

MONTHLY

FACTLY

EXCLUSIVE CURRENT AFFAIRS FOR

PRELIMS

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ForumIAS

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Polity

1. POSTAL BALLOT FOR ABSENTEE VOTERS

News: Election Commission of India has started working on detailed guidelines to facilitate the process of postal ballot paper for absentee voters.

Facts:**About the guidelines:**

- EC has defined **absentee voter** as a person belonging to such class of persons as may be notified under clause(c) of section 60 of the Representation of the People Act,1951.
- Such absentee voters include (a) Persons employed in essential services such as railways, state transport among others (b) Persons with Disabilities (PwD) and (c) Senior citizens.
- Person with Disability means a person identified as person with disability in the database for the electoral roll.
- Senior citizen means an elector belonging to the class of absentee voters and is above 80 years of age.

How can these people vote?

- People under these new categories can choose to vote through postal ballot by filling up **Form 12D** and submitting it to the nodal officer within five days of notification of an election.
- These votes will be registered at a special centre specified by the Election Commission (EC).

Additional information:**About Election Commission:**

- The Constitution of India, under Part XV, article 324 to 329 provides for the institutions and process of elections in our country. The Election Commission of India is an autonomous constitutional authority responsible for administering election processes in India.
- Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to parliament, state legislatures, the office of president of India and the office of vice-president of India shall be vested in the election commission.

About Representation of the People (RP) Act,1951:

- The Representation of the People Act,1951 is an act of Parliament of India. This Act contains provisions relating to the following electoral matters:
 - Qualifications and disqualifications for membership of Parliament and State Legislatures
 - Notification of general elections
 - Administrative machinery for the conduct of elections
 - Registration of political parties
 - Conduct of elections
 - Free supply of certain material to candidates of recognised political parties
 - Disputes regarding elections
 - Corrupt practices and electoral offences

2. SUPREME COURT RECALLS VERDICT DILUTING SC/ST ANTI – ATROCITIES LAW

News: The Supreme Court has recalled its directions in a 2018 verdict that had effectively diluted provisions of arrest under the Scheduled Castes & Scheduled Tribes (Prevention of Atrocities) Act, 1989.

Facts:

What was the 2018 verdict?

- The Supreme Court had diluted the SC and ST (Prevention of Atrocities) Act, 1989 in *Subhash Kashinath Mahajan vs The State of Maharashtra* to grant anticipatory bail to accused persons.
- The apex court gave the judgement on the pretext that innocents cannot be terrorised by the provisions of the SC/ST Act and their fundamental rights need to be protected.
- The apex court had directed that the police conduct a preliminary enquiry into whether a complaint under the law is frivolous or motivated before registering a case.
- The court had also said that public servants could be arrested only with the written permission of their appointing authority while in the case of private employees, the Senior Superintendent of Police concerned should allow it.
- The judgment had triggered widespread protests and compelled the government to amend the Act to negate the effect of the ruling. It had also filed a review petition against the verdict.

What was the recent judgement?

- The apex court reasoned that human failing and not caste is the reason behind the lodging of false criminal complaints.
- The Court also condemned its own earlier judgment saying it was against basic human dignity to treat all SC/ST community members as a liar or crook.

Additional information:

About Schedule caste and scheduled tribe Prevention of Atrocities Act 1989:

- The provisions of the above act can be divided into three categories:
 - The act provides provisions for a criminal law including- creation of new type of offence, punishment for neglect of duties, enhanced minimum punishment etc
 - The act included compensation for the victims
 - The act created special authorities for implementation of the Act like courts, public prosecutor etc
- ‘Review’ of a Supreme Court judgment is done by the same Bench. ‘Overruling’ means that the law laid down in one case is overruled in another case. When a higher court on appeal alters the judgment of a lower court, it is called ‘reversal.’
- **Constitutional Protection of SCs:** The following provisions have been laid down in the Constitution for the protection of SCs:
 - Article 17 abolishes Untouchability.
 - Article 46 requires the State ‘to promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and to protect them from social injustice and all forms of exploitation.
 - Article 335 provides that the claims of the members of the Scheduled Castes and Scheduled Tribes shall be taken into consideration, consistently with the maintenance of efficiency of

administration, in the making of appointments to services and posts in connection with the affairs of the Union or of a State.

- Article 15(4) mandates the state to provide for any special provision for the advancement of any socially and educationally backward classes or SC and STs.
- Article 16(4A) speaks of “reservation in matters of promotion to any class or classes of posts in the services under the State in favour of SCs/STs, which are not adequately represented in the services under the State”.
- Article 338 provides for a National Commission for the Scheduled Castes and Scheduled Tribes with duties to investigate and monitor all matters relating to safeguards provided for them, to inquire into specific complaints and to participate and advise on the planning process of their socio-economic development etc.
- Article 330 and Article 332 of the Constitution respectively provide for reservation of seats in favour of the Scheduled Castes and Scheduled Tribes in the House of the People and in the legislative assemblies of the States. Under Part IX relating to the Panchayats and Part IXA of the Constitution relating to the Municipalities, reservation for Scheduled Castes and Scheduled Tribes in local bodies has been envisaged and provided.

3. VILLAGE SECRETARIAT SYSTEM LAUNCHED BY ANDHRA PRADESH

News: Andhra Pradesh Government has launched the Village Secretariat system.

Facts:

About Village Secretariat system:

- The village secretariat system is aimed at ensuring an efficient and corruption-free delivery of the government’s welfare schemes to households.
- Under the system, one Village Secretariat has been set up for every population of 2,000 with each one comprising close to a dozen village officials.
- The system would consist of ward and village volunteer system who will take governance to the doorsteps of the people.
- The volunteers will conduct door-to-door visits and provide the benefits under various programmes to eligible beneficiaries.
- This scheme also involves the provision of one volunteer to cover 50 families in each village. Identity cards would be given to the volunteers and they would be given an honorarium of Rs 5,000 per month.
- The volunteers would first identify the beneficiaries, get to know their problems and then delineate the schemes being provided by the government for them.

4. NAGA PEACE ACCORD

News: The government has said that the Naga peace accord which was signed in 2015 is in the process of conclusion.

Facts:

About Naga Peace Accord:

- The Naga Peace accord was signed in 2015 between the Government of India and the National Socialist Council of Nagaland (Isak-Muivah).

- The content of the agreement has not been disclosed but it contains the broad principles that would guide the future deliberations between the Government of India and NSCN(IM).
- The agreement recognises the uniqueness of Naga history and culture by the Indian Government.

Rise of Naga nationalism:

- The British had annexed Assam in 1826, in which they subsequently created the Naga Hills district and went on to extend its boundaries.
- During the Kuki revolt (1917–19) and the World War I (1914–18), the British Government recruited a number of labourers from the Naga tribes. Around 2000 Nagas were sent to France, alienated from the other British Indian troops, they developed a sense of unity. These Nagas, together with the British officials, formed the Naga Club in 1918.
- The establishment of Naga Hills District Tribal Council replaced the Naga Club, and later developed into a political organization called the Naga National Council (NNC).
- Under the leadership of Angami Zapu Phizo, it adopted a secessionist outlook and campaigned for the creation of a sovereign Naga state.
- The assertion of Naga nationalism, which began during British rule, has continued after Independence, and even after Nagaland became a state.

About NSCN (IM):

- The NSCN-IM is an insurgent group of Nagas operating in Nagaland, Assam, Manipur, and Arunachal Pradesh.
- Its objective is to establish Greater Nagaland (Nagalim), consisting of all the Naga-inhabited areas of neighbouring Assam, Manipur, Arunachal Pradesh and some portions Myanmar, which it considers to be the rightful homeland of the Nagas.
- NSCN-IM has also demanded a separate flag and constitution for the Nagas.

What is the Government's stand?

- The Centre has ruled out any disintegration of the States of Assam, Arunachal Pradesh and Manipur in order to merge the Naga-inhabited areas with the existing State of Nagaland.
- The Central government has also ruled out a separate flag and Constitution for the Nagas.

Article 371-A : Special provision with respect to the State of Nagaland

(1) Notwithstanding anything in this Constitution,

(a) no Act of Parliament in respect of

(i) religious or social practices of the Nagas,

(ii) Naga customary law and procedure,

(iii) administration of civil and criminal justice involving decisions according to Naga customary law,

(iv) ownership and transfer of land and its resources, shall apply to the State of Nagaland unless the Legislative Assembly of Nagaland by a resolution so decides;

(b) the Governor of Nagaland shall have special responsibility with respect to law and order in the State of Nagaland.

Way forward:

- The Naga peace accord must safeguard the Naga's rights. But the NSCN(IM) must also be pragmatic and realistic in their negotiations with Government of India.
- There is scope for regional autonomy as per the Indian constitution. But there is no scope for secessionism.
- Hence, the unresolved contentious issues must be pursued earnestly post a peace settlement politically and democratically.

5. PARICHAY: LEGAL AID CLINIC

News: Recently, five law schools of the country have jointly launched a legal aid clinic called Parichay.

Facts:**About Parichay:**

- Parichay which means identity aims to help people excluded from the National Register of Citizens (NRC) by helping them to appeal before the foreigner's tribunals.
- It is envisaged to function as a clearing house of litigation and research assistance for lawyers filing appeals against exclusion from the National Register of Citizens (NRC).
- It consists largely of student volunteers who will assist lawyers in drafting appeals, conduct research on pertinent questions of the law and generate documentation on the functioning of Foreigners Tribunals.

Additional information:**About National Register of Citizens (NRC):**

- NRC is a register which contains the name of all Indian citizens maintained by The Government of India. NRC was first prepared in 1951. Now, it is being updated in Assam state honoring the Assam Accord between AASU-AAGSP and GOI. Assam movement was led by All Assam Students Union (AASU) and All Assam Ganasangram Parishad (AAGSP)
- It has been updated in Assam to address the issue of illegal migrants. It seeks to identify illegal migrants in Assam who had entered the state on or after 25th March 1971.
- The update has been carried out under the Citizenship Act, 1955, and according to rules framed in the Assam Accord, 1985.

Updated National Register of Citizens (NRC):

- The updated NRC was published on August 31, 2019. Over 19 lakh people were excluded from the final list.
- The excluded persons have 120 days to file an appeal at any of the existing Foreigners Tribunals. The Tribunals are required to dispose of the cases within six months.
- Appellants can then approach the High Court and Supreme Court. They will get a window of 10 months to prove their citizenship before being sent to detention centres.

Foreigners tribunal:

- Foreigners Tribunal (FT) was set up in Assam in 1964 through the Foreigners Tribunal Order 1964.
- The tribunals have been mandated with identifying the legal status of suspected foreigners in Assam.

- At present, there are 100 FTs in Assam; of these 64 were set up in 2015, to expedite the exercise of determining illegal immigrants in the state through the National Register of Citizens (NRC).

6. GOVERNMENT FORMS A TASK FORCE TO PREPARE A NATIONAL ACTION PLAN ON HUMAN RIGHTS

News: Government is forming a task force to prepare a National Action Plan on Human Rights (NAPHR) as mandated under the UN Human Rights Council's (UNHRC) Universal Periodic Review (UPR).

Facts:

About Universal Periodic Review (UPR):

- The Universal Periodic Review (UPR) is a unique process which involves a review of the human rights records of all UN Member States.
- UPR is a state-driven process under UN Human Rights Council's (UNHRC). It provides opportunities to member states to declare what actions they have taken to improve human rights and to fulfil their obligations.
- A review cycle lasts four-and-half years, during which records of member states are reviewed.
- In the last UPR in 2017, India had accepted 152 out of 250 recommendations on human rights. These pertain to sustainable development goals related to eliminating poverty, access to safe drinking water, sanitation and improving protection for women and children. The next UPR is in 2022.

About the Task force:

- The task force will involve the Union Home Ministry and the National Human Rights Commission (NHRC) and have representatives from ministries such as social justice and health.
- National Action Plan on Human Rights (NAPHR) once implemented, will help mitigate the criticism India faces at international level when it comes to its human rights record as well as strengthen the social justice system.
- It will also lead to stronger administration of justice, strengthening of human rights institutions, and linking of rights with development.

Additional information:

About NHRC:

- The National Human Rights Commission is a statutory (and not a constitutional) body. It was established in 1993 under a legislation enacted by the Parliament, namely, the Protection of Human Rights Act, 1993.
- NHRC deals with promotion and protection of human rights.
- Composition: The commission is a multi-member body consisting of a chairman and four members. The chairman should be a retired chief justice of India and members should be serving or retired judges of the Supreme Court, a serving or retired chief justice of the high court and two persons having knowledge or practical experience with respect to human rights. In addition to these full-time members, the commission also has four ex-officio members—the chairman of the National Commission for Minorities, the National Commission for SCs, the National Commission for STs and the National Commission for Women.

About UNHRC:

- The United Nations Human Rights Council (UNHRC) is a specialised agency of the United Nations. It was established in 2006, when it replaced the erstwhile UN Commission on Human Rights.
- Its mission is to promote and protect human rights around the globe as well as investigate alleged human rights violations.
- The UNHRC has 47 members elected on a regional group basis from 5 groups. The members are elected for a period of three years with a maximum of two consecutive terms.

7. DRAFT ARMS (AMENDMENT) BILL

News: Union Home Ministry has released a Draft Arms (Amendment) Bill. It amends the Arms Act, 1959.

Facts:**Features of the bill:**

- The bill proposes an amendment to convict makers and users of illegal arms. The bill proposes life imprisonment for those convicted with possession/use/manufacture of illegal arms
- The bill also says that anyone possessing more than 2 licensed gun has to deposit the third one with the authorities.
- The amendment also categorizes illegal import of guns and their sales as illicit trade.
- A sports person can possess a third weapon of 0.22 calibre rifle only if the user is a dedicated sports person whose participation is recognized in national and international events in the last 2 years.

Additional information:**About Arms act, 1959:**

- The act was legislated to consolidate and amend the laws related to arms and ammunition. It replaced the Arms Act 1878.
- The act has undergone many changes since 1959. The most recent change in the act was done in 2010 through an amendment for the arms act.
- The act briefs rules and regulations about acquisition, manufacture, possession, sale, import and export ammunition in India. It also provides provisions related to licenses.
- The act lists the punishments associated with breaking rules related to the act. It also provides details on powers that the officials possess to enact it.

*Economy***1. BHIM 2.0 LAUNCHED WITH ADDITIONAL FEATURES**

News: Union Minister of Electronics and Information Technology (MeiTY) has launched BHIM 2.0. It packs in new functionalities, support additional features and has increased transaction limits.

Facts:**About BHIM:**

- Bharat Interface for Money (BHIM) is Unified Payments Interface (UPI) based payment interface application that allows real time fund transfer using a single identity like mobile number or name
- The app was launched in 2016. It was developed by the National Payments Corporation of India (NPCI). It was developed to promote financial inclusion in the country.
- BHIM can be used for the following:
 - Sending & collecting money to any person on UPI
 - Paying bills on merchant websites by UPI
 - Booking flight tickets or recharge your mobile
 - Scan a QR code to make quick payments
 - Check your transaction history on UPI
 - Send money using Bank Account information and IFS code

BHIM 2.0

- It has been launched to make BHIM more feature rich and effective.
- It supports three additional languages- Konkani, Haryanvi and Bhojpuri, over and above existing 13.
- The existing cap of Rs. 20,000 has also been increased to Rs. 1,00,000, from verified merchants.
- It allows linking of overdraft account with BHIM UPI. (in addition to savings and current account)
- It will allow customers to block a certain amount of money for a product or service. Customers can pre-authorise a transaction and pay later (Mandate feature). This feature can be used only once using BHIM
- It will allow customers to check invoice sent by merchant prior to making payment. It will help customers to view and verify the credentials and check whether it has come from the right merchant or not. Customers can pay after verifying the amount and other important details mentioned in the invoice.
- It will allow customers to check the authenticity of merchants while scanning QR or quick response code. It notifies the user with information to ascertain whether the merchant is a verified UPI merchant or not. This provides an additional security. Customers will be informed in case the receiver is not secured by way of notifications.
- Some of the other features of BHIM 2.0 includes - donation gateway, linking multiple bank accounts, offers from merchants, option of applying in IPO, gifting money.

Additional information:**About UPI:**

- Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application of any participating bank.
- The interface has been developed by National Payments Corporation of India (NPCI).

- It merges several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the “Peer to Peer”, collect requests which can be scheduled and paid as per requirement and convenience.

About National Payments Corporation of India (NPCI):

- NPCI is an umbrella organisation for operating retail payments and settlement systems in India.
- It is an initiative of Reserve Bank of India (RBI) and Indian Banks’ Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007 for creating a robust Payment and Settlement Infrastructure in India.

2. WORLD BANK’S EASE OF DOING BUSINESS 2020 REPORT

News: The World Bank has released its doing business report 2020.

Facts:

Key takeaways from the report:

- New Zealand has topped the rankings followed by Singapore and Hong Kong.
- The 10 economies that improved the most in their ease of doing business score were Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Pakistan, Kuwait, China, India, and Nigeria.
- Only two African economies rank in the top 50 on the ease of doing business; no Latin American economies rank in this group.
- Worldwide, 115 economies made it easier to do business.

Report on India:

- India was placed at 63rd position (out of 190 countries). India has recorded a jump of 14 positions against its rank of 77 last year.
- India’s score was 71. It was 67.23 in 2019.
- Further, for the third consecutive year, India was also amongst the top 10 economies where the business climate has improved the most.
- India performed better in six of the ten parameters used for ranking including starting a business, dealing with construction permits, trading across borders, resolving insolvency, paying taxes and getting electricity.
- Four parameters where India saw big improvements are
 - Resolving Insolvency
 - Dealing with construction permit
 - Trading across Borders
 - Starting a business
- India saw the biggest jump in ranking in resolving insolvency category to 52nd rank from 108th.
- The Indian Imports and exports also became easier with a single electronic platform for trade stakeholders, among other things.
- However, the country still lags in areas like enforcing contracts and registering property.
- The report has said that India takes 58 days and costs an average 7.8 percent of a property’s value to register it, longer and at greater cost than among OECD high-income economies.

- Further, it takes 1,445 days for a company to resolve a commercial dispute through a local first-instance court which is almost three times the average time in OECD high-income economies.
- The World Bank will now include Kolkata and Bengaluru, besides Delhi and Mumbai, for preparing ease of doing business report, in order to provide a holistic picture of the business environment of the country.

About Doing Business Report:

- Doing Business report measures regulations across the 190 economies in 10 business regulatory areas to assess the business environment in each economy. The report was introduced in 2003.
- The ten of these indicators were used to estimate an ease of doing business score this year.
- The 10 parameters are- starting a business, construction permits, getting electricity, getting credit, paying taxes, trading across borders, enforcing contracts, and resolving insolvency.
- The other two indicators are employing workers and contracting with the government. However, these were not included in the ease of doing business score and ranking this year.
- The rankings are on the basis of Distance to Frontier (DTF), a score that shows the gap of an economy to the global best practice.



A steady climb

India's Doing Business ranking over the years (inverse scale)



India ranking in categories

THE GOOD	2018	2019
Dealing with construction permits	52	27
Trading across borders	80	68
Resolving insolvency	108	52
THE BAD		
Protecting minority investors	7	13
Getting credit	22	25
Enforcing contracts	163	163

Source: World Bank

3. WORLD ECONOMIC OUTLOOK REPORT

News: The International Monetary Fund (IMF) has released the World Economic Outlook (WEO) Report.

Facts:**Key takeaways from the report:**

- The report has downgraded India's growth projections to 6.1% in 2019 and 7% in 2020.
- The report has said that the global economy is at its slowest pace of growth at 3%. This is a serious climb down from 3.8% in 2017.
- However, the report has said that the Global growth rate is projected to improve to 3.4% by 2020.
- Further, the growth of advanced economies is projected to slow down by 1.7%
- But the emerging and developing economies are projected to experience a growth pick up from 3.9% in 2019 to 4.6% in 2020.

Why is there a slowdown in growth?

- The higher tariffs and prolonged uncertainty in the trade policy are the major reasons for dented investment and the slowdown in the growth.
- The automobile industry is contracting mainly due to the disruptions from new emission standards.
- Further, trade barriers and geopolitical tensions like Brexit is hampering investment, confidence and growth.

What should India do to reverse the slowdown?

- IMF has suggested that the monetary policy and broad-based structural reforms should be used to address cyclical weakness and strengthen confidence.
- A credible fiscal consolidation path is needed to bring down India's elevated public debt over the medium term.
- This should be supported by subsidy-spending rationalisation and tax-base enhancing measures.
- Further, Governance of public sector banks and the efficiency of their credit allocation needs should be strengthened.
- Land reforms should also be enhanced to encourage and expedite infrastructure development.

Additional information:**International Monetary Fund**

- The International Monetary Fund (IMF) is an organization of 189 countries. It was established in 1945.
- The main goal of IMF is to ensure the stability of the international monetary system - the system of exchange rates and international payments
- It also seeks to facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.
- IMF's mandate was increased in 2012 to include all macroeconomic and financial issues that have a bearing on global stability
- The other reports published by IMF are - Global Financial Stability Report and Fiscal Monitor.

4. GLOBAL COMPETITIVENESS INDEX

News: The Global Competitiveness Index (GCI) compiled by the World Economic Forum (WEF) was released recently.

Facts:**Key takeaways from the index:**

- Singapore has replaced the US as the world's most competitive country. The US was positioned at 2nd place and was followed by Hong Kong at third place and Netherlands and Switzerland at 4th and 5th places respectively.
- China was ranked at 28th position and was the highest ranked among BRICS nations. Vietnam showed higher improvements in the region and was ranked at 67.
- The report has also said that Asia Pacific was the most competitive region globally. It was followed by Europe and North America.

India's ranking:

- India has moved down 10 places to rank 68th in 2019 from 58th in 2018 on the global competitiveness index.
- The index has flagged limited ICT (information, communications and technology) adoption, poor health conditions and low healthy life expectancy as the reasons.
- India is also amongst the worst-performing BRICS nations along with Brazil which is ranked even lower than India at 71st this year.
- In the overall ranking, India is followed by some of its neighbours including Sri Lanka at 84th place, Bangladesh at 105th, Nepal at 108th and Pakistan at 110th place.

Other key findings of the report on India:

- India was ranked high at 15th place in terms of corporate governance, while it is ranked second globally for shareholder governance.
- In terms of the market size, India is ranked third and has the same rank for renewable energy regulation.
- Besides, India has also punched above its development status when it comes to innovation which is well ahead of most emerging economies and at par with several advanced economies.
- According to the report, India also needs to work on its skill base, market efficiency, trade openness and worker protection rights.
- The ratio of female workers to male workers in India was 0.26. It was ranked at 128th place and was very low as compared to certain other developing countries.

Additional information:**About the Global Competitiveness Index (GCI):**

- The Global Competitiveness Index is released by the World Economic Forum (WEF).
- It was launched in 1979. It ranks the competitiveness landscape of 141 economies through 103 indicators organised into 12 pillars.
- These 12 pillars are (1) Institutions (2) Infrastructure (3) ICT adoption (4) Macroeconomic stability (5) Health (6) Skills (7) Product market (8) Labour market (9) Financial system (10) Market size (11) Business dynamism and (12) Innovation capability.

World Economic Forum (WEF)

- WEF was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland.

- The objective of WEF is to improve the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas.
- Some of the most significant reports published by the WEF are (a) Global Competitiveness Report (b) Global Gender Gap Report (c) Global Risks Report and (d) Global Travel and Tourism Report among others.

5. INDIA INNOVATION INDEX

News: NITI Aayog with Institute for Competitiveness as the knowledge partner released the India Innovation Index, 2019.

Facts:

About India innovation index:

- The index examines the innovation ecosystem of Indian states and Union Territories.
- The index was developed on the lines of the Global Innovation Index (GII). It is expected to help the innovation ecosystem of Indian states and Union Territories (UTs) to design policies to drive innovation across regions.
- The index performs the following three functions (a) ranking of states and UTs based on their index scores (b) recognizing opportunities and challenges and (c) assisting in tailoring governmental policies to foster innovation.

Parameters:

The Index is calculated as the average of the scores of its two dimensions – Enablers and Performance.

- The Enablers are the factors that underpin innovative capacities. They are grouped into five pillars: (1) Human Capital (2) Investment (3) Knowledge Workers (4) Business Environment and (5) Safety and Legal Environment.
- The Performance dimension captures benefits that a nation derives from the inputs. It is divided into two pillars (6) Knowledge Output and (7) Knowledge Diffusion.

Key takeaways from the index:

- The index has bifurcated the states into three categories (a) major states (b) north-east and hill states and (c) union territories/city states/small states.
- There is a west-south and north-east divide across the country. The top ten major states are majorly concentrated in southern and western India.
- Karnataka has emerged topper in the overall rankings in the category of major states with Tamil Nadu and Maharashtra in the second and third positions.
- Karnataka's top position is partly attributed to its top rank in the Performance dimension.
- Maharashtra performs the best in the dimension of Enablers. This implies that it has the best enabling environment for innovation even though the state comes in at the third position in the overall innovation index.
- Among the North-Eastern states and Union territories, Sikkim and Delhi occupy the top spots respectively.
- Delhi, Karnataka, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh are the most efficient states in translating inputs into output.

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

Additional information:

About GII:

- The Global Innovation Index (GII) is an annual ranking that quantifies the state of national innovation ecosystem across countries. In 2019, it has ranked 129 countries based on 80 indicators.
- The GII is co-published by the World Intellectual Property Organisation (WIPO), Cornell University and INSEAD.
- India has improved its ranking by five places to 52nd in 2019 from 57th position in 2018. India has also outperformed on innovation relative to its GDP per capita for nine consecutive years.

About WIPO:

- It is a self-funding UN agency which acts as a global forum for IP services, information and cooperation.
- It has a membership of 192 countries currently
- It was established through the WIPO Convention of 1967
- Its mission is to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all
- Membership of the WIPO extends to all those countries which are a party to the International Bureau of Intellectual Property, Paris Convention (Convention for the Protection of International Property), Berne Convention (Convention for the protection of Literary and Artistic works)
- Additionally, a country can also be a member of WIPO if it fulfils the following criteria:
 1. if the country is a member of the UNO, any of the UN specialized agencies, the International Atomic Energy Agency or is a party to the statute of the International Court of Justice.
 2. if any country is invited by the General Assembly to be a party to this convention

6. GLOBAL WEALTH REPORT

News: The Credit Suisse Group has released the 10th edition of its annual Global Wealth Report.

Facts:

About the report:

- The report tracks both the growth and distribution of wealth in terms of the numbers of millionaires and billionaires. It also tracks the proportion of wealth held and the status of inequality around the world.

Definition of Wealth:

- Wealth is defined in terms of net worth of an individual. It is calculated by adding up the value of financial assets (such as money) and real assets (such as houses) and then subtracting any debts an individual may have.
- According to the report, the drivers of the wealth are (a) Size of population (b) Savings behaviour and (c) levels of economic activity.

Key findings of the report:

- China has overtaken the United States this year to become the country with most people in the top 10% of global wealth distribution.

- The report has found that just 47 million people which accounts for 0.9% of the world's adult population owns \$158.3 trillion which is almost 44% of the world's total wealth.
- On the other hand, 2.88 billion people accounting for almost 57% of the world's adult population own just \$6.3 trillion or 1.8% of the world's wealth.
- The women's wealth has also grown relative to that of men in most countries due to rising female labor force participation, more equal division of wealth between spouses and other factors.

Report on India:

- The total wealth in India has increased four-fold between 2000 and 2019, reaching \$12.6 trillion in 2019.
- India ranks fifth globally in terms of the number of ultra-high-net-worth individuals.
- The report has said that 78% of India's adult population has wealth below \$10,000 while 1.8% of India's population has more than \$100,000. At the other extreme, 1790 adults have wealth over \$100 million.

7. CORPORATE TAX RATE CUT BY THE GOVERNMENT

News: Finance Minister has announced to reduce the corporate tax rates in order to encourage manufacturing and boost private investment.

Facts:

About the tax rate cut: The government has taken the following decisions:

Type of Company	New Corporation Tax Rate	Additional Benefit/Requirements
Corporations not seeking any incentives/exemptions	22% (earlier 30%) + applicable cess and surcharge. Effective corporate tax rate of 25.17%	No MAT (minimum alternative tax) payable by these companies
Corporations seeking incentives/exemptions	Unchanged at 30%	MAT rate reduced to 15% from earlier level of 18.5%
New Manufacturing Companies	15% (earlier 25%)	New manufacturing co. must be incorporated on or before October 2019. Must start production before March 2023

Why the corporate tax rate cut?

- The corporate tax rate was reduced as the two other factors of the economy namely government expenditure (where the fiscal deficit is under pressure) and exports (which have been stagnant) have little space to boost growth.

Significance of corporate tax cut:

- The lower corporate tax is aimed at boosting private sector investment in the backdrop of slowdown in consumption and decline in investment by private businesses.
- The cut in corporate tax will also make it more attractive for existing and new businesses to invest and increase production which in turn will create employment.

- However, this move will also cost the government Rs 1.45 lakh crore annually. This increases the chances of higher fiscal deficit and government may have to resort to spending cuts or embark on higher disinvestment.

Additional information:

About MAT:

- MAT stands for Minimum Alternative Tax. It was introduced by the Finance Act, 1987 with effect from assessment year 1988-89. Later on, it was withdrawn and then reintroduced in 1996.
- The objective of introduction of MAT is to bring into the tax net zero tax companies who in spite of having earned substantial book profits (the profit shown in the profit and loss account) do not pay tax due to various tax concessions and incentives provided under the Income-tax Law.

8. ASIA-PACIFIC TRADE AND INVESTMENT REPORT

News: The Asia-Pacific Trade and Investment Report 2019 was released.

Facts:

About the report:

- The report has been published by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Conference on Trade and Development (UNCTAD).
- The report provides information on developments in (a) intra and inter-regional trade in goods and services (b) foreign direct investment (c) trade facilitation measures (d) trade policy measures and (e) preferential trade policies and agreements.

Highlights from the report:

- The report has said that the Non-Tariff Measures (NTMs) have increased in the past two decades and are affecting trade as well Sustainable Development Goals (SDGs) in Asian countries.
- Around half the Asia-Pacific's economies have at least one NTM addressing water and energy efficiency and only 10% have measures addressing illegal, unreported and unregulated (IUU) fishing and illegal timber trade.
- NTMs can also affect foreign direct investment negatively which may slow down countries' economic activities. It can also have a direct impact on the performance of trading partners.

Suggestions:

- The report has called for increasing cooperation with developed economies to work out regional mechanisms and developing common guidelines on sustainability impact assessment of NTMs.
- The report has also recommended reviewing current NTMs and ensuring that new NTMs are systematically followed and monitored.
- The report also said that the implementation of NTMs in the right spirit can help in achieving SDGs.

Additional information:**What are Non-tariff measures (NTM)?**

- Non-tariff measures (NTMs) are policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both.

Examples of NTM:

- **Sanitary and Phytosanitary Measures:** These are measures that are applied to protect human or animal life from risks arising from: additives, contaminants, toxins or disease-causing organisms in food.
- **Technical Barriers to Trade:** These are measures referring to technical regulations, and procedures for assessment of conformity with technical regulations and standards.

About UNESCAP:

- The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is the regional development arm of the United Nations for the Asia-Pacific region.
- It has 53 Member States and 9 Associate Members from Asia-Pacific Region including India. It serves as the UN's regional hub promoting cooperation among countries to achieve inclusive and sustainable development.

About UNCTAD:

- UNCTAD is a permanent intergovernmental body established by the United Nations General Assembly in 1964.
- It is headquartered in Geneva, Switzerland and is a part of the UN Secretariat.
- It was formed specifically to handle the problems of developing countries dealing with trade, investment and development issues.

9. ENTERPRISE DEVELOPMENT CENTRES

News: Union Micro, Small and Medium Enterprises sector (MSME) minister will launch the Enterprise Development Centres (EDCs) in every district.

Facts:**About EDC**

- Enterprise Development Centres (EDCs) are aimed at developing a cadre of indigenous entrepreneurs in the MSMEs.
- They are planned for every district by the end of the current financial year (2019-20).
- The EDCs will be similar to incubators for start-ups. They will be run by special purpose vehicles in partnership with the private sector, business management organisations, local industry associations.
- The centre will help new and existing businesses develop by providing services such as management training, and office space among others.
- The EDCs will also have enterprise clinics for struggling firms which the government hopes will reduce the number of small businesses falling into a debt trap financed by bank loans.

Additional information:**About MSME:**

- The Micro- Small and Medium Enterprises (MSMEs) are small sized entities defined in terms of their size of investment.
- The MSMEs are classified in terms of investment made in plant and machinery if they are operating in the manufacturing sector and investment in equipment for service sector companies.
- However, MSME(Amendment) Bill, 2018 which has not been passed yet proposes a uniform classification for all MSMEs.
- Under the Bill, all MSMEs, whether they are manufacturing or service providing enterprises will be classified on the basis of their annual turnover.

10. CABINET APPROVES NEW STRATEGIC DISINVESTMENT PROCESS

News: Union Cabinet has approved a new process of strategic disinvestment with a view to expediting privatization of select PSUs.

Facts:**What are the new changes?**

- Under the new policy, the Department of Investment and Public Asset Management (DIPAM) under the Ministry of Finance has been made the nodal department for the strategic disinvestment sale.
- Currently, PSUs for strategic sale are identified by NITI Aayog. But the new policy has now allowed DIPAM and NITI Aayog to jointly identify PSUs for strategic disinvestment.
- Further, the DIPAM secretary would now co-chair the inter-ministerial group on disinvestment along with the secretary of administrative ministries concerned.

Additional information:**What is disinvestment?**

- Disinvestment is defined as the action of an organisation/government, selling or liquidating an asset/subsidiary. It is also referred to as divestment.
- In the case of Public Sector Undertakings (PSU) disinvestment means Government selling/diluting its stake (share) in PSUs in which it has a majority holding.
- Disinvestment is carried out as a budgetary exercise under which the government announces yearly targets for disinvestment for selected PSUs.
- Government has set the disinvestment target of 1.05 lakh crore for the current financial year 2019-20.

Significance of disinvestment:

- It improves the structure of incentives and accountability of PSUs in India.
- It can help in the revival of loss-making public sector enterprises (PSU).
- It can help in financing the increasing fiscal deficit.
- It can also finance the large-scale infrastructure development, defense, education and healthcare projects.

Concerns on disinvestment:

- The process of disinvestment is not socially and politically popular.

- After disinvestment, there is likelihood of employees of Public Sector Units (PSUs) losing their jobs.
- There is a likelihood of Government losing on its dividend income due to decline in the shares of the PSUs.

II. GOVERNMENT E-MARKETPLACE

News: The government e-Marketplace (GeM) has signed a Memorandum of Understanding (MoU) with Federal Bank to offer different services including the transfer of funds.

Facts:

About GeM:

- Government e Marketplace is an online marketplace setup in 2016 for procurement of commonly used goods and services by government ministries, departments and CPSEs.
- It aims to enhance transparency, efficiency and speed in public procurement.
- It is a National Procurement Portal of India. It functions under Directorate General of Supplies and Disposals (DGS&D), Ministry of Commerce and Industry.

Benefits of GeM:

- **Transparency:** GeM eliminates human interface in vendor registration, order placement and payment processing to a great extent.
- **Efficiency:** Direct purchase on GeM can be done in a matter of minutes and the entire process online, end to end integrated with online tools for assessing price reasonability.
- **Secure and safe:** GeM is a completely secure platform and all the documents on GeM are e-Signed at various stages by the buyers and sellers.
- **Savings to the Government:** transparency, efficiency and ease of use of the GeM portal has resulted in a substantial reduction in prices on GeM.

12. EXPLAINED: WHY STATE BUDGETS MATTER

News: The Reserve Bank of India (RBI) has released its annual study of state-level budgets.

Facts:

Highlights of the study:

- The study has found that except during 2016-17, state governments have regularly met their fiscal deficit target of 3% of GDP.
- However, most states ended up meeting the fiscal deficit target not by increasing their revenues but by reducing their expenditure and increasingly borrowing from the market.
- This had affected the loans that state governments provided to power projects, food storage and warehousing. It has also impacted the states capital budget allocation for key social and infrastructure sectors.
- Hence, reduction in overall size of state budgets has likely worsened the economic slowdown that was slowly setting in since the start of 2016-17, when India had grown by 8.2%.
- The outstanding debt-to-GDP of States have also risen over the last five years to 25% of GDP making sustainability of debt the main fiscal challenge.

Challenges for the states:

- The States have been finding it difficult to raise revenues.
- States revenue prospects are confronted with low tax buoyancies, shrinking revenue autonomy under the Goods and Services tax (GST) framework and unpredictability associated with transfers of IGST and grants.

Why understanding about state government finances important?

- States now have a greater role to play in determining India's GDP than the Centre.
- States now spend one-and-a-half times more than the Union government.
- They are the bigger employment generators. They employ five times more people than the Centre.
- Further, since 2014-15, the states have increasingly borrowed money from the market.
- Hence, the overall trend has serious implications on the interest rates charged in the economy, the availability of funds for businesses to invest in new factories and the ability of the private sector to employ new labour.

Additional information:**About Fiscal deficit:**

- The difference between total revenue (non borrowed revenue receipt) and total expenditure of the government is termed as fiscal deficit.
- It is an indication of the total borrowings needed by the government. While calculating the total revenue, borrowings are not included.

1. 18TH SUMMIT OF NON-ALIGNED MOVEMENT SUMMIT (NAM) HELD IN BAKU, AZERBAIJAN.

News: 18th Summit of Heads of State and Government of NAM was held in Baku, Azerbaijan on 25-26 October, 2019. India was represented in the summit by Vice President Mr. M. Venkaiah Naidu

Facts:

- Indian PM did not attend the summit. In 2016 also, Indian PM skipped the NAM summit. This was the first time that Indian PM skipped NAM summit. (In 1979, Charan Singh did not attend NAM summit. However, he was caretaker PM)

About 18th Summit of NAM:

- The **theme** of the Summit was - ‘**Upholding Bandung Principles to ensure concerted and adequate response to the challenges of the contemporary world**’.
- Vice President while delivering India’s National Statement focussed upon various contemporary issues like - **Terrorism, Climate Change, Financial Crisis, cyber security, pandemics**.
- He also dwelled upon finding solutions to the development challenges of bringing health, education, clean energy and jobs to our people, amid a global economy being rapidly transformed by advances in technology.
- He also talked about the need for meaningful reform of UNSC to reflect the contemporary realities of the 21st century.
- He emphasised that NAM countries need to work together to uphold the rules based global order and respect for international law.
- In 2016 also, Indian PM skipped the meeting of heads of states and governments of NAM nations (Held in Venezuela). He became the first PM of India to skip NAM summit.

Additional Facts:

NAM

- It is a group of countries that are not formally aligned with or against any major power bloc (especially USA and Russia). These countries seek to remain independent or neutral.
- The basic concept for the NAM grouping originated in 1955, on the backdrop of the cold war at the Asia-Africa Bandung Conference held in Indonesia.
- The first NAM Summit Conference took place in Belgrade, Yugoslavia, in September 1961.
- At present, NAM comprises of 120 nations, representing 55% of the world's population.

Aims of NAM:

- To guarantee and defend the national interest of each country i.e. their respective political and national independence and sovereign equality and territorial integrity.
- To continue the struggle for completing decolonization, racial discrimination, non-interference in the internal affairs of another country fight against neo-colonialism and imperialism.
- To promote world peace and security in all parts of the world.
- Abolition of military pacts and realization of universal and complete disarmament.

- To achieve international cooperation and a system for development and economic aid to the developing countries and complete utilization of UN
- Democratization of international relations
- To promote the principle of peaceful coexistence

Bandung Principles:

- In April, 1955, representatives from 29 governments of Asian and African nations gathered in Bandung, Indonesia in **Asian-African conference (aka Bandung Conference)** to discuss peace and the role of the Third World in the Cold War, economic development, and decolonization
- The core principles of the Bandung Conference were political self-determination, mutual respect for sovereignty, non-aggression, non-interference in internal affairs, and equality among nation-states.

NAM over the years:

Achievement of NAM During the Cold War era:

- **Anti -racialism and Anti Colonialism** - Due to the constant pressure from NAM countries, colonized countries got their independence. For example, Namibia became independent in 1990., Mozambique in 1975, Zimbabwe in 1980 and South Africa in May 1992.
- NAM advocated the creation of a New International Economic Order (NIEO) based on greater economic cooperation and justice. NAM countries also promoted trade among the member's states.
- **Disarmament** - Condemnation of Nuclear weapons and creation of Nuclear free zone was advocated by NAM. NAM also helped in bringing about the end of the Iraq-Iran war in 1988 after eight years of serious clashes.

Failures of NAM:

- There limitation of NAM is majorly due to the diverse membership, varying national interests of the members, the lack of resources and technology and their dependence on the developed countries.
- Due to the economic dependence to the developed countries, NAM found it hard to make members condemn and abandon the neo-colonialism in the independent poor states.
- NAM collectively was not able to solve their regional problems within the group. Example is the India/Pakistan poor relations, the Iran-Iraq war that took eight years to end. Yugoslavia is not even a country anymore.
- There were internal factions within the NAM members based on their affiliations towards the two power blocs. Countries like Cuba, Libya and the Latin America had inclination towards the east, while Egypt, Saudi Arabia, Pakistan has inclination towards the west.
- NAMs failure to control coups and condemn military leadership and impose sanctions has been one of the major setbacks. Many countries like Nigeria, Algeria, Ghana, Gambia, etc. have been experiencing the worst military leadership ever known.

Emerging World Order:

NAM must also keep pace with the changing times in the global world order

- Challenges to globalization reflected in Brexit.
- Rise of isolationist and anti-immigration sentiments
- Protectionist policies to economic trade

- Asymmetric threat from terrorist organization and lone wolf attacks
- Reform of international institutions like UN, WTO
- Climate change and the disproportionate possible damage to the global south
- Emergence of new geopolitical theatres like the Indo-Pacific, trans Pacific rivalries.

Relevance of NAM in today's world:

- NAM comprising of 120 nations can play an instrumental role in reform of United Nations
- Non-Alignment as foreign policy is still relevant as it provides for strategic autonomy
- Provides forum to developing nations to put forth their views on international issues
- NAM promotes equitable world order. It can act as a bridge between the political and ideological differences existing in the international environment.

2. 2ND INDIA – CHINA INFORMAL SUMMIT HELD IN MAMALLAPURAM, TAMILNADU

News: Chinese President Xi Jinping and Indian Prime minister Narendra Modi held their second Informal Summit in Mamallapuram, Tamil Nadu on October 11-12. They exchanged views on issues of global and bilateral significance.

Facts:

- First Informal summit between India and China was held in Wuhan. The first India- China informal summit had invoked the 'Wuhan spirit', whereas the second informal India-China summit called for 'Chennai Connect'.
- This second informal summit marked the completion of 70 years since diplomatic relations between India and China came into existence.

Key takeaways from the summit:

- India and China have decided to set up a high-level economic and trade dialogue mechanism. The mechanism will help boost trade and investments and improve trade balance that is currently heavily in favour of China.
- The two countries also agreed that terrorism continued to pose a common threat and recognised the need to make joint efforts to ensure that the international community strengthens the framework against terror.
- The countries reiterated the consensus reached during the first informal Summit in Wuhan to consider India and China as factors for stability in the current international landscape
- They have also reached a consensus which was evolved in Astana in 2017 which said that differences should not become disputes between the two countries.
- The two countries also agreed to support and strengthen the multilateral trading system such as WTO at a time when globally agreed upon trade practices and norms are being selectively questioned.
- They have also agreed on the establishment of sister-state relations between Tamil Nadu and Fujian Province.
- The leaders also agreed to designate 2020 as the Year of India-China Cultural and People to People Exchanges to celebrate the 70th anniversary of diplomatic relations.

Additional Information:

What are informal summits:

- Informal Summits act as supplementary exchanges to annual Summits and other formal exchanges such as the G20 Summit, EU-India Summit and the BRICS Summit among others.
- Informal Summits may not take place on a fixed annual or biennial schedule.
- They are impromptu in the sense that they take place when a need for them is perceived by the concerned nations.
- Informal summit allows for direct and free exchange of views between countries which may not be possible to do through formal bilateral and multilateral meetings as they are agenda driven where specific issues are discussed.
- China is not the only country with which India has had an Informal Summit.
- In May 2018, India had met Russia's President for their first Informal Summit to discuss international matters in a broad and long-term perspective.

Significance of informal summit:

- Informal summits allow for quietly discussing contentious issues away from the media glare and publicity.
- The absence of any formal joint communique also enables each side to spell out its own impressions of any outcomes.
- It also allows leaders to meet informally in order to know and understand each other better.

Mamallapuram:

- Mamallapuram is a town in Chengalpattu district in the southeastern Indian state of Tamil Nadu. It is also known as Seven Pagodas of Mahabalipuram
- The town has a collection of 7th and 8th century religious monuments that has been declared as a UNESCO World Heritage sites. Some important structures include (a) Thirukadalmallai (b) descent of the Ganges (c) Varaha Cave Temple (d) Pancha Rathas (Five Chariots) and (e) Arjun's penance
- It was one of the major port cities during Pallava rule.

3. PRIME MINISTER OF INDIA VISIT TO THE KINGDOM OF SAUDI ARABIA

News: Prime Minister of India paid an official visit to Saudi Arabia to attend Future investment Summit

Facts:

- Prime Minister Narendra Modi was keynote speaker in the 3rd edition of Future Investment Summit, dubbed as 'Davos in the Desert'.
- It is an annual investment forum organized by the Public Investment Fund of Saudi Arabia. It was first conducted in 2017.
- This is the second visit of Prime Minister Modi to the Kingdom of Saudi Arabia in three years.

Key takeaways of the visit:

- The major highlight of the visit was signing of MoU to establish Strategic Partnership Council (SPC). India will become the fourth country with which the Kingdom has formed a strategic partnership, the others being the UK, France and China.

- India and Saudi Arabia signed 12 MoUs in the fields related to renewable energy, security cooperation, combating illicit drug trafficking, civil aviation, strategic petroleum reserve etc.
- The RuPay card was launched in Saudi Arabia. (It becomes 3rd country in the region after Bahrain and UAE where RuPay card has been launched). It will help financial transactions by individuals, particularly expatriate Indian citizens.
- Indian Strategic Petroleum Reserves Limited signed an agreement with Saudi Aramco to lease part of the 2.5 million-tonne Padur storage in Karnataka.
- Saudi Arabia investment in Asia's largest greenfield refinery in Raigad, Maharashtra

Additional Information:

Importance of Saudi Arabia to India:

- **Trade and Investment -**
 - Saudi Arabia is India's 4th largest Trade partner (after China, USA and Japan). Bilateral trade was approximately \$ 28 billion.
 - Saudi Arabia is one of the largest investors in India with investments from April 2000 to June, 2018 amounting to USD 208.38 million
- **Energy Security**
 - Saudi Arabia is the 2nd largest supplier of crude oil to India.
 - Recent MoU with Saudi Aramco for its participation in India's strategic petroleum reserve
 - Saudi Aramco has signed MoU to partner in Ratnagiri refinery
- **Indian expats in Saudi Arabia**
 - Saudi Arabia is home to around 2.96 million Indian expats. They are an important source of remittances.
- **Security**
 - Counter Terrorism and intelligence sharing is an important area of cooperation
 - Saudi can help in fighting piracy in the Gulf of Aden

Major source of tensions in India - Saudi Arabia Relations

- Close relationship of Saudi Arabia with Pakistan
- Diaspora related Issues - Treatment of Indian workers in the country. Efforts towards labour localisation rules (eg. - Nitaqat law) which might limit employment opportunities for Indian expatriates
- Regional Dynamics - Saudi Arabia's rising tensions with Iran
- Ideology related concerns - funding from Saudi Arabia for organizations in India, which might be increasing the influence of Wahhabism in the country.

4. EXERCISE VAJRA PRAHAR

News: The 10th edition of the joint military exercise 'Vajra Prahar' between India and the US was held at Joint Base Lewis-McChord (JBLM) in Seattle from October 13-28, 2019.

Facts:

About the exercise:

- Vajra Prahar is a Special Forces joint military training exercise conducted alternately in India and the US since 2010.

- The exercise enables sharing of best practices and experience in areas such as joint mission planning capabilities and operational tactics.

About Special forces:

- The Special Forces of India refer to those Special forces units which are specifically organised, trained, and equipped to conduct and support special operations.
- The three branches of the Indian Armed Forces have separate special forces units namely (a) Para Special Forces of Indian Army (b) MARCOS of Indian Navy and (c) Garud Commando Force of Indian Air Force.

Additional information:

Other exercises between India and US:

- Yudh Abhyas- It is a joint military exercise between India and the US.
- Exercise Malabar- It is a trilateral naval exercise involving the United States, Japan and India as permanent partners.
- Tiger Triumph- It is a tri-service military exercise between India and the US. (Earlier, India conducted tri-service military exercise with Russia only which was named as INDRA.)

5. INTER - PARLIAMENTARY UNION (IPU)

News: Indian delegation has hit out Pakistan for raising the issue of Kashmir issue at Inter Parliamentary Union (IPU) assembly in Serbia.

Facts:

About IPU:

- It is the global organization of national parliaments.
- It was established in 1889 to promote peace through parliamentary diplomacy
- At present, it comprises of 179 Member Parliaments and 12 Associate members
- Headquarter is located at Geneva, Switzerland
- Its slogan is "For democracy. For everyone"
- It has permanent observer status at the UNGA.
- It played an important role in setting up Permanent Court of Arbitration in The Hague.
- It is focal point for world-wide parliamentary dialogue. It works for peace and co-operation among peoples and for the firm establishment of representative democracy.
- The main area of activity of the IPU include representative democracy, peace and security, sustainable development, human rights, women in politics, and education, science and culture.

Through its activities, the IPU aims to:

- foster contacts, coordination, and the exchange of experience among parliaments and parliamentarians of all countries;
- contribute to the defence and promotion of human rights; and
- contribute to better knowledge of the working of representative institutions and to the strengthening and development of their means of action.

Structure of IPU:

The organs of the Inter-Parliamentary Union are:

- Assembly, meets twice a year.
- Governing Council.
- Executive Committee
- Secretariat.

6. INDUS WATER TREATY

News: Addressing an election rally in Haryana, Prime Minister Narendra Modi has said that India would not allow its share of water to be used by Pakistan.

Facts:**About Indus Water Treaty:**

- It is a water distribution treaty between India and Pakistan
- It was signed on September 19, 1960 by the then Prime Minister Jawaharlal Nehru and Pakistan's president Ayub Khan
- It was brokered by World Bank
- Under the treaty, the control of 3 eastern rivers - Beas, Ravi and Sutlej were given to India. Control of 3 'western rivers' - Indus, Chenab and Jhelum was given to Pakistan
- India is allowed complete usage of waters from the eastern rivers and only non-consumptive usage of waters from the western rivers.
- A permanent Indus Commission was set up as a bilateral commission to implement and manage the treaty and it solves disputes arising over water sharing. The commission should meet once a year as per the treaty.
- China has been kept out of the treaty. (Even though Indus originates from Tibet.) However, if anytime China decides to stop or change the flow of the Indus river, it will affect both India and Pakistan.

Why is the Indus Waters treaty important for Pakistan?

- Indus, Chenab and Jhelum are the lifelines of Pakistan as the country is highly dependent on these rivers for its water supply.
- Since these rivers do not originate from Pakistan but flow to the country through India, Pakistan fears that any mismanagement may lead to drought and famine.
- Pakistan has objected to India's effort in building Kishanganga dam on Jhelum, Ratle dam on Chenab, Pakuldul dam on Chenab.

7. INDIA JOINS WEF'S G20 GLOBAL SMART CITIES ALLIANCE ON RESPONSIBLE USE OF SMART CITY TECHNOLOGIES

News: India has joined the World Economic Forum's (WEF) G20 Global Smart Cities Alliance on Technology Governance.

Facts:**About G20 Global Smart Cities Alliance on Technology Governance:**

- It was established in June 2019, in conjunction with the G20 Summit held in Osaka, Japan.

- It is an alliance that comprises of 15 of the world's leading city networks and technology governance organisations.
- It seeks to work towards advancing the responsible and ethical use of smart city technologies.
- The alliance also aims to create global norms and policy standards for the use of connected devices in public spaces.

Founding set of Institutional Partners include:

- Presidents and host nations of Group of 20 (G20) in 2019 and 2020
- Japan and the Kingdom of Saudi Arabia
- The Smart City Mission of India
- Cities for All
- Cities Today Institute
- Commonwealth Local Government Forum
- Commonwealth Sustainable Cities Network among others.

Significance of the alliance:

- Smart city technologies can help decrease traffic congestion, combat crime, improve resilience during natural disasters and reduce greenhouse emissions.
- As urban populations grow, smart city technologies become more and more essential not only to improve the quality of life of citizens but also to simply keep our cities livable.
- However, without proper governance, these technologies pose significant risk, notably to privacy and security.
- Hence, India joining the league is a first step towards accelerating global best practices, fostering greater openness and public trust as well as mitigating risks regarding the collection of data in public spaces.

Additional information:

World Economic Forum (WEF):

- WEF was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland.
- The objective of WEF is to improve the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas.
- Some of the most significant reports published by the WEF are (a) Global Competitiveness Report (b) Global Gender Gap Report (c) Global Risks Report and (d) Global Travel and Tourism Report among others.

About G20:

- G20 is an international forum of the governments and central bank governors from 20 major economies formed in 1999.
- The group accounts for 85% of world GDP and two-thirds of the population.
- They have no permanent staff of its own and its chairmanship rotates annually between nations divided into regional groupings.

8. BANGLADESH PRIME MINISTER SHEIKH HASINA VISIT TO INDIA

News: Bangladesh Prime Minister Sheikh Hasina was on a four-day official visit to India from 3rd Oct to 6th Oct, 2019. She was also Chief Guest at the India Economic Summit organized by the World Economic Forum

Facts:**Key Takeaways of the Visit:**

- India appreciated the zero-tolerance policy of the Government of Bangladesh against terrorism and commended Prime Minister Sheikh Hasina for her resolute efforts to ensure peace, security and stability in the region.
- Both sides emphasized simplifying people-people movement between the two countries.
- Both leaders emphasized the importance of effective border management for ensuring a tranquil, stable and crime free border.
- Both Leaders agreed to enhance cooperation in the area of Disaster Management.
- Both countries recognized the need for increased cooperation in defence for a more integrated and secure neighborhood, (e.g - development of closer maritime security partnership).
- A total of 7 MoUs were signed including - establishment of coastal surveillance radar system.
- Agreement was signed for the bulk import of LPG from bangladesh
- Agreement was also signed regarding vocational training and social facility.

Additional Information:**Why Bangladesh is important for India:**

- Economic
 - Bangladesh is India's largest trading partner in South Asia
 - It provides opportunities in cooperation in Blue - economy (such as exploration of hydrocarbons, deep sea fishing etc)
- Geopolitical
 - Bangladesh acts as gateway to ASEAN (i.e bridge to South East Asia)
 - Connectivity of North east India. Transit agreement with Bangladesh will spur the socio-economic development of North-East India.
- Security
 - To contain insurgency in North east.
 - Border Security and Counter Terrorism
- Historical and Cultural ties
 - The relationship between India and Bangladesh is anchored in history, culture, language and shared values of secularism, democracy. Increase in people to people contact will help in building mutual trust and help in curbing hostility between nations.

Areas of Concerns:

- River Disputes - Teesta water sharing Agreement, Construction of Tipaimukh dam on Barak river by India.
- Illegal Immigrants - Cross border illegal migration (especially after Assam NRC)
- Porous Borders - Issues such as fake currency, drug trafficking, cattle smuggling, Human trafficking, Arms smuggling
- China Factor - Bangladesh using China card to increase its bargaining power against India

Policy

1. SCHOOL EDUCATION QUALITY INDEX (SEQI)

News: NITI Aayog has released the first edition of the School Education Quality Index (SEQI) based on data for 2016-17.

Facts:

About SEQI:

- SEQI has been developed by NITI Aayog to evaluate the performance of States and Union Territories (UTs) in the school education sector.
- It has been developed through a collaborative process including key stakeholders such as the Ministry of Human Resource Development (MHRD), the World Bank and sector experts.

Aim:

- SEQI aims to drive policy reforms that will improve the quality of school education.
- The index seeks to institutionalise a focus on enhancing education outcomes by driving improvements in learning levels, access, equity, infrastructure and governance processes.

Composition:

- SEQI is based on a set of 30 critical indicators that measure the overall effectiveness, quality and efficiency of the Indian school education system.

<i>CATEGORY</i>	<i>DOMAIN</i>
OUTCOMES	<ol style="list-style-type: none"> 1. Learning outcomes 2. Access outcomes 3. Infrastructure & facilities for outcomes 4. Equity outcomes
GOVERNANCE PROCESSES AIDING OUTCOMES	<ol style="list-style-type: none"> A. support system necessary for learning to take place like training and availability of teachers. B. attendance of students and teachers C. administrative adequacy D. Accountability E. transparency

Ranking process:

- The States and UTs were ranked on their overall performance in the reference year 2016-17 as well as on the change in their performance between the reference year and base year (2015-16).
- To facilitate like-to-like comparisons, States and UTs have been grouped as Large States, Small States and Union Territories.

- Within each of these groups, the indicator values have been appropriately scaled, normalized and weighted to generate an overall performance score and ranking for each State and UT.

Key takeaways from the index:

- Among the large States, Kerala bagged the top spot followed by Rajasthan and Karnataka while Uttar Pradesh scored the lowest for 2016-17.
- However, Haryana, Assam and Uttar Pradesh showed the most improvement in their performance in 2016-17 in comparison to the base year of 2015-16.
- Among the small States, Manipur emerged as the top performer while Arunachal Pradesh came last in the category.
- Among Union Territories, Chandigarh stood at the top position while Lakshadweep ranked lowest.
- But it is to be noted that all seven UTs have shown an improvement in their performance.

Additional information:

NITI Aayog:

- The NITI Aayog was formed via a resolution of the Union Cabinet on January 1, 2015.
- It is the premier policy 'Think Tank' of the Government of India providing both directional and policy inputs. It had replaced planning commission as the premier think tank.
- The NITI Aayog has been mandated with fostering cooperative federalism through structured support initiatives and mechanisms with the States on a continuous basis recognizing that strong States make a strong nation.
- It also seeks to design and assist the implementation of strategic, long term policy frameworks and programme initiatives and also monitor their progress and efficacy.

2. FOOD SAFETY MITRA SCHEME

News: Union Minister for Health and Family Welfare has launched the Food Safety Mitra Scheme and Eat Right Smart Jacket.

Facts:

About Food Safety Mitra scheme:

- The scheme aims to create an ecosystem of food safety mitras (FSM) who will help Food Business organisations (FBO) with licensing and registration, training and auditing hygiene among others.
- FSM is an individual professional certified by the Food Safety and Standards Authority of India (FSSAI) who assists in compliances related to FSS Act, Rules & Regulations.
- The food safety Mitra will have three avatars - Digital Mitra, Trainer Mitra and Hygiene Mitra depending upon their respective roles and responsibilities.

Significance of the scheme:

- The scheme will lead to improved ease of doing business by creating a transparent and organized ecosystem.
- It will support food businesses wherein food businesses will be able to get trained service providers at fair prices - lowering the costs of compliance

About Eat Right Jacket:

- Eat Right Smart Jacket has been introduced to giving an identity to FSSAI staff to ensure transparent inspection.
- It's embedded with an RFID tag and QR code. It is linked to software to capture entry of inspection staff into premise for monitoring.

Additional information:**About Eat Right India Movement**

- The Eat Right India Movement was launched by Food Safety and Standards Authority of India (FSSAI) in 2018.
- It is a preventive healthcare measure to trigger social and behavioural change among people.
- The movement aims to improve public health in India and combat negative nutritional trends to fight lifestyle diseases.

Food Safety and Standards Authority of India (FSSAI):

- Food Safety and Standards Authority of India (FSSAI) is a statutory autonomous body under Food Safety and Standards Act, 2006. It comes under the Ministry of Health & Family Welfare.
- FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety.

3. DIGITAL BHARAT DIGITAL SANSKRITI

News: Union Minister of State for Culture & Tourism has launched the E-Portal of Centre for Cultural Resources and Training (CCRT) 'Digital Bharat Digital Sanskriti'.

Facts:**About the Digital Bharat Digital Sanskriti:**

- The 'Digital Bharat Digital Sanskriti' is an E-portal that will enable dissemination of cultural education through digital interactive medium into classrooms all over the country.
- The portal will provide a platform for specifically dropout children so that they can join the mainstream and pursue their dreams by making a career out of be it music, painting, or any other art forms.
- For this initiative, CCRT has tied up with Routes 2 Roots, an NGO for connecting seamlessly all the CCRT Regional Centres.

Additional information:**About CCRT:**

- The Centre for Cultural Resources and Training (CCRT) is an autonomous organisation under the Ministry of Culture of Government of India.
- It was established in 1979 to support cultural education.

4. INTENSIFIED MISSION INDRADHANUSH 2.0

News: Government of India will be launching the second phase of Intensified Mission Indradhanush 2.0.

Facts:**About Intensified Mission Indradhanush 2.0:**

- The Intensified Mission Indradhanush 2.0 will aim to cover the low immunisation pockets.
- It will carry out massive immunisation program in 271 districts across the nation and 652 blocks located in Uttar Pradesh and Bihar.
- The Mission Indradhanush has increased India's immunisation coverage significantly to 87% from 67% in 2014.
- However, official data on India's immunisation coverage is still 62% given as the National Family Health Survey-4 (2015-16).

About Mission Indradhanush:

- Mission Indradhanush is a vaccination programme that was launched in the year 2014.
- It aimed to increase full immunization coverage to cover children up to 2 years and pregnant women.
- It represents the seven vaccines that were then included in the Universal Immunisation Programme against seven diseases: tuberculosis, poliomyelitis, hepatitis B, diphtheria, pertussis, tetanus and measles.
- The number has since risen to 12 with the inclusion of vaccines against measles rubella, rotavirus, Haemophilus influenzae type-B and polio.
- In a select few states and districts, vaccines are also provided against Japanese Encephalitis and pneumococcus.

About Intensified Mission Indradhanush:

- The Intensified Mission Indradhanush was launched in October 2017.
- It has aimed to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunization programme.
- The special drive has focussed in selected districts and cities to ensure full immunization to more than 90% by December 2018.
- Further, Special attention was also given to unserved/low coverage pockets in sub-centre and urban slums with migratory population. The focus was also on the urban settlements and cities identified under National Urban Health Mission (NUHM).
- The Vaccine which were supplied were also tracked using the Electronic Vaccine Intelligence Network and cold chain tracking programme, and distributed using the alternate vaccine delivery mechanism.

5. QS INDIAN UNIVERSITY RANKINGS

News: The QS Indian University Rankings, 2020 has been released.

Facts:**About QS University rankings:**

- This is the second edition of the standalone rankings for India's higher education institutions.
- The rankings include 107 Indian universities including public, private, higher education or deemed universities.

Methodology: The methodology used eight indicators to determine the institutions' rankings. These were

- academic reputation (weight of 30%),
- employer reputation (20%)
- faculty-student ratio (20%)
- the proportion of staff with a PhD (10%)
- papers per faculty from Scopus database (10%)
- citations per paper from Scopus database (5%)
- the proportion of international students (2.5%) and
- the proportion of international faculty (2.5%).

About the Rankings:

- The Indian Institutes of Technology (IITs) dominate the list with seven IITs figuring in the top ten rankings.
- IIT-Bombay was ranked first followed by the Indian Institute of Science (IISc) and IIT-Delhi.
- Further, Delhi University, University of Hyderabad and the Indian Institute of Science are the only other non-IIT institutions in the top ten.

6. FEED OUR FUTURE

News: The United Nations World Food Programme (WFP) has launched a cinema advertisement campaign 'Feed Our Future' for India.

Facts:

About the Feed Our Future:

- The campaign aims to raise awareness and take steps against hunger and malnutrition in India.
- The purpose of the campaign is also to build a curiosity in the audience to search 'ShareTheMeal' app which integrates food donation.
- ShareTheMeal is an app of UN WFP against global hunger. The app enables users to make small donations to specific WFP projects and track its progress.

About World Food Programme (WFP):

- The World Food Programme (WFP) is the leading humanitarian organization fighting hunger worldwide. It is the food assistance branch of the United Nations.
- The WFP aims to eradicate hunger and malnutrition with the ultimate goal of eliminating the need for food aid itself.
- It was established in 1961 after the 1960 Food and Agricultural Organization (FAO) Conference. It is headquartered in Rome, Italy.
- It is a member of the United Nations Development Group and part of its Executive Committee.
- The WFP operations are funded by voluntary donations from world governments, corporations and private donors.

7. PRAKASH PORTAL

News: Union Minister of State for Power and New & Renewable Energy (IC) and Union Minister of Coal has launched PRAKASH portal.

Facts:**About the portal:**

- PRAKASH stands for Power Rail Koyla Availability through Supply Harmony.
- The portal aims at bringing better coordination for coal supplies among all stakeholders namely Ministry of Power, Ministry of Coal, Coal India, Railways and power utilities.
- The portal is developed by NTPC and sources data from different stakeholders such as Central Electricity Authority (CEA), Centre for Railway Information System (CRIS) and coal companies.
- This portal will play an important role in ensuring adequate availability and optimum utilization of coal at thermal power plants.

Benefits of Portal to the Stakeholders:

- Coal company will be able to track stocks and the coal requirement at power stations for effective production planning
- Indian Railways will be able to plan to place the coal quantity as per actual coal available at power stations.
- Power stations can plan future schedule by knowing coal quantities in pipe line and expected time to reach.
- Ministry of Power /Ministry of Coal can review overall availability of coal at thermal power plants in different regions.

Additional information:**About Central Electricity Authority:**

- CEA is an organization originally constituted under Section 3(1) of the repealed Electricity (Supply) Act, 1948, since substituted by Section 70 of the Electricity Act, 2003.
- It's objective is to formulate National Electricity Plan every five years for optimum utilization of available resources for power generation.
- It works under the Ministry of Power and is located in New Delhi.

About NTPC:

- NTPC is India's largest power utility. It was established in 1975.
- It was incorporated under the Companies Act 1956 and is promoted by the Government of India.
- The headquarters of the company is situated in New Delhi.

About Centre for Railway Information System (CRIS):

- The Ministry of Railways set up CRIS as a society in July 1986.
- It designs, develops, implements and maintains most of the important information systems of Indian Railways.
- It is headquartered in New Delhi.

8. PERFORMANCE SMART BOARD

News: The Ministry of Electronics and IT (MEITY) has launched an Automated Real Time Performance Smart-Board.

Facts:**About the Smart-Board:**

- The board will act as a single window access for Centre, State or District specific projects implemented by the Ministry of Electronics and IT (MEITY).
- The smart-board is expected to promote transparency and enhance ease of working.
- The board will provide real-time, dynamic analytical project monitoring for critical and high priority Programme or schemes of MeitY.
- It will also enhance analysis through data integration by consolidating multiple data sources into one centralized, easy-to-access platform.

9. YOUTH CO: LAB

News: Atal Innovation Mission (AIM), NITI Aayog and United Nations Development Programme (UNDP) India has launched an initiative called Youth Co:Lab.

Facts:**About Youth Co:Lab:**

- Youth Co:Lab was co-created in 2017 by UNDP and the Citi Foundation.
- It is operational in 25 countries across the Asia Pacific region.
- The initiative aims to create an enabling ecosystem to promote youth leadership, innovation, and social entrepreneurship.
- It will also spread awareness about different issues pertaining to youth, the future of work and the Sustainable Development Goals (SDG) through Youth Co:Lab
- The initiative also allows young entrepreneurs and innovators to get a chance to connect with governments, mentors, incubators and investors who will help equip them with entrepreneurial skills.

The first phase of Youth Co:Lab will focus on six SDGs which are

- SDG 5 (Gender Equality)
- SDG 6 (Clean Water and Sanitation)
- SDG 7 (Affordable and Clean Energy)
- SDG 8 (Decent Work and Economic Growth)
- SDG 12 (Sustainable Consumption and Production) and
- SDG 13 (Climate Action).

Additional information:**About Atal innovation mission (AIM):**

- The Atal Innovation Mission (AIM) was set up by NITI Aayog in 2016.
- It aims to promote a culture of innovation and entrepreneurship.
- It seeks to create institutions and programs that enhance innovation in schools, colleges, and entrepreneurs in general.

About UNDP:

- The United Nations Development Programme (UNDP) is the UN's global development network.

- UNDP was established in 1965 by the General Assembly of the United Nations. It is headquartered in New York, US.
- It provides expert advice, training and grants support to developing countries, with increasing emphasis on assistance to the least developed countries.
- UNDP is central to the United Nations Sustainable Development Group (UNSDG).
- UN SDG is a network that spans 165 countries and unites the 40 UN funds, programmes, specialized agencies and other bodies working to advance the 2030 Agenda for Sustainable Development.

NITI Aayog:

- The NITI Aayog was formed via a resolution of the Union Cabinet on January 1, 2015.
- It is the premier policy 'Think Tank' of the Government of India providing both directional and policy inputs. It had replaced planning commission as the premier think tank.
- The NITI Aayog has been mandated with fostering cooperative federalism through structured support initiatives and mechanisms with the States on a continuous basis recognizing that strong States make a strong nation.

10. AUDIO ODIGOS

News: Ministry of Tourism has launched the Audio Guide facility Audio Odigos for 12 sites of India (including Iconic Sites).

Facts:

About Audio Odigos:

- Audio guide Odigo offers the Government of India verified content with visuals & voice over support.
- The app allows tourists to enjoy a more enriching experience and takes them back to historical insights into Indian culture and heritage.
- The App also contains an inbuilt map of the site for smooth navigation during the tour.
- The listeners will be offered various versions of history like synopsis, detailed history and podcasts. The audio can be chosen in their preferred language.

The 12 sites where Audio Odigos can be used are:

Rajasthan	Amer Fort
Delhi	Chandni Chowk, Red Fort, Purana Quila and Humayun's tomb
Uttar Pradesh	Fatehpur Sikri and Taj Mahal
Gujarat	Somnath and Dholavira
Madhya Pradesh	Khajuraho
Tamil Nadu	Mahabalipuram
Bihar	Mahabodhi Temple

Additional information:

About Iconic Tourists sites:

- Iconic tourists' sites initiative aims to develop world-class tourist destinations to serve as a model for other tourism sites.
- The nodal ministry for the implementation of the initiative will be the Ministry of Tourism. This initiative is primarily aimed at enhancing India's soft power.
- The initiative will aim at overall development of the tourist destinations which includes roads and infrastructure, skill development, development of technology, attracting private investment and branding and marketing.
- The Centre has identified 17 sites in the country for development under the Iconic Tourist Sites Development Project.
- The 17 sites are (a) Taj Mahal and Fatehpur Sikri (Uttar Pradesh) (b) Ajanta & Ellora (Maharashtra) (c) Humayun's Tomb, Red Fort and Qutub Minar (Delhi) (d) Colva (Goa) (e) Ajmer Fort (Rajasthan) (f) Somnath and Dholavira (Gujarat) (g) Khajuraho (Madhya Pradesh) (h) Hampi (Karnataka) (i) Mahabalipuram (Tamil Nadu), (j) Kaziranga (Assam) (j) Kumarakom (Kerala) and (k) Mahabodhi Temple (Bihar).

11. NATIONAL TESTING AGENCY

News: National Testing Agency has sought permission from the Central Government to use Aadhaar data for the 2020 NEET exam.

Facts:

About National Testing Agency:

- National Testing Agency (NTA) was established as a Society registered under the Indian Societies Registration Act, 1860.
- It is an autonomous and self-sustained testing organization to conduct entrance examinations for admission/fellowship in higher educational institutions.
- It aims to conduct efficient, transparent and international standards tests in order to assess the competency of candidates for admission and recruitment purposes.

Composition:

- NTA is chaired by an eminent educationist appointed by the Ministry of HRD.
- The CEO will be the Director General to be appointed by the Government.
- There will be a Board of Governors comprising members from user institutions.
- The Director General will be assisted by 9 verticals headed by academicians/ experts.

Significance of NTA:

- Establishment of a specialized testing body like NTA has relieved the agencies such as CBSE, AICTE of their responsibilities of conducting Entrance examinations.
- NTA has also launched a 'mobile app' and Test Practice Centres (TPC's) through which students can practice or take mock tests on their own computers or smartphones.

12. TECHNICAL ASSISTANCE PROGRAMME (TAP)

News: Union Minister of Textiles has announced that India will cover five more African countries in the second phase of its cotton technical assistance programme (TAP) for the region.

Facts:

About TAP Programme:

- TAP is a technical assistance programme for Cotton sector by the Department of Commerce of India.
- The first phase of programme from 2012 to 2018 had focussed on 6 African countries namely Benin, Burkina Faso, Chad, Malawi, Nigeria and Uganda.
- The programme aims at improving the competitiveness of the cotton and cotton-based textiles and apparel industry in these countries through a series of interventions which had significant outcomes leading to a demand for a follow-on project.
- In the five year long second phase, the programme will be scaled up in size and coverage and will be introduced in five additional countries, namely Mali, Ghana, Togo, Zambia and Tanzania.

Technical Assistance Programme (TAP) covers the following broad areas:

- Increasing cotton production (area expansion and productivity enhancement)
- Improving Extension & Support Service Efficiency
- Enhancing R&D/ Quality Control
- Marketing/Distribution Infrastructure
- Strengthening/development of cotton residue-based value addition industry
- Creating/Strengthening Downstream Industry in Textiles and Clothing.

13. PRADHAN MANTRI INNOVATIVE LEARNING PROGRAMME (PMILP)- ‘DHRUV’

News: Union Human Resource Development Minister launched the Pradhan Mantri Innovative Learning Programme- ‘DHRUV’ from Indian Space Research Organisation (ISRO).

Facts:

About the Pradhan Mantri Innovative Learning Programme- ‘DHRUV’:

- The programme is named DHRUV after the Pole Star with the same name. Every student selected under this programme will be called as ‘Dhruv Tara’.
- The programme aims at identifying and encouraging talented children to enrich their skills and knowledge.
- Under this programme, the identified children will be mentored and nurtured by renowned experts in centres of excellence across the country in different areas so that they can reach their full potential.

Features of the programme:

- The program will cover two areas namely (a) Science and (b) Performing Arts.
- There will be 60 students selected under this programme.
- The students will be broadly from classes 9 to 12 from all schools including government and private.
- This is only the first phase of the programme which will be expanded gradually to other fields like creative writing among others.

14. MAHATMA GANDHI NATIONAL FELLOWSHIP (MGNF) PROGRAMME

News: The Ministry of Skill Development and Entrepreneurship (MSDE) has signed a contract with Indian Institute of Management (IIM)-Bangalore to launch a new programme 'Mahatma Gandhi National Fellowship (MGNF)'.

Facts:

About Mahatma Gandhi National Fellowship (MGNF):

- **Aim:** The program aims to address the challenge of non-availability of personnel for implementation of various programmes at national, state and district levels.
- **Implementation:** The two-year Fellowship programme will be delivered by IIMB's Centre of Public Policy (CPP).
- CPP is an independent public interest-oriented policy think-tank engaged in research, teaching, training, and capacity-building.
- **Eligibility:** The person must be a citizen of India in the age group of 21-30 years and should possess a graduate degree from a recognised university.

Features of the programme:

- The programme will identify and train a group of young, committed and dynamic individuals who will use the IIMB ecosystem to work with the district administration in strengthening the process of skilling to create a vibrant local district economy.
- It will be launched on a pilot basis in 75 districts in 6 states including Gujarat, Karnataka, Meghalaya, Rajasthan, Uttar Pradesh and Uttarakhand.
- It has been designed under Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP).

Additional information:

About SANKALP:

- SANKALP is an outcome-oriented programme of Ministry of Skills Development & Entrepreneurship (MSDE) with a special focus on decentralised planning and quality improvement.
- The project is a Centrally Sponsored Scheme and is implemented in mission mode through World Bank support.
- The project aims to implement the mandate of the National Skill Development Mission (NSDM).
- The main objectives of SANKALP include (a) Institutional Strengthening (at National, State & District level) (b) Quality Assurance of skill development programs (c) Inclusion of marginalised population in skill development and (d) Expanding Skills through Public Private Partnerships (PPPs).

15. SURAKSHIT MATRITVA AASHWASAN (SUMAN) SCHEME

News: The Union Government has launched Surakshit Matritva Aashwasan (SUMAN) to provide quality healthcare at zero cost to pregnant women, new mothers and newborns.

Facts:

About SUMAN:

- The scheme aims to provide dignified and quality health care at no cost to every woman and newborn visiting a public health facility in order to bring down maternal and infant mortality rates in the country,

- Under the scheme, pregnant women, mothers up to 6 months after delivery and all sick newborns will be able to avail free healthcare benefits such as four antenatal check-ups and six home-based newborn care visits.
- The scheme will enable zero expense access to the identification and management of complications during and after the pregnancy.
- The government will also provide free transport from home to health institutions.
- The pregnant women will also have a zero-expense delivery and C-section facility in case of complications at public health facilities.
- The government will also provide free transport to pregnant women from home to the health facility and drop back after discharge (minimum 48 hrs).
- The scheme will ensure that there is zero-tolerance for denial of services to such patients.

Additional information:

Maternal mortality rate:

- Maternal mortality refers to the number of maternal deaths which occur due to pregnancy or as a result of a complication of the same.
- Maternal mortality rate (MMR) is taken as the number of recorded maternal deaths, for every 1 lakh live births.
- According to the government, India's maternal mortality rate has declined from 254 per 1,00,000 live births in 2004-06 to 130 in 2014-16.

Infant mortality rate:

- Infant mortality rate (IMR) is the number of deaths per 1,000 live births of children under one year of age.
- Between 2001 and 2016, the infant mortality rate has also come down from 66 per 1,000 live births to 34.

16. YUVA SAHAKAR-COOPERATIVE ENTERPRISE SUPPORT AND INNOVATION SCHEME

News: Yuva Sahakar scheme was launched at the opening ceremony of the first ever 'India International Cooperatives Trade Fair'.

Facts:

About Yuva Sahakar scheme:

- The scheme has been formulated by National Cooperative Development Corporation (NCDC).
- This scheme is launched to promote young entrepreneurs in the cooperatives.
- This scheme comes under the 'Ministry of Agriculture and Farmers Welfare'.

Objective:

- The objective of NCDC Yuva Sahakar Yojana is to motivate and promote the entrepreneurs of India in the Cooperative Enterprise and those individuals working for business.
- This is done by providing cheaper loans for initiating startups in the cooperative sectors.

Features of Yuva Sahakar Scheme:

- NCDC has produced a dedicated fund with entitling youth to avail the scheme.

- The scheme is linked with Rs 1000 crores of the Cooperative Start-up and Innovation Fund that has been authorised by the NCDC.
- The scheme provides more incentives to the cooperatives working in the North Eastern region and the aspirational districts.
- Exclusive benefits are also provided for women, Scheduled Caste and Scheduled Tribe candidates.
- The funding for the project will be up to 80% of the project cost for these special categories as against 70% for others.

Additional information:

About NCDC:

- National Cooperative Development Corporation (NCDC) was established by an Act of Parliament in 1963 as a statutory Corporation under Ministry of Agriculture & Farmers Welfare.
- It has many regional centres to provide financial assistance to Cooperatives or Societies or Federations.

17. SARAS AAJEEVIKA MELA:

News: Ministry of Rural Development is organising SARAS Aajeevika Mela at India Gate Lawns from 10th October to 23rd October, 2019.

Facts:

About Saras Aajeevika Mela:

- SARAS Aajeevika Mela is an initiative under Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY – NRLM).
- The Mela is organised by Council for Advancement of People's Action and Rural Technology (CAPART), the marketing arm of the Ministry of Rural development.
- The objective of the initiative is to bring the rural women SHGs – Self Help Groups under one platform.
- This is to help them showcase their skills, sell their products and build linkages with buyers.

Additional information:

About National Rural Livelihoods Mission (NRLM):

- Deendayal Antyodaya Yojana -National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India in 2011.
- The objective of the Mission is to promote sustainable livelihoods for the poor such that they come out of poverty.
- The institutions of the poor are intended to facilitate (a) access to formal credit (b) support for diversification and strengthening of livelihoods and (c) access to entitlements and public services.
- The mission is aided in part through investment support by the World Bank.
- The mission has set out with an agenda to cover 7 Crore rural poor households through self-managed Self-Help Groups (SHGs) and federated institutions and support them for livelihoods collectives in a period of 8-10 years.

18. JAL JEEVAN MISSION:

News: As part of the Jal Jeevan Mission, Rural households will get two to three hours of piped water supply and 14.6 crore such households will be provided piped water connection in the next five years. This was informed at a meeting of the group of State Governors.

Facts:**About Jal Jeevan Mission:**

- **Aim:** It seeks to provide safe and adequate drinking water through individual household tap connections (HarGharJal) to all rural households.
- **Implementing Agency:** It will be implemented by the Department of Drinking Water and Sanitation under the Jal Shakti Ministry.
- **Finance:**
 - The project is estimated to cost Rs 3.60 lakh crore, with the Union government and non-Northeast and non-Himalayan states sharing the expenses 50:50.
 - However, in the case of N-E and Himalayan states, the funding pattern will be 90:10.
 - In Union Territories, the Centre will bear the full cost of the programme
- **Features:**
 - It will focus on integrated demand and supply-side management of water at the local level.
 - It will implement source sustainability measures recharge and reuse through grey water management, water conservation, rain water harvesting.
 - It will converge with other Central and State Government Schemes to achieve its objectives of sustainable water supply management across India.
 - It seeks to generate maximum community participation in the form of 'jan andolan' to achieve the target of functional household tap connection by 2024.
- **Need:** According to the Jal Shakti Ministry, only 18% of India's rural households have access to piped water. Thus, to improve coverage of households with piped safe drinking water the mission has been initiated.

19. VAN DHAN INTERNSHIP PROGRAMME

News: Ministry of Tribal Affairs has launched Van Dhan Internship Programme.

Facts:**About Van Dhan Internship Programme**

- It is being organised by TRIFED under Ministry of Tribal Affairs.
- 18 interns (to be called Minister's interns) from some of the reputed Institutes of Rural Management/ Management Institutions/ Institutes of Social Work/ Social Services of the country are participating in the programme.
- The period of internship is 6 months (extendable depending upon the need of the organisation and mutual sustainability).
- Responsibilities of Interns
- Work with the team of TRIFED in various states and districts in tribal areas in the development of tribal welfare and inclusive growth.

- Support the TRIFED activities on livelihood promotion, value addition of NTFTs, marketing and credit linkages.
- Develop tools and techniques on institutional development including mechanism for determination of a just price or producer price of Minor Forest Products.

About Van Dhan Yojana:

- The Pradhan Mantri Van Dhan Yojana was launched in 2018. It is a scheme of Ministry of Tribal Affairs.
- **Aim:** It aims to help tribals in optimum utilization of natural resources and provide sustainable Minor Forest Produce (MFP)-based livelihood. It seeks to help increase tribal income through value addition of MFP centric products.
- **Implementation of the Scheme:**
 - The scheme is implemented through Ministry of Tribal Affairs as Nodal Department at the Central Level. TRIFED acts as the Nodal Agency at the National Level.
 - At State level, the State Nodal Agency for MFPs and the District collectors are envisaged to play a pivot role in scheme implementation at grassroot level.
 - Locally the Kendras are proposed to be managed by a Managing Committee (an SHG) consisting of representatives of Van Dhan SHGs in the cluster.
 - Under the scheme, Van Dhan Vikas Kendras are set up. These centres cater to 10 Self Help Groups of and each group consists of thirty tribal gatherers. They are trained and provided with working capital to add value to the products, which they collect from the jungle. The first Van Dhan Vikas Kendra was set up in Chattisgarh.
 - These SHGs can then market their products within and outside the States through retail network. Training and technical support is provided by TRIFED.

Additional Information:

Minor Forest Produce:

- Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 defines minor forest produce as all non-timber forest produce of plant origin.
- These include bamboo, brushwood, stumps, canes, cocoon, honey, waxes, Lac, tendu leaves, medicinal plants and herbs, roots, etc.
- Minor Forest Produce (MFP) is a major source of livelihood for tribals living in forest areas. Tribals derive 20-40% of their annual income from MFP on which they spend major portion of their time.

Tribal Cooperative Marketing Development Federation of India (TRIFED):

- It was established in 1987. It functions under the administrative control of Ministry of Tribal affairs.
- The basic objective of the TRIFED is to provide good price to the products made or collected from the forest by the tribal people

20. GOAL PROGRAM

News: Union Minister of Tribal Affairs has announced the second phase of programme GOAL (Going Online as Leaders) for tribal women.

Facts:**About the programme:**

- Going Online as Leaders (GOAL) is a digital skilling initiative launched by Facebook in March, 2019 for underprivileged tribal women.
- The program aims at inspiring, guiding and encouraging tribal girls from across India to become village-level digital young leaders for their communities.
- In order to become a beneficiary of the program the girls should be above 18 years of age and should have dropped out of school and should be of tribal origin.
- The initiative seeks to nurture and train young girls from India's tribal heartland across three core areas - digital literacy, life skills, leadership and entrepreneurship.
- The project also connects the women with senior experts in areas of business, fashion and arts to learn digital and life skills.

Second phase of the programme:

- In the second phase, the Facebook and Tribal ministry will partner to digitally mentor 5000 young women in India's tribal dominated districts.
- The program will include weekly one-to-one mentoring sessions. It will also focus on online safety, entrepreneurship among others.

Additional information:**About Tribal Population in India**

- As per the data of 2011 census about 104 million tribal people are living in India.
- Most of the tribal people are living in Jharkhand, Chhattisgarh, Andhra Pradesh, Odisha, West Bengal, Gujarat, Madhya Pradesh, Maharashtra, Andaman Nicobar Islands and some north-eastern states.

*Environment***1. ADVANCED AIR QUALITY EARLY WARNING SYSTEM**

News: The Union Ministry of Earth Sciences (MoES) has launched an advanced Air Quality Early Warning System which can predict places neighbouring Delhi that are likely to burn crop residue on a given day. It can also predict extreme air pollution events 72 hours in advance and give necessary alerts.

Facts:**About the advanced Air Quality Early Warning System:**

- It has been developed jointly by Indian Institute of Tropical Meteorology (IITM), Pune, Indian Meteorological Department and National Centre for Medium Range Weather Forecasting (NCMRWF).
- **Prediction of Stubble Burning Areas** - The system uses data of stubble burning incidents from the past 15 years to predict the date and place of the next burning. And thus, helps authorities to act in advance. It is the **first time** that stubble burning is being forecast (though there have been forecast models for forest fires).
 - **Probability Maps:** The system tries to learn how many times an area has burned on a day and the average gives it a probability of that happening again. Using this data, the system will create probability maps to alert government agencies about areas where the chances of stubble burning is going to be high.
- **Prediction of Extreme Air Pollution Events (in the next 72 hours) for the implementation of Graded Response Action Plan (GRAP)** - The system can track pollution load from stubble burning-as well as the particulate matter pollution from other sources.
- The warning system consists of -
 - **Real time observations** of air quality over Delhi region and details about natural aerosols like dust (from dust storms) and particulate matter using different **satellite** data sets
 - **Predictions of air pollutants** from two different air quality prediction systems based on state-of-the-art atmospheric chemistry transport models and
 - **Warning Messages** and Alerts and Bulletins.
- **Significance:** The system would help authorities to take preventive steps to control pollution levels from stubble burning as well as mitigate pollution from existing sources.

Additional Information:**Stubble Burning:**

- Stubble burning is the practice of intentionally setting fire to residues which remains after the harvest of a crop. It is usually done to clear the field quickly for the next season and to burn off weeds and other pests.
- Stubble burning is a pan-Indian problem. However, it is most acute in Punjab, Haryana and Western Uttar Pradesh. It contributes significantly to air pollution in Delhi-NCR region when in autumn, paddy stubbles are burned to prepare field for wheat cultivation.

- In 2013, the National Green Tribunal (NGT) issued a directive to Punjab, Haryana and Uttar Pradesh to take immediate steps to curb stubble burning. The Centre and states of Punjab, Haryana and Uttar Pradesh have declared “zero tolerance policy” on stubble burning.
- Further, in 2018, the Punjab government drafted an action plan to deal with stubble burning. Under the plan, the state has decided to provide straw management machinery at 80% subsidy to the cooperative societies and other groups and at 50% subsidy to individual farmers. The state has also signed MoUs with major companies to set up Bio-CNG, ethanol and biogas plants using crop residue.

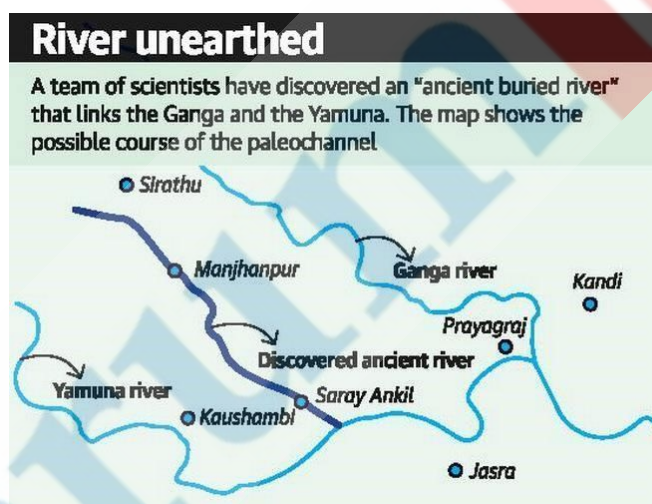
2. SCIENTISTS EXCAVATE ‘ANCIENT RIVER’ IN UTTAR PRADESH

News: The Jal Shakti Ministry has excavated an old, dried-up river in Prayagraj (formerly Allahabad) that linked the Ganga and Yamuna rivers.

Facts:

About the river:

- The paleochannel is around 4 km wide, 45 km long, consisted of a 15 metre-thick layer buried under soil.
- It joins the Yamuna River at Durgapur village, about 26 km south of the current Ganga-Yamuna confluence at Prayagraj.



Significance of the Discovery: It can be developed as a potential groundwater recharge source

Additional Information:

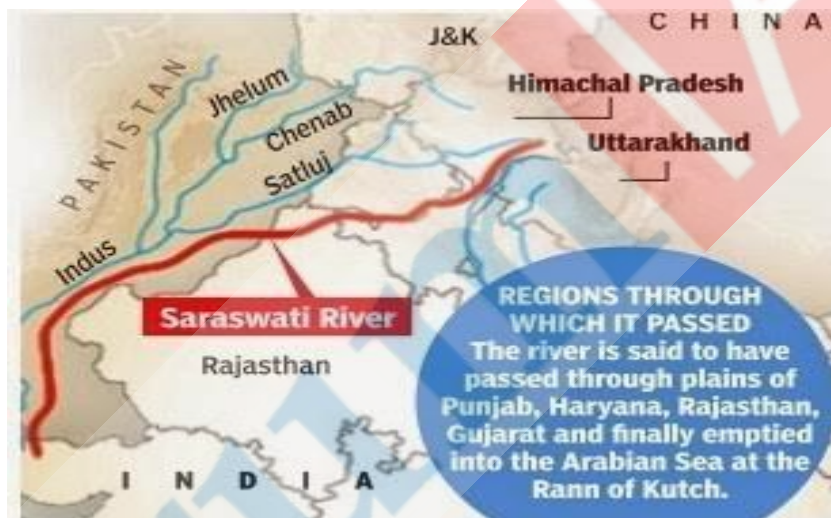
Paleochannel:

- A channel that is no longer part of an active river system and has ceased to be a conduit of water is commonly referred to as a palaeochannel.
- Some of the channels lie buried under the cover of younger sediments.
- They are parts of misfit rivers and streams representing channels abandoned by migrating rivers as they shift their courses and cut new ones.
- Palaeochannels are commonly occurring landforms in alluvial landscapes.
- **Economic significance:**
 - use in the exploration for freshwater resources, artificial recharge and storage of groundwater;

- they are of importance in the location and assessment of mineral deposits such as uraniferous ores, gold, silver and other placer deposits hosted in them

Paleochannels in India:

- The erstwhile Ministry of Water Resources had constituted a seven-member committee, headed by Professor K.S. Valdiya of the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR).
- The Committee submitted the “Report on Palaeo Channel of North West India: Review & Assessment” in 2016. The major findings were:
 - The banks of one of the misfit rivers, the Ghaggar-Hakra-Saraswati-Drishadvati, is associated with multiplicity of palaeochannels.
 - Evidence from palaeochannels suggest that the mythological Saraswati River did indeed exist. River Saraswati originated from Adibadri in Himalaya to culminate in the Arabian Sea through the Rann of Kutch. It was approximately 4000 km in length.



3. FAILURE OF MONSOON FORECAST IN INDIA

News: The Monsoon Mission Coupled Forecast Model, developed under the Monsoon Mission by IMD has **failed** to accurately forecast the excess rainfall in August-September 2019. **The monsoonal rain this year has been the highest in 25 years.**

Facts:

Monsoon Forecast in India:

- The IMD issues operational forecast for the southwest monsoon seasonal (June to September) rainfall for the country as a whole in two stages. The **first stage forecast is issued in April** and the **second stage forecast is issued in June**.
- These forecasts are prepared using state-of-the-art Statistical Ensemble Forecasting system (SEFS) and using the dynamic coupled Ocean-Atmosphere Global Climate Forecasting System (CFS) model known as the Monsoon Mission Coupled Forecasting System (MMCFS)

Statistical Ensemble Forecasting system (SEFS):

- IMD has been using the ensemble statistical model to predict monsoon since 2007.
- It relies on arriving at a prediction based on historical monsoon data coupled with data on sea-surface temperatures and winds.

Monsoon Mission Coupled Forecasting System (MMCFS):

- It has been developed by the National Centres for Environmental Prediction (NCEP) and NOAA National Weather Service, USA.
- It is a coupled ocean-atmosphere modelling system that combine data from ocean, atmosphere and land for providing long range forecasting.
- As part of the Monsoon Mission project, the Indian Institute of Tropical Meteorology (IITM) has developed the indigenous strategy of the model.

Additional Information:**IMD Forecast Failure -**

This year, IMD's CFS model predicted a 97 per cent of the normal, but the monsoon has brought 110 percent of rainfall.

So, Why IMD failed this year ? - There are two key reference points that the IMD missed in assessing the strength of monsoon.

1. One was the **Indian Ocean Dipole**, which gives an indication of the temperature condition for the sustenance of monsoon over mainland India. The readings were favourable at the end of July for a very strong monsoonal wind in August and September. But the IMD model failed to factor it in.
2. The other factor, was a weaker **El Nino** until almost the middle of August. This meant the temperature in the Indian Ocean towards the mainland India was higher. This translates into a stronger flow of monsoon over India

This year is not a singular year when the IMD has failed to predict monsoon correctly. Its record over the last few years has been dismal. The IMD has got a correct prediction only once since 2014 (in 2015).

National Monsoon Mission :

- The National Monsoon Mission was launched in 2012.
- It aims to develop a state-of-the-art dynamical prediction system for monsoon rainfall on different time scales.
- The mission falls under the aegis of Ministry of Earth Sciences.
- The responsibility of execution and coordination of the mission is bestowed upon the Indian Institute of Tropical Meteorology (IITM), Pune.

Climate Models :

- Climate models are computer programs made up of mathematical equations that quantitatively describe how factors like atmospheric temperature, air pressure, winds, water vapour and clouds respond to the heating of the Earth's surface.

- Coupled climate models have equations describing three-dimensional oceanic circulation (the large-scale movement of water across the Earth's oceanic basins), and how it transports the absorbed solar energy around the Earth, how it exchanges heat and moisture with the atmosphere.

Rainfall Distribution on All India Scale

- Normal percentage departure of realised rainfall is within $\pm 10\%$ of the Long Period Average (LPA)
- Below Normal percentage departure of realised rainfall is $< 10\%$ of the Long Period Average (LPA)
- Above Normal percentage departure of realised rainfall is $> 10\%$ of the Long Period Average (LPA)

Note: LPA is the 50-year average of monsoon rains in India and is pegged at 89 cm.

4. E-WASTE CLINIC IN MADHYA PRADESH

News: The Bhopal Municipal Corporation (BMC) and the Central Pollution Control Board (CPCB) have signed a MoU to set up India's first e-waste clinic in Bhopal.

Facts:

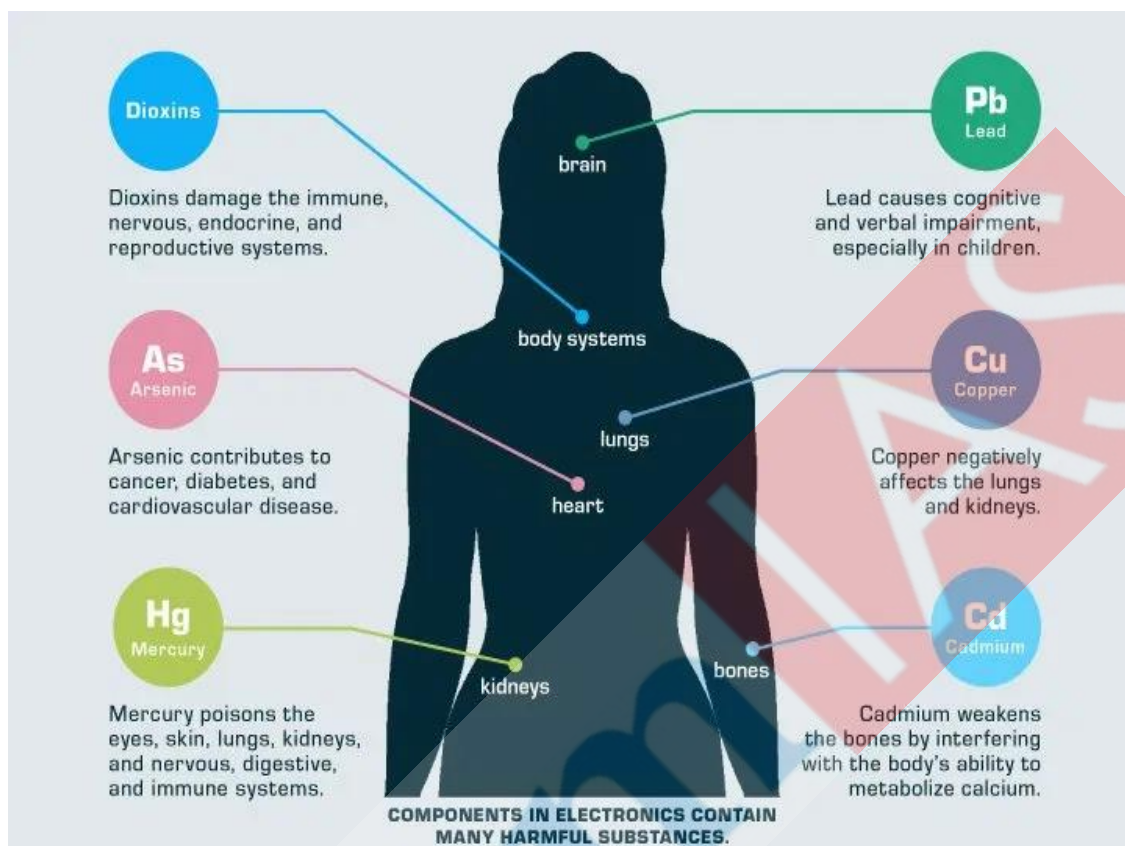
- The e-waste clinic would enable segregation, processing and disposal of waste from both household and commercial units.
- Electronic waste will be collected door-to-door or could be deposited directly at the clinic in exchange for a fee.
- Door-to-door collection will happen in two ways. Either separate carts for the collection of e-waste will be designed, or separate bins will be attached to existing ones meant for solid and wet waste.
- This e-waste clinic in Bhopal would be a 3-month pilot project, which, if successful, will be replicated everywhere in India.
- The clinic is being conceived in compliance with the Solid Waste Management Rules, 2016.

Additional Information:

E-waste:

- Electronic waste, or e-waste, is a term for electronic products that have become unwanted, obsolete, and have reached the end of their useful life.
- It refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use.

Health Hazards of e-waste :



Opportunities from E waste recycling -



E-Waste (Management) Rules, 2016:

- The rules extend to Producer, consumer, collection centre, dismantler and recycler manufacturer, dealer, refurbisher and Producer Responsibility Organization (PRO). **However**, micro and small industries are exempted.

- The applicability of the rules extends to various electronic equipment/products, components, consumables, spares and parts of EEE. Further, Compact Fluorescent Lamp (CFL) and other mercury containing lamp brought under the purview of rules.
- The Rules adopt **collection-based approach** to include collection centre, collection point, take back system etc for collection of e – waste by Producers under **Extended Producer Responsibility (EPR)**.

Solid Waste Management Rules, 2016:

- The Rules are applicable beyond Municipal areas and extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, airbase, Port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.
- The **source segregation** of waste is mandated to channelize the waste to wealth by recovery, reuse and recycle.
- Responsibilities of Generators is mandated to segregate waste **into three streams**:
 - Wet (Biodegradable),
 - Dry (Plastic, Paper, metal, wood, etc.) and
 - Domestic hazardous wastes (diapers, napkins, empty containers of cleaning agents, mosquito repellents, etc.)

5. GRADED RESPONSE ACTION PLAN (GRAP)

News: Starting October 15, some stricter measures to fight air pollution will come into force in Delhi's neighbourhood, as part of the Graded Response Action Plan (GRAP).

Facts:

- In pursuant with Supreme Court's order in the M. C. Mehta vs. Union of India (2016) regarding air quality in National Capital Region of Delhi, the Graded Response Action Plan was notified by MoEFCC in 2017.
- Graded Response Action Plan (GRAP) is a set of stratified actions that are taken once the pollution level reaches a certain specified limit. It works only as an emergency measure.
- Under GRAP, there are 4 stages of pollution – Moderate to Poor, Very Poor, Severe and Severe+ or Emergency and action are listed that need to be undertaken as the levels are breached. The categories have been made on the basis of PM 2.5 and PM 10 in the atmosphere.
- The GRAP is implemented by the Environment Pollution Control Authority (EPCA).

Additional Information:

EPCA:

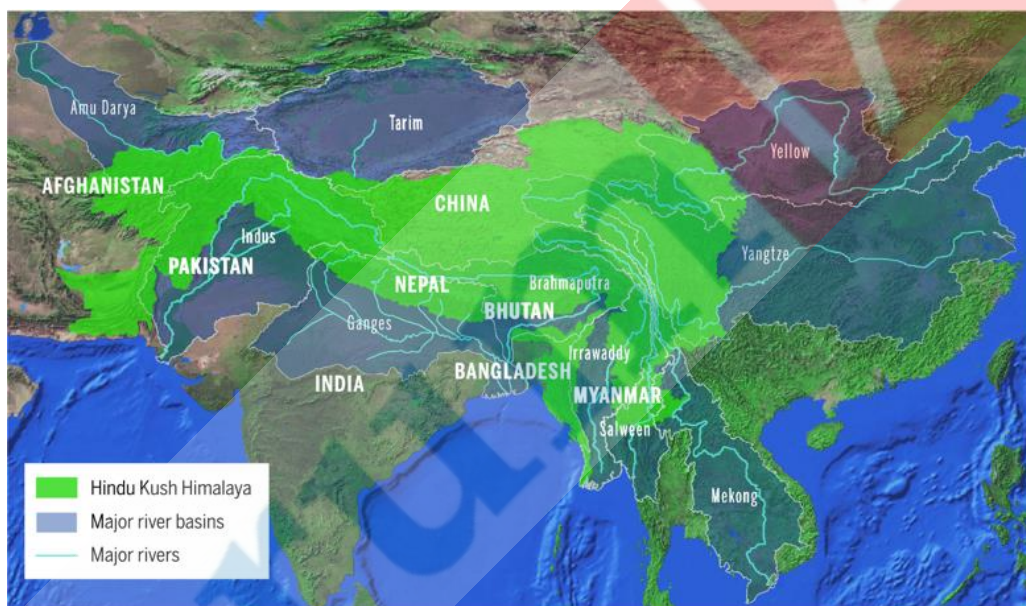
- It is a Supreme Court mandated body tasked with taking various measures to tackle air pollution in Delhi NCR.
- It was constituted in 1998 under the provisions of the Environment (Protection) Act, 1986.

6. HINDU KUSH MOUNTAINS:

News: India Meteorological Department (IMD) will collaborate with meteorological agencies in China and Pakistan, among others, to provide climate forecast services to countries in Hindu Kush Mountain region. The services will be under the World Meteorological Organisation (WMO).

Facts:

- The Hindu Kush and Himalayan Range (HKH) is famously known as the earth's "third pole" as it forms the largest area of permanent ice cover outside of the North and South Poles.
- The HKH region spans Afghanistan, Bangladesh, Bhutan, China, India, Kyrgyzstan, Mongolia, Myanmar, Nepal, Pakistan, Tajikistan, and Uzbekistan.
- It is the source of ten major rivers, and is particularly sensitive to climate change. According to Hindu Kush Himalaya Assessment, 36% of the glaciers in the Hindu Kush and Himalaya range (HKH) could melt by 2100 even if global temperature rise is limited to 1.5C above pre-industrial levels.



Additional Information:

World Meteorological Organization (WMO):

- It is an intergovernmental organization with a membership of 192 Member States and Territories. It is a specialized agency of the United Nations (UN) for meteorology, operational hydrology and related geophysical sciences.
- It was established by the ratification of the WMO Convention on 23 March 1950. It is headquartered at Geneva, Switzerland.
- It originated from the International Meteorological Organization (IMO), which was established after the 1873 Vienna International Meteorological Congress.

7. GANGETIC RIVER DOLPHIN

News: The annual Ganges river dolphin census was conducted.

Facts:**About Ganges River Dolphin Census:**

- It is undertaken by World Wide Fund for Nature-India in collaboration with the Uttar Pradesh Forest Department.
- It takes place along about 250-km-long riverine stretch of Upper Ganga between Hastinapur Wildlife Sanctuary and Narora Ramsar site.
- Unlike previous years, when direct counting method was used, this year the Tandem Boat Survey method is being used.

About Tandem Boat survey Method:

- The method has been developed by the renowned river and marine ecologist Gill Braulik.
- Under this method, the officials use two inflated boats which move in tandem to count the dolphins. After collating the data, statistical tools are employed to arrive at the final count.

About Gangetic Dolphin

- The Gangetic river dolphin inhabits the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- Being a mammal, the Ganges River dolphin cannot breathe in the water and must surface every 30-120 seconds. Because of the sound it produces when breathing, the animal is popularly referred to as the 'Susu'.
- It is among the four "**obligate**" freshwater dolphins. The other obligate freshwater dolphins are a) **Baiji** (likely extinct) found in Yangtze river in China, b) the **Bhulan** in Indus river of Pakistan and c) the **Boto** in Amazon river in Latin America.



- Gangetic River Dolphins are protected species under the **Schedule I** of the Indian Wildlife (Protection) Act, 1972. The government has also declared Gangetic Dolphin as the national aquatic animal.
- Gangetic dolphin is listed as **Endangered** in the IUCN Red List.

- The only dolphin sanctuary in India is the **Vikramshila Gangetic Dolphin Sanctuary** located in Bhagalpur District of Bihar.
- **Threats to Gangetic Dolphin** - A decline in population of Gangetic Dolphin has been seen in in Vikramshila Sanctuary.

Reasons -

- **Movement of big cargo vessels** in the river - due to their effective blindness, and dependence on echolocation, the Gangetic dolphins would suffer from the noise pollution created by large ship propellers
- **Dredging activities** - Dredging activity in the area has increased manifold in recent years because the current Indian government has declared the stretch of the Ganga from Varanasi to Haldia in West Bengal National Waterway Number 1
- Increasing **Pollution**, Human interference, Siltation and **Decreasing water flow** and water level in the river.

8. COALITION FOR DISASTER RESILIENT INFRASTRUCTURE

News: While speaking at the UN Secretary General's Climate Action Summit in New York on September 23, Prime Minister Narendra Modi had announced the launch of the Coalition for Disaster Resilient Infrastructure (CDRI)

Facts:

About Coalition for Disaster Resilient Infrastructure

- It is an international knowledge and capacity development platform where countries, United Nations (UN) agencies, multilateral development banks, the private sector, and academic institutions can collaborate to make existing and new infrastructure strong enough to withstand natural disasters.
- **Background:** The formation of the Coalition is the result of efforts by India and UNDRR, responding to Modi's call at the Asian Ministerial Conference on DRR (Mongolia, 2018) for action to reduce damage to critical infrastructure.
- **Aim:** To rapidly expand the development of resilient infrastructure and retrofit existing infrastructure for resilience, and to enable a measurable reduction in infrastructure losses. Also seeks to act as an intersection of the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement.
- **Objectives:**
 - identify and promote best practices,
 - provide access to capacity building,
 - Work towards standardisation of designs, processes and regulations relating to infrastructure creation and management.
 - Identify and estimate the risks to, and from, large infrastructure in the event of different kinds of disasters in member countries.
- CDRI secretariat will be set up in New Delhi, India. The National Disaster Management Authority (NDMA) is operating as the interim secretariat of CDRI as of now.

Additional information:

The Sendai Framework

- It is a 15-year, voluntary, non-binding agreement on disaster risk reduction.

- It was adopted in 2015 at the Third UN World Conference on Disaster Risk Reduction in Sendai City, Miyagi Prefecture, Japan.
- It is the successor instrument to the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.

The Paris agreement (2015)

- It is an international agreement with the framework of United Nations Framework Convention on Climate Change.
- It seeks to combat climate change and accelerate the actions and investments needed for a sustainable low carbon future.
- The Paris agreement aims to:
 - keep global temperature rise in the 21st century well below 2 degrees Celsius above pre-industrial levels and
 - pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius

SDGS and Disaster Resilience: SDG target 9.1 commits to developing sustainable and resilient infrastructure.

UNDRR:

- The UN Office for Disaster Risk Reduction (UNDRR) (formerly known as UNISDR) is the focal point of the United Nations system for disaster risk reduction and the custodian of the Sendai Framework.
- It was founded in 1999 and is headquartered in Geneva, Switzerland.

9. CLIMATE \VULNERABILITY MAP OF INDIA

News: Government is planning to develop a pan India climate vulnerability assessment map.

Facts:

Why Climate Vulnerability map?

- The map is being developed to prepare communities and people to meet the challenges arising out of climate.
- Such climate vulnerability atlas has already been developed for 12 states in the Indian Himalayan Region, using a common framework.
- The map is being developed under a joint project of the Department of Science and Technology (DST) under the Union Ministry of Science and Technology and Swiss Agency for Development and Cooperation (SDC).
- This research programme of DST is being implemented as part of the National Mission for Sustaining the Himalayan Ecosystem (NMSHE) and National Mission on Strategic Knowledge for Climate Change (NMSKCC).
- The atlas is expected to be ready by the middle of 2020.

Mapping method:

- The map for the Himalayan region was developed in consultation with the states. It has details up to the district level.
- The national map will also do the same as vulnerability within a state may differ from one region or district to another.

- A common set of indicators will be used for vulnerability profile and ranking of 650 districts all over the country.
- Among the priority areas identified for research are glaciology, climate modeling, urban climate, extreme events and Himalayan ecosystem studies among others.

Significance of the map:

- Climate risk is interplay of hazard, exposure and vulnerability. There is a rise in climate-sensitivity of livelihoods of people. Hence a methodology for assessing vulnerability is critical for comparison and for planning adaptation strategies.
- The map can also help reduce risk to climate change. It also helps in identifying what makes a state or district vulnerable to climate change.
- Further, the vulnerability assessments will also be useful for officials, decision makers, funding agencies and experts to have a common understanding on vulnerability and enable them to plan for adaptation.

Additional Information:

The National Mission for Sustaining the Himalayan Ecosystem (NMSHE):

It is one of the eight missions under the National Action Plan on Climate Change (NAPCC), 2008.

- It seeks to facilitate formulation of appropriate policy measures and time-bound action programmes to sustain ecological resilience and ensure the continued provisions of key ecosystem services in the Himalayas.
- The Mission covers 12 Himalayan states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam and West Bengal.
- It is implemented by Department of Science and Technology.

National Mission on Strategic Knowledge for Climate Change (NMSKCC).

- It is one of the eight missions under the National Action Plan on Climate Change (NAPCC).
- It seeks to build a dynamic and vibrant knowledge system that informs and supports national policy and action for responding effectively to climate change challenges, while not compromising on the nation's growth goals.
- It is implemented by Department of Science and Technology, Ministry of Science and Technology.

10. COLOMBO DECLARATION

News: The member states of the United Nations has endorsed a proposed road map for action on Nitrogen challenges called Colombo Declaration on **Sustainable Nitrogen Management**.

Facts:

About Colombo Declaration:

- The aim of the Colombo Declaration is to halve nitrogen waste by the year 2030.
- The Declaration was developed with technical support from International Nitrogen Management System (INMS).
- The declaration calls upon UN agencies, international organizations, development partners, philanthropic agencies, academic and civil society organizations to support its implementation.

- The event also endorsed the UN plans for a campaign called Nitrogen for Life. The campaign aims at sustainable management of Nitrogen.
- The campaign is based on the Sustainable Management Resolution that was adopted during the fourth session of the UN Environment Assembly that was held in Nairobi, Kenya in March, 2019.

Additional information:

About INMS:

- International Nitrogen Management System (INMS) is a joint activity of UNEP and International Nitrogen Initiative.
- It brings together the science community, the private sector and civil society to gather and synthesize evidence that can support international policy development to improve global nitrogen management.

About International Nitrogen Initiative:

- The International Nitrogen Initiative (INI) is an international program set up in 2003 under the sponsorship of the Scientific Committee on Problems of the Environment (SCOPE) and the International Geosphere-Biosphere Program (IGBP).
- The overall goal of the International Nitrogen Initiative is to optimize nitrogen's beneficial role in sustainable food production and minimize nitrogen's negative effects on human health and the environment resulting from food and energy production.

II. SENTINEL-3 WORLD FIRE ATLAS

News: According to the data from its Sentinel-3 World Fire Atlas, the European Space Agency (ESA) has announced that compared to August 2018, there were almost five times as many wildfires across the world in August 2019.

Facts:

Key takeaways from the study:

- The Copernicus Sentinel-3 mission has recorded 79,000 fires in August this year compared to just over 16,000 fires detected during the same period last year.
- The data revealed that 49% of the fires were detected in Asia, around 28% were detected in South America, 16% in Africa, and the remaining were recorded in North America, Europe and Oceania.

About Sentinel-3:

- Sentinel-3 is an Earth observation satellite constellation developed by the European Space Agency (ESA) as part of the Copernicus Programme.
- Sentinel-3 uses the satellite data to plot the number of fires occurring monthly.
- The sensors on satellites measure thermal infrared radiation to take the temperature of Earth's land surfaces. This information is used to detect and monitor the heat emitted by the fires.
- This data is important as fires have a significant impact on global atmospheric emissions with biomass burning contributing to the global budgets of greenhouse gases like carbon dioxide.

Additional information:**About Copernicus Programme:**

- It is headed by the European Commission (EC) in partnership with the European Space Agency (ESA).
- The programme aims to provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security.
- ESA is developing a new family of satellites called Sentinels specifically for the operational needs of the Copernicus programme.
- At present, three complete two-satellite constellations are in orbit plus an additional single satellite, Sentinel-5P.
- The Sentinels will provide a unique set of observations, starting with the all-weather, day and night radar images.

12. ODISHA INTEGRATED IRRIGATION PROJECT FOR CLIMATE RESILIENT AGRICULTURE

News: Government of India, Government of Odisha and the World Bank has signed a \$165 million loan agreement for the Odisha's Integrated Irrigation Project for Climate Resilient Agriculture.

Facts:**About the project:**

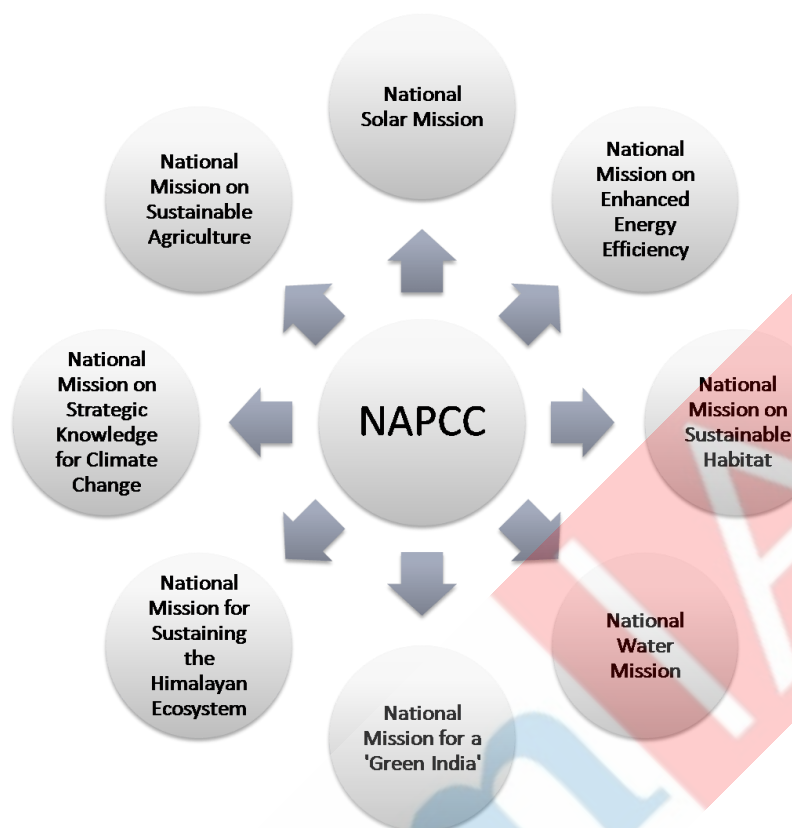
- The aim of the project is to strengthen the resilience of the small holder farmers against adverse climate.
- The project will be implemented in rural areas that are vulnerable to droughts and are largely dependent on rainfed agriculture.
- It will benefit around 125,000 smallholder farmers from 15 districts of Odisha.
- This project is under the National Action Plan on Climate Change (NAPCC) of the government so as to achieve the sustainable agriculture-related targets of the SDGs by 2030.

Objectives of the project:

- improve access to resilient seed varieties and diversify towards climate resilient crops.
- improve access to better water management and irrigation services.
- support farmers to reduce the current emphasis on food grains, especially paddy and wheat.
- provide marketing support to farmers who are able to generate a marketable surplus.
- support the rehabilitation of 532 water tanks thereby promoting productivity improvements at the farm level.

Additional information:**About NAPCC:**

- The National Action Plan on Climate Change (NAPCC) was launched in 2008 by the Prime Minister's Council on Climate Change.
- It aims at creating awareness among the representatives of the public, different agencies of the government, scientists, industry and the communities on the threat posed by climate change and the steps to counter it.
- There are 8 national missions which forms the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-



13. SNOW LEOPARD

News: At the session of Global Snow Leopard and Ecosystem Protection (GSLEP) programme, as many as 12 range countries have come together to begin a massive exercise to get the global count of Snow leopards. This will be the first ever survey by India to assess the population of Snow leopard.

Facts:

About Snow Leopard:

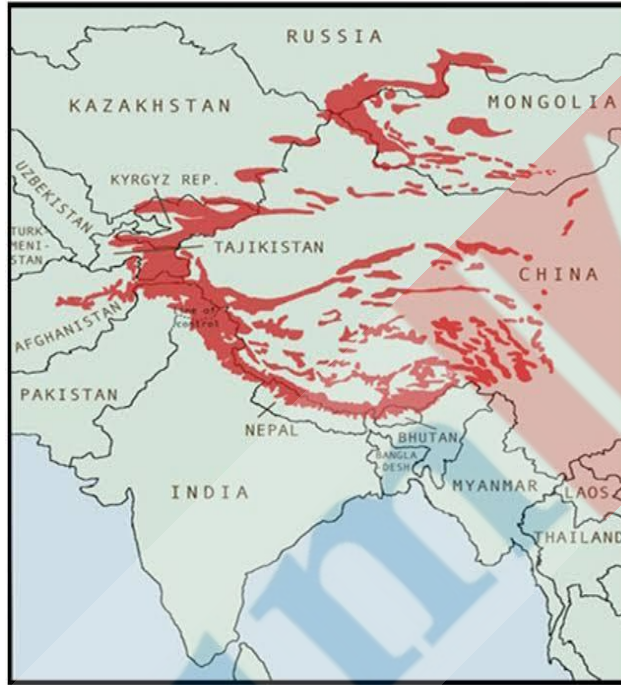


Features:

- Snow leopards (*Panthera uncial*) belong to the family of cats called Felidae.

Habitat:

- Snow leopards are found in 12 range countries namely Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan. China contains as much as 60% of all snow leopard habitat areas.



- The states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh constitute snow leopard Habitat range in India.
- In India, Snow Leopards are found in the **high-altitude areas** above the forested areas above 3000m.
- Further, they are also the State animal of Uttarakhand and the National Heritage Animal of Pakistan.

Conservation Status:

- Snow leopards are listed as **Vulnerable** on the IUCN Red List of Threatened Species.
- They are also listed on Appendix I of the Convention on International Trade of Endangered Species (CITES).
- Government of India has also identified the snow leopard as a flagship species for the high altitude Himalayas and is protected under Schedule I of the Wildlife (Protection) Act, 1972.

About Global Snow Leopard and Ecosystem Protection Programme:

- It is a joint initiative of range country governments, international agencies, civil society, and the private sector.
- Its goal is to secure the long-term survival of the snow leopard in its natural ecosystem.
- It also seeks to address high-mountain development issues using the conservation of the snow leopard as a flagship.

Additional Information:**Other Conservation Measures:**

- **Project snow leopard-** It is a centrally-supported programme launched in 2009 by the Government of India. It is aimed at conservation of the Snow leopard's species and its habitats.
- **Global Snow Leopard Forum-** It was formed in 2013 by 12 countries encompassing the snow leopard's range. The countries are Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan.
- **Bishkek Declaration-** The 12 range countries had signed the Bishkek Declaration to acknowledge that the snow leopard is an irreplaceable symbol of our nations' natural and cultural heritage and an indicator of the health and sustainability of mountain ecosystems.

14. LOTUS-HR

News: India and Netherlands has launched the second phase of the LOTUS-HR as a part of joint collaboration.

Facts:**About LOTUS-HR:**

- LOTUS-HR stands for Local Treatment of Urban Sewage streams for Healthy Reuse plant.
- The project was initiated in 2017. It aims to demonstrate a novel holistic waste-water management approach that will produce clean water that can be reused for various proposes.
- The project also aims to simultaneously recover nutrients and energy from the urban waste water thus converting drain into profitable mines.
- The project is jointly supported by Department of Biotechnology, Government of India and the Netherlands Organization for Scientific Research (STW), Government of the Netherlands.
- The location of the project is Barapullah drain systems, New Delhi. The partners in the project are IIT-Delhi and The Energy and Resources Institute (TERI).

Additional information:**About TERI:**

- The Energy and Resources Institute (TERI) is a non-profit research institute.
- It conducts research work in the fields of energy, environment and sustainable development for India and the Global South.
- It was established in 1974 as the Tata Energy Research Institute and renamed to The Energy Resources Institute in 2003.

15. C40 WORLD MAYORS SUMMIT

News: C40 World Mayors Summit was held at Copenhagen, Denmark

Facts:**Key Takeaways:****C40 Good Food Cities Declaration**

- It was signed by the mayors of Barcelona, Copenhagen, Guadalajara, Lima, London, Los Angeles, Milan, Oslo, Paris, Quezon City, Seoul, Stockholm, Tokyo and Toronto.

- As part of the declaration, mayors of these cities will work towards implementing a 'planetary health diet' for all by 2030. It will be balanced and nutritious food, based on the culture, geography, and demography of the cities.
- They will also change the food procurement policies to make healthy, delicious and low-carbon food affordable and accessible for all and also reduce food loss and waste by 50%.

Clean Air Cities Declaration

- It was signed by Mayors of 35 cities. **Delhi** is one of the signatories.
- They will implement radical clean air policies by 2025. Steps will include: like low- or zero-carbon public transport, zero-emissions zones, promoting cleaner fuels and air quality monitoring.

Additional Information:

C40

- C40 is a network of the world's megacities taking action to address climate change.
- It is a group of 94 cities around the world that represents one-twelfth of the world's population and one-quarter of the global economy.
- The summit was launched in London in 2005 when the then London Mayor convened representatives from 18 megacities.
- C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change.
- The aim of the summit is also to show how cities are delivering their strong commitments for healthier, sustainable, resilient and inclusive future.

16. CYCLONE KYARR

News: Cyclone Karr developed in the **Arabian Sea**.

Facts:

About Cyclone Kyarr:

- Cyclone Kyarr is a tropical cyclone that has intensified west of India in the Northern Indian Ocean's Arabian Sea.
- It is the second most intense super cyclonic storm on record in the Arabian Sea in the last 12 years.
- The only stronger storm on record in the Arabian Sea was 2007's Tropical Cyclone Gonu.

Additional information:

About Tropical Cyclones:

- Tropical cyclones are storms that originate and intensify over warm tropical oceans.
- They are intense low-pressure areas with very strong winds circulating around it in anti-clockwise direction in the Northern Hemisphere and clockwise in the Southern Hemisphere.
- The central calm region of the storm is called the "Eye". The Eye is surrounded by Eye wall which is the region with heaviest precipitation and strongest winds

Tropical Cyclones are known by different names in different regions:

- Cyclones in Indian Ocean
- Hurricanes in Atlantic

- Typhoons in Western Pacific in South China Sea
- Willy-Willies in Western Australia

Necessary Conditions for development of a tropical cyclone:

- Continuous supply of abundant warm and moist air
- Sea temperature in lower latitudes should be around 27°C
- A distance from the Equator is necessary, so that it allows the Coriolis Effect to deflect winds blowing toward the low-pressure centre. Tropical cyclones develop in inter-tropical convergence zone
- Pre-existence of weak tropical disturbances
- Presence of anticyclonic circulation at the height of 9 to 15km above the surface
- Low vertical wind shear between the surface and the upper troposphere. Vertical wind shear is the magnitude of wind change with height.

About India Meteorological Department (IMD):

- India Meteorological Department (IMD) was established in 1875. It is an agency of the Ministry of Earth Sciences of the Government of India.
- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.
- IMD ranks cyclones on a 5-point scale- a) Cyclonic storm, b) Severe cyclonic storm, c) Very severe cyclonic storm, d) Extremely Severe cyclonic storm and e) Super cyclonic storm.
- Cyclonic Storms have storm force wind speeds of between 62–88 km/h. Severe Cyclonic Storms have storm force wind speeds of between 89–117 km/h.
- Very Severe Cyclonic Storms have hurricane-force winds of 118–166 km/h. Super Cyclonic Storms have hurricane-force winds of above 222 km/h.

17. YOUTH CLIMATE CONCLAVE

News: The Delegation of European Union (EU) to India launched the Youth Climate Conclave.

Facts:

About the Youth Climate Conclave:

- The Youth Climate Conclave will be held as part of the World Sustainable Development Summit (WSDS) to be held in January 2020.
- The project is organised by the EU together with German development agency (GIZ), Energy and Resources Institute (TERI) and Council on Energy, Environment and Water (CEEW).
- The Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India is the nodal ministry for this conclave.
- The conclave will have sessions that involve informing youth about the key issues related to climate change mitigation and adaptation and agreement such as Paris Climate agreement will be explained.

About World Sustainable Development Summit (WSDS):

- The World Sustainable Development Summit is the annual flagship event of The Energy and Resources Institute (TERI).
- It is the sole Summit on global issues taking place in the developing world.

- It provides a platform for global leaders and practitioners to discuss and deliberate over climatic issues of universal importance.
- It strives to provide long-term solutions for the benefit of the global community by assembling the world's most enlightened leaders and thinkers on a single platform.
- It is continuing the legacy of Delhi Sustainable Development Summit (DSDS) which was initiated in 2001 with the aim of making 'sustainable development' a globally shared goal.
- The theme for WSDS 2020 is **Towards 2030: Making the Decade Count.**

Additional information:

About TERI:

- The Energy and Resources Institute (TERI) is a non-profit research institute.
- It conducts research work in the fields of energy, environment and sustainable development for India and the Global South.
- It was established in 1974 as the Tata Energy Research Institute and renamed to The Energy Resources Institute in 2003.

About CEEW:

- The Council on Energy, Environment and Water (CEEW) is a Delhi-based not-for-profit policy research institution. It was founded in 2010.
- The research areas of CEEW include (a) resource efficiency and security (b) water resources (c) renewable energy and (d) sustainability finance among others.
- The think-tank also advises the Indian government on the above research areas.

18. WILDLIFE WEEK INDIA

News: The Forest department organised an awareness rally to launch Wildlife Week India.

Facts:

About Wildlife week:

- The Wildlife Week is celebrated all over the country every year between 2nd October and 8th October.
- The aim of this week is to preserve animal life in India.
- The event is organized by National Board of Wildlife since its establishment in 1972.
- The theme of this year's event is "**Life Below Water: For people and planet**".
- The events are organized to teach people about animal life and encourage them to save a large number of animals by not killing them for food and other purposes.

Additional information:

About National Board of Wildlife:

- The NBWL has been constituted under the Wildlife Protection Act, 1972.
- NBWL advises the government on policy and strategy for wildlife conservation.
- It also reviews proposals for non-forestry use of forestland within National Parks and Wildlife Sanctuaries and issue or deny permissions.
- The NBWL is chaired by the Prime Minister. It also comprises of a Standing Committee headed by Union Environment Minister.

- The Wildlife Protection Act, 1972 specifies that the committee should comprise of 10 eminent ecologists and five NGOs. The committee considers the merits of projects that come to it for scrutiny.

19. WORLD HABITAT DAY

News: World Habitat Day was celebrated on October 7, 2019.

Facts:

About World Habitat Day:

- The United Nations has designated the first Monday of October every year as World Habitat Day.
- The theme for World Habitat Day 2019 is “**Frontier Technologies as an Innovative Tool to Transform Waste to Wealth**”.
- The focus of this year’s theme is to promote the contribution of innovative technologies to sustainable waste management to achieve Sustainable Development Goal 11.
- Sustainable Development Goal 11 aims to make cities more inclusive, safe, resilient and sustainable.
- The event also focuses on the state of human settlements and people’s right to sufficient shelter.
- It also aims to remind people that they are responsible for the habitat of future generations.

Additional information:

Frontier Technologies:

- The Frontier technologies include robotics, automation, renewable energy technologies, Artificial Intelligence among others.
- These types of technologies offer potential for cheaper, faster, scalable and easy to use solutions for everyday problems.

1. COSMIC WEB

News: The cosmic web was imaged on a large scale for the first time. The study has been published in the journal *Science*.

Facts:

Cosmic Web:

- Galaxies across the universe are connected by a complex structure made up of filaments of dark matter and sheets of hydrogen gas. The network connecting these intergalactic filaments is known as cosmic web.
- The existence of the cosmic web is central to current theories of how galaxies first formed following the big bang, however, evidence for it had remained largely theoretical.
- The recent observations of the cosmic web support the **cold dark matter theory** of galaxy formation.

Cold Dark Matter Theory:

- The theory suggests that hydrogen gas created in the big bang collapses first into sheets and then into filaments strung out across space.
- In places where filaments cross or are clustered together, galaxies form and the filaments continue to fuel the growth of galaxies by feeding them a steady stream of gas.

Additional Information

Dark Matter:

- Dark matter is a form of matter thought to account for approximately 85% of the matter in the universe and about 25% of its total energy density.
- Most dark matter is thought to be **non-baryonic*** (not composed primarily of baryons- protons, neutrons and all the objects composed of them) in nature, possibly being composed of some as-yet undiscovered subatomic particles.
- Dark matter **only** interacts through gravity and the weak atomic force. It does not interact via either the strong atomic force or electromagnetic force hence dark matter cannot be seen and is hard to detect.

* Ordinary matter and anti-matter are known as baryonic matter. Dark matter is known as non-baryonic matter.

2. GEOTAIL

News: CLASS, an instrument on Chandrayaan 2 had detected charged particles during the mission. This happened during the orbiter's passage through the "geotail".

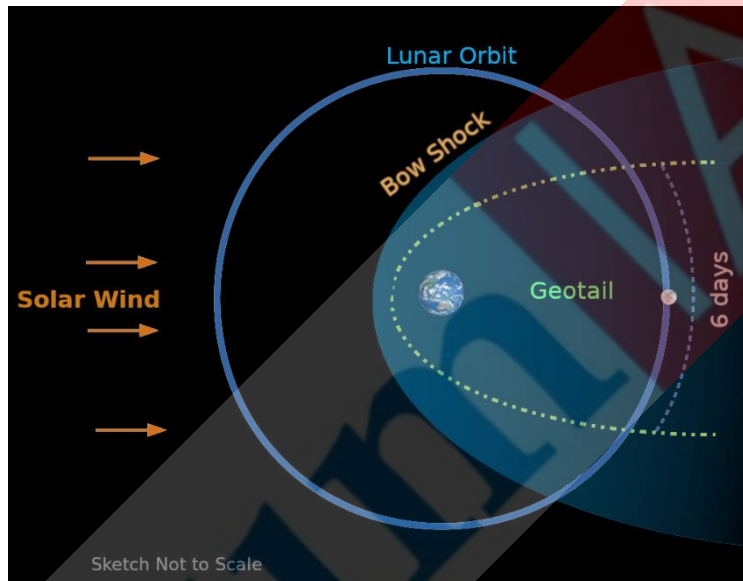
Facts:

Geotail:

- The geotail is a region in space that exists as a result of the interactions between the Sun and Earth.
- Geotail provides information about the way the magnetic envelope surrounding Earth, called the magnetosphere, responds to incoming material and energy from the Sun.

Formation of Geotail:

- The Sun emits the solar wind, which is a continuous stream of charged particles. These particles are embedded in the extended magnetic field of the Sun.
- Since the Earth has a magnetic field, it obstructs the solar wind plasma. This interaction results in the formation of a magnetic envelope around Earth, called the magnetosphere.
- On the Earth side facing the Sun, the envelope is compressed into a region that is approximately three to four times the Earth radius.
- On the opposite side, the envelope is stretched into a long tail, which extends beyond the orbit of the Moon. This tail is called the geotail. Approximately once every 29 days, Moon traverses the geotail for about 6 days centered around full moon.

**Additional Information:****Chandrayaan 2:**

- Chandrayaan-2 was India's second unmanned lunar mission after Chandrayaan-1. It was the 1st Indian expedition to attempt a soft landing on the moon with indigenous technology. However, the mission was unsuccessful in soft landing on the moon.
- The main aim of the Chandrayaan-2 mission was to conduct a detailed study of moon for a better understanding of its origin and evolution.
- The Chandrayaan – 2 comprises of an a) Orbiter, b) Lander named 'Vikram' and c) Rover named 'Pragyan'.
- The Chandrayaan-2 mission carried 13 payloads. The Orbiter carries 8 payloads.
- **Chandrayaan-2 Large Area Soft X-Ray Spectrometer (CLASS)** is one of the payloads in the Orbiter. It seeks to examine the presence of major elements such as magnesium, calcium, iron, titanium etc. in the lunar soil.

3. MOSAiC MISSION

News: Polar Researcher Vishnu Nandan will be the only Indian among 300 scientists from across the world aboard the MOSAiC Expedition.

Facts:

- MOSAiC stands for **Multidisciplinary drifting Observatory for the Study of Arctic Climate**. It is the **largest ever Arctic expedition** in history, and will be the first year-round expedition into the central Arctic exploring the Arctic climate system.
- The project has been designed by an international consortium of leading polar research institutions, led by the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI).
- The backbone of MOSAiC is the year-round operation of **RV Polarstern** (a polar research ship). It has already started drifting across the central Arctic since September 2019.
- The objective of the MOSAiC mission is to **study the impact of climate change on the Arctic and how it could affect the rest of the world**.

4. MICROBIAL FUEL CELLS

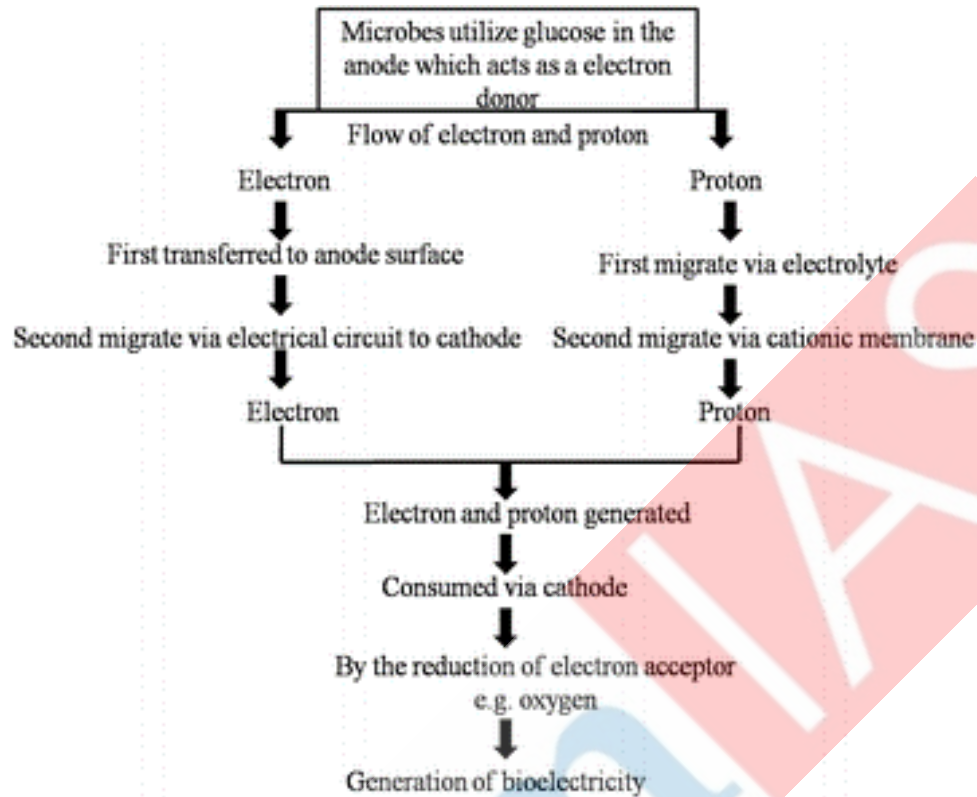
News: At the London Zoo, a fern has started taking its own selfies. This was achieved by installing microbial fuel cells.

Facts:

Definition: Microbial fuel cells (MFCs) are bio-electrochemical devices that use respiring microbes as the catalysts **to convert organic substrates directly into electrical energy**. The idea of using microbes to produce electricity was conceived by M. C. Potter in early 20th century.

Process:

- Generally, MFC consists of anode and cathode compartments, which are separated by a cationic membrane.
- Microbes reside in the anode compartment, where they metabolize organic compounds such as glucose which act as electron donor. The metabolism of these organic compounds generates electrons and protons.
- Electrons are then transferred to the anode surface. From anode, the electrons move to the cathode through the electrical circuit, while the protons migrate through the electrolyte and then through the cationic membrane.
- Electrons and protons are consumed in the cathode by reduction of soluble electron acceptor, such as oxygen or hexacyanoferrate and acidic permanganate. Electrical power is harnessed by placing a load between the two electrode compartments.



Applications of MFCs:

- Production of low-cost electricity from waste materials.
- Can be used as an alternate method for bioremediation.
- Can act as a biosensor-can measure the solute concentration of wastewater.
- Can be used in waste-water treatment.

5. EDGE COMPUTING

News: Recently, American tech company, Nvidia, has announced its Edge Computing Platform to help telecom operators adopt 5G networks capable of supporting edge workloads.

Facts:

About Edge Computing:

- Edge computing is the practice of processing data near the edge of the network, where the data is being generated, instead of in a centralised data-processing warehouse. For internet devices, the network edge is where the device, or the local network containing the device, communicates with the Internet.

Key benefits of Edge computing:

- Decreased latency and real-time or near **real-time data analysis** as the data is analyzed at the local device level, not in a distant data center or cloud;
- **Lower operating costs** due to the smaller operational and data management expenses of local devices vs. clouds and data centers;

- Reduced network traffic because less data is transmitted from local devices via a network to a data center or cloud, thereby **reducing network traffic bottlenecks**
- **Increased security** as edge computing distributes processing, storage, and applications across a wide range of devices and data centers, which makes it difficult for any single disruption to affect the network.

Additional Information:

Cloud Computing:

- Cloud computing is the delivery of different services through the Internet, including data storage, servers, databases, networking, and software. It is done by using a network of remote servers hosted on the Internet rather than a local server or a personal computer.

Difference between Cloud Computing and Edge Computing:

Parameters	Cloud Computing	Edge Computing
Architecture	Central Processing based model	Distributed/ Decentralised
Service location	Within the Internet	In edge network
Latency	High	Low
Service Scope	Global	Limited/ Local

6. GOOGLE ACHIEVES QUANTUM SUPREMACY

News: Google has claimed that its quantum computer named **Sycamore**, has completed a task in 200 seconds that would have been accomplished in 10,000 years by the world's fastest supercomputer named Summit.

Facts:

About Quantum Supremacy:

- The phrase quantum supremacy was coined in 2011 by John Preskill, Professor of Theoretical Physics at the California Institute of Technology.
- Quantum supremacy refers to quantum computers being able to solve a problem that a classical computer cannot.
- It uses the principles of quantum mechanics so that they can easily tackle computational problems that are beyond the scope for the classical computer.

Quantum computing and Traditional Computing:

- The quantum computing differs from a traditional computing in the way the two-store information.
- The traditional computer stores information in the form of binary bits that can process either '1' or a '0' at a time.
- On the other hand, Quantum computers compute in **qubits or quantum bits** which means it can be put into a quantum state where they can simultaneously represent both 0 and 1.

Additional Information:**Quantum Physics**

- Quantum physics is the study of matter and energy at its most fundamental level. A central tenet of quantum physics is that energy comes in indivisible packets called quanta.
- Unlike classical physics, in which an object can exist in one place at one time, quantum physics looks at the probabilities of an object being at different points.
- Existence of multiple states at the same time is called **Superposition**, and the relationships among these states is called **Entanglement**.

7. INDIGEN GENOME PROJECT

News: The Council of Scientific and Industrial Research (CSIR) recently announced the conclusion of a six-month exercise (from April 2019)- IndiGen Genome project.

Facts:**Additional Information:****About IndiGen Genome Project:**

- The initiative was undertaken by CSIR in April 2019, which was implemented by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi and CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad.
- Under the initiative, CSIR conducted whole **Genome Sequencing** of 1,008 Indians from different populations across India.
- The project also aims to enable genetic epidemiology and develop public health technologies applications using population genome data.

Significance of the initiative:

- The genomic data will help scientists understand genetic diversity of the Indian population and make available genetic variant frequencies for clinical applications.
- The outcomes of the project will also find applications in a number of areas, including faster and efficient **diagnosis of rare genetic disease**.
- The project will also lead to cost-effective genetic tests enabling efficient **diagnosis of heritable cancers** and pharmacogenetic tests to **prevent adverse drug reactions**

Additional Information:**Genome Sequencing:**

- A genome is a person's complete set of deoxyribonucleic acid or DNA, including all genes with more than 3 billion DNA base pairs.
- **Genome sequencing** means determining the order of the four chemical building blocks – called “bases” – that make up the DNA molecule.
- Genome sequencing helps to understand how genes work together to direct the growth, development and maintenance of an organism. It helps to determine unique genetic traits, susceptibility and resilience to diseases.

Important Genome Sequencing Initiatives:**EarthBio Genome Project:**

- It is a network of partner organizations and affiliated projects that have a common goal of sequencing and annotating the genomes of all 1.5 million known species of eukaryotes on the planet in 10 years.
- It aims to create a digital backbone of sequences from the tree of life that will serve as critical infrastructure for biology, conservation, agriculture, medicine, and the growing global bioeconomy.

Human Genome Project:

- It was the international, collaborative research effort to determine the DNA sequence of the entire human genome.
- It began formally in 1990 and ended in 2003. The project was coordinated by the U.S. Department of Energy (DOE) and the National Institutes of Health.

100k GenomeAsia project

- The project is led out of the Nanyang Technological University (NTU), Singapore, to sequence the whole genomes of 100k Asians, including 50,000 Indians.

8. TECHSAGAR

News: The National Cyber Security Coordinator's office in partnership with Data Security Council (DSCI) of India has launched TechSagar.

Facts:**About TechSagar**

- TechSagar is a platform to discover India's technological capability through a portal. It is a consolidated and comprehensive **repository of India's cyber tech capabilities**.
- The portal will list business and research entities from the IT industry, startups, academia, and individual researchers.
- It will provide insights about capabilities of the Indian Industry across 25 technology areas like internet of things (IoT), Artificial Intelligence (AI), Machine Learning (ML) among others.
- The portal will also allow targeted search, granular navigation and drill down methods using more than 3000 niche capabilities.
- Further, the portal will be frequently updated with new entities and information to maintain its relevance and usefulness.

Additional Information:**About Data Security Council (DSCI) of India:**

- Data Security Council of India (DSCI), is a not-for-profit, industry body setup by NASSCOM for data protection in India,
- DSCI aims to make cyberspace safe, secure and trusted by establishing best practices, standards and initiatives in cyber security and privacy.
- It engages with governments and their agencies, regulators, industry sectors, industry associations and think tanks for policy advocacy, thought leadership, capacity building and outreach activities.

About NASSCOM:

- The National Association of Software and Services Companies (NASSCOM) is a trade association of Indian Information Technology (IT) and Business Process Outsourcing (BPO) industry.
- It was established in 1988. It is a not-for-profit organization.

About National Cyber Security Coordinator

- The Prime Minister's Office created the position of the National Cyber Security Coordinator in 2014. It functions under the National Security Council Secretariat (NSCS)
- The NCSC office coordinates with different agencies at the national level for cyber security matters.

9. SATURN OVERTAKES JUPITER AS THE PLANET WITH THE MOST MOONS

News: Saturn has overtaken Jupiter as the planet with the most number of moons.

Facts:

- The discovery of 20 new moons of Saturn has made Saturn the planet with the highest number of moons (82) against 79 moons of Jupiter.
- The moons were discovered using the Subaru telescope on Mauna Kea, Hawaii.
- The discovery have been released by the International Astronomical Union's Minor Planet Centre.
- Out of the 20 moons discovered, 17 of them orbit Saturn backwards. This is known as a retrograde direction.
- The other three moons orbit in a prograde direction which is the same direction as Saturn rotates.

About moons in the Solar system:

- A count of the moons listed on the NASA website shows that our Solar System's planets together have 205 confirmed moons now.
- Saturn and Jupiter with 161 between them accounts for nearly 80% of these.
- Another 20% are orbiting Uranus (27) and Neptune (14). Of the remaining three moons, one is Earth's own while the other two are with Mars.

Why Mercury and Venus does not have a moon?

- Mercury is so close to the Sun and its gravity that it wouldn't be able to hold on to its own moon. Any moon would most likely crash into Mercury or maybe go into orbit around the Sun and eventually get pulled into it.
- However, it is not yet clear why Venus does not have a moon.

Additional information:**Subaru Telescope:**

- Subaru Telescope is the telescope of the National Astronomical Observatory of Japan.
- It is located at the Mauna Kea Observatory in Hawaii.

International Astronomical Union:

- It is an international association of professional astronomers.

- Its mission is to promote and safeguard the science of astronomy in all its aspects, including research, communication, education and development, through international cooperation.
- It was founded in 1919. It is headquartered in Paris, France.


10. GEMINI

News: Union Minister for Earth Sciences launched the Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI) device.

Facts:

About GEMINI:

- GEMINI stands for **Gagan Enabled Mariner's Instrument for Navigation and Information**.
- The device has been developed by Indian National Centre for Ocean Information Services (INCOIS) and Airports Authority of India (AAI).
- It is electronically designed and manufactured by a private industry M/S Acord, Bangalore under Make in India Program.
- The device will disseminate information about emergency situations, communication on disaster warnings, potential fishing zones and ocean states forecasts to the fishermen.
- The device is exclusively designed for fishermen about disasters when they are 10 to 12 km away from the coast.
- The GEMINI device receives and transfers the data received from GAGAN satellite to a mobile through Bluetooth communication.
- A mobile application developed by INCOIS decodes and displays the information in nine regional languages.

SAFE AT SEA	
<p>HOW IT WORKS</p> <ul style="list-style-type: none"> > Gemini, a soap-box size device fitted to fishing boats, will have a receiver > Servers in INCOIS, Hyderabad, will receive data on various ocean parameters including sea surface temperature, currents and wind speed and direction > A suite of numerical models is run to generate forecast on daily weather, disaster warning for cyclone and tsunami and potential fishing zones (PFZ) > The forecast is transmitted to Gemini device receiver through Gagan (GPS Aided Geo Augmented Navigation) satellite system, linked to GSAT-8, GSAT-10 and GSAT-15 	<p>Gagan is used by Airports Authority of India for aircraft landing and takeoff. INCOIS has tied up with AAI to use the technology for its Gemini device</p> 
	<ul style="list-style-type: none"> > Gemini sends the information to a mobile application downloaded by fishermen through Bluetooth, in all regional languages > PFZ forecast is sent three days in advance and alerts on weather systems are sent once every hour

Additional information:**About GAGAN:**

- GPS Aided GEO Augmented Navigation (GAGAN) is a step by the Indian Government towards initial Satellite-based Navigation Services in India.
- It is a system to improve the accuracy of a global navigation satellite system (GNSS) receiver by providing reference signals.
- The Airports Authority of India (AAI) and Indian Space Research Organization (ISRO) have collaborated to develop GAGAN as a regional Satellite Based Augmentation System (SBAS).
- GAGAN's goal is to provide a navigation system to assist aircraft in accurate landing over the Indian airspace and in the adjoining area and applicable to safety-to-life civil operations.
- GAGAN covers the area from Africa to Australia and has expansion capability for seamless navigation services across the region.

Indian National Centre for Ocean Information Services (INCOIS):

- INCOIS is an autonomous organization under the Ministry of Earth Sciences (MoES).
- It is located in Hyderabad & was established in 1999 under the MoES and is a unit of the Earth System Science Organization (ESSO).
- It is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community.

Airport authority of India (AAI):

- The Airports Authority of India or AAI is a statutory body (created through the Airports Authority of India Act, 1994) working under the Ministry of Civil Aviation.
- It is responsible for creating, upgrading, maintaining and managing civil aviation infrastructure in India.
- It provides Communication Navigation Surveillance / Air Traffic Management (CNS/ATM) services over Indian airspace and adjoining oceanic areas.

II. GUIDELINES FOR EVALUATION OF NANOPHARMACEUTICALS IN INDIA.

News: Union Minister for Science & Technology has released the Guidelines for Evaluation of Nanopharmaceuticals in India.

Facts:**Guidelines on Nanopharmaceuticals:**

- **Aim:** to provide transparent, consistent and predictable regulatory pathways for nanopharmaceuticals in India.
- The Guidelines have been developed by the Department of Biotechnology (DBT), Ministry of Science and Technology, Indian Council of Medical Research (ICMR) and Central Drugs Standard Control Organization (CDSCO), Ministry of Health and Family Welfare
- It has been prepared in line with the provisions of Schedule Y of Drugs and Cosmetics Rules, 1945 as well as Second Schedule of the New Drugs and Clinical Trials Rules, 2019 with specific requirements for nanopharmaceuticals.

- The guidelines apply to the nanopharmaceuticals in the form of finished formulation. It also applies to Active Pharmaceutical Ingredient (API) of a new molecule or an already approved molecule with altered nanoscale dimensions, properties or phenomenon associated with the application of nanotechnology

Key points of the Guidelines:

- The impact of nano material waste disposal on environment should be declared.
- The stability testing for Nanoformulations should focus on functionality, integrity, size range of nanopharmaceuticals.
- It makes it compulsory for the pharma companies to present the data on how the plasma, off-target tissue and disease sites are affected by repeated dosing.
- It provides guidelines for animal toxicology data. It allows the toxicology studies to be performed only on rodent species and dogs in both sexes.

Significance of the guidelines:

- The guidelines will help to facilitate research in line with the regulatory requirements.
- It will help in making decision in clearing new products based on nanotechnology and would also help in attracting new private investments.
- It will help to initiate activities for developing safety guidelines for other domains like agri-inputs, cosmetics, implantable devices.

Additional Information:

What are Nanopharmaceuticals?

- A nanopharmaceutical is defined as a pharmaceutical preparation containing nanomaterials intended for internal use or external application on human for the purpose of therapeutics, diagnostics and health benefits.
- The nanomaterial is generally defined as material having particle size in the range of 1 to 100 nm in at least one dimension.

12. WORLD INTELLECTUAL PROPERTY INDICATORS 2019

News: World Intellectual Property Organization (WIPO) has released the World Intellectual Property Indicators 2019.

Facts:

WIPO's World Intellectual Property Indicators provides a wide range of indicators covering the following areas of intellectual property: Patents, Utility models, Trademarks, Industrial Designs, Microorganisms and Plant Variety Protection.

It draws on data from national and regional IP offices, WIPO and the World Bank.

Key takeaways from the report:

- In 2018, patent filings around the world exceeded by around 3.3 million, representing a 5.2% growth over 2017 figures.
- The global growth in IP filings was driven by China which accounted for over 50% of IP filings including patents, trademarks and design.

- The US was ranked second as it witnessed a 1.6% fall in patent filings, which is the first decline for the country in the previous decade.
- **India was among the top ten countries** of the total (resident and abroad) Intellectual Property (IP) filing activity by origin.
- In India, there was a large increase in the number of filings with respect to
 - Trademark filing activity (+20.9%),
 - Patent filings (+7.5%), and
 - Industrial design filing activity (+13.6%), marking almost double-digit growth in 2018. For India, this was the third successive year of double-digit growth.

Additional information:

About Intellectual Property:

- Intellectual Property rights (IPR) provide certain exclusive rights to the inventors or creators of that property in order to enable them to reap commercial benefits from their creative efforts or reputation.
- The main social purpose of protection of copyright and related rights is to encourage and reward creative work.

Types of Intellectual Property:

- **Copyright:** It covers literary works such as novels, poems and plays), films, music, artistic works and architectural design.
- **Trademark:** Trademark is a word, or symbol, or phrase, or design, or any combination of these, which identifies and distinguishes the source or origin of a product or service.
- **Patents:** Patents are exclusive rights granted by the Government to a company/individual for an invention. Patents are time bound.
- **Industrial Design:** It constitutes the ornamental or aesthetic aspect of an article. It may consist of three-dimensional features such as the shape of an article or two-dimensional features.
- **Geographical Indication:** A geographical indication is a sign used on goods that have a specific geographical origin and possess qualities or a reputation due to that place of origin.

About WIPO:

- WIPO is the global forum for intellectual property (IP) services, policy, information and cooperation.
- It is a self-funding agency of the United Nations with 192 member states.
- It's mandate governing bodies and procedures are set out in the WIPO Convention which had established WIPO in 1967.
- It's aim is to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all.

13. DPIIT LAUNCHES WEBSITE AND MOBILE APP FOR IPR

News: Department for Promotion of Industry and Internal Trade (DPIIT) has launched the website and mobile application **L2Pro India** on Intellectual Property Rights (IPRs).

Facts:**About L2Pro:**

- L2 Pro stands for Learn to Protect, Secure and Maximize Your Innovation.
- The website and app, designed to serve as an **e-learning platform**, have been developed by Cell for IPR Promotion and Management (CIPAM) in collaboration with Qualcomm and National Law University (NLU), Delhi.
- The e-learning platform will enable youth, innovators, entrepreneurs and small and medium industries (SMEs) in understanding IPRs for their ownership and protection, integrate IP into business models and obtain value for their R&D efforts.

About CIPAM:

- Cell for IPR Promotion and Management (CIPAM) has been created as a professional body under DPIIT to take forward the implementation of the National IPR Policy with the slogan Creative India; Innovative India.
- CIPAM works towards creating public awareness about IPRs in the country, promoting the filing of IPRs through facilitation, providing inventors with a platform to commercialize their IP assets among others.

Security And Defence

Exercises

Exercise	Countries Involved	Nature of Exercise	Aim	Note
1. KAZIND-2019	India and Kazakhstan	Annual joint military exercise	Joint training of troops in Counter Insurgency/ Counter Terrorism operations in both Jungle and Mountainous terrain.	KAZIND 2019 took place in Pitogarth, Uttarakhand.
2.Him Vijay-2019	India	Annual Military exercise	To test mobility, communication and coordination of such a huge body of fast-moving troops in difficult terrain like the himalayas.	In 2019 edition,integrated battle groups (IBGs) took part in an exercise for the first time.
3.Exercise DANX	India	Joint services exercise conducted by the ANC (Andaman and Nicobar Command)	To practice and validate procedures and drills of all Command forces aimed at defending strategic Andaman & Nicobar Islands.	First edition was conducted in 2017. 2019 is the second edition
4.DHARMA GUARDIAN-2019	India and Japan	Annual joint military exercise	To share experience gained during various Counter Terrorism Operations in respective Countries.	
5.Nomadic Elephant- XIV	India and Mongolia	Joint military exercise	Enhance defence cooperation and military relations between the two nations.	2019 edition was conducted at Bakloh,Himachal Pradesh.
6.Exercise Ekuverin-2019	India and Maldives	Annual Joint military exercise	Enhancing interoperability between the two forces for carrying out counter	It is conducted alternatively in India and Maldives.

			insurgency and counter-terrorism operations in a semi-urban environment under the United Nations mandate.	This year, the 10th annual exercise will be conducted at Aundh Military Station in Pune, Maharashtra.
7.EX EASTERN BRIDGE-V.	India and Oman	Joint air exercise	To improve interoperability during mutual operations between both Air Forces	The exercise was first held in 2009. 2019 Edition held in Air Force base Masirah in Oman
8.IMNEX 2019	India and Myanmar	Annual naval exercise	Enhance maritime cooperation	First edition held in 2019
9.Exercise Shakti-2019	India and France	Biennial military exercise conducted alternately in India and France.	Enhancing understanding, cooperation and interoperability between the two Armies.	It was first conducted in the year 2011. 2019 edition conducted at Mahajan field firing range in Rajasthan.
10. Shinyuu Maitri	India and Japan	Joint Air exercise	to undertake Joint Mobility and Tactical interoperability among the two forces	2019 edition held at Air Force Station, Arjan Singh in Panagarh town, West Bengal.

1. BRAHMOS SUPERSONIC CRUISE MISSILE, WITH MAJOR INDIGENOUS SYSTEMS, SUCCESSFULLY TEST-FIRED

News: The land-attack version of BrahMos supersonic cruise missile was successfully test-fired.

Facts:

- It was jointly launched by Defence Research and Development Organisation (DRDO) and BrahMos Aerospace from Balasore's Integrated Test Range (ITR), Odisha.
- Features:**
 - It has a strike range of 290 km.
 - It can be fired from land as well as sea-based platforms.
 - It features indigenous components such as propulsion system, airframe, and power supply.

About BrahMos Missiles:

- The BrahMos is a supersonic cruise missile.

- It is developed by BrahMos Aerospace Pvt. Ltd. (BAPL), New Delhi.
- It is capable of being launched from land, sea, sub-sea and air against surface and sea-based targets.
- It has been operationalized in the Indian Armed Forces with all three services.

Additional Information:

Supersonic Cruise Missiles:

- A cruise missile is an unmanned self-propelled (till the time of impact) guided vehicle that sustains flight through aerodynamic lift for most of its flight path.
- Supersonic cruise missile travels at a speed of around 2-3 Mach i.e.; it travels a kilometre approximately in a second

BrahMos Aerospace Pvt. Ltd. (BAPL)

- The BAPL is a joint venture between the Russian Federation's NPO Mashinostroyeniya and Defence Research and Development Organisation (DRDO)
- It is named after Brahmaputra and Moscow rivers.
- It is responsible for designing, developing, producing and marketing BrahMos supersonic cruise missiles.

2. RAFALE FIGHTER JET

News: Defence Minister has formally received the Indian Air Force's first Rafale fighter jet from a series of 36 such aircraft purchased from France.

Facts:

- In 2016, Indian government had inked a direct deal with the French government to purchase 36 new Rafale fighter jet.

About Rafale fighter jet:

- Rafale is a twin-engine medium multi-role combat aircraft. It is manufactured by the French company Dassault Aviation.
- The Rafale is referred to as an 'omnirole' aircraft by Dassault. It is the capability to perform several actions at the same time. It can carry out both air-to-ground as well as air-to-air attacks.
- The aircraft is also fitted with an on-board oxygen generation system (OBOGS). It suppresses the need for liquid oxygen refilling or ground support for oxygen production.
- Rafale also provides standoff capability when any country attacks India. An active electronically scanned array (AESA) radar enables the pilot to look 200 to 400 kms away.
- The aircraft also has Situational awareness capability in which Aircraft has got those sensors which enable the pilot to be aware situationally and detect the enemy Aircraft for which the Rafale has AESA radar.

3. DEFENCE ACQUISITION COUNCIL APPROVES 3 INDEGENOUS PROJECTS

News: Defence Acquisition Council (DAC), chaired by Defence minister has accorded approval for three projects to be indigenously designed, developed and manufactured by the Indian industry.

Facts:**About the Projects:**

- The first two projects include third generation Anti-Tank Guided Missiles (ATGM) and the Auxiliary Power Units (APUs) for the T-72 and T-90 Tanks.
- The third generation ATGM would provide fire and forget and Top Attack capabilities to the troops in an armoured battle.
- On the other hand, APUs would enable incorporation of various upgrades to Fire Control System and Night Fighting capabilities of the Tanks.
- These projects will be progressed under the Make in India II category and will provide a boost to indigenous research and development in the Private Sector.
- Further, the third indigenous project is the Electronic Warfare (EW) systems for the mountain and High Altitude terrain which would be designed and developed by Defence Research and development organization (DRDO).

About Defence acquisition Council:

- Defence Acquisition Council (DAC) is the highest decision-making body for military procurement.
- The council was formed in 2001. It is headed by Defence minister.
- The objective of the DAC is to ensure expeditious procurement of the approved requirements of the Armed Forces in terms of capabilities sought and time frame prescribed by optimally utilizing the allocated budgetary resources.
- The council also gives policy guidelines to acquisitions based on long-term procurement plans.
- It also clears all acquisitions including imported equipment and those produced indigenously or under a foreign licence

4. OPEN GENERAL EXPORT LICENCES (OGELS)

News: Defence Ministry has approved two Open General Export Licences in a major push for defence exports.

Facts:**About Open General Export Licences (OGEL):**

- An Open General Licence (OGL) is a type of export license issued by a government to its domestic suppliers.
- The OEGL is a one-time export licence to be granted to a company for a specific period which is two years initially.
- The application for grant of OGEL will be considered by Department of Defence Production (DPP) on a case-to-case basis.

Eligibility and Countries allowed:

- For acquiring the licences, the applicant is mandatory to have Import Export certificate.
- The countries allowed under the OGELs are Belgium, France, Germany, Japan, South Africa, Spain, Sweden, UK, USA, Canada, Italy, Poland and Mexico.
- However, the export of items to a Special Economic Zone is not permitted under OEGL.

Items Permitted and excluded under OEGL:

- The items permitted under OEGL includes components of ammunition and fuse setting device without energetic and explosive material, firing control and related advance warning equipment and related system and body protective items.
- But the complete aircraft or complete unmanned aerial vehicles (UAVs) and any components specially designed or modified for UAVs are excluded under this licence.

5. AUTOMATED FACIAL RECOGNITION SYSTEM (AFRS)

News: Government of India has asked the IT companies to send proposals to National Crime Record Bureau (NCRB) to install world's largest facial recognition system. The winner of the bids will create National Automated Facial Recognition System (AFRS).

Facts:

About Automated Facial Recognition System (AFRS):

- Automated Facial Recognition System involves a large database of photos as well as videos of peoples' faces and biometric software.
- The software maps facial features of an individual mathematically and stores the data as a faceprint in the database.
- Then, a new image of an unidentified person is often taken from CCTV footage is compared to the existing database to find a match and identify the person.
- The artificial intelligence technology used for pattern-finding and matching is called neural networks.
- Neural networks are a set of algorithms modeled loosely after the human brain that are designed to recognize patterns.

Concerns:

- Cyber experts have cautioned that the Automated Facial Recognition System can be used as a controlling tool by the government and transform India into a police state.
- In the absence of data protection law, Indian citizens will be more vulnerable to privacy abuses if AFRS is used.
- The use of surveillance cameras and facial recognition constrict the rights of particular class of people.
- Moreover, even facial recognition systems are not 100% accurate. Therefore, there can be chances of mistaken identity.

Additional information:

About NCRB:

- The National Crime Records Bureau (NCRB) is an attached office of the Ministry of Home Affairs.
- The agency is responsible for collecting and analysing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL).

6. INS BAAZ

News: Recently, Indian Navy Chief has visited the INS Baaz, the southernmost air station of the Indian Armed Forces.

Facts:**About INS Baaz:**

- The Indian Naval Station (INS) 'Baaz' was commissioned in July 2012, and is the southernmost air station of the Indian Armed Forces. It is a part of the Andaman and Nicobar Command.
- INS Baaz is located at Campbell Bay on the Great Nicobar island, the southernmost and largest island in the UT of Andaman and Nicobar Islands.
- This island is also the location of the Indira Point and is less than 250 km by sea from Banda Aceh in Indonesia.

Significance of INS Baaz:

- The Andaman & Nicobar Islands are strategically important for India's national security as they provide a critical capability to monitor sea areas in the region.
- The INS Baaz helps in building Maritime Domain Awareness by providing information via airborne surveillance using aircraft and Unmanned Aerial Vehicles (UAVs).
- The base also helps to ensure maritime security in the Bay of Bengal and the Andaman Sea and substantially enhances the Indian Navy's maritime surveillance capability.
- The base also assists the local population in times of need such as facilitating evacuation during medical emergencies.
- Further, the location of the base has been described as India's "window into East and Southeast Asia and is in close vicinity of the Six Degree Channel also called the Great Channel.

Additional information:**About Green Channel:**

- The Great Channel in the Indian Ocean separates Great Nicobar Island of India and Aceh Province of Indonesia.
- The Great Channel is located at six degrees north of the equator and is popularly referred to as the 'Six Degree Channel'.

About Andaman and Nicobar Command (ANC):

- Andaman and Nicobar Command was created in 2001.
- It is the first and only tri-service command of the Indian Armed Forces based at Port Blair, Andaman and Nicobar Islands.
- It was created to safeguard India's interests in the Strait of Malacca and in Southeast Asia.
- The ANC provides logistics and administrative support to Indian ships that are deployed in East Asia and Pacific Ocean.

Air and naval bases under the A&N command:

<i>Base</i>	<i>City</i>	<i>Role</i>
INS Karding	Kamorta	Logistics support
INS Jarawa	Port Blair	Logistics and Administrative support

INS Utkrosh		Joint Naval and Air Force Base at Veer Savarkar International Airport
INS Baaz	Campbell Bay	Naval Air Station
INS Kohassa	Diglipur	Naval Air Station
Car Nicobar AFS	Car Nicobar	Air Force Base

1. INTERNATIONAL DAY FOR OLDER PERSONS

News: The President of India Shri Ram Nath Kovind has conferred the “Vayoshreshtha Samman-2019” to mark ‘International Day of older Persons’.

Facts:

About Vayoshreshtha Samman

- The Ministry of Social Justice and Empowerment decided in the year 2005 to confer Vayoshreshtha Sammans to eminent senior citizens and Institutions in recognition for their service to elderly persons, especially indigent senior citizens.
- The “Vayoshreshtha Samman” was elevated to the level of national awards in 2013. It is conferred every year in thirteen categories. The Awards are given to institutions/organisations/individuals from any part of the country.
- These awards are presented as part of the celebration of the International Day of Older Persons (IDOP).

Additional Information:

International Day of Older Persons (IDOP):

- It is celebrated every year on the 1st of October. The United Nations General Assembly designated 1st October the International Day of Older Persons in 1990.
- The day aims to raise awareness about the issues affecting the elderly and emphasises the need to ensure people can grow old with dignity.
- The theme of the 2019 IDOP is “The Journey to Age Equality”.

Madrid international action plan on aging (MIPAA) :

- The Madrid International Plan of Action on Ageing and the Political Declaration was adopted at the Second World Assembly on Ageing in April 2002 to address the key challenge of “building a society for all ages”.
- It focuses on three priority areas:
 1. older persons and development;
 2. advancing health and well-being into old age; and
 3. ensuring enabling and supportive environments

Vienna International Plan of Action on Ageing : It is the first international instrument on ageing, guiding thinking and the formulation of policies and programmes on ageing. It was adopted at the World Assembly on Ageing in Vienna, Austria in 1982. It was later endorsed by the United Nations General Assembly in 1982.

2. GLOBAL HUNGER INDEX 2019

News: Global Hunger Index 2019 was released.

Facts:**About Global Hunger Index (GHI)**

- It is a peer-reviewed annual report, jointly published by Ireland's Concern Worldwide and Germany's Welthungerhilfe. It calculates the levels of hunger and undernutrition worldwide.
- The index was first published in 2006. It was initially published by the International Food Policy Research Institute (IFPRI) and Welthungerhilfe.
- The four indicators for the index are
 - Undernourishment (the share of population that is undernourished that is whose caloric intake is insufficient)
 - Child stunting (the share of children under five years who have a low height for their age reflecting chronic undernutrition),
 - Child wasting (the share of children under five years who have a low weight for their age-height reflecting acute undernutrition) and
 - Child mortality rate under 5 years of age (reflection of the fatal mix of inadequate nutrition and unhealthy environments)
- GHI scores countries on a 100-point "severity scale", where zero is the best score (no hunger) and 100 is the worst.
- Values less than 10 reflect low hunger, values from 20 to 34.9 indicate serious hunger; values from 35 to 49.9 are alarming; and values of 50 or more are extremely alarming.
- The focus of GHI 2019 is **Climate Change and hunger** which seeks to explore the impact of extreme weather on food production, nutrition and food security. In 2019, 117 countries have been assessed.

Key takeaways from GHI 2019**Global:**

- 17 countries with 2019 GHI scores of less than 5 have not been assigned individual ranks, but rather have been collectively ranked 1–17 as differences between their scores are minimal. Some of the countries include Uruguay, Ukraine, Turkey, Cuba, etc.
- Central African Republic has been ranked the worst (117th) in the "seriously alarming level" followed by Yemen and Chad.
- At the regional level, South Asia and Africa South of the Sahara have the highest 2019 GHI scores in the world, at 29.3 and 28.4, respectively, indicating serious levels of hunger.
- Eastern Europe and the Commonwealth of Independent States, Latin America and the Caribbean, East and Southeast Asia, and the Near East and North Africa range from 6.6 to 13.3, indicating low or moderate hunger levels.
- Nine countries of concern were omitted due to lack of data, including Democratic Republic of Congo, Eritrea, Libya, Somalia, South Sudan and Syria.
- Out of 117 countries, 43 have "serious levels of hunger"
- The report has warned that the progress towards a 2030 zero hunger target (SDG 2) that was agreed upon by leaders across the world was "under threat".
- **Recommendations by The Global Hunger Index to tackle the hunger problem:**
 1. Prioritizing resilience among the most vulnerable groups
 2. Better response to disasters,
 3. Address inequalities,

4. Action to mitigate climate change

India:

- India ranked 102nd out of 117 qualifying countries. With a score of 30.3, India suffers from a level of hunger that is in serious category. India's ranking in 2018 was 103rd out of 119 countries.
- The child wasting rate in India stands at 20.8% which, according to the index, is the highest wasting rate of any country studied for the GHI report.
- The child stunting rate, at 37.9%, was termed as very high.
- Further, when it comes to infants aged six months to 23 months, only 9.6 percent of them in India are fed a "minimum acceptable diet".
- Neighbouring countries like Nepal (73rd), Sri Lanka (66th), Bangladesh (88th), Myanmar (69th) and Pakistan (94th), although all in the 'serious' hunger category, have performed better than India. China (25th) has moved to a 'low' severity category.

3. WORLD FOOD DAY

News: United Nations (UN) Food and Agriculture Organization (FAO) has said in a booklet that people globally should eat healthy diets for a zero-hunger world. The booklet has been released ahead of World Food Day on October 16.

Facts:

About World Food Day

- World Food Day is celebrated every year on 16 October in honour of the date of the founding of the Food and Agriculture Organization of the United Nations.
- It was established by FAO's Member Countries at the Organization's 20th General Conference in November 1979.
- The day seeks to raise awareness about the issues behind poverty and hunger.
- The theme of 2019 World Food Day is "Our Actions Are Our Future, Healthy Diets for A #Zero Hunger World." With the theme, the FAO aims to create awareness about healthy diets and how sustainable diets can help eradicate hunger and malnutrition.
- The FAO has defined healthy diets as one that meets the nutritional needs of individuals by providing sufficient, safe, nutritious and diverse foods to lead an active life and reduce the risk of disease.

Additional Information:

FAO

- The Food and Agriculture Organization of the United Nations is a specialized agency of the United Nations that leads international efforts to combat hunger.
- It was established in 1945. It is headquartered in Rome, Italy.

4. INDIA HALVED ITS POVERTY RATE SINCE 1990S: WORLD BANK

News: The World Bank said that India has halved its poverty rate since the 1990s and achieved a seven plus growth rate over the last 15 years.

Facts:**Key observations made by World Bank**

- India has achieved annual growth exceeding 7% over the last 15 years.
- India's growth is expected to continue and elimination of extreme poverty in the decade is within reach.
- While an estimated 13 million people enter the working age population each year, only three million new jobs are being generated on an annual basis

Recommendations put forward by World Bank for India

- Land will need to be used more productively in urban areas by the spatial transformation of cities achieving agglomeration economies and in rural areas by increased agricultural productivity.
- Water management will need to provide for shifting water allocation to higher-value uses and policies to increase the value of water use within sectors.
- Electricity generation will need to be less carbon intensive while ensuring proper electricity connectivity to all.
- India's rapidly growing economy needs investment in infrastructure, an estimated 8.8 percent of GDP or \$343 billion a year until 2030.
- Sustained growth will also need to accelerate inclusion, especially to create more and better jobs.
- Public sector institutions will need to be modernised to deliver services and regulations that match the aspirations of a middle-income country. This will entail improving accountability and effectiveness, improving the ability of the state to interface with the private sector, and strengthening the compact among tiers of government to improve service delivery.

5. GLOBAL TUBERCULOSIS (TB) REPORT, 2019

News: World Health Organization (WHO) has released Global Tuberculosis (TB) Report, 2019. The report provides a comprehensive and up-to-date assessment of the TB epidemic and progress in the response at all 3 levels, regional, national and global.

Facts:**Key highlights from Global TB Report, 2019****Global**

- Between 2015 and 2018, only 6.3 per cent TB cases showed a cumulative decline.
- The global decline in the total number of TB deaths between 2015 and 2018 was 11%.
- In 2018, 7 million new cases of TB were notified — an increase from 6.4 million notified in 2017 and from the 5.7-5.8 million notified annually between 2009 and 2012.
- TB remains top infectious killer in the world, claiming over 4000 lives a day
- The catastrophic costs ranged from 27% to 83% for all forms of TB, and from 67 % to 100% for drug-resistant TB.
- Undernourishment, smoking, alcohol abuse, HIV infection and diabetes, were the five major factors to which TB could be attributed.

India:

- In 2017, India had 27.4 lakh TB patients which came down to 26.9 lakh in 2018. Of the estimated 2.69 million TB cases emerging in 2018, 2.15 million were reported to the Government of India — leaving a gap of 5, 40,000 patients who are going unreported.
- Incidence per 1, 00,000 population has decreased from 204 in 2017 to 199 in 2018.
- The number of patients being tested for rifampicin resistance has increased from 32% in 2017 to 46% in 2018.

Additional Information:**About Tuberculosis (TB)**

- TB is an infectious airborne bacterial disease caused by *Mycobacterium tuberculosis*.
- When TB infection becomes resistant to the first line of treatment — isoniazid and rifampicin, it is called Multi-drug resistant TB (MDR-TB). When the infection becomes resistant even to the second-line treatment it is called Extensively-drug resistant tuberculosis (XDR-TB)

Elimination Efforts:**India:**

- The Indian government has put forward **National Strategic Plan (NSP) for TB Elimination, 2017-2025**. The plan is a framework to provide guidance for the activities of various stakeholders to reduce the burden of TB mortality and morbidity.
- In 2018, the government launched the **TB Free India campaign** to take activities under NSP for TB Elimination. The campaign seeks to **eliminate TB in India by 2025**.
- **TB Harega Desh Jeetega' Campaign**: The campaign aims to improve and expand the reach of Tuberculosis care services across the country by 2022.
- **National TB Prevalence Survey**: 25 vans will be part of the prevalence survey, which will go to 625 clusters of the country and check for TB. This sample survey is to be completed by 2020. The survey will present national and state level data which will be used as a policy tool for further interventions.
- **Nikshay Poshan Yojana**: Launched in 2018, 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.

Global:

- **SDG 3.3**: It calls to eliminate TB by 2030
- **WHO End TB Strategy**: Under the strategy, compared to 2015 levels of TB, the WHO aims to:
 - Reduce TB deaths by 35 per cent and TB incidence rate to 20 percent by 2020
 - Reduce TB deaths by 90 per cent and TB incidence rate to 80 percent by 2030
 - Decrease TB deaths by 95 per cent and TB incidence rate to 90 per cent by 2035
- **Find. Treat. All#ENDTB initiative** : It is a joint initiative of the World Health Organisation, Stop TB Partnership, The Global Fund to Fight AIDS, Tuberculosis and Malaria have launched this joint initiative to scale up the End TB response towards universal access to TB prevention and care.
- **The Global Fund to Fight AIDS, Tuberculosis and Malaria**: It is an international financial organization designed to accelerate the end of AIDS, tuberculosis and malaria as epidemics. The organisation is a partnership between governments, civil society, the private sector and people affected

by the diseases. It was formed in 2002. It is headquartered at Geneva, Switzerland. Recently, India has announced a contribution of \$22 million to the Global Fund for AIDS, TB and Malaria for the 6th replenishment cycle (2020-22).

- **The UN Political Declaration on TB in 2018 includes 4 new global targets:**
 1. Treat 40 million people for TB disease in the 5-year period 2018-22 (7 million in 2018).
 2. Reach at least 30 million people with TB preventive treatment for latent TB infection in the 5-year period 2018-22.
 3. Mobilize at least US\$13 billion annually for universal access to TB diagnosis, treatment and care by 2022.
 4. Mobilize at least US\$2 billion annually for TB research.

6. STATIONS' CLEANLINESS SURVEY REPORT

News: Minister of Railways released the 'Stations' Cleanliness Survey Report' (Cleanliness assessment of Non-suburban and Suburban Stations 2019).

Facts:

About the survey:

- The cleanliness survey is an annual exercise carried out by Quality Council of India (QCI).
- The QCI evaluates railway stations on three broad parameters namely (a) process evaluation (b) direct observation and (c) citizen feedback.
- The railways have been conducting third party audit and cleanliness survey to increase the level of cleanliness by identifying unclean spots, improve cleanliness standards and propel healthy competition among railway stations.

Key takeaways from the survey:

- The top three cleanest railways stations are from the western state of Rajasthan.
- The survey has ranked Jaipur on the first position followed by Jodhpur and Durgapura Railway station.
- Further, the North Western Railway followed by South East Central Railway and East Central Railway are the top three railway zones.

Additional information:

About Quality Council of India:

- Quality Council of India (QCI) was set up in 1997 by the Government of India jointly with Indian Industry bodies as an autonomous organization under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.
- It is the Quality Apex and National Accreditation Body for accreditation and quality promotion in India.
- The Council was established to provide a credible, reliable mechanism for third party assessment of products, services and processes which is accepted and recognized globally.

7. NATIONAL HEALTH PROFILE 2019

News: The 14th National Health Profile (NHP) 2019 was released on 30th October 2019.

Facts:**About National Health Profile (NHP)**

- It is an annual publication released by the Central Bureau of Health Intelligence (CBHI). The first NHP was released in 2005.
- It covers all the major information on Demography, Socio-Economic Status, Disease Morbidity & Mortality, Healthcare Finance, Human Resources in Health and Healthcare Infrastructure.
- Objective : To create a database of health information to make it available to all the stakeholders in the healthcare industry

Key takeaways from NHP 2019

- There has been a consistent decrease in the birth rate, death rate and natural growth rate in India since 1991 to 2017
- **Life Expectancy:** According to the report, life expectancy in India increased from 49.7 years in 1970-75 to 68.7 years in 2012-16. For the same period, the life expectancy for females is 70.2 years and 67.4 years for males.
- **Total Fertility Rate:** The Total Fertility Rate (TFR) for the country was 2.3 whereas in rural areas it has been 2.5 and 1.8 in urban areas during 2016.
- **Maternal, Neonatal, Nutritional Diseases and Other Communicable Diseases:**
 - The disease burden due to communicable, maternal, neonatal, and nutritional diseases, as measured using disability-adjusted life years (DALYs), dropped from 61% to 33% between 1990 and 2016.
 - However, there is an accelerated rise in the prevalence of chronic non-communicable (NCD) diseases.
 - The disease burden due to non-communicable diseases such as cardiovascular disease (CVD), diabetes, chronic obstructive pulmonary disease (COPD), cancers, mental health disorders and injuries increased from 30% to 55% between 1990 and 2016.
 - Acute Respiratory Infections (ARI) accounted for 69.47% of morbidity which was the highest in the communicable disease category leading to 27.21% mortality.
 - Andhra Pradesh, Gujarat, Karnataka, Kerala, Tamil Nadu, Uttar Pradesh and West Bengal reported a large number of patients and fatalities due to ARI.
- **Infant and Maternal Mortality Rate:**
 - Infant Mortality Rate in India which was at 74 (per 1000 live births) in 1994 has declined considerably to 33 (Per 1000 live births) in 2017.
 - Maternal mortality ratio (MMR) has reduced by 77% from 556 per 1 Lakh live births in 1990 to 130 per 1 Lakh live births in 2016
- **Anaemia continues to remain a huge health concern:** According to the report, over half the children between 6 and 59 months (58.4%) and women in the age group 15-49 are anaemic.
- **Doctor to Patient Ratio:** There is only one allopathic government doctor for every 10,926 people in India against the WHO's recommended doctor-population ratio of 1:1000.
- **Healthcare Spending:** India's public spending on healthcare continues to remain the lowest globally. As per the report, India's public expenditure on health now stands at 1.28 per cent of the GDP. (NOTE : The National Health Policy 2017 envisages raising government health spending to 2.5 percent of the GDP by 2025 in a

time-bound manner. It also envisages increasing state sector health spending to more than 8 percent of their budget by 2020)

Additional Information:

Central Bureau of Health Intelligence (CBHI):

- It was established in 1961 by the Act of Parliament on the recommendation of Mudaliar committee.
- It is the Health Intelligence Wing under Directorate General of Health Services, Ministry of Health & Family Welfare.
- **Key Objectives:**
 - To collect, analyse & disseminate Health Sector related data of India for evidence-based policy decisions, planning and research activities.
 - To identify & disseminate innovative practices for Health Sector Reforms.
 - To function as collaborating centre (CC) for WHO Family of International Classifications (WHO-FIC) in India & SEAR countries

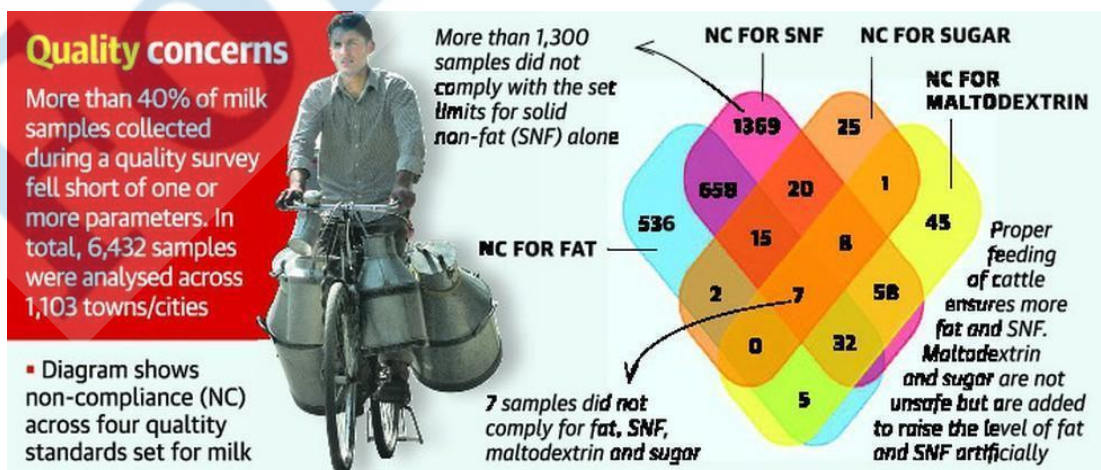
8. NATIONAL MILK SAMPLE SAFETY QUALITY SURVEY

News: Food Safety and Standard Authority of India (FSSAI) has released the National Milk Sample Safety Quality Survey. This first-of-its-kind comprehensive survey was conducted through a third-party agency. The survey covered both organised (retailers and processors) as well as non-organised (local dairy farms, milk vendors and milk mandis) sectors.

Facts:

Key takeaways from the survey:

- The survey has found that milk samples from Telangana followed by Madhya Pradesh and Kerala has shown the highest number of cases of adulteration.
- The problem of Aflatoxin-M1 is more dominant in processed milk than that of raw milk.
- Tamil Nadu, Delhi and Kerala were the top states where the Aflatoxin-M1 was found maximum.
- In terms of quality, 7% of the total sample of processed milk did not comply with quality parameters because the presence of contaminants such as fats, Maltodextrin and sugar were above permissible limits.



Additional information:**About Aflatoxin-M1:**

- Aflatoxins are toxins produced by certain fungi which are generally found in agricultural crops like maize, peanuts, cotton seed and others. They are carcinogenic in nature.
- It comes in the milk through feed and fodder that are currently not regulated in the country.
- There is no proper lab to test this residue in the country.
- According to FSSAI standards, the permissible limit of aflatoxins in milk is 0.5 µg/kg.
- The exposure to AFM1 from milk causes stunting among children.

Testing and sampling Scheme:

- To address the issue of testing, the government is instituting a scheme for testing and sampling for organised dairy players. It will be implemented from January 1, 2020.
- The scheme stipulates sampling points during various stages of milk processing, test methods and frequency of sampling.
- Organised players which include dairy co-operatives and private players, will need to have a well-equipped in-house lab for testing and also will need to keep records of all tests conducted.

Food Safety and Standards Authority of India (FSSAI):

- Food Safety and Standards Authority of India (FSSAI) is a statutory autonomous body under Food Safety and Standards Act, 2006. It comes under the Ministry of Health & Family Welfare.
- FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety.

9. CRIME IN INDIA REPORT 2017

News: The annual 'Crime in India Report' 2017 has been published by the National Crime Records Bureau (NCRB).

Facts:**Key takeaways from the report:****Crime Registration and Rate:**

- In 2017, there was an increase of 3.6% in registration of cases over 2016.
- Delhi witnessed the highest crime rate in the country with 1,050 Indian Penal Code (IPC) crime incidents per lakh of the city's population.
- On the other hand, the IPC crimes decreased greatly in Mizoram, Gujarat, Himachal, Tripura and Nagaland.

Crime Against Women:

- The number of crimes against women has increased by 6% in India from 2016.
- Uttar Pradesh topped the list with most number of cases followed by Maharashtra and West Bengal.

Rioting

- There were around 58,000 incidents of rioting reported. The maximum number of incidents were reported from Bihar followed by Uttar Pradesh and Maharashtra.

Crime Against SC and STs

- The incidents registered under the Scheduled Caste Prevention of Atrocities Act has seen an increase from 5,082 incidents reported in 2016 to 5,775 in 2017.

False News:

- The report for the first time collected data on circulation of false/fake news and rumours. Under the category, maximum incidents were reported from Madhya Pradesh, Uttar Pradesh and Kerala.

Anti-National Activities

- Further, a new category of offences committed by various categories of Anti-National Elements was included. It showed that the maximum offences were committed by Left Wing Extremist (LWE) followed by North East insurgents and Terrorists.

Offences Against State:

- There has been a 30 per cent rise in incidents of offences against the state as compared to 2016. This category includes offences such as sedition, waging war against the country and damage to public property among others
- The maximum number of such offences were reported from Haryana (2,576) followed by UP (2,055).

Note: The report has not collected any data under the categories of (a) death due to mob lynching (b) killing ordered by khap panchayat and (c) murder committed for religious reason.

Additional information:**About NCRB:**

- The National Crime Records Bureau (NCRB) is an attached office of the Ministry of Home Affairs.
- It was set up in 1986 based on the recommendations of the National Police Commission (1977-1981) and the MHA's Task Force (1985).
- The agency is responsible for collecting and analysing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL).
- The NCRB data only reflects the number of crimes registered by the police.
- NCRB has been publishing Crime in India Report since 1953.

10. NATIONAL NUTRITION SURVEY:

News: The Government of India has released the first-ever comprehensive National Nutrition Survey.

Facts:**About the National Nutrition Survey:**

- The survey has been conducted by the Ministry of Health and Family Welfare and the United Nations Children's 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 takeaways from the survey:**National Level:**

- 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.
- Further, 5% of the children and adolescents in the same group are overweight and another 5% suffer from blood pressure.

Urban India:

- Malnutrition among children in urban India is characterised by relatively poor levels of breastfeeding, higher prevalence of iron and Vitamin D deficiency as well as obesity.
- In rural India, there is a higher percentage of children suffering from stunting, underweight and wasting and lower consumption of milk products.
- 83% of children between 12 and 15 months continued to be breastfed, a higher proportion of children in this age group residing in rural areas are breastfed (85%) compared to children in urban areas (76%). Breastfeeding is inversely proportional to household wealth.
- Children and adolescents residing in urban areas also have a higher (40.6%) prevalence of iron deficiency compared to their rural counterparts (29%).
- Children in urban areas are also overweight and obese as indicated by subscapular skinfold thickness (SSFT) for their age.
- Wealthier households in urban areas and sedentary lifestyle of children may also be responsible for higher deficiency of Vitamin D in urban areas (19%) as compared to rural areas (12%).

Rural India:

- Among children aged 1-4 years, zinc deficiency is more common in rural areas (20%) compared to urban areas (16%).
- Rural areas also witness higher prevalence of stunting (37% in rural versus 27% in urban), underweight (36% in rural versus 26% in urban) and severe acute malnutrition (34.7% in rural areas for children in 5-9 years versus 23.7% in urban areas and 27.4% in urban areas for adolescents in 10-19 years versus 32.4% in rural areas).

Additional information:**UNICEF**

- UNICEF stands for United Nations Children's Fund. It was created by the United Nations General Assembly in 1946. It is headquartered in New York, USA.
- It is a special program of the United Nations (UN) devoted to aiding national efforts to improve the health, nutrition, education, and general welfare of children.

Note: Stunting- low height for age, Wasting- low weight compared to height, Underweight- low weight for age. Malnutrition includes both under and over nutrition.

United Nations decade of action on nutrition : 2016-2025**Steps taken by Indian Government to curb malnutrition :**

- Direct target interventions :

1. National food security act (2013) : This makes access to food a legal right
2. Integrated Child Development Services (ICDS)
3. National Health Mission (NHM)
4. Mid-Day Meal Scheme : To improve nutrition levels of a school going child which has an impact on enrollment, attendance and retention, especially for girls
5. Indira Gandhi Matru Vandana Yojana : Rs 6000 is given to a pregnant women in 3 installments for pre and post pregnancy care.
6. Poshan Abhiyan : To reduce stunting, under-nutrition, anaemia and low birth weight babies through convergence among different programmes, better monitoring and improved community mobilisation.

II. ALL INDIA SURVEY ON HIGHER EDUCATION(AISHE)

News: Union Minister for Human resource and development (HRD) released the All India Survey on Higher Education (AISHE) 2018-19.

Facts:

About All India Survey on Higher Education (AISHE):

- The AISHE Survey was initiated in the year 2011 to prepare a robust database on higher education.
- Under this, the ministry of HRD collects online information on Universities, Colleges and other Higher Educational Institutions.
- The data is collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance and infrastructure.
- Further, the indicators of educational development such as Institution Density, Gross Enrolment Ratio, Pupil-teacher ratio, Gender Parity Index, Per Student Expenditure are also calculated under the survey.

Highlights of the survey:

- For the survey, 944 out of 993 universities listed on the AISHE portal, uploaded the information during the 2018-19 survey.
- Enrolment : 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 %).
 - According to the survey, the present Gross Enrolment Ratio (GER) in higher education is around 26.3% up from 25.8% in 2017-18.
 - 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 %).
- Gender Gap : The gender gap in the country narrowed as compared to the previous year, i.e. 2017-18.
 - 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 of the state.

- The number of female students per 100 male students has gone up from 90 (2017-18) to 95 in 2018-19.
- The top 8 States in terms of highest number of colleges in India are Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Haryana, Tamil Nadu, Gujarat and Madhya Pradesh.
- The Gender Parity Index (GPI) which measures the male:female ratio in higher education has increased over the last five years from 0.92 in 2014-15 to 1 in 2018-19.
- Foreign students : The survey has said that the highest share of foreign students comes from the neighbouring countries of which Nepal is first followed by Afghanistan, Bangladesh, Sudan, Bhutan and Nigeria.
- Professional courses : The students enrolment in B. Tech and M. Tech programmes has seen a dramatic fall. This has led to an overall dip in enrolment in professional courses which has hit a four-year low.

Additional information:

Gross Enrolment Ratio (GER):

- Gross Enrolment Ratio (GER) in Higher education in India is calculated for 18-23 years of age group.
- The total enrolment in higher education regardless of age is expressed as a percentage to the eligible official population (18-23 years) in a given year.
- The GER is widely used to show the general level of participation in and capacity of higher education. The data includes details on gender wise gross enrolment ratio in higher education for all categories.

Miscellaneous

1. CHENANI-NASHRI TUNNEL

News: Government decided to rename the Chenani-Nashri tunnel after Syama Prasad Mookerjee.

Facts:

About the Chenani-Nashri tunnel:

- Chenani-Nashri tunnel was inaugurated by Prime Minister in 2017. It is also known as the Patnitop tunnel.
- The tunnel is 9.28 km long. It is located on NH44 between Udhampur and Ramban in Jammu & Kashmir.
- It is not only India's longest highway tunnel but also Asia's longest bi-directional highways tunnel.
- The tunnel reduces distances between Jammu and Srinagar by 30 km and travel time by 2 hours.
- The tunnel incorporates India's first fully integrated mechanism to externally control everything from the movement of vehicles to the inflow and outflow of air (Transverse ventilation system- 6th such tunnel in the world) and even the evacuation of passengers or vehicles in distress.
- It also has features like
 - Integrated Traffic Control System (ITCS)
 - Video Surveillance System
 - FM Rebroadcast System
 - Entrance Detection Control System
 - Active Fire Fighting System

Additional information:

Other key tunnels in J&K:

- **Jawahar Tunnel** – It is a 2.85 km long tunnel connecting Banihal in Jammu with Qazigund in the Valley was built at an elevation of 2194 m.
- **Nandini Tunnel**- It is located beneath the Nandni wildlife sanctuary. It consists of four tunnels of lengths between 210 m and 540 m adding up to a combined length of 1.4 km.

Railway tunnels in J&K:

- **Banihal-Qazigund** – It is 11 km tunnel. It is India's longest and Asia's 4th longest railway tunnel. The tunnel brings Qazigund and Banihal closer by 17 km.

2. WORLD STANDARDS DAY:

News: World Standards Day is being celebrated on October 14, 2019.

Facts:

About World Standards Day:

- World Standards Day (WSD) is celebrated each year all over the world on 14 October.
- This day was chosen after the delegates from 25 countries gathered in London in 1946 to create an international organization that focuses on facilitating standardization.
- It has been officially celebrated from 1970

- The aim of the day is to raise awareness among regulators, industry and consumers as to the importance of standardization to the global economy.
- The theme for 2019 is “Video Standards create a global stage”.
- In India, the World Standard Day was celebrated by the Bureau of Indian standards (BIS).

Additional information:

About BIS:

- The Bureau of Indian Standards (BIS) is the National Standard Body of India established under the BIS Act 2016. It works under the aegis of Ministry of Consumer Affairs, Food & Public Distribution.
- It aims for harmonious development of the activities of standardization, marking and quality certification of goods and for matters connected therewith or incidental thereto.
- BIS has been providing traceability and tangibility benefits to the national economy in a number of ways by (a) Providing safe reliable quality goods (b) Minimizing health hazards to consumers (c) Promoting exports and imports substitute and (d) Control over the proliferation of varieties through standardization, certification and testing.
- Roadmap for ‘One Nation, One Standard’ was given by BIS.

3. PARYATAN PARV 2019

News: Minister of Tourism has inaugurated the nationwide “Paryatan Parv 2019”.

Facts:

About Paryatan Parv:

- Paryatan Parv 2019 is dedicated to 150th Birth Anniversary of Mahatma Gandhi.
- The objective of the event is to draw (a) focus on the benefits of tourism, (b) showcase the cultural diversity of the country and (c) reinforce the principle of “Tourism for All”.

The three components of Paryatan Parv are:

- **Dekho Apna Desh:** To encourage Indians to visit their own country. In the run up to the parv, several activities have been organised across the Country like photography contest, promotion on social media among others through the MyGov platform.
- **Tourism for All:** Tourism Events at sites across all States in the country are being organised. The activities at these sites will include illumination in and around the Sites, Cultural Programmes among others,
- **Tourism & Governance:** Interactive Sessions & Workshops with Stakeholders on varied themes have been organised across the Country as a part of the Paryatan parv activities.

Additional Information :

During the event the minister of tourism highlighted that India had improved its ranking in the **world tourism ranking** from 65th in 2013 to 34th position in 2019. The ranking is released by the **World Economic Forum** and published in the **Travel & Tourism Competitiveness Report- 2019**

4. NOBEL PRIZES 2019

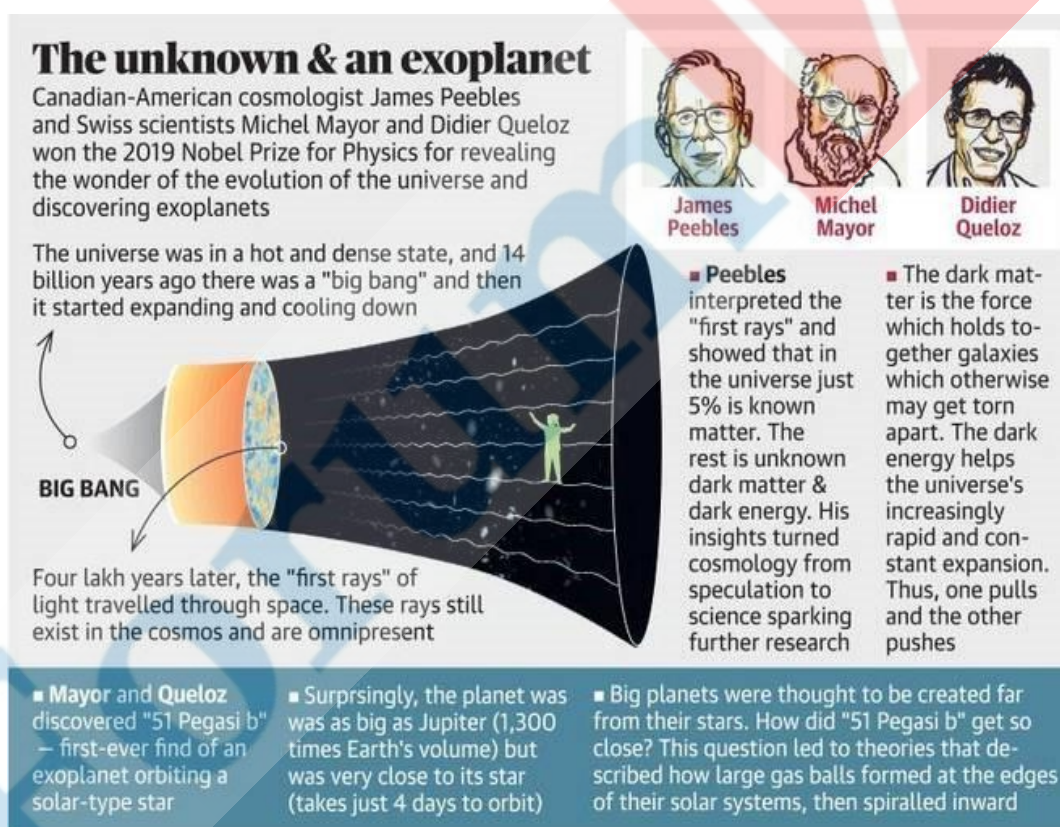
News: Nobel Prizes 2019 have been declared.

Facts:**Nobel Prize in Physiology or Medicine 2019**

- It was awarded jointly to William G. Kaelin Jr, Sir Peter J. Ratcliffe and Gregg L. Semenza.
- They have been awarded for their discoveries of how cells sense and adapt to oxygen availability.
- They identified molecular machinery that regulates the activity of genes in response to varying levels of oxygen. The study has helped in understanding how different oxygen levels regulate fundamental physiological processes.

Nobel Prize in Physics 2019

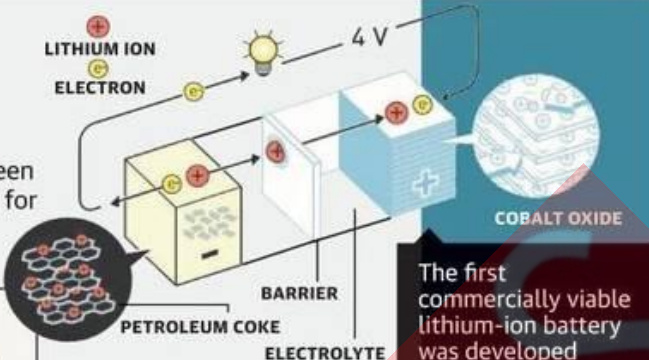
- It was awarded jointly to James Peebles, Michel Mayor and Didier Queloz
- They have been awarded for contributions to the understanding of the evolution of the universe and Earth's place in the cosmos.
- James Peebles has been awarded for theoretical discoveries in physical cosmology. Michel Mayor and Didier Queloz have been awarded for the discovery of an exoplanet orbiting a solar-type star.


**Nobel Prize in Chemistry 2019**

- It was awarded to John B. Goodenough, M. Stanley Whittingham and Akira Yoshino for the development of lithium-ion batteries.

More power to batteries


M. Stanley Whittingham, John B. Goodenough and Akira Yoshino have been selected for the 2019 Chemistry Nobel for their roles in the development of the Li-ion battery






M. Stanley Whittingham

- In the 1970s, he used titanium disulphide as cathode and lithium, which is highly reactive, as anode. When put together, it generated two volts of electricity



John B. Goodenough

- In the 1980s, he replaced titanium disulphide with cobalt oxide as the cathode. The battery's potential doubled because of oxide in the cathode but the use of reactive lithium remained a concern



Akira Yoshino

- He replaced lithium with petroleum coke, which drew the Li-ions towards it. Once the battery was operational, the ions and electrons flowed towards the cobalt oxide cathode

The first commercially viable lithium-ion battery was developed by Akira Yoshino in 1991

How does a battery work?

Electricity is the flow of electrons from one atom to another. In a battery, electrons flow from the negative electrode - the anode - to the positive one - the cathode, producing electricity

Nobel Peace Prize 2019

- The prime minister of Ethiopia, Abiy Ahmed, has won the 2019 Nobel peace prize. He was recognised for starting peace talks with Eritrea and establishing a peace agreement to end the long stalemate between the two countries.

Nobel Prize in Literature 2019

- Austrian author Peter Handke has won the 2019 Nobel Prize in Literature.

Nobel Prize in Economics 2019

- It was awarded to Abhijit Banerjee, Esther Duflo, and Michael Kremer “for their experimental approach to alleviating global poverty. They were instrumental in using randomised controlled trials to test the effectiveness of various policy interventions to alleviate poverty.
- A Randomised Control trial is an experiment that is designed to isolate the influence that a certain intervention or variable has on an outcome or event.

Additional Information

Nobel Prizes:

- The Nobel Prize is a set of annual international awards bestowed in several categories by Swedish and Norwegian institutions in recognition of academic, cultural, or scientific advances.

- The will of the Swedish chemist, engineer and industrialist Alfred Nobel established the Nobel prizes in physics, chemistry, medicine, peace and literature in 1895.
- Nobel Prize in Economics was created by Sweden's Central Bank in 1968. It is officially known as Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.
- The Finances and administration of Nobel Prize. It is a private institution founded in 1900 and is headquartered in Stockholm, Sweden.

Art And Culture

Category	Name	Region/State	Characteristics
Festival	Bathukamma Festival	Telangana	<ul style="list-style-type: none"> • Celebrated for nine days during Durga Navratri • Word Bathukamma means- 'Mother Goddess come to life'. • During the festival, flowers arranged and decorated on a big plat in conical shape in seven layers and this arrangement is called as Bathukamma.
Theatre	Bhaona	Assam	<ul style="list-style-type: none"> • It is a traditional form of entertainment with religious messages. • It is a creation of Mahapurusha Srimanta Sankardeva written in the early sixteenth century. • The bhaona are written in the Assamese and Brajvali languages
Festival	Hori Habba	Karnataka	<ul style="list-style-type: none"> • It is a popular folk-game- bull-catching even- native to Haveri district. • It is held during the harvest season.
Festival	Kittur Utsav	Karnataka	<ul style="list-style-type: none"> • It is a three-day festival which celebrates the Queen Rani Channamma's victory over East India's company in 1824. • Kittur Chennamma (1778 – 1829) was an Indian freedom fighter and Rani of the Kittur, a former princely state in Karnataka.
Festival	Shirui Lily Festival	Ukhrul district, Manipur	<ul style="list-style-type: none"> • It is an annual five-day State festival. • It seeks to spread awareness about the endangered Shirui Lily and promote the district of Ukhrul as a tourist destination in Manipur.
Festival	Bali Yatra	Odisha	<ul style="list-style-type: none"> • Bali Jatra is also known as Bali Yatra and Boita Bandana. It literally means A Voyage to Bali. It is one of the largest trade fairs in Odisha. • This festival is held in Odisha in the city of Cuttack at Gadagadia Ghata of the Mahanadi river.

			<ul style="list-style-type: none"> The festival is celebrated every year from the day of Kartika Purnima according to the Odia Calendar which comes around the end of October and November. It is celebrated to mark the day when ancient Sadhabas (Odia mariners) would set sail to distant lands of Bali, as well as Java, Sumatra and Sri Lanka for trade and cultural expansion.
Folk Music	Baul	West Bengal, India and Bangladesh	<ul style="list-style-type: none"> The Bauls are mystic minstrels living in rural Bangladesh and West Bengal, India. Baul music represents a particular type of folk song, carrying influences of Hindu bhakti movements as well as the shuphi, a form of Sufi song In 2005, the Baul tradition of Bangladesh was included in the list of Representative List of the Intangible Cultural Heritage of Humanity by UNESCO.
Architecture/ Monument	Thotlakonda monastery	Visakhapatnam, Andhra Pradesh	<ul style="list-style-type: none"> It is 2000 years old and was under the influence of ancient Kalinga The monastery provides an insight into the process of transoceanic diffusion of Indic culture, especially Buddhism.
Architecture/ Monument	Rangdum Monastery	Suru Valley, Ladakh	<ul style="list-style-type: none"> Rangdum Monastery is a Tibetan Buddhist monastery belonging to the Gelugpa sect.
Personality	Paramahansa Yogananda		<ul style="list-style-type: none"> Paramahansa Yogananda(1893–1952) is considered one of the preeminent spiritual figures of modern times. <u>Book Written:</u> Autobiography of a Yogi. GoI has released a special commemorative coin on Paramahansa Yogananda to mark his 125th birth anniversary.

Pointly

1. **Emperor Penguins:** It is the largest (tallest and heaviest) of all living penguin species. It is endemic to Antarctica. It is the only one that breeds during the Antarctic winter. It is listed as Near Threatened in the IUCN Red List.
British Antarctic Survey (BAS) researchers have found that second largest Emperor penguin colony in the world (Halley Bay Antarctica) suffered a “catastrophic” breeding failure where nearly all chicks born over three years died due to shrinking sea ice.
2. **Mount Paektu :** It is situated at the border between North Korea and China. At a height of about 9,000 feet, it is also the highest peak in the Korean Peninsula. It is called Changbai in Chinese and is considered sacred by the Koreans. It is a volcanic mountain that last erupted 1000 years ago.
3. **SEED Awards:** It aims to highlight the contribution of green and social enterprises to advancing the Sustainable Development Goals (SDGs). It was founded by the UNEP, UNDP and the International Union for Conservation of Nature (IUCN) at the 2002 World Summit on Sustainable Development in Johannesburg.
4. **Uluru:** Uluru is also known as Ayers Rock. It is a red rock monolith located in central Australia. It is listed as a UNESCO World Heritage Site. This site had been permanently closed for trekking by the Australian government due to its spiritual significance for Anangu (an aboriginal tribe in Australia)
5. **Sarayu River:** It flows through the Indian states of Uttarakhand and Uttar Pradesh. The river is formed at the confluence of rivers karnali and mahakali. It is a tributary of River Ganges. Ayodhya is situated on the banks of river sarayu.
6. **Asia Environmental Enforcement Award:** Indian Forest Service (IFS) officer Ramesh Pandey has been selected for the Asia Environmental Enforcement Award by the United Nations Environment Programme. The award publicly recognize and celebrate excellence in enforcement by government officials and institutions combating transboundary environmental crime in Asia.
7. **Ganga Aamantran Abhiyan:** It has been launched by Ministry of Jal Shakti. It is an exploratory open-water rafting and kayaking expedition on the Ganga River to be held between 10th October 2019 to 11 November 2019.
8. **Liver transplant registry:** India’s first voluntary liver transplant registry has been started by the Liver Transplantation Society of India. It aims to collate national data of the procedures and their outcomes.
9. **Tulagi Island:** Tulagi is a small island Solomon Islands, just off the south coast of Ngella Sule (Florida islands). It is located in south pacific between the USA and Australia. A Beijing based company has secured the rights for the development of the islands and its surroundings.
10. **Operation Dhanush:** It was conducted by Indian Railways Central Railway zone. It was conducted against the ticket touts involved in e-ticketing.
11. **Consumer app:** It has been launched by the Ministry of Consumer Affairs. The app aims to provide a one stop solution for consumer grievance redressal across the nation via mobile phones.
12. **World Cotton Day:** It is observed every year on 7th October. It is organized by the World Trade Organisation (WTO) in collaboration with the Food and Agriculture Organization (FAO), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC) and the International Cotton Advisory Committee (ICAC).

13. **Prahari Scheme** : It is a scheme launched by Delhi Police. The scheme aims to prevent crime and maintain law and order in Delhi. Under this scheme, civil personnel such as chowkidars and security guards deployed in the commercial and VIP areas will act as the eyes and ears of the police. This move will help to bring professionalism in the work of security guards by giving them appropriate training and enabling frequent police-Prahari interaction and co-operation.
14. **Million Farmers' School Programme** : Million Farmers' School (MFS) Programme popularly known as Kisan Pathshala is a scheme of Uttar Pradesh Government. The scheme aims to enhance farmers' incomes through dissemination of agriculture-related information on technology, government schemes, and modern farming methods. Under the programme, modern agri-knowledge is delivered through village-level trainings across all districts in the state. The training usually comprises of a daily two-to-three hour session in the evening for a module of three to five days in the primary school building in the village.
15. **Kanya Sumangala Yojana** : Uttar Pradesh government launched its flagship scheme named Kanya Sumangla Yojna. The scheme aims to provide a fund worth Rs 15000 to every family where a girl child is born. The funds will be released in various installments when the girl child completes various milestones such as at the time of birth, vaccination, admission to Class 1, 5, 9 and graduation.
16. **Officers Automated Structured Information System (OASIS)** : It is a programme of the Indian Army that aims to digitise the official records of the Indian army officers. Oasis will also carry the photographs of the dependents of the army officers. When the officer retires, the whole data will also be migrated from Oasis to Retired Officers Digital Records Archive (RODRA). RODRA holds the pension details of the officers.
17. **Project Beehive** : It was launched by the Army's Corps of Electronics and Mechanical Engineers (EME) on September 1, 2019. The project seeks to achieve greater automation of the Corps and connect all its workshops to an integrated smart network with real-time data analytics capabilities. The project has been divided into eight modules of which the first module is ready and the second is under preparation.