum of science and technology fields from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology, and nanotechnology to mining, aeronautics, instrumentation, environmental engineering, and information technology.

Note:

New Millennium Indian Technology Leadership Initiative (NMITLI)

➢ It is the largest Public-Private-Partnership effort within the R&D domain in the country.

➢ NMITLI seeks to catalyze innovation centred scientific and technological developments as a vehicle to attain for Indian industry a global leadership position, in selected niche areas. It synergizes the best competencies of publicly funded R&D institutions, academia, and private industry.

➢ NMITLI has so far evolved 60 largely networked projects in diversified areas viz. Agriculture & Plant Biotechnology, General Biotechnology, Bioinformatics, Drugs & Pharmaceuticals, Chemicals, Materials, Information and Communication Technology, and Energy.

➢ The Fuel Cells fit well in India's mission of replacing Diesel based Generating (DG) sets with the green and alternate fuels.

○ This development is therefore expected to reduce India's dependence on crude oil.

➢ The technology has placed India in the league of developed nations which are in possession of such a knowledge base.

Way Forward

➢ In the field of clean energy, Fuel Cell distributed power generation systems are emerging as a promising alternative to grid power.

➢ The development of indigenous fuel cell technology carries immense national importance in terms of energy security.

Radiative Cooling & Electricity Generation

Recently, a scientist of Indian-origin has demonstrated a new way **to generate electricity at night, without any active heat input**.

➢ According to the **laws of thermodynamics**, everything on Earth emits heat.

○ At night, when one side of Earth turns away from the sun, its buildings & streets cool off.

○ If no clouds are present to trap warmth, objects on the Earth can lose so much heat that they reach a lower temperature than the air surrounding them.


POWERED BY TEMPERATURE CHANGE

Aaswath Raman's device employs radiative cooling, a phenomenon that makes buildings and parks feel cooler than the surrounding air after sunset. His prototype uses a polystyrene disk coated in black paint and covered with a wind shield. At its heart is a thermoelectric generator

How the device works

➤ As the device releases heat, it does so unevenlym, the top side cooling more than the bottom

➤ Thermoelectric generator at the centre of the device uses the difference in temperature between opposite sides of the device to generate a current
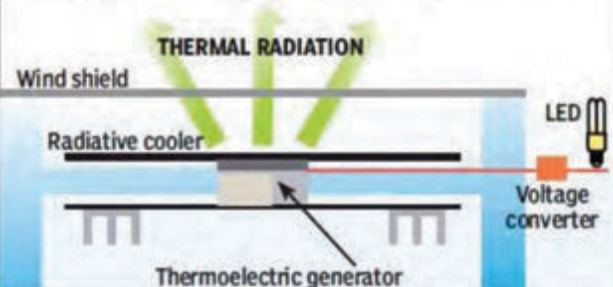
This underlying method has been used for millennia

Humans have taken advantage of this effect for millennia. Six thousand years ago, people constructed enormous beehive-shaped structures called **yakhcahl** to create and store ice in the desert

➢ Potential Application

○ This could be an effective approach for **power generation suitable for remote locations**, and anywhere where power generation at night is needed.

○ While solar cells are an efficient source of renewable energy during the day, there is currently no similar renewable approach to generating power at night.

Way Forward

➢ Although the amount of electricity it generates per unit area remains relatively small, limiting its widespread applications for now, but the researchers predict it can be made twenty times more powerful with improved engineering – such as by suppressing heat gain in the radiative cooling component to increase heat-exchange efficiency.

Note:

Darknet

The **Kerala Police** has set up a **'state-of-the-art lab'** to intervene and **crack down** on the rising **criminal activities** over the **Darknet**, also known as the **underworld of the Internet**.

➢ Spearheading the programme is **Cyberdome**, the **State police department's premier facility** dedicated to prevent cybercrime and mitigate security threats to the State's critical information infrastructure.

➢ According to Section 70(1) of the Information Technology Act, the **Critical Information Infrastructure (CII) is defined** as a "computer resource, incapacitation or destruction of which, shall have a debilitating impact on national security, economy, public health or safety".

Darknet

➢ **Internet consists of three layers:**

○ The first layer is **public**, consisting of sites that one uses frequently such as Facebook, Twitter, Amazon and LinkedIn. This layer makes up only 4% of the entire internet.

○ The second layer, **the deep web**, is a network where data is **stored in inaccessible databases** (i.e. cannot be accessed through traditional search engines like Google). It is used to provide **access to a specific group of people**.

● The data is generally sensitive and private (government private data, bank data, cloud data etc), so kept out of reach.

○ The third layer is **the darknet** which is also known as a part of the 'Deep Web'. It is a network built over the **internet which is encrypted**.

● It is basically a layer of the Internet accessible **only by using special software like Tor (The Onion Router)**, or I2P, which stands for Invisible Internet Project.

● Anything present on the dark web will not be pulled up in internet searches, thereby offering a **high degree of anonymity**.

➢ **Concerns over Darknet:**

○ In February 2016, in a study titled 'Cryptopolitik and the Darknet', researchers analysed content over the TOR network.

● Of the 2,723 websites they could classify by content, 1,547 – 57 % – hosted **illicit material** ranging from **drugs** (423 sites), **illegitimate**

pornography (122) and **hacking** (96), among others.

○ There were also reports of **log-in details of streaming sites** like Netflix being sold on the dark web marketplaces for cheap rates.

○ The network is also **used by several activists** especially those living under oppressive regimes to communicate without any government censorship.

● The TOR network was used by activists during the Arab Spring.

➢ **Darknet and India:**

○ The **Information Technology Act deals with cybercrime** and comes under the Ministry of Electronics and Information Technology. There are only six sections in the law that deal with cybercrime.

○ With the changing times, India **needs a code of criminal procedures** dealing with cybercrime **that would come under the Ministry of Home Affairs,** which deals with policing issues.

○ Also, there is a need for **police, trained in changing cyber trends** who are dedicated only towards investigation of cybercrimes.

Coal Gasification Plant for Urea Project

The Minister of Chemicals & Fertilizers has signed a contract for the coal gasification plant for the urea project at Talchar, Odisha.

➢ Currently, the production of urea in the country is done by using **pooled natural gas** which comprises domestic Natural Gas and **imported Liquified Natural Gas (LNG)**.

➢ Hence it is preferred that an indigenous raw material is used for the production of urea to reduce spending of valuable foreign exchange.

Coal Gasification

➢ The process of Coal Gasification **chemically transforms the fossil fuel into Synthetic Natural Gas (SNG)**, instead of burning fossil fuel.

➢ It produces **Syngas** which is a mixture consisting primarily of methane (CH_4), carbon monoxide (CO), hydrogen (H_2), carbon dioxide (CO_2) and water vapour (H_2O).

➢ It is primarily used for electricity generation, as well as for the production of chemical feedstocks.

Genetically modified Aedes aegypti

The genes from genetically-modified Aedes aegypti mosquito were found to have been transferred to naturally-occurring Aedes aegypti mosquito population in Brazil when the former transgenic mosquitoes were released.

➢ Aedes aegypti mosquitoes are responsible for **transmitting Dengue, Chikungunya and Zika virus**.

➢ It is **unclear** if the presence of transgenic mosquito genes in the natural population will affect the disease transmission capacity or make mosquito control efforts more difficult.

➢ The employed genetic strategy RIDL (Release of Insects Carrying Dominant Lethal Genes) **was supposed to only reduce the population of the naturally occurring Aedes aegypti mosquitoes and not affect or alter their genetics**.

➢ But the study has found **transgenic genes in 10-60% of naturally-occurring mosquitoes**.

➢ Also, the **naturally occurring Aedes aegypti** mosquitoes **carrying some genes of the transgenic mosquitoes** are able to **reproduce in nature**.

Zika Virus

➢ Zika virus is a **mosquito-borne flavivirus** that was first identified in **Uganda in 1947** in **monkeys**. Later, identified in **humans in 1952 in Uganda** and the United Republic of Tanzania.

➢ Zika virus disease is caused by a virus transmitted primarily by Aedes mosquitoes and can be passed from a pregnant woman to her foetus; and Sexual transmission of Zika virus is also possible.

➢ There is **no vaccine or medicine** for Zika.

Dengue

➢ Dengue is transmitted by several species of mosquito within the genus Aedes.

➢ Symptoms include fever, headache, muscle, and joint pains, and a characteristic skin rash that is similar to measles.

➢ **Dengvaxia is the first dengue vaccine** but the **Indian** drug controller is **yet to grant approval** to it.

Chikungunya

➢ Chikungunya is caused by a **mosquito-borne virus**.

➢ Its symptoms are characterized by abrupt fever and severe joint pain, often in hands and feet, and may include headache, muscle pain, joint swelling or rash.

➢ There is **no specific antiviral drug treatment** or **commercial vaccine** for chikungunya.

Carcinogen Substances in Ranitidine

After the US Food and Drug Administration (FDA) flagged the **low-level presence of the carcinogenic substances in Ranitidine**, the **Central Drugs Standard Control Organisation (CDSCO)** has also issued directives to check the presence of carcinogenic substances in Ranitidine.

➢ CDSCO has also asked states to ensure that Ranitidine is sold only under prescription as it is a **prescription drug included in Schedule H**.

Ranitidine

➢ Ranitidine is **one of the oldest drugs to be used in acidity** and upper intestinal ulcers and is available in various formulations including tablets, injections, etc.

➢ Some Ranitidine medicines contain a **Nitrosamine Impurity called N-nitrosodimethylamine (NDMA)** at low levels which is **considered as carcinogenic**.

  ○ Although NDMA may cause harm in large amounts, the levels the FDA found in Ranitidine from preliminary tests barely exceed amounts even found in common foods.

  ○ **Nitrosamine** is a type of chemical found in tobacco products and tobacco smoke. These are also found in many foods, including fish, beer, fried foods, and meats. Some nitrosamines cause cancer in laboratory animals and may increase the risk of certain types of cancer in humans.

  ○ A **carcinogen** is any **substance or radiation that promotes carcinogenesis, the formation of cancer**.

➢ It is on the **World Health Organisation's 'Model List of Essential Medicines'**.

➢ Under the Drugs and Cosmetics Rules, 1945, drugs under **Schedule H** shall have labels displaying the texts "Rx" and "Schedule H" drug.

  ○ Drugs under this schedule are **to be sold by retail on the prescription of a Registered Medical practitioner only**.

Central Drugs Standard Control Organisation
➢ CDSCO is the **Central Drug Authority** for performing functions assigned to the Central Government under the Drugs and Cosmetics Act.
➢ It functions under the **Ministry of Health and Family Welfare**.
➢ Major **functions** of CDSCO:
  ❍ **Regulatory control over the import of drugs,** approval of new drugs and clinical trials.
  ❍ **Approval of certain licenses** as Central License Approving Authority is exercised by the CDSCO.
➢ It has its **Headquarters in New Delhi**.

Goldschmidtite

Recently a new mineral has been discovered inside a diamond unearthed from a mine in South Africa.

➢ It has been found in Earth's Mantle (A part of Interior of the Earth) which covers 80% of earth's volume.
➢ Goldschmidtite has high concentrations of niobium, potassium and the rare earth elements such as lanthanum and cerium.
➢ The found single grain is dark green in colour and opaque.
➢ The mineral has been named after the Norwegian scientist Victor Moritz Goldschmidt, who is considered as the founder of Modern Geochemistry.

Controlled Human Infection Model (CHIM)

Recently, The Department of Biotechnology (DBT) has proposed to develop **new influenza vaccines** using a **Controlled Human Infection Model (CHIM)**.

➢ Under the CHIM approach, **volunteers who take part in trials will be infected with a virus or bacteria**, under expert supervision.
➢ Vaccines traditionally are made of a **weakened form of a disease-causing virus or bacteria** and injected into the body to **coax the immune system** into making antibodies that create **immunity against future infection**.
➢ A CHIM approach will speed up the process whereby scientists can comprehend/conjecture whether potential vaccine candidates can be effective in

people and identify the factors to determine why some people vaccinated with the new medicine get sick and others do not.

  ❍ It would also help **to study bacterial or enteric viruses** (residing in the intestine) like **cholera** which is **prevalent in India**.
➢ Earlier, The Hyderabad-based biotech company, **Bharat Biotech**, used the CHIM approach to develop a **Typhoid vaccine**.
  ❍ Though the vaccine is already licensed in India the vaccine's potency was evaluated by infecting human volunteers at Oxford University **in the U.K. and not in India**.
➢ The risk in such trials is that **intentionally infecting healthy people** with an **active virus** and causing them to be sick is **against medical ethics**.

Methane: Space Fuel

The Indian Space Research Organization (ISRO) is developing **methane-powered rocket engines**.

➢ **Methane,** which can be **synthesised with water and carbon dioxide in space,** is often described as the **space fuel of the future**.
➢ ISRO **currently** prefers to use a fuel called **Unsymmetrical Di-Methyl Hydrazine,** along with Nitrogen tetroxide for oxidiser, in its liquid fuel engines, which are used in the lower stages of its rockets; **Polar Satellite Launch Vehicle (PSLV)** and **Geosynchronous Satellite Launch Vehicle (GSLV)**.
  ❍ This fuel, like all hydrazine-based fuels, is said to be **highly toxic and cancer-causing**.
  ❍ Globally, governments are keen on banning hydrazine.
➢ **Advantages of Methane over Hydrazine:**
  ❍ Apart from being non-toxic, it has a **higher specific impulse** (which means one kg of the gas can lift one kg of mass for a longer time).
  ❍ It is easy to store and does not leave a residue upon burning.
  ❍ It is less bulky and can be synthesised up in space.
➢ **Disadvantage:** Methane-fired engines **need an igniter to start** the fire whereas **Hydrazine fuels are hypergolic,** which means they start burning on their own as soon as they come in contact with oxygen.

▰▰▰

Note:

Environment and Ecology

Highlights

- *World Ozone Day*
- *Vulture Culture*
- *Special Report on Climate Change: IPCC*

- *Ganga Data Collector App*
- *Climate Change and Ocean Currents*

World Ozone Day

Every year, **16th September** is observed as the **International Day for the Preservation of the Ozone layer**.

➢ The **theme** for the **year 2019** is **'32 Years and Healing'**.

○ It celebrates over three decades of remarkable international cooperation to protect the **ozone layer** and the climate under the **Montreal Protocol**.

➢ In 1994, the **United Nations General Assembly proclaimed** 16th September the International Day for the Preservation of the Ozone Layer, commemorating the **date of the signing, in 1987, of the Montreal Protocol on Substances that Deplete the Ozone Layer**.

➢ The latest Scientific Assessment of Ozone Depletion completed in 2018, shows that **parts of the ozone layer has recovered** at a **rate of 1-3% per decade since 2000**.

➢ Ozone layer protection efforts have also contributed to the fight against climate change by averting an estimated 135 billion tonnes of carbon dioxide equivalent emissions, from 1990 to 2010.

Ozone

➢ Ozone (composed of three atoms of oxygen) is present **both in the Earth's upper atmosphere (Stratosphere) and at ground level (Troposphere)**.

○ **Stratospheric Ozone:**
- It is also known as Good Ozone.
- It forms a protective layer that **shields** living organisms from the **sun's harmful ultraviolet rays**.

○ **Tropospheric Ozone:**
- Surface level ozone is a harmful air pollutant, thus it is also known as Bad Ozone.

- It is formed near **ground** level **when pollutants emitted** by cars, power plants, industrial boilers, refineries, and other sources **react chemically in the presence of sunlight**.

Conventions and Protocols related to Prevention of Ozone Layer Depletion

➢ **The 1985 Vienna Convention** for the Protection of the Ozone Layer is an international agreement in which United Nations members recognized the fundamental importance of preventing damage to the stratospheric ozone layer.

➢ **The 1987 Montreal Protocol** on Substances that Deplete the Ozone Layer and its succeeding amendments were subsequently negotiated to control the consumption and production of anthropogenic ozone-depleting substances (ODSs) and some hydrofluorocarbons (HFCs).

➢ **2016 Kigali Amendment to the Montreal Protocol** will phase down the production and consumption of some HFCs and avoid much of the projected global increase and associated climate change.

Vulture Culture

India is home to **nine species of vultures,** but most of them face the danger of extinction.

The nine species of vultures & their International Union for Conservation of Nature (IUCN) status is:

Reasons for Death of Vultures

➢ The major reason behind the vulture population getting nearly wiped out was the **drug Diclofenac**.

➢ It is **found in the carcass of cattle** on which the vultures feed.

○ The **drug was commonly fed** to cattle to **treat inflammation**.

Sr. No.	Name of the Vulture Species	IUCN status	Pictorial Representation
1.	Oriental White-backed Vulture (Gyps Bengalensis)	Critically Endangered	
2.	Slender-billed Vulture (Gyps Tenuirostris)	Critically Endangered	
3.	Long-billed Vulture (Gyps Indicus)	Critically Endangered	
4.	Egyptian Vulture (Neophron Percnopterus)	Endangered	
5.	Red-Headed Vulture (Sarcogyps Calvus)	Critically Endangered	
6.	Indian Griffon Vulture (Gyps Fulvus)	Least Concerned	
7.	Himalayan Griffon (Gyps Himalayensis)	Near Threatened	
8.	Cinereous Vulture (Aegypius Monachus)	Near Threatened	
9.	Bearded Vulture or Lammergeier (Gypaetus Barbatus)	Near Threatened	

❍ Its veterinary use was **banned in 2008** by the Government of India.

❍ **Bioaccumulation** (the accumulation of a contaminant, such as pesticides, or other chemicals in an organism) of Diclofenac caused **kidney failure in Vultures, leading to death**.

Conservation Efforts

➢ To study the cause of deaths of vultures in India, a **Vulture Care Centre (VCC)** was set up at Pinjore, **Haryana** in 2001.

➢ Later in 2004, the VCC was upgraded to being the **first Vulture Conservation and Breeding Centres (VCBC) in India**.

❍ At present, there are nine Vulture Conservation and Breeding Centres (VCBC) in India, of which three are directly administered by the Bombay Natural History Society (BNHS).

➢ The main objective of the VCBCs was to look after the vultures and **breed them in captivity** and also **release them into the wild**.

➢ So far **nine states** have undertaken programmes **to create safe habitats for vultures**.

➢ **White-backed Vulture, Slender-billed Vulture, Long-billed Vulture** and **Red-Headed Vulture** are three species found in India which are already **Critically endangered under IUCN Red List**.

Special Report on Climate Change: IPCC

The Intergovernmental Panel on Climate Change (IPCC) made public **'The Special Report on the Ocean and Cryosphere in a Changing Climate'** at the United Nations Climate Summit.

➢ The published report is the last in a series of three reports on specific themes that IPCC has published, namely:

❍ **Global Warming of 1.5° C:** A special report, which was commissioned to specifically explore the **scientific feasibility of the 1.5°C** goal set in the Paris Agreement.

❍ **Land and climate change:** The report focuses on the **contribution of land-related activities to global warming** i.e how the different uses of land affect the emission of greenhouse gases.

➢ The report also **updates the IPCC's 5th Assessment Report** — and summarises the disastrous impacts of warming based on current status/scenario of global greenhouse gas emissions.

Key Findings of the Report

➢ The ocean is projected to **transition to unprecedented conditions** with increased temperatures, **ocean acidification, marine heatwaves** and more frequent extreme **El Niño** and **La Niña** events, over the 21st century.

➢ **Ocean Warming:**

❍ Since 1993, the **rate of ocean warming has doubled**.

❍ Marine heatwaves have very likely doubled since 1982 and are increasing in intensity.

drishti

- ➤ **Global Mean Sea-Level:**
  - ○ Between 2006 and 2015, the global mean sea level recorded an **average rise of 3.6 mm per year**, which was more than double of 1.4 mm per year recorded in the first 90-year-period of the 20th century.
  - ○ Sea-level rise is not globally uniform and **varies regionally**. Regional differences, within 30% of global mean sea-level rise, result from land ice loss and variations in ocean warming and circulation.
- ➤ **The Melting of Glaciers:**
  - ○ Between 2006 and 2015, the **Greenland ice sheet lost ice-mass at an average rate of 278 billion tonnes every year**, which was enough to result in a global sea-level rise of 0.8 mm per year.
  - ○ During the same period, the **Antarctic ice sheet lost a mass of 155 billion tonnes on an average every year**.
  - ○ Snow over outside of these two poles, like the glaciers in the Himalayas, together lost an average of 220 billion tonnes of ice every year.
  - ○ Since the mid-20th century, the shrinking cryosphere has led to predominantly negative impacts on food security, water resources, water quality, livelihoods, health, and well-being, as well as the culture of human societies, particularly for Indigenous people.

Intergovernmental Panel on Climate Change (IPCC)
- ➤ The Intergovernmental Panel on Climate Change (IPCC) is the **international body for assessing the reasons and causes behind climate change**.
- ➤ It was set up in **1988 by the World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP)** to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.
- ➤ IPCC assessments provide a scientific basis for governments at all levels to develop climate-related policies, and they underlie negotiations at the **UN Climate Conference – the United Nations Framework Convention on Climate Change (UNFCCC)**.

IPCC's 5th Assessment Report
- ➤ The IPCC **prepares comprehensive Assessment Reports** about the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place.

- ➤ The **Assessment Report** released by the IPCC in **2014 was the 5th** in a series of such reports.
- ➤ **6th Assessment Report** of the IPCC is expected to be released in **2022**.

Ganga Data Collector App

Wildlife Institute of India (WII) has launched a mobile application **"Ganga Data Collector"** under the National Mission for Clean Ganga (NMCG) of Union Ministry of Jal Shakti.

- ➤ Ganga Prahari volunteers and staff of the forest department in the 11 states of the Ganga Basin will use this application **to collect and monitor data related to the quality of water, the presence of different species of fishes, amphibians and reptiles, crocodiles and turtles, dolphins, birds, water level and weather**.
  - ○ The Ganga basin covers 11 states including Uttarakhand, Uttar Pradesh, Madhya Pradesh, Rajasthan, Haryana, Himachal Pradesh, Chhattisgarh, Jharkhand, Bihar, West Bengal and Delhi.

National Mission for Clean Ganga (NMCG)
- ➤ National Mission for Clean Ganga (NMCG) is the implementation wing of the National Ganga River Basin Authority (NGRBA).
- ➤ It is a registered society, originally formed by the Ministry of Environment, Forests and Climate Change (MoEFCC) on 12th August 2011 under the Societies Registration Act, 1860.
- ➤ But now both NGRBA and NMCG have been allocated to the Ministry of Water Resources, River Development and Ganga Rejuvenation.
- ➤ The main pillars of the programme include sewerage treatment infrastructure, river-front development, river-surface cleaning, biodiversity preservation, afforestation, public awareness industrial effluent monitoring, and Ganga gram.

Ganga Guardians
- ➤ Ganga Praharis are self-motivated and trained volunteers from among the local communities working for biodiversity conservation and cleanliness of the Ganga River.
- ➤ They aim to:
  - ○ Creating awareness about the benefits of a clean and vibrant Ganga and create a sense of belongingness among people towards the Ganga River.

Note:

○ Linking local communities and their livelihoods with the overall efforts of various agencies working for a clean Ganga, and thereby, creating a convergence point at the grassroots level for such efforts.

○ Linking local people's livelihood and well-being with a clean and vibrant Ganga.

Wildlife Institute of India

➢ The Wildlife Institute of India (WII) is an autonomous institution under the Ministry of Environment, Forest and Climate change.

➢ It was established in 1982.

➢ It is based in Dehradun, Uttarakhand.

➢ It offers training programs, academic courses, and advisory in wildlife research and management.

Climate Change and Ocean Currents

A new study suggests a link between Atlantic Meridional Overturning Circulation (AMOC) and the Indian Ocean.

➢ For thousands of years, Atlantic Meridional Overturning Circulation (AMOC) has remained stable but in the last 15 years, signs show that AMOC may be slowing, which could have drastic consequences on the global climate.

○ However, the rising temperatures in the Indian Ocean can help to boost the AMOC and delay slow down.

➢ Warming in the Indian Ocean generates additional precipitation, which in turn, draws more air from other parts of the world including the Atlantic.

➢ With so much precipitation in the Indian Ocean, there will be less precipitation in the Atlantic Ocean.

➢ Lesser precipitation leads to higher salinity in the waters of the tropical portion of the Atlantic — because there won't be as much rainwater to dilute it.

➢ This saltier water in the Atlantic, as it comes north via AMOC, will get cold much quicker than usual and sink faster.

➢ The above process would act as a jump start for AMOC, intensifying the circulation.

➢ But if other tropical ocean's warming, especially the Pacific's, catches up with the Indian Ocean, the advantage of intensification of AMOC may stop.

➢ Moreover, it isn't clear whether the slowdown of AMOC is caused by global warming alone or it is a short-term anomaly related to natural ocean variability.

➢ Slow down of AMOC had taken place 15,000 to 17,000 years ago, which caused harsh winters in Europe, with more storms or a drier Sahel in Africa due to the downward shift of the tropical rain belt.

➢ Alternating oceanic system patterns like El Niño–Southern Oscillation (ENSO) also affects rainfall distribution in the tropics and can have a strong influence on weather in other parts of the world.
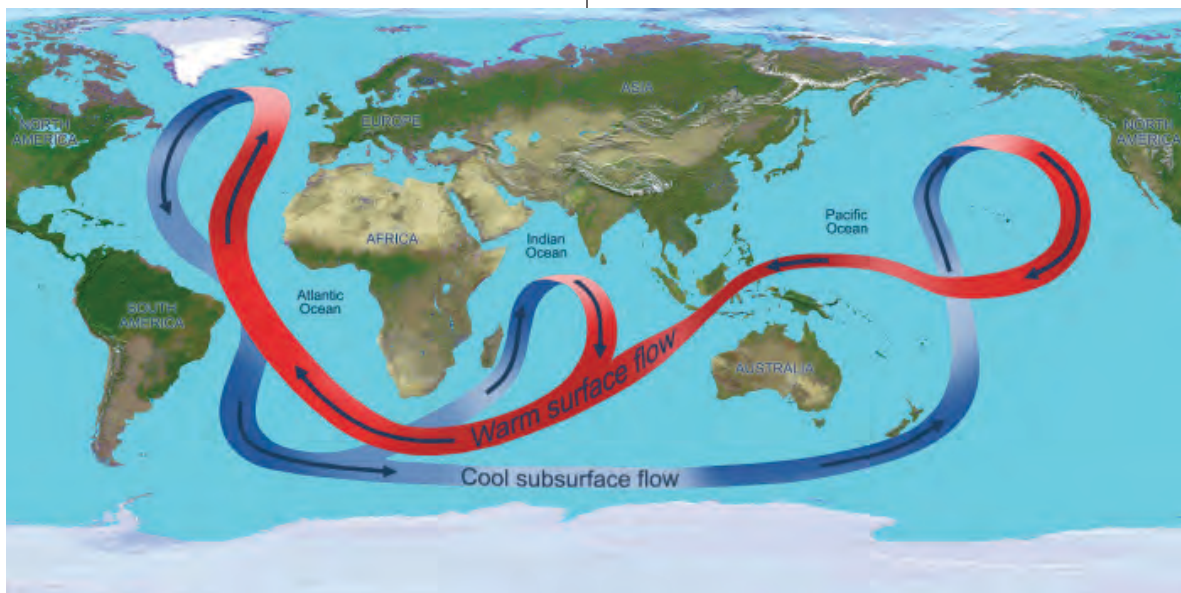
Note:

Atlantic Meridional Overturning Circulation

➢ Atlantic Meridional Overturning Circulation (AMOC) — which is sometimes referred to as the "Atlantic conveyor belt" — is one of the Earth's largest water circulation systems where ocean currents move warm, salty water from the tropics to regions further north, such as western Europe and sends colder water to the south.

○ As warm water flows northwards in the Atlantic, it cools, while evaporation increases its salt content.

○ Low temperature and high salt content increases the density of the water, causing it to sink deep into the ocean.

○ The cold, dense water deep below slowly spreads southward.

○ Eventually, it gets pulled back to the surface and warms again, and the circulation is complete.

○ This continual mixing of the oceans and the distribution of heat and energy across the planet contributes to the global climate.

➢ Atlantic Meridional Overturning Current(AMOC) ensures the oceans are continually mixed, and heat and energy are distributed around Earth.

El Niño-Southern Oscillation (ENSO)

➢ It involves temperature changes of 1°-3°C in the central and eastern tropical Pacific Ocean, in between three to seven years.

➢ El Niño refers to the warming of the ocean surface and La Niña to cooling, while "Neutral" is between these extremes.

■■■

Note:

Art & Culture

Galo Community

The Galos are one of the major communities which dominate Siang, Lepa Rada, Upper Subansiri and Namsai districts of **Arunachal Pradesh**.

➢ The Galos belong to the **Tani group inhabiting Assam and Arunachal Pradesh**, besides Tibet.

➢ Communities like the Mising (Assam), Adi, Apatani, Nyishi, Tagin, and Galos trace their common origin to a primaeval ancestor, Abotani.

➢ Among all the communities only the Galos maintain genealogy through given names.

➢ Galo community has been **recognized as a Scheduled Tribe in the Amendment to the Constitution (ST), Order, 1950, Part-XVIII**.

➢ **Mopin** is the main festival among Galos which is celebrated for the prosperity of the villages

➢ The Galos perform **Popir dance**.

Erra Matti Dibbalu

Erra Matti Dibbalu is dissected and stabilized coastal red sediment mounds, located between Visakhapatnam and Bheemunipatnam in Andhra Pradesh.

➢ **Formation:**
  ○ Formed around 12,000 years ago due to sea-land interaction.
  ○ Comprises a mixture of sand (40-50%), silt and clay (another 50%) with oxidation imparting the unique red colour.

➢ **Significance:**
  ○ They are geologically important as they represent the geological history of the late **Quaternary period** and carry the imprints of the fall of sea level and its subsequent rise, the impact of climate, monsoon and geological processes on the sediments.
  ○ They are anthropologically and archeologically important as they possibly contain **mesolithic and neolithic** cultural materials as well.

➢ **Recognition:**
  ○ It was recognised as a national geo-heritage site in 2014 and as a protected site by the Andhra Pradesh Government in 2016.
    • The Geological Survey of India (GSI) declares geo-heritage sites/national geological monuments for protection and maintenance

➢ **Other Similar Place:** The only other place in the country to have a similar stretch of red sand dunes is Tamil Nadu, which has the Teri dune complex.

Geological Survey of India

➢ The Geological Survey of India (GSI) was set up in 1851 primarily to find coal deposits for the Railways.

➢ The main functions of the GSI relate to creation and updation of national geo-scientific information and mineral resource assessment.

➢ It is headquartered in Kolkata, and has regional offices located at Lucknow, Jaipur, Nagpur, Hyderabad and Shillong and Kolkata and State Unit offices in almost all States of the country.

➢ Presently, GSI is an attached office to the Ministry of Mines.

Keeladi Findings

The cultural deposits unearthed during the excavations at site Keeladi located in the Sivaganga district of **Tamil Nadu** could be dated to a **period between the 6th century BC and the 1st century AD**.

Note:

drishti

- ➢ It could be a major **turning point** in the **cultural historiography of the ancient Sangam Age**.
- ➢ The recent Tamil Nadu government report titled, **'Keeladi-An Urban Settlement of Sangam Age on the Banks of River Vaigai'** reveals that:
  - ○ The new excavations at Keeladi artifacts are **300 years older than previously believed – 3ʳᵈ century BCE**.
  - ○ **The second urbanization** [the first being Indus Valley Civilization] of **Vaigai plains** happened in **Tamil Nadu around the 6ᵗʰ century BCE**.
    - The second Urbanisation of Vaigai plains was a **contemporary of the Iron Age in Gangetic plains** and also the period of the **rise of various Heterodox sects**.
  - ○ It also **spells the site as Keeladi as against the erstwhile widely used Keezhadi**.
  - ○ The date of the **origin of the Tamil-Brahmi script** (symbolizing the origin art of writing) as early as **6ᵗʰ century BCE**.
    - The Tamil-Brahmi script was the **earliest script** used by **Tamils** which later evolved the **Grantha script**, from which the modern Tamil is derived.
  - ○ The society in Keeladi had **used animals predominantly for agricultural purposes**.

- ○ Pottery specimens from Keeladi confirmed that **water containers and cooking vessels were shaped out of locally available raw materials**.
  - The pottery specimen also outlines the **various stages of the weaving industry** from spinning, yarning, looming, weaving and dyeing.

Sangam Age
- ➢ The word **'Sangam'** means a **group of persons** or an **association**.
  - ○ The **Tamil Sangam** was an **academy of poets** who flourished in **three different periods** and in **different places** under the patronage of the **Pandyan kings**.
- ➢ The **Sangam literature** includes Tolkappiyam, Ettutogai, Pattuppattu, Pathinenkilkanakku, and the two epics- Silappathigaram and Manimegalai.
  - ○ It deals with the **secular matter** relating to the public and social activities.

Vaigai River
- ➢ It is an **east-flowing** river.
- ➢ 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.

■■■

Note:

Social Issues

Highlights

- *'TB Harega Desh Jeetega' Campaign*
- *Silicosis and Mining Safety*
- *Population Pyramid*
- *National Nutrition Survey*
- *Malnutrition and Disease Burden*

- *'UMMID' Initiative*
- *Promulgation of the Prohibition of Electronic Cigarettes Ordinance*
- *Pradhan Mantri Matru Vandana Yojana*
- *AISHE-2019*

'TB Harega Desh Jeetega' Campaign

The Union Minister for Health and Family Welfare has launched the **'TB Harega Desh Jeetega Campaign'**, along with the **National TB Prevalence Survey**.

➤ He also released the **TB India Report (2019)**.

- ○ As per the TB India Report 2019, 21.5 lakh **cases of tuberculosis** were notified to the Revised National Tuberculosis Control Programme (RNTCP) in 2018 — a **16% increase** from 2017.

➤ He also launched an **all-oral regimen kit** for multi-drug resistant Tuberculosis (TB) patients which does not include injections which are painful and can have side effects.

➤ He also announced a **partnership with the World Bank** which is providing a $400 million credit for accelerating TB response in 9 states through private sector engagement and other critical interventions.

TB Harega Desh Jeetega Campaign

➤ It has **three strong pillars** which include **clinical approach, public health component and active community participation**.

➤ It aims to **improve and expand the reach of TB care services** across the country by **2022**.

- ○ This includes preventive and promotive approaches and proposes potentially transformative interventions such as **engagement with the private sector health care providers**, inter-ministerial partnerships, corporate sector engagement, latent TB infection management, and community engagement.

- ○ The interventions will be accompanied by a comprehensive, mass media and **communications campaign** to generate awareness about the disease and the free treatment services available under the government program.

The National TB Prevalence Survey

➤ The Union Health Minister flagged off a van for the National TB Prevalence Survey.

➤ In all, 25 such vans will be part of the prevalence survey, which shall take 6 months and be carried out across the country.

➤ This shall present **national and state-level data**, which will be used as a **policy tool for further interventions**.

Other Recent Initiatives

➤ India has a commitment to **eliminate Tuberculosis by 2025**, five years ahead of the global goal of 2030.

➤ The Government of India has partnered with the Global Fund to launch **JEET (Joint Effort for Elimination of TB)**, a private sector engagement program operating across the country.

➤ In April 2018, the government launched the **Nikshay Poshan Yojana, a direct benefit transfer (DBT) scheme to provide nutritional support to TB patients**.

- ○ Under the scheme, TB patients have been receiving Rs. 500 per month for the entire duration of treatment.

Tuberculosis

➤ TB is caused by **bacteria *(Mycobacterium tuberculosis)*** that most often affect the lungs.

➤ **Transmission:** TB is spread from person to person through the air.

Note:

- **Symptoms:** Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.

- **Prevention: Bacille Calmette-Guérin (BCG) vaccine** is effective against disseminated and meningeal TB in young children.

- **Treatment:** TB 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.

- Anti-TB medicines have been used for decades and strains that are resistant to 1 or more of the medicines have been documented in every country surveyed.

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

  - **Extensively drug-resistant TB (XDR-TB)** is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.

- **Revised National TB Control Programme (RNTCP):** It is based on the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy and was launched in 1997 expanded across the country in a phased manner with support from the World Bank and other development partners.

  - Full nation-wide coverage was achieved in March 2006.

  - Under the programme, diagnosis and treatment facilities are provided free of cost to all TB patients.

Enhancing BCG Vaccine

A recent study has found that **curcumin in nanoparticle** form has the potential to **enhance the efficacy of BCG vaccine**.

Curcumin

- Curcumin is the **active ingredient of the dietary spice turmeric (Curcuma longa)** and has been consumed for medicinal purposes for thousands of years.

- It has a **wide range of applications** such as antibacterial activity, anti-inflammatory, anti-oxidant, chemotherapeutic, anti-proliferative, wound healing, antiparasitic, anti-malarial, diabetes, obesity,

neurologic, psychiatric disorders and cancer, as well as chronic illnesses affecting the eyes, lungs, etc.

- Although curcumin has shown therapeutic efficacy against many human ailments, one of the major problems with curcumin is its **poor bioavailability**.

- One of the **promising approaches** to increase the bioavailability of curcumin include the **use of nanoparticles**.

Lacuna in BCG Vaccine

- The vaccine induces **two types of immune cells — effector memory T cells** and **central memory T cells**.

- The **effector memory T cells** play a crucial role in mounting an **immediate immune response** against virulent TB bacteria and also kill them.

- The **central memory T cells** help in **long-term protection in children**. But, after persisting for some time, the central memory cells **ultimately diminish**. As a result, the **protection does not last beyond childhood and adults become vulnerable to TB** infection despite BCG vaccination.

Curcumin in Nanoparticle
Form & Enhanced Efficiency

- One way of enhancing the efficacy of the BCG vaccine is by **increasing the number of central memory cells** so they last longer and confer protection for a longer duration.

- The researchers found that **injecting curcumin nanoparticles,** soon after vaccinating the mice with BCG, produced an **appreciable enhancement** of the central memory T cells.

- Curcumin also helps in the **activation of innate immune cells** known as macrophages and dendritic cells. TB bacteria reside and grow inside the macrophages. But once activated by curcumin nanoparticles, macrophages and dendritic cells clear the bacteria.

- It **enhances** the level of **TB-specific acquired immune cells** (Th1 and Th17 cells) and simultaneously **reduces** the level of certain other cells **(Th2 and Tregs)** thus improving the efficacy of the BCG vaccine.

  - After TB infection, the levels of Th2 and Tregs cells increase and they inhibit host-protective effect of Th1 and Th17 responses.

- It, in a way confers **protection against adult pulmonary TB**.

Note:

drishti

Silicosis and Mining Safety

Saharia tribe miners in Madhya Pradesh have appealed to the government to treat them for silicosis rather than **Tuberculosis**.

➢ Recently the sandstone mining industry in Rajasthan also demanded modernization of working conditions in mining and quarrying areas.

➢ Silicosis is more prevalent among miners who are exposed to dust containing crystallized silica which turns quarrying and mining villages into "widow villages".

➢ Maximum miners in these states do not have any identity proof and cannot make a thumb impression on government documents since their fingerprints have faded.

Silicosis

➢ Silicosis is one of the most prevalent occupational health illnesses in the world.

➢ It is a progressive lung disease caused by inhalation of silica over a long period of time.

➢ Silicosis is characterized by shortness of breath, cough, fever and bluish skin.

➢ Silicosis is an incurable condition with its potential to cause permanent physical disability.

➢ Silicosis occurs most commonly in people working in the quarrying, manufacturing, and building construction industries.
  ○ Silica (SiO_2/silicon dioxide) is a crystal-like mineral found in abundance in sand, rock, and quartz.

➢ It is also reported from the population with non-occupational exposure to silica dust from industrial as well as nonindustrial sources.

➢ Exposure to large amounts of free silica may not be noticed because silica is odourless, non-irritant and does not cause any immediate health effects, but long-term exposure is associated with pneumoconiosis, lung cancer, pulmonary tuberculosis, and other lung diseases.

➢ Diagnosis is a challenge because it is difficult to even find out if a person has tuberculosis or silicosis.
  ○ The nodules that collect to form a mass can take up to 20 years to be identified in chest x-rays and the victim notices symptoms only after many years of exposure to silica.

➢ Steps taken by Government of India to reduce and prevent incidents of Silicosis include:
  ○ In India, more than 10 million workers are at risk of silicosis and thus it is recognized as occupational diseases by the Factories Act and Employees Compensation Act, which mandates employers must pay compensation to workers who are afflicted.
    ● In India silicosis is prevalent in Gujarat, Rajasthan, Pondicherry, Haryana, Uttar Pradesh, Bihar, Chhattisgarh, Jharkhand, Orissa and West Bengal among the workers of construction and mining.
  ○ Factory Act of India (1948) mandates a well-ventilated working environment, provisions for protection from dust, reduction of overcrowding and provision of basic occupational health care.
  ○ Silicosis is a notified disease under the Mines Act (1952) and the Factories Act (1948).

Saharia Tribe

➢ Most of the Saharia (or Sor) of India live in the state of Madhya Pradesh. But also found Odisha, Andhra Pradesh, Bihar, Tamil Nadu, West Bengal, Rajasthan and the Plains division of Assam.

➢ They speak the Munda language that belongs to the Austro-Asiatic language family.

➢ The Saharia tribe is divided based on occupation into five sub-tribes:
  ○ The Arsi are weavers.
  ○ The Muli are ironworkers.
  ○ The Kindal are basket makers.
  ○ The Kumbi are potters.

Population Pyramid

A population pyramid is a graphical representation of the age and sex composition of a specific population.

➢ It consists of two histograms, one for each gender (by convention, men on the left and women on the right) where the numbers are shown horizontally and the ages vertically.

➢ The numbers by gender and by age depend on interactions between fertility, mortality and migrations.

➢ The shape of the pyramid and its variations over the years depend, above all, on the variations in fertility.

➢ The pyramid can also assume a columnar shape (with vertical sides rather than sloped sides), or have an irregular profile.

Note:

India vis-a-vis China

➢ India's pyramid is bottom heavy i.e. the Indian population has a larger proportion of children, teenagers and young adults compared to China's.

➢ **Population Distribution**

○ **India**

● The country's population for the age cohorts of 0-4, 5-9, 10-14 and 15-19 is roughly equal, whereas the numbers for older groups become progressively smaller.

● This means that the country's younger age groups have stopped growing in numbers now and are likely to shrink slightly soon.

● This, however, does not mean that India's population will also start shrinking soon.

● Except for the oldest groups, India seems to have more males than females for every cohort.

○ **China**

● The country's largest cohort is in its late 40s, although it is more gender balanced than its younger cohorts, suggesting that sex-selective abortions are likely to have taken off in the last few decades.

➢ **Working Age Population**

○ In 25-65 age group, India currently has around 650 million people and China 830 million.

○ By 2040, India is likely to reach 900 million, whereas China will have around 730 million.

○ In other words, India will go from having 180 million less working-age people than China today to about 170 million more – a net gain of a third of a billion in 20 years.

Way Forward

➢ Just having people in the working age is not enough. How many are in the labour force and their productivity are important. The government needs to focus on the same.

➢ India needs to invest more, and efficiently, in human capital and infrastructure.

India's demographic edge over China

India has 650 mn people in the working-age group of 25-65, while China has 830 mn. By 2040, India will have 170 mn more working-age people than China.
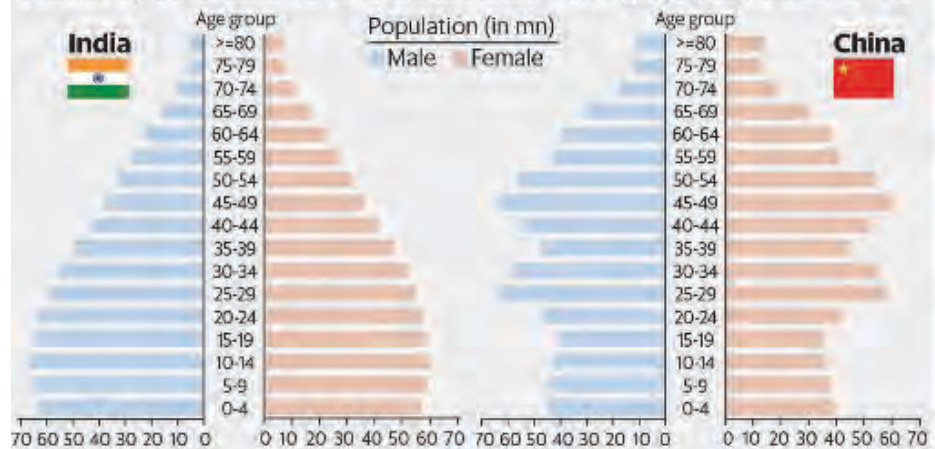
○ For the former, investments in health and sanitation have to be sustained and more Public Private Partnership (PPP) models are required to ensure basic education.

○ For the latter, a bigger push for affordable rental housing in cities has to be considered, along with more investments in rail connectivity.

National Nutrition Survey

The first-ever comprehensive National Nutrition Survey has been conducted by the Ministry of Health and Family Welfare and the United Nations Children Fund (UNICEF) to measure malnutrition.
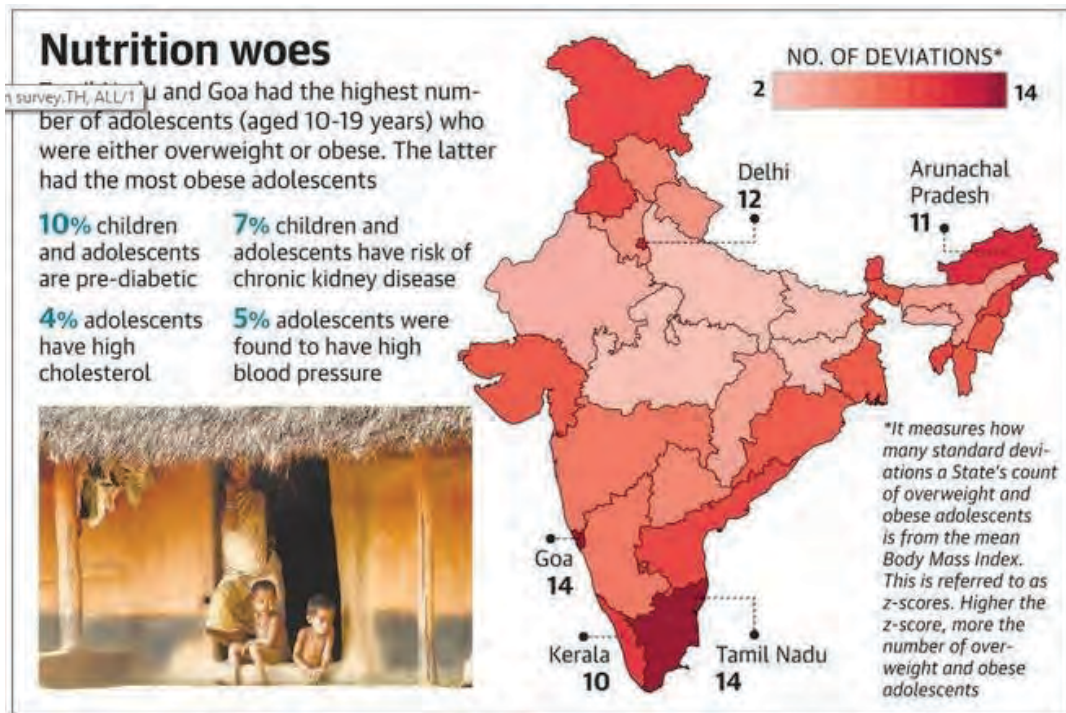
➢ The survey recorded not only **micronutrient deficiencies** but also details of **non-communicable diseases** such as diabetes, hypertension, cholesterol and kidney function in children and adolescents.

Key Findings

➢ Nearly 10% of children in the age group of 5-9 years and adolescents in the age group of 10-19 years are **pre-diabetic**.

➢ Also, 5% are overweight and another 5% suffer from blood pressure in the age groups mentioned above.

➢ The first time hard evidence of the **coexistence of obesity and undernutrition**, among school-going children has been recorded.

➢ The National Nutrition Survey is different from the National Family Health Survey (NFHS) as:

Note:

Nutrition woes

...u and Goa had the highest number of adolescents (aged 10-19 years) who were either overweight or obese. The latter had the most obese adolescents

10% children and adolescents are pre-diabetic

7% children and adolescents have risk of chronic kidney disease

4% adolescents have high cholesterol

5% adolescents were found to have high blood pressure

NO. OF DEVIATIONS*

2 — 14

Delhi **12**

Arunachal Pradesh **11**

Goa **14**

Kerala **10**

Tamil Nadu **14**

*It measures how many standard deviations a State's count of overweight and obese adolescents is from the mean Body Mass Index. This is referred to as z-scores. Higher the z-score, more the number of overweight and obese adolescents

○ NFHS collects data to measure the prevalence of **stunting, wasting and underweight and household dietary intake** to measure deficiencies.

○ Moreover, the survey collects data **only for the age groups of 1-5 years and adults,** and not for school going children between the age of 5 and 19 years.

Steps Taken by Government of India to curb incidences of Malnutrition

➢ Under the Pradhan Mantri Matru Vandana Yojana (PMMVY), Rs.6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.

➢ POSHAN Abhiyaan, launched in 2017-18, aims to reduce stunting, under-nutrition, anaemia and low birth weight babies through synergy and convergence among different programmes, better monitoring and improved community mobilisation.

➢ The National Food Security Act (NFSA), 2013, aims to ensure food and nutrition security for the most vulnerable through its associated schemes and programmes, making access to food a legal right.

➢ Mid-day Meal (MDM) scheme aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools.

Malnutrition and Undernutrition

➢ Malnutrition refers to **deficiencies, excesses or imbalances** in a person's intake of energy and/or nutrients.

➢ The term malnutrition covers two broad groups of conditions.

○ **Undernutrition –** which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies (a lack of important vitamins and minerals).

○ **Obesity –** which includes overweight and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and cancer).

Malnutrition and Disease Burden

A study led by the Indian Council of Medical Research (ICMR), has given comprehensive estimates of **Disease Burden due to Child and Maternal Malnutrition and the Trends of its Indicators in Every State of India from 1990 to 2017**.
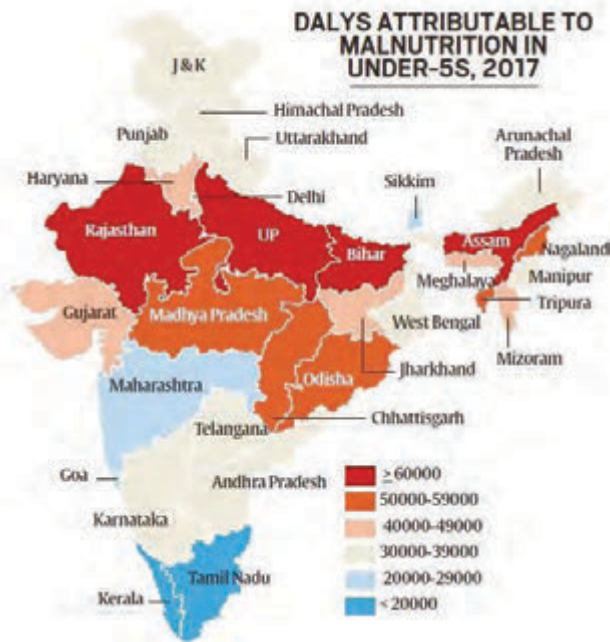
➢ The estimates were produced as **part of the Global Burden of Diseases Study (GBD) 2017**.

Note:

drishti

○ The Global Burden of Disease Study is a comprehensive **regional and global** assessment of mortality and disability from major diseases, injuries, and risk factors initiated by **World Health Organisation (WHO)** and **World Bank**.

Key Findings

➢ **Child and maternal malnutrition** is still a leading cause of:

DALYS ATTRIBUTABLE TO MALNUTRITION IN UNDER-5S, 2017

≥ 60000	
50000-59000	
40000-49000	
30000-39000	
20000-29000	
< 20000	

○ **Death Rate:**
  ● Malnutrition deaths under-5 children, has **dropped by two-thirds from 1990 to 2017**.
  ● But still it is the underlying risk factor for **68% of the deaths**, ranging between a high of 72.7% in Bihar and a low of 50.8% in Kerala.
○ **Disability-Adjusted Life Years (DALY):**
  ● DALY rate attributable to malnutrition in children **varies among the states** — a gap between a high of 74,782 in Uttar Pradesh and a low of 11,002 in Kerala.
○ **Anaemia:**
  ● The prevalence of anaemia in women was at **54% in 2017**.

➢ **Low Birthweight:**
○ It is the **largest contributor to child deaths** among all malnutrition indications, followed by child growth failure which includes stunting, underweight, and wasting.

➢ **Overweight:**
○ It is becoming a significant public health problem as it is increasing rapidly across all States.

Implications

The country may miss global targets with respect to malnutrition and others for the year **2030**, set by

➢ The World Health Organization (WHO)
➢ The United Nations Children's Fund (UNICEF)
➢ The Sustainable Development Goals (SDGs)

Suggestions

➢ To improve the overall nutritional status of girls and women during the preconception and pregnancy period and providing quality antenatal care.
➢ Focus is needed on clean drinking water, reducing rates of open defecation, improving women's educational status, and food and nutrition security.

Disability-Adjusted Life Years (DALYs)

➢ Disability-Adjusted Life Years (DALYs) is the **sum of the number of years of life lost due to premature death and a weighted measure of the years lived with disability** due to a disease or injury.

Anaemia

➢ It is a condition in which **the number of red blood cells or their oxygen-carrying capacity is insufficient** to meet physiologic needs, which vary by age, sex, altitude, smoking, and pregnancy status.
➢ Iron deficiency is the most common cause of anaemia.

Steps Taken by India

➢ **Mid-day Meal (MDM) scheme** aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools.
➢ Under the **Pradhan Mantri Matru Vandana Yojana (PMMVY)**, Rs.6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.
➢ **POSHAN Abhiyaan,** launched in 2017-18, aims to reduce stunting, under-nutrition, anaemia and low birth weight babies .
➢ **The National Food Security Act (NFSA), 2013,** aims to ensure food and nutrition security for the most vulnerable through its associated schemes and programmes, making access to food a legal right.

Note:

'UMMID' Initiative

The **Department of Biotechnology (DBT)** has started **UMMID (Unique Methods of Management and Treatment of Inherited Disorders)** initiative **to tackle inherited genetic diseases in newborn babies**.

➢ The programme will be **implemented through government hospitals** to regularise the use of cutting edge scientific technology and molecular medicine to achieve Universal Health Coverage for all.

➢ The initiative is designed on the concept of **'Prevention is better than Cure'**.

Background

➢ In India's urban areas, **congenital malformations and genetic disorders are the third most common cause of mortality** after prematurity & low birth weight issues and infections in newborns.

➢ A very large population and high birth rate, and consanguineous marriage favoured in many communities are some of the important reasons for the high prevalence of genetic disorders in India.

UMMID Initiative

➢ **Aim:**
  ❍ To establish **NIDAN (National Inherited Diseases Administration) Kendras** to provide counselling, prenatal testing and diagnosis, management, and multidisciplinary care in Government Hospitals wherein the influx of patients is more.
  ❍ To produce **skilled clinicians** in Human Genetics.
  ❍ To undertake **screening of pregnant women and newborn babies** for inherited genetic diseases in hospitals **at aspirational districts**.

Initiative of Department of Biotechnology, Government of India
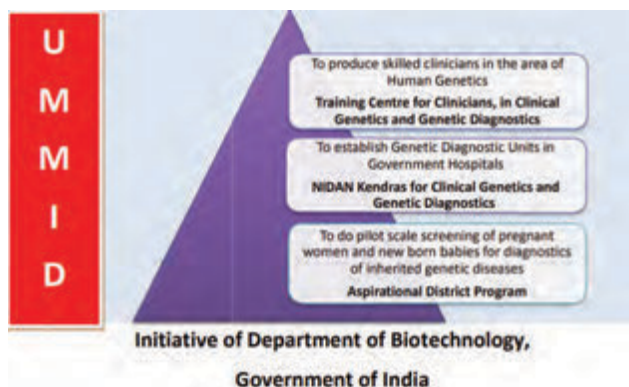
Genetic Disorders

➢ A genetic disorder is a **disease caused in whole or in part by a change in the DNA sequence** away from the normal sequence.

➢ Genetic disorders can be caused by a mutation in one gene (monogenic disorder), by mutations in multiple genes (multifactorial inheritance disorder), by a combination of gene mutations or by damage to chromosomes.

➢ Some of the **examples** of Genetic disorders are: Sickle Cell Anemia, Heart Disease, High Blood Pressure, Alzheimer's Disease, Diabetes, Cancer, and Obesity.

Aspirational Districts

➢ **'Transformation of Aspirational Districts' programme** was launched in **January 2018**.

➢ The programme was launched with the aim of **expeditiously improving the socio-economic status of 117 districts** through cooperative and competitive federalism.

➢ It basically aims to rapidly transform districts that have been showing relatively less progress in key social areas, and have emerged as pockets of under-development, thereby posing a challenge to balanced regional development.

➢ The **broad contours** of the programme are:
  ❍ **Convergence** (of Central & State Schemes),
  ❍ **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors),
  ❍ **Competition** among districts driven by a Mass Movement or a Jan Andolan.

Promulgation of the Prohibition of Electronic Cigarettes Ordinance

Recently, the Union Cabinet has approved the **Promulgation of the Prohibition of Electronic Cigarettes (production, manufacture, import, export, transport, sale, distribution, storage and advertisement) Ordinance, 2019**.

➢ The prohibition of e-cigarettes includes all forms of Electronic Nicotine Delivery Systems [ENDS], Heat Not Burn Products, e-Hookah, and the like devices.

➢ Any production, manufacturing, import, export, transport, sale (including online sale), distribution

or advertisement (including online advertisement) of e-cigarettes shall be a cognizable offence.

➢ The above-mentioned activities are **punishable** with
  ○ Imprisonment of up to one year or fine up to Rs. 1 lakh or both for the **first offence**.
  ○ Imprisonment of up to three years and fine up to Rs. 5 lakh for a **subsequent offence**.

➢ **Storage of electronic-cigarettes** shall also be **punishable** with imprisonment up to 6 months or fine up to Rs. 50,000 or both.

➢ The owners of existing stocks of e-cigarettes on the date of commencement of the Ordinance will have to suo moto declare and deposit these stocks with the nearest police station.

➢ The **Sub-Inspector of Police** has been designated as the **Authorized Officer** to take action under the Ordinance.
  ○ The Central or State Governments may also designate any other equivalent officer(s) as Authorized Officer for enforcement of the provisions of the Ordinance.

➢ It enforces **Article 47** of the Indian Constitution which mentions about **State's responsibility to promote Public Health**.

➢ It also enforces **Sustainable Development Goals**, National Monitoring Framework for Prevention and Control of Non-communicable Diseases and National Health Policy, 2017.

Background

➢ The Government had issued **an advisory in 2018 to all States** to consider banning e-cigarettes resulting e-cigarettes ban in some of the states already.

➢ The World Health Organisation (WHO) has urged member countries to take appropriate steps including prohibiting e-cigarettes and related products.

➢ The Indian Council of Medical Research (ICMR) has also recommended a complete ban on e-cigarettes as it adversely affects almost all the human body systems with impact across the life course.

➢ These products are usually marketed as being safer alternatives for conventional cigarettes but these products may **act as gateway products to induce non-smokers,** especially youth and adolescents, to nicotine-use, leading to addiction and subsequent use of conventional tobacco products.

➢ Apart from nicotine, e-cigarettes **may also be used for the delivery of other psychoactive substances**.

Electronic Nicotine Delivery Systems (ENDS)

➢ ENDS heat a solution **(e-liquid)** to create an **aerosol** which frequently contains flavourings, usually dissolved into Propylene Glycol or/and Glycerin.

➢ Electronic cigarettes, the most common prototype, are devices that **do not burn or use tobacco leaves but instead vaporize a solution** so that a user can inhale.

➢ The main constituents of the solution, **in addition to nicotine, are propylene glycol**, with or without glycerol and flavouring agents.

Concerns related to ENDS

➢ These products are **not registered as nicotine replacement therapy products** in India.

➢ E-cigarettes usually **contain nicotine** which makes product **addictive**.

➢ E-cigarettes cause **health hazards for youth, young adults, and pregnant women**.

➢ A number of metals, including **lead, chromium, and nickel, and chemicals like formaldehyde have been found in aerosols of some ENDS,** with concentrations equal to or greater than traditional cigarettes.

➢ Lack of knowledge about the negative effects of nicotine and the easy accessibility of these products make the youth prone to addiction.

Impact of Prohibition of E-Cigarettes

➢ The decision to prohibit e-cigarettes will help protect the population, especially the youth and children, from the risk of addiction through E-cigarettes.

➢ Enforcement of the Ordinance will **complement the government's efforts for tobacco control** and will help in the reduction of tobacco use and reduction in associated economic and disease burden.

National Health Policy, 2017

➢ It aims to achieve universal access to good quality health care services without anyone having to face financial hardship as a consequence.

➢ It intends to gradually increase public health expenditure to 2.5% of the GDP.

➢ It proposes free drugs, free diagnostics, and free emergency and essential healthcare services in public hospitals.

➢ The policy advocates allocating two-thirds of resources to primary care.

Note:

drishti

Pradhan Mantri Matru Vandana Yojana

Pradhan Mantri Matru Vandana Yojana (PMMVY) has achieved a **significant milestone by crossing one crore beneficiaries**.

➤ Also, the **total amount disbursed** to the beneficiaries under the scheme has **crossed Rs. 4,000 crores**.

➤ Pradhan Mantri Matru Vandana Yojana (PMMVY) is a **maternity benefit** programme being implemented in **all districts** of the country.

○ It is a **centrally sponsored scheme** under the **Ministry of Women and Child Development**.

○ **Direct Benefit Transfer (DBT)** is provided to pregnant women to meet enhanced nutritional needs and partially compensate for wage loss.

○ The beneficiaries include **All Pregnant Women and Lactating Mothers (PW&LM)**.

○ Beneficiaries receive a **cash benefit of Rs. 5,000 in three installments** provided beneficiary has done:

● Early registration of pregnancy

● Ante-natal check-up

● Registration of the birth of the child and completion of first cycle of vaccination for the first living child of the family.

○ Implementation of the scheme is closely monitored by the central and state governments through the **Pradhan Mantri Matru Vandana Yojana - Common Application Software (PMMVY-CAS)**.

○ Currently, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Dadra & Nagar Haveli and Rajasthan are the top five States/UT in the country in implementation of PMMVY.

○ Whereas,Odisha and Telangana are **yet to start implementation** of the scheme.

○ The **eligible beneficiaries** of PMMVY also **receive cash incentive** under **Janani Suraksha Yojana (JSY)**. Thus, on an average, **a woman gets Rs. 6,000**.

Janani Suraksha Yojana

➤ The Janani Suraksha Yojana (JSY) is a **100% centrally sponsored scheme** which is being implemented with the objective of **reducing maternal and infant mortality** by **promoting institutional delivery**.

➤ An **eligible pregnant women** are entitled for **cash assistance irrespective of the age of mother and number of children**, for giving birth **in a government or accredited private health facility**.

➤ The scheme also provides **performance based incentives** to women health volunteers known as Accredited Social Health Activist (ASHA) for promoting institutional delivery among pregnant women.

AISHE-2019

According to the **All-India Survey on Higher Education (AISHE) report 2018-19,** the **gender gap** in the country **narrowed as compared to the previous year, i.e. 2017-18**.

MATTER OF HEALTH

➤ Under-nutrition continues to adversely affect women in India

➤ Every third woman is under-nourished, while every second woman is anaemic

➤ Under-nourished women often give birth to babies with a low birth weight

➤ When poor nutrition starts in-utero, it extends throughout the life cycle

➤ Owing to economic and social distress, many women continue to work to earn a living for their family up to the last days of their pregnancy

➤ They resume work soon after childbirth, which prevents their bodies from fully recovering

➤ It also impedes their ability to exclusively breastfeed during the first six months

THE INITIATIVE

The Pradhan Mantri Matru Vandana Yojana provides maternity benefits of ₹5,000 for pregnant women and lactating mothers after their first delivery

■ The benefit is provided in three instalments

■ It is a conditional cash transfer scheme and provides a partial wage compensation to women for wage-loss during childbirth and childcare

■ The scheme ensures safe delivery and good nutrition for women

■ The benefits are not available for employees of the Central or State governments and any public-sector undertaking

➢ The **female students** constituted almost half (approx. 48.6%) of the total enrolment in higher education.

➢ In U.P and Karnataka, more girls were enrolled than their male counterparts in the higher education.

➢ The number of female students per 100 male students has gone up from 90 (2017-18) to 95 in 2018-19.

Key Findings

➢ According to the findings, the total enrolment in higher education has been estimated at around 37.4 million, with a marginal increase in the gross enrolment ratio.

➢ The highest number of students are enrolled at the undergraduate level (at around 79.8 %), followed by post-graduation (10.8 %). But a surge was observed in integrated degree programmes.

    ○ Integrated programmes are becoming more popular as they provide a better foundation for the subject knowledge and practice.

    ○ At the undergraduate level, the highest number of students were enrolled in Arts/Humanities/Social Sciences courses (approx. 35.9%), followed by Science (16.5%), Commerce (14.1%) and Engineering and Technology (13.5 %).

➢ Only 2.5% of the total number of colleges were running Doctorate programmes and 35% had Post-graduate level courses.

➢ Out of the total number of colleges in India, only 11.04% are exclusively there for female students.

    ○ According to the report, the percentage of women saw a steady rise in language courses, while on the other hand, men are opting for courses which can fetch them immediate employment, like that of courses in the field of Science and Technology.

    ○ The share of female students was the lowest in the Institutions of National Importance.

Higher Education Initiatives in India

➢ The Department of Higher Education, under the Ministry of Human Resource Development, has taken several measures to improve the overall development of the Higher Education sector, both in terms of policy and planning. Some of the taken initiatives are as follows:

➢ National Mission on Education through Information and Communication Technology (NMEICT), to leverage the potential of ICT to make the best quality content accessible to all learners in the country free of cost.

➢ Rashtriya Ucchatar Shiksha Abhiyan (RUSA) aims at providing strategic funding to higher educational institutions throughout the country.

➢ Project Education Quality Upgradation and Inclusion Programme (EQUIP) to put together an action plan to give a multi-pronged boost to the higher education system in India.

➢ Prime Minister's Research Fellowship (PMRF) to attract the talent pool of the country to doctoral (Ph.D) programmes for carrying out research in cutting edge science and technology domains, with focus on national priorities.

➢ Scheme for Promotion of Academic and Research Collaboration (SPARC) aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian institutions and the best institutions in the world.

➢ Global Initiative for Academic Network (GIAN) launched by MHRD, seeks to tap the talent pool of scientists and entrepreneurs from abroad, including those of Indian origin to augment the country's existing academic resources.

➢ Formation of Higher Education Financing Agency (HEFA) to finance the creation of capital assets in premier educational institutions in India.

◼◼◼

Note:

drishti

Security

Highlights

- Fake News
- Exercise Malabar
- SITMEX
- Exercise KAZIND - 2019
- ICGS Varaha
- INS Nilgiri
- Astra Missile

Fake News

The **Supreme Court of India** has asked the **Central government to frame guidelines** on social media to control the spreading of **fake news**. The directive came in the wake of growing incidents of violence fuelled by online rumours and fake videos.

Fake News

➢ Fake news is **news, stories or hoaxes created to deliberately misinform** or deceive readers.

➢ Usually, these stories are created to either influence people's views, push a political agenda or cause confusion and can often be a profitable business for online publishers.

➢ Fake news is **not a new phenomenon** which is linked to the rise of social media, on the contrary, from the times of ancient Greece, governments and political actors (anyone in the business of mobilising public opinion) have always invested in disinformation campaigns to build narratives of their choice.

➢ **In India,** the spread of misinformation and disinformation in media is becoming a serious social challenge. It is leading to hateful behaviour in online platform and causing riots and **lynchings on the streets**.

➢ Some **incidents** include:
  ○ Muzaffarnagar riots of 2013: fake video fuelled communal passions.
  ○ Child kidnapping rumours led to lynchings by a mob in Jharkhand.

Laws and Regulations in India

➢ There is **no specific law against fake news** in India. Free publication of news flows from **Article 19** of the Constitution which guarantees freedom of speech.

➢ However, there are certain **legal recourses** available for people affected by fake news.
  ○ Complaints can be lodged with the **News Broadcasters Association (NBA)** which represents the private television news and **current affairs** broadcasters.
  ○ Complaint against any broadcaster can be filed in English or Hindi to the **Indian Broadcast Foundation (IBF)**, online or offline, for promoting smoking, abuse or any violent action.
  ○ **Broadcasting Content Complaint Council (BCCC)** also admits complaints against TV broadcasters for objectionable TV content and fake news.
  ○ The **Press Council of India** can disapprove or admonish a news outlet found guilty of spreading misinformation.
  ○ **IPC Sections 153A and 295** can be invoked to guard against fake news.
    - Seen from the prism of Sections 153A and 295, action can be initiated against someone creating or spreading fake news if it can be termed as hate speech.

➢ The purpose of the **Section 153 A** is to punish persons who indulge in wanton vilification or attacks upon the religion, race, place of birth, residence, language etc of any particular group or class or upon the founders and prophets of a religion.

➢ **Section 295** of the I.P.C makes destruction, damage, or defilement of a place of worship or an object held sacred, with intent to insult the religion of a class of persons, punishable with imprisonment which may extend to two years, or with fine, or with both.

➢ **Defamation suit** is another legal tool available in the case of fake news. If a person finds fake news defamatory, s/he can file a civil or criminal case for defamation.

　❍ IPC Section 499 makes defamation a criminal offence.

　❍ Section 500 provides for punishment for criminal defamation that can extend upto a jail term of two years with or without fine.

➢ **Section 66 in the Information Technology Act, 2000:** If any person, dishonestly or fraudulently, does any act referred to in section 43, s/he shall be punishable with imprisonment for a term which may extend to three years or with fine which may extend to five lakh rupees or with both.

　❍ **Section 43** deals with the damage of computer database.

International Initiative against Fake News

➢ Recently, **BBC news** conducted the **Trusted News Summit** globally, bringing together senior figures from major global technology firms and publishing, to fight the disinformation present over different media platforms.

➢ The summit agreed to work towards a joint **'Online Social Media Education Campaign'** to create and spread awareness regarding fake news present on different social media platforms.

Laws against Fake News in Other Countries

➢ **Malaysia**

　❍ Malaysia was **among the first countries to pass an anti-fake news law** in the year 2018.

　❍ In Malaysia, spreading fake news draws a fine of 500,000 Malaysian ringgits (Rs. 85 lakh) or up to six years of imprisonment.

➢ **Germany**

　❍ Germany's NetzDG applies to companies with more than two million registered users in the country.

　❍ The law requires companies to **review complaints about content and remove anything illegal within 24 hours**.

➢ **Australia**

　❍ A law was passed in Australia earlier this year that introduced **penalties up to 10% of a company's turnover** and up to three years in prison for tech executives for failing to **remove social media**

content depicting terrorism, murder, rape or other serious crimes.

➢ **France**

　❍ In October 2018, France passed **two anti-fake news laws** following allegations of Russian interference in the 2017 US presidential election.

　❍ The laws give the French broadcasting authority the **power to take off air any network spreading misinformation** throughout the country.

➢ **Russia**

　❍ In 2019, law **punishing the individuals and companies for spreading fake news** and information that disrespects the state was passed in Russia.

➢ **China**

　❍ China has **blocked most of the social media sites** and internet services like Twitter, Google, and WhatsApp in the country.

　❍ The country has thousands of **cyber police personnel** who monitor social media and screen content the government considers politically sensitive.

Exercise Malabar

The 23rd edition of the **trilateral maritime exercise 'MALABAR'** is scheduled between the navies of India, Japan, and the USA from 26th September to 4th October 2019 off the coast of Japan.

➢ It is an **annual exercise** between the navies of **India, Japan, and the U.S.,** held **alternately in the Indian and Pacific Oceans**.

➢ It began in 1992 as a bilateral exercise between India and the U.S.

➢ Then it got permanently expanded into a trilateral format with the inclusion of Japan in 2015.

➢ MALABAR 2019 would endeavour to further strengthen India - Japan - US Naval cooperation and enhance interoperability, based on shared values and principles.

➢ **India and Japan** defence forces organize a series of bilateral exercises namely, **JIMEX (Maritime Exercise), SHINYUU Maitri (Air Exercise),** and **Dharma Guardian (Military Exercise)**.

➢ Whereas **India and USA** conduct joint **military exercises** namely, **Yudha Abhyas**.

drishti

SITMEX

The inaugural **trilateral** exercise, involving the **Indian Navy (IN)**, the **Republic of Singapore Navy** (RSN), and the **Royal Thailand Navy** (RTN), recently commenced at Port Blair, Andaman and Nicobar.

➢ From the Indian side, Indian Naval Ships:
- **Ranvir -** a guided-missile destroyer,
- **Kora -** a missile corvette,
- **Sukanya -** an offshore patrol vessel,
- **P8I -** long-range maritime reconnaissance aircraft,

➢ It aims at strengthening the maritime inter-relationship (in terms of interoperability) amongst Singapore, Thailand, and India, and significantly contributes to enhancing the overall maritime security in the region.

India also conducts bilateral exercises with both the countries namely

➢ **Exercise Maitree** between **India and Thailand**.

➢ **SIMBEX** between **India and Singapore**.

Exercise KAZIND - 2019

Joint Military Exercise KAZIND-2019 between India and Kazakhstan will be conducted in Uttarakhand, India.

➢ It is the fourth edition of an annual event that is conducted alternatively in Kazakhstan and India.

➢ During the exercise, armies of both countries would be sharing their experience gained during the conduct of various counter-insurgency and counter-terrorism operations.

➢ The aspects of emerging trends of hybrid warfare have also been included under this exercise.

➢ The joint military exercise will enhance the level of defence cooperation further fostering bilateral relations between the two nations.

Hybrid Warfare

➢ Hybrid Warfare refers to the use of unconventional methods as part of a multi-domain warfighting approach that aims to disrupt and disable an opponent's actions without engaging in open hostilities.

➢ Russia's approach to Ukraine is an example of this form of warfare. It has involved a combination of activities, including disinformation, economic manipulation, use of proxies and insurgencies, diplomatic pressure and military actions.

ICGS Varaha

Recently, the Indian Defence Minister commissioned the **Indian Coast Guard Ship (ICGS) Varaha** at the Chennai port.

➢ The ICGS Varaha is the **fourth in the series of seven 98-m Offshore Patrol Vessels (OPV)** of the Indian Coast Guard (ICG).

➢ The ship has been **designed and built indigenously** and will operate from the port of New Mangalore on the West Coast (covering Exclusive Economic Zone) up to Kanyakumari.

➢ The ship is well equipped with high-speed boats, medical facilities, and modern surveillance systems for conducting boarding operations, search and rescue, law enforcement and maritime patrolling.

➢ This ship **will enhance the ICG's strength** in responding to the threats of maritime terrorism, smuggling, and challenges of maritime enforcement.

Indian Coast Guard

➢ It was established in **1978** by the Coast Guard Act, 1978 of the Parliament of India as an **independent Armed force of India**.

➢ It operates under the **Ministry of Defence**.

➢ It has **jurisdiction over the territorial waters of India** including the contiguous zone and exclusive economic zone.

➢ It is responsible for marine environment protection in maritime zones of India and is the coordinating authority for response to oil spills in Indian waters.

➢ **Headquarter:** New Delhi.

INS Nilgiri

Recently, the Defence Minister has launched the first of the Navy's seven new stealth frigates named INS Nilgiri, in Mumbai.

➢ He also commissioned the largest dry dock of Indian Navy - the 'Aircraft Carrier Dock' at the Naval Dockyard in Mumbai, terming it as an 'edifice of modern India'.

➢ INS Nilgiri is the first ship of the **Project-17A**.

Dry Dock

➢ A dry dock is a narrow basin or vessel that can be flooded to allow a load to be floated in, then drained to allow that load to come to rest on a dry platform.

➢ They are used for the construction, maintenance, and repair of ships, boats, and other watercraft.

➢ Project 17A frigates is a design derivative of the Shivalik class stealth frigates with much more advanced stealth features and indigenous weapons and sensors.

➢ The P17A frigates incorporate new design concepts for improved survivability, sea keeping, stealth and ship manoeuvrability.

Astra Missile

Recently, ASTRA the **first indigenously developed air-to-air missile** was successfully flight-tested off the coast of Odisha.

➢ The Astra missile is developed by **Defence Research and Development Organization (DRDO)**.

➢ It works on the **Beyond Visual Range Air-to-Air Missile (BVRAAM) technology** that enables the fighter-pilots to shoot precisely at the enemy targets which are beyond their visual range.

➢ Astra is extremely effective in a **multi-target** scenario and therefore, has been described as the most potent weapon system for IAF's combat aircrafts.

■■■

Note:

Miscellaneous

Highlights

- *Karan Vandana – A New Hybrid Wheat Variety*
- *Kristalina Georgieva*
- *Mobile Apps for Farmers*
- *Siachen Glacier*
- *Initiatives By AICTE*
- *India's Eastern-most Village*
- *National Educational Alliance for Technology (NEAT) Scheme*
- *World's Second-Largest Coal Block*
- *Cyclonic Storm 'HIKAA'*
- *63rd General Conference of IAEA*
- *Pusa Yashasvi*

Karan Vandana – A New Hybrid Wheat Variety

A new **hybrid wheat variety Karan Vandana** is soon to be launched across the country.

➢ It is also known as **DBW-187**.

➢ It is rich in **protein and iron**.

➢ It has **high heat tolerance** across the country.

➢ It is **resistant to yellow rust** and **wheat blast** which causes widespread losses.

> ➢ Wheat **yellow rust** is one of the wheat rust diseases principally found in wheat grown in cooler environments.
>
> ➢ **Wheat blast** is a fast-acting and devastating fungal disease that threatens wheat production.

➢ It will **reduce unit costs for farmers** as well as **return higher yield** than normal varieties.

➢ It can be **cultivated only in areas under full irrigation support**.

➢ It has been developed by the Indian Institute of Wheat and Barley Research (IIWBR) under the Indian Council of Agricultural Research (ICAR).

Kristalina Georgieva

The International Monetary Fund (IMF) formally selected **Kristalina Georgieva of Bulgaria as the second woman** ever to lead the 189-member institution for a five-year term starting on October 1, 2019.

➢ She will **replace Christine Lagarde**, the **first female Managing Director** of the IMF.

➢ She is also the **first person from an emerging economy** to head the global lender.

➢ By tradition, the IMF managing director is a European, while the United States chooses the president of the World Bank. The situation leaves little hope for ascendant emerging economies that, despite modest changes in 2015, do not have as large an IMF voting share as the United States and Europe.

  ○ **David Malpass,** a top U.S. Treasury official was unanimously selected as the **new President of the World Bank** for a five-year term starting from April 9, 2019.

> **International Monetary Fund**
>
> ➢ The IMF, also known as the Fund, was **conceived at a UN conference in Bretton Woods,** New Hampshire, United States, in **July 1944**.
>
> ➢ It provides financial assistance to member countries with balance of payments problems, lends money to replenish international reserves, stabilize currencies, etc.
>
> ➢ **Special Drawing Rights (SDRs) is the IMF's unit of account** and not a currency. SDR basket of currencies include the U.S. dollar, Euro, Japanese yen, pound sterling and the Chinese renminbi (included in 2016).

Mobile Apps for Farmers

The Agriculture and Farmer Welfare Minister has launched two agriculture-related mobile applications.

➢ **CHC Farm Machinery:**

  ○ **Usage:**

  - It is a **multilingual app** through which farmers can **select and order the required machinery**

Note:

drishti

    at the rates feasible for them from the **Custom Hiring Centers** located in the radius of 50 Kms.

- Custom Hiring Centers have been established under various schemes like Sub-Mission on Agricultural Mechanization, Rashtriya Krishi Vikas Yojana etc. to provide Agricultural Machinery on rental basis to the Farmers, especially small & marginal farmers who cannot afford to buy the high value machinery & equipments.
  - **Objective:** Farmers, especially small and marginal farmers, will have **easy access to high value and technical agricultural equipments**. This will not only increase the income of the farmers, but it will also take mechanization to maximum farm holdings in a short time frame.

➢ **Krishi Kisan App for Geo Tagging:**
  - **Usage:**
    - Any farmer with high quality of crops can utilise this platform to **demonstrate best practices of cultivation** to other farmers so that this will help other farmers also to adopt these methods.
    - The App will also help in **geo-tagging and geo-fencing of crop** and give weather forecast message to farmers.
  - **Agenda:** To **improve cultivation methods** to ensure higher agricultural productivity.

Siachen Glacier

Since January 2018, nearly **130 tonnes of waste has been brought down from the Siachen Glacier** and disposed off.

➢ The Army has made bringing down waste a **part of the Standard Operating Procedure (SOP) for troops** under the concept of waste management.

  - The reason is that in the high altitude areas of 18,000 to 21,000 feet, **nothing degrades at sub-zero temperatures**.

➢ The Siachen Glacier is located in the Eastern Karakoram range in the Himalayas, to the **northeast of Point NJ9842 where the Line of Control between India and Pakistan ends**.
  - **Operation Meghdoot** (launched on 13 April 1984) resulted in Indian troops gaining control of the entire Siachen Glacier.

➢ 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"**.

➢ The Siachen Glacier is **part of Ladakh which has now been converted into a Union Territory**.

➢ The Siachen Glacier is the **world's highest battlefield**.

Initiatives By AICTE

Margadarshan

➢ **Institutions** having **good accreditation records or the top-performing institutions** are selected to **mentor 10 to 12 relatively newer potential institutions**.

➢ Best teaching and learning practices followed in the mentor institute will be **simulated** in the **identified mentee institutions**.

➢ The mentee institutions will also be provided with funding up to ₹ **50 lakhs per institution over a period of three years** in installments for related activities.

Margdarshak

➢ The mentor teachers or the Margdarshaks are the ones who are either serving or are superannuated, with good knowledge of accreditation and are willing to devote adequate time to the mentee Institutions.

➢ These Margdarshaks will **regularly visit the identified mentee institutions** and guide them for the improvement in their quality.

WAWE Summit 2019

➢ WAWE stands for **Waste Management Accelerators for Aspire Women Entrepreneurs** which will

be the **largest gathering of young women students,** to promote **entrepreneurship in waste management**.

➢ The Summit will be jointly organized by the **All India Council for Technical Education (AICTE) and the Institute of Waste Management (IIWM)** at Jaipur.

All India Council for Technical Education (AICTE)

➢ It was set up in **1945** as a **National-level apex advisory body**.

➢ Its purpose was to conduct a survey on the facilities available for technical education and to promote development in the country in a coordinated and integrated manner.

➢ It is **statutory authority** for planning, formulation, and Quality assurance through accreditation.

India's Eastern-most Village

The Indian Air Force has inaugurated resurfaced runway at **India's Easternmost inhabited Village-Vijaynagar in Arunachal Pradesh**.

➢ It is **not connected by road**. Thus, the main mode of transport to Vijaynagar has been **helicopters**.

➢ Vijaynagar is **surrounded by Myanmar** on **three** sides and the **fourth** side comprises stretches of **Namdapha National Park**.

➢ Nearby cities to Vijaynagar are Miao (157 km, 7 days walk), Hayuliang and Tezu in India. **Putao (40 km) is the nearest city in Myanmar**.

➢ In the 1960s, over 200 Gorkha families of retired Assam Rifles personnel were settled in the area by the Union government.

Namdapha National Park

➢ It lies at the **international border between India and Myanmar** within Changlang District in the state of Arunachal Pradesh.

➢ It is the **only park in the World** to have the **four Feline species of big cat** namely the Tiger (Panthera Tigris), Leopard (Panthera Pardus), Snow Leopard (Panthera Uncia) and Clouded Leopard (Neofelis Nebulosa).

➢ **Hoolock Gibbons, the only 'ape' species** found in India is found in this National Park.

National Educational Alliance for Technology (NEAT) Scheme

The Ministry of Human Resource Development (MHRD) has announced a **National Educational Alliance for Technology (NEAT)** to use technology **for better learning outcomes in Higher Education**.

➢ The scheme aims to use **Artificial Intelligence** to make learning more personalized and customized as per the requirements of the learner.

➢ MHRD aims to recognize the **development of technologies in Adaptive Learning and bring them under a common platform** so that learners can access it easily.

➢ It proposes to create a National Alliance with such technology developing EdTech Companies through a **Public-Private Partnership (PPP) model**.

  ○ EdTech companies would be responsible for developing solutions and manage the registration of learners through the NEAT portal.

➢ MHRD would act as a facilitator to ensure that the Adaptive Learning Solutions are freely available to a large number of economically backward students.

➢ Under the scheme, a National NEAT platform would be created to provide **one-stop access to Adaptive Learning Solutions**.

➢ NEAT is **aimed at taking the concept of Massive Open Online Courses (MOOCS) platform a step ahead**.

➢ **All India Council for Technical Education (AICTE) would be the implementing agency** for the NEAT programme.

➢ It would help to certify maximum students with highly marketable skills and would also improve the employability of students.

World's Second-Largest Coal Block

Deaucha Panchami coal block of Birbhum Coalfield Area is World's Second Largest Coal Block situated in **West Bengal**.

➢ This coal mine is the **largest coal mine or coal block in Asia**, due to the number of coal reserves.

➢ It is the **newest coal mine** in **West Bengal**.

- ❍ **India's first coal mine Raniganj** is also situated in **West Bengal**.
- ➢ The proposed mining project at Birbhum coalfield Area has been recently in the news due to expected environmental concerns and displacement of the people from the same area.

Cyclonic Storm 'HIKAA'

A deep depression over the Arabian Sea intensified into a cyclonic storm 'Hikaa'.

- ➢ The name Hikka has been given by the Maldives.

Cyclonic storm

- ➢ Storms are a natural phenomenon, caused by violent atmospheric disturbances over land and water.
- ➢ They get **formed when a centre of low pressure develops,** with a system of high pressure surrounding it.
- ➢ Storms that form **north of equator spin counter clockwise** whereas storms, **south of the equator spin clockwise**. This difference is because of the earth's rotation on its axis.
- ➢ **Tropical Storms are revolving storms that develop in the tropical regions** i.e. approximately between 5 degrees and 30 degree latitudes (south of the tropic of cancer in northern hemisphere).
- ➢ When the **speed of winds rotating in the storm reaches 74 miles per hour (mph)**, the storm is officially a **tropical cyclone**.

Arabian Sea Cyclones

- ➢ **Cyclonic activity is comparatively less intense in the Arabian sea,** as compared to the Bay of Bengal, where high-intensity severe cyclones originate frequently.

- ➢ In the last 120 years, just about 14% of all cyclonic storms, and 23% of severe cyclones, around India have occurred in the Arabian Sea.
- ➢ Arabian Sea cyclones are **also relatively weak** compared to those emerging in the Bay of Bengal.
- ➢ Gujarat coastline, where most of the cyclones emerging in the Arabian Sea are headed, is not very densely populated, ensures that the damage potential of the cyclones on the western coast is comparatively low.

63rd General Conference of IAEA

On the sidelines of the 63rd general conference of the International Atomic Energy Agency (IAEA), India launched a **global cancer care network, "NCG-Vishwam Cancer Care Connect" (NCG-Vishwam 3C)**.

- ➢ **NCG-Vishwam** envisages **integration of hospitals and relevant cancer care institutes** in **partner countries** with the **National Cancer Grid (NCG) of India**.
  - ❍ Vishwam is a Sanskrit word meaning 'universal' or 'global'.
  - ❍ NCG is managed by Tata Memorial Centre (TMC), was established in 2012 with the vision of creating uniform standards of cancer care across India and this has grown to a large network of 183 cancer centres, and hospitals.
- ➢ Eleven countries such as Russia, Kazakhstan, Vietnam, Nepal, UAE showed interests in the NCG-Vishwam soon after its launch.

International Atomic Energy Agency
- ➢ The International Atomic Energy Agency (IAEA) is the international centre for cooperation in the nuclear field. Also known as the world's **"Atoms for Peace and Development"**.
- ➢ The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.
- ➢ The IAEA was **created in 1957** in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.
- ➢ IAEA's **headquarters** is in **Vienna, Austria**.
- ➢ It is an **independent international organization that reports annually to the UN General Assembly**.

○ When necessary, the IAEA also reports to the UN Security Council in regards to instances of members' non-compliance with safeguards and security obligations.

Pusa Yashasvi

Recently, the **Indian Agricultural Research Institute (IARI)** has released a new variety of wheat named **Pusa Yashasvi**.

➤ It is also known as **HD-3226**.

➤ It has **higher genetic yield potential** (at 79.6 quintals) as compared to other varieties of wheat.

➤ Pusa Yashasvi has a **higher content of zinc, protein, and gluten** (which contributes to the strength and elasticity of the dough).

➤ The best feature of this variety of wheat is that it is **highly resistant against all major rust fungi** viz. yellow/stripe, brown/leaf, and black/stem.

➤ It is compliant to the **Conservation Agriculture (CA)**

○ It is defined as a sustainable agriculture production system that comprises of a set of farming practices adapted to the requirements of crops and local conditions of each region.

● The farming and soil management techniques in CA protects the soil from erosion and degradation, improves its quality and biodiversity, and contributes to the preservation of the natural resources, water, and air while optimizing yields.

■■■

Note:

Key Points

Details

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Summary

Key Points   **Details**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Summary