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Polity and Governance

Highlights

- Supreme Court on VVPATs (1)
- RTI vs. OSA (1)
- New Mineral Policy 2019 (2)
- National Policy on Software Products 2019 (2)
- Income-Tax Details of Election Candidates (3)
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Supreme Court on VVPATs

The Supreme Court (SC) is hearing a plea filed by some political parties for random verification of at least 50% Electronic Voting Machines (EVMs) using their Voter Verifiable Paper Audit Trail (VVPAT) slips in the upcoming general elections.

Background

- VVPAT is an independent verification printer machine and is attached to electronic voting machines. It allows voters to verify whether if their vote has gone to the intended candidate.
- When a voter presses a button in the EVM, a paper slip is printed through the VVPAT. The slip contains the poll symbol and name of the candidate. It allows the voter to verify his/her choice.
- After being visible to the voter from a glass case in the VVPAT for seven seconds, the ballot slip is cut and dropped into the drop box in the VVPAT machine.

Key Points

- Supreme Court in Subramanian Swamy case gave utmost importance to the functioning of EVMs by referring VVPATs as an 'indispensable requirement for free and fair elections'.
- The Election Commission (EC) started to verify VVPAT slips of only one randomly selected polling station in an Assembly constituency (in case of election of State Legislative Assembly) and each Assembly segment (in case of Lok Sabha election).

- Petitioners argue that the 50% randomised verification, of EVMs using their VVPAT slips, is a reasonable sample size to be statistically significant to ensure that EVMs are working properly. It will be in the interest of free and fair elections, which is part of the basic structure of the Constitution.

RTI vs. OSA

Recently, the government has sought action against some media houses under the Official Secrets Act (OSA), 1923 for publishing documents related to India's deal to buy 36 Rafale fighter jets from France. The issue brought to light the controversy regarding transparency in governance structures.

Key Points

- **Legal Position**
 - Whenever there is a conflict between the two laws, the provisions of the Right to Information (RTI) Act override those of the OSA.
 - Section 22 of the RTI Act states that its provisions will have effect notwithstanding anything that is inconsistent with them in the OSA.
 - Similarly, under Section 8(2) of the RTI Act, a public authority may allow access to information covered under the OSA, 'if the public interest in disclosure outweighs the harm to the protected interests'.
- **Issues with OSA**
 - **Colonial Legacy** – The OSA was enacted in 1923 by the British to keep certain kinds of information confidential including information involving the

affairs of state, diplomacy, national security, espionage, and other state secrets.

- **Vague Terms:** The OSA has provisions that are too broad and vague, often leaving room for arbitrariness. For instance, under Section 2(8)(d) of the Act defining a 'prohibited place', 'any railway, road, way or channel or other means of communication by land or water...' can be notified by the Central government as a 'prohibited place'.
- **Punishment:** It punishes the communication of any information obtained in contravention of the Act, which could prejudice the security of the state or friendly relations with foreign states. This provision targets whistle-blowing and investigative journalism, no matter how critically important it might be to have the information public.
- **Against the Constitutional Values:** OSA is against the constitutional principles of democratic republic, where the state is supposed to be transparent to its citizens.
- **Reforms within OSA**
 - The Second Administrative Reforms Commission recommended repeal of the Official Secrets Act. But the government rejected the recommendation, saying 'the OSA is the only law to deal with cases of espionage, wrongful possession and communication of sensitive information detrimental to the security of the State'.
 - In 2006, the Home Ministry recommended substantial changes to the OSA, in line with the privacy regime established by the RTI.
 - There are calls to repeal the OSA and replace it with a National Security Act that is more consistent with the aspirations of an open, democratic republic.

New Mineral Policy 2019

The Union Cabinet has approved the **National Mineral Policy (NMP), 2019**.

Key Points

- The aim of National Mineral Policy 2019 is to have a more effective, meaningful and implementable policy that brings in further transparency, better regulation, and enforcement, balanced social and economic growth as well as sustainable mining practices.
- The Policy proposes to grant the **status of industry** to mining activity to boost financing for mining

activities and for acquisitions of mineral assets in other countries by the private sector.

- The Policy also envisages rationalisation of reserved areas given to PSUs which have not been used and to put these areas to auction.
- The Policy aims to harmonize taxes, levies and royalty with world benchmarks to help the private sector.
- The new policy focuses on the use of coastal waterways and inland shipping for evacuation and transportation of minerals and encourages dedicated mineral corridors to facilitate the transportation of minerals.
- NMP 2019 proposes a long term export-import policy for the mineral sector to provide stability and as an incentive for investing in large scale commercial mining activity.
- The 2019 Policy also introduces the concept of inter-generational equity that deals with the well-being not only of the present generation but also of the generations to come.
- It also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.

Benefits

- The Policy includes provisions which will give a boost to the mining sector such as
 - encouraging the private sector to take up exploration,
 - auctioning in virgin areas for composite RP cum PL cum ML (reconnaissance permit cum prospective licensing and mining lease) on revenue sharing basis
 - encouraging merger and acquisition of mining entities
 - transfer of mining leases and creation of dedicated mineral corridors to boost private sector mining areas

National Policy on Software Products 2019

Recently, the Union Cabinet has approved the **National Policy on Software Products (NPSP) 2019**.

Key Points

- The NPSP 2019 seeks to create a robust software product ecosystem, which aims to develop India as the **global software product hub**.

- Further, the Policy aims to align with other Government initiatives such as Start-up India, Make in India and Digital India, Skill India etc. so as to help the industry reach \$70-80 billion by 2025.
- The policy has the following **five missions**:
 - Promote the creation of a sustainable Indian software product industry, driven by intellectual property (IP), leading to a ten-fold increase in India share of the global software product market by 2025.
 - To nurture technology start-ups in software product industry, including those in Tier-II and Tier-III towns & cities and generating direct and in-direct employment for 3.5 million people by 2025.
 - To create a talent pool for software product industry through up-skilling of IT professionals, motivating school and college students and promoting specialized professionals that can provide leadership.
 - To build a cluster-based innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/test beds and mentoring support.
 - In order to evolve and monitor scheme & programmes for the implementation of this policy, National Software Products Mission will be set up with participation from Government, Academia and Industry.

Income-Tax Details of Election Candidates

Recently, Form 26 was amended to make it mandatory for election candidates to reveal their income-tax (I-T) returns of the last five years, as well as the details of their offshore assets.

What is Form 26?

- A candidate in an election is required to file an affidavit called Form 26 that furnishes information on her assets, liabilities, educational qualifications, criminal antecedents and public dues, if any.
- The affidavit has to be filed along with the nomination papers and should be sworn before an Oath Commissioner or First Class Magistrate or before a Notary Public.

- Earlier, a candidate had to only declare the last I-T return (for self, spouse and dependents). Details of foreign assets were not sought.
- Now it is also mandatory for candidates to reveal their own income-tax returns of the last five years rather than only one, and the details of offshore assets, as well as the same details for their spouse and dependents.
- As per the new rules, offshore assets mean details of all deposits or investments in foreign banks and any other body or institution abroad and details of all assets and liabilities in foreign countries.
- The objective behind Form 26 was that it would help voters make an informed decision. The affidavit would make them aware of the criminal activities of a candidate. With the recent amendment, voters will know the extent to which a serving MP's income grew during his five years in power.

SHREYAS Scheme

Recently the **Ministry of Human Resource Development** launched the '**Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS)**'.

Key Points

- The Scheme seeks to provide **industry apprenticeship opportunities** to the general graduates through the **National Apprenticeship Promotion Scheme (NAPS)**.
- The Scheme aims to **enhance the employability of Indian youth** by providing '**on the job work exposure**' and earning of stipend for students in **degree courses, primarily non-technical**.
- The courses will be available to students from academic year April-May 2019.
- SHREYAS portal will enable educational institutions and industry to provide their respective demand and supply of apprenticeship.
- **Sector Skill Councils (SSCs)** would identify industries for apprenticeship, and would also conduct assessment leading to certification. Whereas the certification is not a guarantee for placement, it is expected to vastly enhance a candidate's chance of securing employment.
- **The objectives of the Scheme:**
 - **Improve employability of students** by introducing employment relevance into the learning process of the higher education system.

- Forge a **close functional link between education and industry** on a sustainable basis.
- Provide **skills which are in demand** to the students in a dynamic manner.
- Establish an **'earn while you learn' system** into higher education.
- Help businesses in securing good quality manpower.
- The scheme would be operationalised by coordination of **Ministry of Skills Development and Entrepreneurship (MSDE) and the Ministry of Labour.**
- **Ministry of Skills Development and Entrepreneurship (MSDE)** would monitor the progress of the apprentices and disburse the claims from the business enterprises towards stipend expenses.

National Apprenticeship Promotion Scheme (NAPS)

- National Apprenticeship Promotion Scheme (NAPS) was launched on **19th August 2016** to promote apprenticeship training and increase the engagement of apprentices.
- The scheme has the following **two components**:
 - **Reimbursement of 25% of prescribed stipend** subject to a maximum of ₹1500/- per month per apprentice by the Government of India to all employers who engage apprentices.
 - **Reimbursement of cost of basic training** (upto ₹7500/- for a maximum of 500 hours/3 months) by the Government of India to basic training providers (BTPs) in respect of apprentices who come directly for apprenticeship training without any formal training.

Sector Skill Councils (SSCs)

- Sector Skill Councils are set up as **autonomous industry-led bodies by National Skill Development Corporation (NSDC).**
- SSCs are responsible for defining the skilling needs, concept, processes, certification, and accreditation of their respective industry sectors in accordance with National Skill Qualification Framework.
- They create Occupational Standards and Qualification bodies, develop competency framework, conduct train the trainer programs, conduct skill gap studies and Assess and Certify trainees on the curriculum aligned to National Occupational Standards developed by them.

SATAT Scheme

Recently, the Minister of Petroleum and Natural Gas handed over the 100th Letter of Intent (LoI) to the **Compressed Bio-Gas (CBG) Entrepreneur (producer)** under the **Sustainable Alternative Towards Affordable Transportation (SATAT) scheme.**

Key Points

- SATAT has following **four objectives**:
 - **Utilising** more than 62 million metric tonnes of **waste** generated every year in India,
 - Cutting down **import dependence**,
 - **Supplementing job creation** in the country, and
 - **Reducing vehicular emissions and pollution from burning of agricultural/organic waste.**
- **Compressed bio-gas**
 - Compressed bio-gas is similar to the commercially available natural gas in its composition and energy potential.
 - It is produced naturally through a process of anaerobic decomposition from waste/bio-mass sources like agriculture residue, cattle dung, municipal solid waste etc. After purification, it is compressed and called CBG, which has pure methane content of over 90%.
 - CBG can be used as an alternative, renewable automotive fuel.
- **Advantages of CBG**
 - Responsible waste management, reduction in carbon emissions and pollution
 - Additional revenue source for farmers
 - Boost to entrepreneurship, rural economy and employment
 - Support to national commitments in achieving climate change goals
 - Reduction in import of natural gas and crude oil
 - Buffer against crude oil/gas price fluctuations

Pradhan Mantri JI-VAN Yojana

Recently, the Cabinet Committee on Economic Affairs (CCEA) approved **Pradhan Mantri JI-VAN (Jaiv Indhan – Vatavaran Anukool fasal awashesh Nivaran) Yojana.**

Key Points

- The scheme will be supported financially by Viability Gap Funding (VGF) to Second Generation (2G) Integrated bio-ethanol projects using Lignocellulosic biomass and other renewable feedstock.
- The objective of the scheme is to create an ecosystem for setting up commercial projects and boost to research and development in 2G ethanol sectors.
- The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs) to further enhance the blending percentage under Ethanol Blending Programme (EBP).
- Centre for High Technology (CHT), under the Ministry of Petroleum and Natural Gas (MoP&NG), will be the implementation agency for the scheme.

Key Terms

- **Viability Gap Funding (VGF)** means a grant one-time or deferred, provided to support infrastructure projects that are economically justified but fall short of financial viability.
- **Lignocellulosic biomass** (or LC biomass) refers to plant biomass that is composed of cellulose, hemicellulose, and lignin. For examples, cereal straw, bagasse, forest residues etc.

Benefits

- The scheme seeks to promote Second Generation (2G) bio-fuels technology moving away from food crops used in First Generation (1G) to feedstocks, non-food crops agricultural residues or waste.
- The progressive blending/substitution of fossil fuels are a step towards achieving Green House Gas emission reduction targets.
- It will stop burning of biomass/crop residues and thus improve the health of citizens and farmers' income. By disposing of non-food bio-fuel feedstock it will also contribute towards Swachh Bharat Mission.
- It will also create employment opportunities in 2G ethanol projects and biomass supply chain.

Background

- The Government launched Ethanol Blended Petrol (EBP) programme in 2003 for undertaking blending of ethanol in petrol to address environmental concerns due to fossil fuel burning, provide remuneration to farmers, subsidise crude imports and achieve forex savings.

- Under the EBP programme, OMCs (Oil Marketing Companies) are to blend up to 10% of ethanol in Petrol.
- Presently, EBP is being run in 21 States and 4 UTs.
- Despite efforts such as higher ethanol prices and simplification of ethanol purchase system, the highest ever ethanol procurement stands around 150 crore litres during 2017-18 which is hardly sufficient for around 4.22% blending on pan India basis.
- To enhance blending up to 10% of ethanol in Petrol, an alternate route viz. Second Generation (2G) Ethanol from biomass and other wastes is being explored by MoP&NG to bridge the supply gap for EBP programme.
- Therefore, 'Pradhan Mantri JI-VAN Yojana' is being launched as a tool to create 2G ethanol capacity in the country and attract investments in this new sector.

Bio-fuels

- Bio-fuels are fuels manufactured from biomass.
- Biomass resources are the biodegradable fraction of products, wastes, and residues from agriculture, forestry and related industries as well as the biodegradable fraction of industrial and municipal wastes.
- **Advantages**
 - Renewable energy source
 - Non-toxic & biodegradable
 - Contains no sulphur that causes acid rain
 - Environment-friendly
 - Rural employment potential

Generation	Characteristics	Remarks
FIRST	Produced from food crops like maize, corn, sugar cane, into ethanol and bio-diesel, using a similar process to that used in beer and wine-making.	Imposes significant costs on food security by demanding a share of staple crops, resulting in a conflict between fuel and food security.
SECOND	Produced from non-food crops and organic agricultural waste, which contain cellulose.	Grasses, non-edible oil seeds like jatropha, castor seed can be transformed into bio-fuels.

Note:

THIRD	Derived from algae. Also known as green hydrocarbons	The list of fuels that can be derived from algae includes: Bio-diesel, Ethanol, and Jet-fuel.
FOURTH	Produce sustainable energy as well as capture and store CO ₂ by converting biomass materials, which have absorbed CO ₂ while growing.	Rather than simply being carbon neutral, the fourth generation bio-fuel production is carbon negative.

India's First Lokpal

The President appointed the former Supreme Court judge Pinaki Chandra Ghose as India's first anti-corruption ombudsman or Lokpal.

Key Points

- Most of the anti-corruption agencies are hardly independent. The Supreme Court has even termed the Central Bureau of Investigation (CBI) as a 'caged parrot' and 'its master's voice'.
- Many of these agencies are advisory bodies. There is also the problem of internal transparency and accountability. There is no effective mechanism to put checks on these agencies.
- In this context, an independent institution of Lokpal has been a landmark move in the history of Indian polity which offered a solution to the never-ending menace of corruption.
- The Lokpal and Lokayukta Act, 2013 provides for the establishment of Lokpal for the Union and Lokayukta for States. These institutions are **statutory bodies** without any constitutional status.
- They function as an 'ombudsman' and inquire into allegations of corruption against certain public functionaries and for related matters.

Background

- In 1809, the institution of ombudsman was inaugurated officially in Sweden.
- In 1967, Great Britain adopted the institution of the ombudsman and became the first major nation in the democratic world to have such a system.

- In India, the concept of constitutional ombudsman was first proposed by the then law minister Ashok Kumar Sen in Parliament in the early 1960s. The term Lokpal and Lokayukta were coined by Dr. L. M. Singhvi.
- In 1966, the **First Administrative Reforms Commission** recommended the setting up of two independent authorities – at the central and state level – to look into complaints against public functionaries, including MPs.
- In 1968, Lokpal bill was passed in Lok Sabha but lapsed with the dissolution of Lok Sabha. Till 2011 eight attempts were made to pass the Bill, but all met with failure.
- In 2002, the **Commission to Review the Working of the Constitution** headed by M.N. Venkatachaliah recommended the appointment of the Lokpal and Lokayuktas. It also recommended that the Prime Minister be kept out of the ambit of the authority.
- In 2005, the **Second Administrative Reforms Commission** chaired by Veerappa Moily recommended that the office of Lokpal should be established without delay.
- In 2011, the government formed a Group of Ministers, chaired by Pranab Mukherjee to suggest measures to tackle corruption and examine the proposal of a Lokpal bill.
- '**India Against Corruption**' movement led by Anna Hazare put pressure on the government which resulted in the passing of the Lokpal and Lokayuktas Act, 2013. It received assent from President on 1 January 2014.

Lokpal and Lokayuktas Act, 2013

- The Act provides for the establishment of a body of **Lokpal for the Union** and **Lokayukta for States** to inquire into allegations of corruption against certain public functionaries.
- It extends to the whole of India. It applies to public servants in and outside India.
- The Lokpal shall inquire or cause an inquiry to be conducted into any matter that involves any allegation of corruption made in a complaint in respect of the following, namely:
 - Any person who is or has been a Prime Minister (except for certain exceptions with respect to matters related to security, international relations etc.)
 - Any person who is or has been a Minister of the Union or a Member of Parliament.

Note:

- Group A to D officers as defined in Prevention of Corruption Act, 1988.
- The Act also mandates that all public officials should furnish the assets and liabilities of themselves as well as their respective dependents.
- It shall be the duty of the Lokpal to present annually to the President a report to be laid before each House of the Parliament.
- Every State shall establish a body to be known as the Lokayukta for the State by a law made by the State Legislature. Thus, establishment of the institutions of **Lokayukta** including any appointment therein falls within the **domain of the States**.
- To some extent, the need for functional **independence of the CBI** has also been catered to by a change brought forth in the **selection process of its Director**, by this Act.
- Lokpal has the power of superintendence over, and to give direction to CBI. If Lokpal has referred a case to CBI, the investigating officer in such case cannot be transferred without the approval of Lokpal.
- The Inquiry Wing of the Lokpal has been vested with the **powers of a civil court**.
- Lokpal has the power to recommend transfer or suspension of public servant connected with allegation of corruption.

Structure of Lokpal

- Lokpal is a **multi-member body** that consists of one chairperson and a maximum of 8 members.
- The **Chairperson** should be either the former Chief Justice of India or a former Judge of Supreme Court or an eminent person with impeccable integrity, having special knowledge and expertise of minimum 25 years in the matters like anti-corruption policy, public administration, vigilance, finance including insurance and banking, law and management.
- Out of the maximum eight members, half will be judicial members and minimum 50% of the members shall be SCs/STs/OBCs/minorities and women.
- The judicial member of the Lokpal shall be either a former Judge of the Supreme Court or a former Chief Justice of a High Court.
- The non-judicial members should be eminent persons with impeccable integrity, having special knowledge and expertise of minimum 25 years in the matters like anti-corruption policy, public administration and vigilance.

- The **term of office** for Lokpal Chairman and members is 5 years or till the age of 70 years.
- The members are **appointed by the President** on the recommendation of a Selection Committee. The **oath of office** of the Chairperson (Lokpal) is administered by the President while that of other members of the Lokpal is administered by the Chairperson himself.
- The **Selection Committee** is composed of the Prime Minister (as the Chairperson); Chief Justice of India or a judge nominated by him, Speaker of the Lok Sabha, Leader of Opposition in the Lok Sabha and one eminent jurist.
- For selecting the chairperson and the members of the Lokpal, the selection committee constitutes a search committee of at least eight persons.
- **Lokpal Search Committee**
 - The Department of Personnel and Training (DoPT) prepares a list of candidates which is placed to the search committee.
 - The search committee shortlists the names and places them before the selection committee headed by the Prime Minister.
 - The selection committee may or may not pick names suggested by the search committee.

Limitations

- It took five years to appoint a Lokpal since the Lokpal and Lokayuktas Act was passed in 2013. This indicates the lack of political will.
- The Lokpal act also called upon states to appoint a Lokayukta within a year of its coming to force, but only 16 states have established the Lokayukta till now.
- Lokpal is not free from political influence as the appointing committee itself consist of members from political parties.
- The appointment of Lokpal can be manipulated in a way as there is no criterion to decide who is an 'eminent jurist' or 'a person of integrity'.
- The 2013 Act did not provide concrete immunity to the whistle blowers. The provision for initiation of inquiry against the complainant if the accused is found innocent will only discourage people from complaining.
- Another major lacuna is the exclusion of judiciary from the ambit of the Lokpal.
- The Lokpal is not given any constitutional backing and there is no adequate provision for appeal against the Lokpal.

Note:

- The specific details in relation to the appointment of Lokayukta have been left completely on the States.
- The complaint against corruption cannot be registered after a period of seven years from the date on which the complaint is alleged to have been committed.

Suggestions

- In order to tackle the problem of corruption, the institution of the ombudsman should be strengthened both in terms of functional autonomy and availability of manpower.
- Greater transparency, more right to information and empowerment of citizens and citizen groups is required along with a good leadership that is willing to subject itself to public scrutiny.
- Appointment of Lokpal in itself is not enough. The government should address the issues based on which people are demanding a Lokpal. Merely adding to the strength of investigative agencies will increase the size of the government but not necessarily improve governance.
- Moreover, Lokpal and Lokayukta must be financially, administratively and legally independent of those whom they are called upon to investigate and prosecute.
- Lokpal and Lokayukta appointments must be done transparently so as to minimize the chances of the wrong sorts of people getting in.
- There is a need for a multiplicity of decentralized institutions with appropriate accountability mechanisms, to avoid the concentration of too much power, in any one institution or authority.

Model Code of Conduct

With the announcement of elections to the 17th Lok Sabha, the Model Code of Conduct (MCC) has come into effect immediately.

Key Points

- The Model Code of Conduct (MCC) is a consensus document. It is intended to help the poll campaign maintain high standards of public morality and provide a level playing field for all parties and candidates.
- The MCC is a set of guidelines issued by the Election Commission (EC) to regulate political parties and candidates prior to elections. Basically, the code spells out the do's and don'ts for elections.

- This is in keeping with Article 324 of the Constitution, which mandates EC to conduct free and fair elections to the Parliament and State legislatures.
- It is **not statutory** but political parties, candidates and polling agents are expected to observe the norms, on matters ranging from the content of election manifestos, speeches and processions, to general conduct etc.
- The code comes into force on the announcement of the poll schedule and remains operational till the process is concluded.
- **What is permitted and what is not?**
 - The MCC forbids ministers from using official machinery for election work and from combining official visits with electioneering.
 - Advertisements extolling the work of the incumbent government using public money are to be avoided.
 - The government cannot announce any new schemes or financial grants, and make any ad hoc appointments.
 - MCC also applies to content posted by political parties and candidates on the Internet, including on social media sites.
 - Ministers cannot enter any polling station or counting centre except in their capacity as a voter or a candidate.
 - The Code does not stand in the way of ongoing schemes of development work or welfare, relief and rehabilitation measures meant for people suffering from calamities. However, use of these works for election propaganda is forbidden.
- The EC has devised several mechanisms to take note of the violation of the code, which include joint task forces of enforcement agencies and flying squads. The latest is the introduction of the cVIGIL mobile app through which audio-visual evidence of malpractices can be reported.
 - The cVIGIL App provides time-stamped, evidence-based proof of the Model Code of Conduct/ Expenditure Violation, having live photo/video with auto location data.
 - Any citizen can lodge a complaint through the app. Flying Squads will then investigate the matter and the Returning Officer takes the decision.

MCC: Legal Enforcement

- Though MCC does not have any statutory backing, it has come to acquire teeth in the past decade because

Note:

of its strict enforcement by the EC. The Commission usually uses moral sanction to get political parties and candidates to fall in line.

- Certain provisions of the MCC may be enforced through invoking corresponding provisions in other statutes such as the Indian Penal Code, 1860, Code of Criminal Procedure, 1973, and Representation of the People Act, 1951.
 - For example; inciting hatred through political speeches, appealing to caste and community feelings of voters, intimidating or bribing voters in the 48 hours preceding the close of polling, are offences for which candidates can be tried under the statutes.
- In 2013, the Standing Committee on Personnel, Public Grievances, Law and Justice, recommended making the model code of conduct legally binding. The committee observed in a report on electoral reforms that most provisions of the code are already enforceable through corresponding provisions in other statutes. It recommended that the MCC be made a part of the Representation of the People Act, 1951.
- The EC argues against making it legally binding. According to it, elections must be completed within a relatively short time but judicial proceedings typically take longer, therefore it is not feasible to make it enforceable by law.

Nine Science and Technology Missions

Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC) has identified nine national science missions.

- The missions seek to address major scientific challenges to ensure India's sustainable development.
- Each mission will be led by a lead Ministry and will engage international and national institutional partners, young scientists and industry.

The Nine Missions

Mission 1: Natural Language Translation

- The mission seeks to make science and technology accessible to all by removing the barrier that the requirement of high-level of facility in English poses today.

- Using a combination of machine and human translation, the mission will eventually enable access to teaching and research material bilingually i.e. in English and one's native Indian language.

Lead agencies:

- Ministry of Electronics and Information Technology
- Ministry of Human Resource Development
- Department of Science and Technology

Mission 2: Quantum Frontier

- It seeks to initiate work in control of the quantum mechanical systems, with a large number of degrees of freedom, as one of the great contemporary challenges in fundamental science and technology.
- Building excellence in the quantum frontier will also be essential for national security and in the development of quantum computers, quantum chemistry, quantum communication, new materials, quantum sensors and quantum cryptography.

Lead agencies:

- Department of Science and Technology
- Department of Space
- Department of Atomic Energy
- Defence Research and Development Organisation
- Ministry of Electronics and Information Technology

Mission 3: Artificial Intelligence (AI)

- It will focus on addressing societal needs in areas such as healthcare, education, agriculture, smart cities and infrastructure, including smart mobility and transportation.

Lead agencies:

- NITI Aayog
- Department of Science and Technology
- Ministry of Electronics and Information Technology
- Department of Biotechnology

Mission 4: National Biodiversity Mission

- It will include the following
 - A comprehensive documentation of India's biodiversity including the associated cultural and traditional practices,
 - Development of a cadre of professionals adept at handling large sets of environmental data for management and monitoring of biodiversity
 - Establishment of a vibrant biodiversity based economy on a solid foundation of reliable information

- Engagement with the public
- Enhanced options for agricultural production and livelihood security and the general well-being of society

➤ **Lead agencies:**

- Ministry of Environment, Forests and Climate Change
- Department of Biotechnology

Mission 5: Electric Vehicles (EVs)

- It will develop vehicle sub systems and components for Indian requirements including Li-ion batteries, power electronics etc., using academia-industry collaboration.
- This mission is critical for India to reduce fossil fuel consumption and mitigate emissions. Vehicles need to be energy efficient, use light and efficient batteries that function well in India specific conditions with materials that are recyclable.

➤ **Lead agencies:**

- Department of Science and Technology
- Department of Heavy Industries
- Ministry of New and Renewable Energy
- Ministry of Power
- NITI Aayog

Mission 6: Bio-science for Human Health

- It aims to construct comprehensive reference maps of genomes and to understand the dynamics of how exposures to different environments impact our bodies.
- The diversity of Indians and of its environment requires a large-scale study of human genomes specific to our lifestyle and how this impact health and disease patterns.
- The mission will focus on the genomic study of populations of humans to identify and unravel the genetic basis and prevalence of rare and inherited diseases.
- The outcome will help stimulate better diagnosis and treatment that can feed into the health care system of the country.
- **Lead agencies:**
 - Department of Biotechnology
 - Department of Health Research
 - Department of Health
 - Department of Science and Technology
 - Department of Atomic Energy

Mission 7: Waste to Wealth

- It aims to identify, develop and deploy technologies to treat waste to generate energy, recycle materials and extract worth.
- The mission will also work to identify and support development of new technologies that hold promise in creating a clean and green environment.
- The mission will assist and augment the Swachh Bharat and Smart Cities project by leveraging science, technology and innovation to create circular economic models that are financially viable for waste management to streamline waste handling in India.
- **Lead agencies:**
 - Department of Biotechnology
 - Department of Science and Technology
 - Ministry of Environment, Forest and Climate Change
 - Ministry of Urban Development
 - Swachh Bharat Abhiyan

Mission 8: Deep Ocean Exploration

- It aims to scientifically explore the deep oceans towards improving India's understanding of the blue frontier.
- It will address issues arising from long term changes in the ocean due to climate change.
- The focus areas cover the following:
 - Development of technologies for deep sea exploration and exploitation of living (biodiversity) and non-living (minerals) resources
 - Development of underwater vehicles and underwater robotics
 - Development of ocean climate change advisory services
 - Technological innovations and conservational methods for sustainable utilisation of marine bio-resources
 - Offshore based desalination techniques and renewable energy generation
- **Lead agencies:**
 - Ministry of Earth Sciences
 - Department of Biotechnology
 - Department of Space
 - Ministry of New and Renewable Energy
 - Oil and Natural Gas Corporation
 - Defence Research and Development Organisation
 - Geological Survey of India
 - National Hydrographic Office
 - National Biodiversity Authority

Note:

Mission 9: AGNI (Accelerating Growth of New India's Innovations)

- The mission aims to support the national efforts to boost the innovation ecosystem in the country by connecting innovators across industry, individuals and the grassroots to the market and help commercialise innovative solutions.
- The mission includes services across the techno-commercialisation chain required to support and upscale market-ready indigenous innovations.
- The initiative includes
 - working with government R&D laboratories and academia to help commercialise their innovations;
 - collaborate and value add to existing innovation programs;
 - training and capacity building of scientists, innovators, technology transfer offices and technology license offices
 - Linking specific needs of industry to research laboratories to enable development of cost-effective marketable solutions
- **Lead agency:**
 - Invest India

Other major projects of the Office of the Principal Scientific Adviser

- **Earth Museum:** A state-of-the-art museum which will serve as a national repository for specimen fossil preservation and conservation.
 - It will also be designed as a major centre for research in geological and other natural sciences.
 - This will help to educate students and citizens about the exploration, conservation and preservation of India's natural heritage.
- **I-STEM- Indian Science Technology, and Engineering Facilities Map:** A regularly updated national portal of publicly funded R&D facilities and equipment, installed and working in R&D and academic institutions across the country.
- **Energy Security:** An expert committee for exploration and procurement of critical minerals required for the National Mission of Electric Mobility has been set up in consultation with Ministry of Mining to examine the reserves of Lithium, Cobalt, etc. in the country as well as possible tie-up with mining sector of other countries for sourcing these.

- KABIL, a joint venture of MECL, NALCO and HCL has initiated preliminary discussions for possible agreement on sourcing Lithium and Cobalt from countries like Australia, Argentina and Bolivia.
- In February 2019, KABIL team visited Argentina to conduct a primary survey of different mines in Argentina.

Prime Minister's Science, Technology and Innovation Council (PM-STIAC)

- The PM-STIAC is an overarching body which assesses the status of specific S&T domains, comprehends challenges, formulates immediate, mid and long term interventions and presents a roadmap to the Prime Minister.
- The Principal Scientific Adviser coordinates to facilitate and ensure implementation of major interventions by concerned Government Departments, Agencies and Ministries.
- Amongst the terms of reference of the Council are to formulate, converge, collaborate, coordinate and implement multi-stakeholder policy initiatives, mechanisms, reforms and programmes aimed at:
 - synergising S&T covering fundamental to applied research in collaboration with multiple stakeholders both in central and state governments
 - enabling future preparedness in emerging domains of science and technology
 - formulating and coordinating major inter-ministerial S&T missions
 - providing an enabling ecosystem for technology led innovations and techno entrepreneurship
 - driving innovation and technology delivery towards solving socio-economic challenges for sustainable growth
 - fostering effective public-private linkages for driving research and innovation
 - developing science, technology and innovation clusters with multiple stakeholders including academia, industry and government
 - skilling in current and futuristic technologies

BOLD-QIT Project

The Union Home Minister has inaugurated the project BOLD-QIT (Border Electronically Dominated QRT Interception Technique).

Note:

Key Points

- Under the **CIBMS** (Comprehensive Integrated Border Management System) the project is being implemented on India-Bangladesh border in Dhubri District of Assam.
- BOLD-QIT is the project to install technical systems which enable BSF to equip Indo-Bangla border with different kind of sensors in the unfenced riverine area of the Brahmaputra and its tributaries.
- Now, the entire span of river Brahmaputra is covered with data network generated by microwave communication, optical fiber cable (OFC), digital mobile radio (DMR) communication, day and night surveillance cameras, and intrusion detection system.
- These modern gadgets provide feeds to BSF Control Rooms on the border and enable BSF Quick Reaction Teams to thwart any possibility of Illegal cross border crossing/crimes.
- The implementation of this project will not only help BSF to curb all type of cross border crimes but also provide respite to the troops from round the clock human surveillance.

Background

- Border Security Force (BSF) is responsible for the safeguarding of around 4,000 km long International Border with Bangladesh. At various places, it is not possible to erect border fence due to the geographical barriers.
- The border area in Dhubri (Assam) where River Brahmaputra enters into Bangladesh consists of vast char lands and innumerable river channels thus making border guards in this area, a tough task especially during rainy season.

Comprehensive Integrated Border Management System (CIBMS)

- The CIBMS is a robust and integrated system that is capable of addressing the gaps in the present system of border security by seamlessly integrating human resources, weapons, and high-tech surveillance equipment.
- CIBMS has three components which are using a number of different devices for surveillance, efficient and dedicated communication network and data storage for a composite picture.
- Sensors like thermal imager, unattended ground sensor, fiber optical sensors, radar, sonar, satellite imagery are used in CIBMS.

- To overcome this problem, in the year 2017, the Ministry of Home Affairs decided to go for a technological solution besides the physical presence of BSF.
- In January 2018, Information and Technology Wing of BSF undertook the project BOLD-QIT (Border Electronically Dominated QRT Interception Technique).

Flood Management and Border Areas Programme (FMBAP)

The Union Cabinet has approved the Flood Management and Border Areas Programme (FMBAP) for the period 2017-18 to 2019-20.

Key Points

- The Scheme has been framed by merging the components of two continuing XII Plan schemes titled Flood Management Programme (FMP) and River Management Activities and Works related to Border Areas (RMBA).
- FMBAP will be implemented throughout the country for effective flood management, erosion control and anti-sea erosion.
- The proposal will benefit towns, villages, industrial establishments, communication links, agricultural fields, infrastructure etc. from floods and erosion in the country. The catchment area treatment works will help in reduction of sediment load into rivers.
- The Scheme will assist the State Governments to provide reasonable degree of protection against floods in critical areas by adopting optimum combination of structural and non-structural measures and enhancing capabilities of government officials in related fields.
- The Scheme also caters to hydro-meteorological observations and flood forecasting on common rivers with the neighbouring countries.
- The Scheme also includes survey and investigations of water resources projects on the common rivers with neighbouring countries like Pancheshwar Multipurpose Project, Saptakosi-Sunkosi Projects in Nepal.
- The funding pattern will be 50% (Centre) : 50% (State) for general category States and 70% (Centre) : 30% (State) for North Eastern States, Sikkim, J&K, Himachal Pradesh and Uttarakhand.



Economic Scenario

Highlights

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SBI links savings bank deposits, short-term loans to Repo rate

State Bank of India, the largest commercial bank in the country, has decided to link interest rates on savings bank deposits and short term loans, including personal loans, to the Repo rate of the Reserve Bank of India (RBI).

Key Points

- The new interest rate system is expected to speed up interest rate transmission and transparency in the banking system.
- It will result in any rate change by the RBI being instantly passed on to depositors and borrowers.
- With effect from May 1, savings bank deposits, with balances of above ₹1 lakh, will earn a return equivalent to 2.75% below the prevailing repo rate.
- In addition to deposits, all cash credit accounts and overdrafts with limits of above ₹1 lakh will be at the repo rate plus a spread of 2.25%. In addition to this, the bank will add a spread based on the risk profile of the borrower.
- In order to insulate small deposit holders and small borrowers from the movement of external benchmarks, SBI has decided to exempt savings bank account holders with balances up to ₹1 lakh and borrowers

with Cash Credit/Overdraft Account (CC/OD) limits up to ₹1 lakh from linkage to the Repo rate.

- In its December 2018 monetary policy meet, the RBI had proposed benchmarking of fresh floating-rate retail loans and loans to micro and small enterprises to an external benchmark like Repo rate or Treasury Bills rate

Open Acreage Licensing Policy

The government has deferred by one month the last date for bidding for the 14 oil and gas exploration blocks offered in the second round of Open Acreage Licensing Policy (OALP).

Key Points

- Under OALP, companies are allowed to put in an expression of interest (EoI) for prospecting of oil and gas in an area that is presently not under any production or exploration licence. The EoIs can be put in at any time of the year but they are accumulated twice annually.
- The blocks or areas that receive EoIs at the end of a cycle are put up for auction with the originator or the firm that originally selected the area getting a 5-mark advantage.
- Blocks are awarded to the company which offers the highest share of oil and gas to the government as

well as commits to doing maximum exploration work by way of shooting 2D and 3D seismic survey and drilling exploration wells.

- The new policy replaced the old system of government carving out areas and bidding them out. It guarantees marketing and pricing freedom and moves away from production sharing model of previous rounds to a revenue-sharing model, where companies offering the maximum share of oil and gas to the government are awarded the block.
- OALP is a part of Hydrocarbon Exploration and Licensing Policy (HELP), which itself was a replacement to the New Exploration and Licensing Policy (NELP).
- HELP was brought out in June 2017 and marked a departure from the previous regime in terms of the geographical area that could be explored, the number of licenses required, the manner in which proceeds are to be shared with the government, and the procedure to sell what is extracted.

Hydrocarbon Exploration and Licensing Policy

To reduce import dependency on oil and gas by 10% by 2022, the Government of India announced HELP to replace the New Exploration Licensing Policy that has been applicable since 1997-98. Four main facets of this policy are:

- Uniform license for exploration and production of all forms of hydrocarbon.
- An open acreage policy.
- Easy to administer revenue sharing model.
- Marketing and pricing freedom for the crude oil and natural gas produced.
- While the uniform licence enables the contractor to explore conventional as well as unconventional oil and gas resources like shale gas and gas hydrates under a single license, the Open Acreage Policy enables companies to choose the blocks from the designated area.
- The policy shifts production linked payment system to administer revenue sharing model under which the government will receive a share of the gross revenue from the sale of oil, gas etc.

Report on EASE Reforms Index

The Ministry of Finance recently released the first report on Enhance Access & Service Excellence (EASE) Reforms Index. The publication of the Report was commissioned by Indian Banks' Association (IBA).

Key highlights

- **Punjab National Bank has been ranked first** among Public Sector Banks (PSBs) in the implementation of 'reforms agenda', followed by Bank of Baroda and State Bank of India.
- The Report found that reforms in the insolvency and bankruptcy framework and recovery process are leading to large scale NPA resolution and recovery.
- The six PSU banks, which continue to be under the RBI's Prompt Corrective Action (PCA) framework, too have been ranked in the report. These are Indian Overseas Bank, UCO Bank, United Bank of India, IDBI Bank, Central Bank of India and Dena Bank.
- The Report also shows visible progress made on each of 4 elements of Government's **4R's strategy** including **recognition, recovery, recapitalisation and reforms**.

Prompt Corrective Action (PCA)

- PCA norms allow the RBI to place certain restrictions such as halting branch expansion and stopping dividend payment. It can even cap a bank's lending limit to one entity or sector. Other corrective actions that can be imposed on banks include special audit, restructuring operations and activation of recovery plan. Banks' promoters can be asked to bring in new management, too. The RBI can also supersede the bank's board, under PCA.
- The provisions of the revised PCA framework became effective from April 1, 2017 based on the financials of the banks for the year ended March 31, 2017. The framework will be reviewed after three years.

When is PCA invoked?

- The PCA is invoked when banks breach certain regulatory requirement like minimum capital, return on asset and quantum of non-performing assets.

EASE Reform Index

- The EASE Reform Index measures progress on the PSBs Reforms Agenda on 140 objective metrics across 6 themes, including customer responsiveness, credit off-take and digitalisation.
- The Index provides all PSBs a comparative evaluation showing where banks stand vis-à-vis benchmarks and peers on the Reforms Agenda.
- The Index follows a fully transparent scoring methodology, which enables banks to identify precisely their strengths as well as areas for improvement.

Note:

- The goal is to continue driving change by spurring healthy competition among PSBs and also by encouraging them to learn from each other.
- The Index will be published every year to monitor the performance of PSBs.

Society for Worldwide Interbank Financial Telecommunications (SWIFT)

The Reserve Bank of India (RBI) has imposed a penalty on seven banks for delayed implementation of SWIFT-related operational controls.

- Earlier in February 2018 RBI had directed banks on time-bound implementation and strengthening of SWIFT-related operational controls following the ₹14,000- crore fraud in Punjab National Bank.

SWIFT

- The Society for Worldwide Interbank Financial Telecommunication (SWIFT) provides a network that enables financial institutions worldwide to send and receive information about financial transactions in a secure, standardized and reliable environment.
- Established in 1973, SWIFT uses a standardized proprietary communications platform to facilitate the transmission of information about financial transactions.
- SWIFT neither holds funds on its own nor manages external client accounts.
- SWIFT is headquartered in La Hulpe, Belgium.
- Prior to SWIFT, the only reliable means of message confirmation for international funds transfer was Telex. It was discontinued due to a range of issues such as low speed, security concerns, and a free message format.

Scheme for developing Knitwear Sector

The Union Minister of Textiles has launched a comprehensive scheme for development of Knitting and Knitwear Sector under **PowerTex India**.

Key Points

- The Ministry has approved a combined Standing Finance Component (SFC) of PowerTex India Scheme and Knitwear Scheme.

- The main components of the scheme are as follow:
 - **Creation of new service centres** on Public-Private Partnership (PPP) model by industries and associations in the knitting and knitwear clusters.
 - **Modernization and upgradation of existing Powerloom service Centers (PSCs)** and institutions run by Textile Research Associations (TRAs) and Export Promotion Councils (EPCs) Association in knitting and knitwear clusters.
 - Facilitation, IT, awareness, studies, surveys, market development and publicity for knitting and knitwear units.

PowerTex India

- PowerTex India was launched in 2017 by the Ministry of Textile.
- It is a three-year all-inclusive scheme focused on the development of country's Powerloom Sector.
- The Scheme embraces branding, subsidies, new markets, new research and development in power loom textiles, and also welfare schemes for the power loom workers.

Panel on Offshore Rupee Market

The Reserve Bank of India (RBI) has recently formed an eight-member task force on the offshore rupee market.

Key Points

- It will be **headed by former Deputy Governor Usha Thorat** and would submit its report by the end of June 2019.
- The task force will assess the causes behind the development of the offshore Rupee market.
- It will study the effects of the offshore markets on the Rupee exchange rate and market liquidity in the domestic market.
- The task force will also recommend measures to address concerns, if any, arising out of offshore Rupee trading.
- It will propose measures to generate incentives for non-residents to access the domestic market and examine the role that International Financial Services Centres (IFSCs) can play in addressing these concerns.
- Any other relevant issue(s) the Task Force considers relevant to the context.

International Financial Services Centres (IFSCs)

- An IFSC caters to customers outside the jurisdiction of the domestic economy. Such centres deal with flows of finance, financial products and services across borders.
- An IFSC is thus a jurisdiction that provides world-class financial services to non-residents and residents, to the extent permissible under the current regulations, in a currency other than the domestic currency of the location where the IFSC is located.
- The Special Economic Zone Act, 2005 allows setting up an IFSC in an SEZ or as an SEZ in India after approval from the central government.
- Some of the IFSCs are Shanghai and Dubai.
- India's first International Financial Services Centre (IFSC) at Gujarat International Finance Tec-City (GIFT City) became operational in 2015.

FSDC Panel on Credit Ratings

Recently the Financial Stability and Development Council (FSDC) panel has discussed ways to address challenges pertaining to the quality of credit ratings.

- It expressed concerns over the inability of rating agencies' to assess credit risk and take timely rating actions. Example: Recent IL&FS defaults crisis which had AAA rating just before it started defaulting.

Financial Stability and Development Council (FSDC)

- FSDC is a non-statutory apex council under Ministry of Finance constituted by Executive Order of Union Govt in 2010.
- The **Chairman of the Council is the Finance Minister** and its members include the heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA), Finance Secretary, Secretary, Department of Economic Affairs; Secretary, Department of Financial Services, Chief Economic Adviser etc.
- It aims to strengthen and institutionalize the mechanism of financial stability and development.
- It monitors macro-prudential supervision of the economy and assesses the functioning of the large financial conglomerates. It also addresses intra-regulatory coordination issues.

- The **Raghuram Rajan committee (2008)** on financial sector reforms **recommended for the creation of FSDC**.

Credit Rating Agencies

- A Credit Rating Agency (CRA) is a company that assigns credit ratings, which rate a debtor's ability to pay back the debt by making timely principal and interest payments and the likelihood of default.
- The assessed entities may be companies, special purpose entities, State Governments, local governmental bodies, non-profit organizations and even countries.
- There are six credit rating agencies registered under SEBI namely, CRISIL, ICRA, CARE, SMERA, Fitch India and Brickwork Ratings.

Cabinet Approves Proposal to Align with Global Trademark System

Recently, the Government has approved the proposal for the accession of India to:

- The **Nice Agreement** on the International classification of goods and services for the purposes of registration of trademarks.
- The **Vienna Agreement** for setting up an International classification of the figurative elements of trademarks.
- The **Locarno Agreement** for establishing an International classification for industrial designs.
- All three agreements are administered by the World Intellectual Property Organization (WIPO).

Benefits of the Accession

- Accession to the Nice, Vienna and Locarno Agreements will help the Intellectual Property (IP) Office in India to **harmonize the classification systems for examination of trademark and design applications**, in line with the classification systems, followed globally.
- It would give an opportunity to include Indian designs, figurative elements, and goods in the international classification systems.
- The accession is expected to instill confidence in foreign investors in relation to the protection of IPs in India.
- The accession would also facilitate in exercising rights in decision-making processes regarding review and revision of the classifications under the agreement.

World Intellectual Property Organization (WIPO)

- WIPO was created in 1967 “to encourage creative activity, to promote the protection of intellectual property throughout the world”.
- WIPO is one of the oldest specialized agencies of the United Nations and currently administers 26 international treaties.
- It is headquartered in Geneva, Switzerland.
- Every year World Intellectual Property Day is being celebrated on 26th April.

Intellectual Property

- Intellectual property (IP) is a category of property that includes intangible creations of the human intellect, and primarily encompasses copyrights, patents, and trademarks.
- It also includes other types of rights, such as trade secrets, publicity rights, moral rights, and rights against unfair competition.

Dollar-Rupee Buy/Sell Swap

The first dollar-rupee buy/sell swap auction by Reserve Bank of India (RBI) has received more than \$16 billion in bids for the auction for a notified amount of \$5 billion.

Key Points

- The objective was to augment liquidity management and inject rupee liquidity through long term foreign exchange swap auction. The RBI has in return infused more than ₹34,000 crore rupee liquidity.
- Under the Swap, a bank would sell US dollars to the RBI and simultaneously agree to buy the same amount of US dollars at the end of the swap period. The RBI has conducted the dollar-rupee buy/sell swap auction for a three-year tenor.
- There is an expectation that RBI would conduct more such auctions as it will lower the dependence on Open Market Operations (OMO) which have been a significant amount of the overall borrowing as higher open market operations distort the interest rates curve.
- The dollar amount mobilized through the auction would reflect in the RBI's foreign exchange reserves for the tenor of the swap as also in the RBI's forward liabilities.

- Apart from diversifying liquidity-infusion efforts, this measure is expected to ease longer-tenor forward premia, helping to lower hedging costs.

World Gold Council

According to the latest report by the World Gold Council (WGC), India, which is the world's largest consumer of gold, has the 11th largest gold reserve, with the current holding pegged at 607 tonnes.

Key Points

- The U.S. tops the list with gold reserves of more than 8,000 tonnes, followed by Germany with more than 3,000 tonnes.
- Among Asian countries, China and Japan have more reserves when compared to India.
- The demand for gold was concentrated among emerging market central banks, with diversification, the key driver in the face of ongoing geopolitical and economic uncertainty.
- India's overall position in terms of total gold holding would have been tenth had the list included only countries.
 - International Monetary Fund (IMF) is included and is third on the list with total gold reserves of 2,814 tonnes.

World Gold Council

- The World Gold Council (WGC) is a nonprofit association of the world's leading gold producers. It was established to promote the use of and demand for gold through marketing, research and lobbying.
- Headquartered in London, the WGC covers the markets which comprise about three-quarters of the world's annual gold consumption.
- Founded in 1987, it is a market development organization for the gold industry which includes 25 members and many gold mining companies as well.

Gold & Economy

- **As currency:** Gold was used as the world reserve currency up through most of the 20th century. The United States used the gold standard until 1971.
 - The paper money has to be backed up by an equal amount of gold in their reserves.
 - Although the gold standard has been discontinued, some economists feel that we should return to it due to the volatility of the U.S. dollar and other currencies.

- **As a hedge against inflation:** The demand for gold increases during inflationary times due to its inherent value and limited supply. As it cannot be diluted, gold is able to retain value much better than other forms of currency.
- **Strength of currency:** When a country imports more than it exports, the value of its currency will decline. On the other hand, the value of its currency will increase when a country is a net exporter. Thus, a country that exports gold or has access to gold reserves will see an increase in the strength of its currency when gold prices increase, since this increases the value of the country's total exports.

GI Website & Tutorial Video on IPR

The Union Minister of Commerce and Industry has launched a tutorial video on "Intellectual Property Rights (IPR)" for school students and the Geographical Indications (GI) website.

Key Points

- The tutorial video, created by the Cell for IPR Promotion and Management (CIPAM), Department for Promotion of Industry and Internal Trade (DPIIT) in collaboration with Qualcomm, **deals with fundamentals of IPRs such as Patents, Copyrights and Trademarks.**
- **'IP Nani', India's first IP Mascot**, features in the video that aims to spread awareness about the importance of Intellectual Property Rights (IPRs) among people, especially children, in an interesting manner. The mascot was launched by the Ministry of Commerce and Industry in 2018.
- The tutorial video can be used in schools without any external intervention from teachers or experts and will aid in reaching a large number of schools and students, thereby overcoming issues of bandwidth and limited resources.
- The video is available on CIPAM's YouTube Channel and official website, which is freely available for the public.

NOTE:

India is already a signatory to WTO's TRIPS Agreement and has enacted or amended the laws in harmony with the agreement.

Intellectual Property Rights (IPR)

- These are the rights that are given to persons/agencies for their creativity/innovations.
- The laws that govern IPRs in India are: The Copyright Act, 1957, Patents Act, 1970, Trade Mark Act, 1999, The Designs Act, 2000, The Geographical Indications of Goods (Registration and Protection) Act, 1999, The Protection of Plant Varieties and Farmers' Rights Act, 2001 and The Semiconductor Integrated Circuits Layout Design Act, 2000.

WTO's TRIPS Agreement

- The Agreement that came into force from January 1, 1995, **lays down minimum standards for protection and enforcement of intellectual property rights in WTO member countries** with a view to reduce distortions and impediments to international trade.
- The Agreement provides for norms and standards in respect of following areas of intellectual property: Patents, Trademarks, Copyrights, Geographical Indications, and Industrial Designs.

GI Website

- The website showcases Indian GIs products, classified state wise as well as product category wise.
- It includes specific and comprehensive details of the geographical area, description of product, uniqueness, history, product process/processing in addition to enlisting GI authorized users.
- The website aims to promote creativity and motivate more of India's skilled artisans to apply for GI registration.

Cell for IPR Promotion and Management

- The Cell for IPR Promotion and Management (CIPAM) was created in 2016 under the aegis of the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry to take forward the implementation of the National IPR Policy.
- Since then, CIPAM is working 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 and coordinating the implementation of the National IPR Policy in collaboration with Government Ministries/ Departments and other stakeholders.

Trademark	<ul style="list-style-type: none"> ➤ A trademark is a word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods of one party from those of others. ➤ The term “trademark” is often used to refer to both trademarks and service marks. ➤ Unlike patents and copyrights, trademarks do not expire after a set term of years. Instead, a trademark can last forever, so long as the owner continues to use the mark in commerce to indicate the source of goods and services.
Patent	A patent is a limited duration property right relating to an invention, granted by Trademark Office in exchange for public disclosure of the invention. Patentable materials include machines, manufactured articles, industrial processes, and chemical compositions. The duration of patent protection is 20 years in case of India.
Copyright	A copyright protects works of authorship that have been tangibly expressed in a physical form. Example – songs, books, movies, and works of art.

GI Tag for Erode Turmeric

The Geographical Indication Registry of India has granted **Geographical Indication (GI) Tag to Erode Manjal Turmeric** under Spices Category.

Key Points

- Erode Turmeric has been granted tag because of its uniqueness in terms of its size, colour, quality and its resistance to pests after boiling.
- With the GI Tag, turmeric cultivated in some districts of Erode, parts of Coimbatore and whole of Tirupur (Tamil Nadu) will be recognized for its unique qualities derived from its place of origin.
- It is a commercial spice crop which is sown in the months of June-July and is harvested in the months from January to March.

Geographical Indication (GI) Tag

- A GI is a sign used primarily on agricultural, natural or manufactured products (handicrafts and industrial goods) originating from a definite geographical territory.

- Typically, a GI tag conveys an assurance of quality and distinctiveness, which is essentially attributable to the place of its origin.
- This tag gives protection to the producer of these genuine products, which commands premium pricing in the markets, both domestic and international.
- GI tags are given on the basis of the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- The first product to be included in the list was Darjeeling Tea.

RBI Deferred Ind AS Implementation by Banks

RBI has recently deferred the implementation of the **Indian Accounting Standards (Ind AS)** by banks as the requisite legislative amendments are still under consideration.

Key Points

- In 2006, the Institute of Chartered Accountants of India (ICAI) initiated the process of shifting towards the **International Financial Reporting Standards (IFRS)**.
- The reason behind this step was to increase the acceptability and transparency of the financial statements of the Indian corporates on the global platform.
- In 2015, the Ministry of Corporate Affairs (MCA) notified **Companies (Indian Accounting Standard) Rules 2015**, which listed out the applicability and adoption of Ind AS.
- As per the initial plan, MCA was to implement Ind AS for banks, insurance companies and NBFCs from April 2018 onwards but in April 2018, RBI had deferred the implementation of Indian Accounting Standards by one year for banks.
- In March 2019, RBI again deferred the implementation of Ind AS by banks till further notice.

NOTE:

The International Financial Reporting Standards (IFRS) are accounting standards that have been issued by the International Accounting Standards Board (IASB) with the **objective of providing a common accounting language to increase transparency in the presentation of financial information.**

- The reason cited is that certain legislative amendments in the Banking Regulation Act 1949 are under consideration of the government.

- It is expected that these amendments will help in making the current format of financial statements compatible with the requirements under Ind AS.

Indian Accounting Standards (Ind AS)

- Indian Accounting Standards (Ind AS) are set of accounting standards that **govern the accounting and recording of financial transactions** as well as the presentation of statements such as profit and loss account and balance sheet of a company.
- The standards were **formulated by the Accounting Standards Board (ASB)**, which was **constituted as a body in the year 1977**. ASB is a committee under ICAI which consists of representatives from the government department, academicians, other professional bodies viz. ICAI, representatives from ASSOCHAM, CII, FICCI, etc.
- The Ind AS are named and numbered in the same way as the International Financial Reporting Standards (IFRS).

Institute of Chartered Accountants of India (ICAI)

- The Institute of Chartered Accountants of India (ICAI) is a statutory body established under the Chartered Accountants Act, 1949 for regulating the profession of Chartered Accountancy in the country.
- The ICAI is the second largest professional body of Chartered Accountants in the world, with a strong tradition of service to the Indian economy in public interest.
- The Council constitutes of 40 members of whom 32 are elected by the Chartered Accountants and remaining 8 are nominated by the Central Government generally representing the Comptroller and Auditor General of India, Securities and Exchange Board of India, Ministry of Corporate Affairs, Ministry of Finance and other stakeholders.
- The Institute functions under the administrative control of the Ministry of Corporate Affairs.
- Headquarters: New Delhi

International Accounting Standards Board (IASB)

- IASB is an independent body that was formed in 2001 for establishing the IFRS.
- It succeeded the International Accounting Standards Committee (IASC), which was earlier given the responsibility of establishing the international accounting standards.
- It is based in London.

Disinvestment Exceeds Target

For the second year in a row, the government has exceeded the disinvestment target of ₹ 80,000 crore set for the Financial Year 2019.

Key Points

- Apart from Power Finance Corporation acquiring government's stake in Rural Electrification Corporation, the launch of several tranches of Exchange Traded Fund (ETF) of Central Public Sector Enterprises (CPSE), and PSUs buying back their own shares were among the measures deployed by the government to achieve its target of stake sales.
- The largest chunk of disinvestment came from several tranches of Exchange Traded Funds (ETFs) launched by the government.
- Meeting the disinvestment target for the current fiscal year was crucial because of the uncertainty in revenue collection from direct taxes as well as from the Goods and Services Tax (GST).
- This will **enable the government to achieve the revised fiscal deficit target of 3.4%** of Gross Domestic Product (GDP).
 - The budgeted fiscal deficit target was 3.3% of Gross Domestic Product (GDP) at the beginning of 2018-19 and was later revised to 3.4% of gross domestic product in the interim budget, mainly because of an expectation of higher payout because of the direct income scheme for farmers (PM-KISHAN).

Disinvestment

- Divestment is the opposite of an investment, and it is the process of selling an asset for either financial, social or political goals.
- In the case of Public Sector Undertakings (PSUs), 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.
- Department of Investment and Public Asset Management (DIPAM) is entrusted with the task to oversee:
 - All matters relating to the management of Central Government investments in equity including disinvestment of equity in Central Public Sector Undertakings.

- All matters relating to the sale of Central Government equity through offer for sale or private placement or any other mode in the erstwhile Central Public Sector Undertakings.
- DIPAM functions under the Ministry of Finance.

Exchange Traded Funds (ETF)

- ETFs are index funds that are listed and traded on stock exchanges just like regular shares. They are a basket of stocks with assigned weights that reflect the composition of an index.
- The ETFs trading value is based on the net asset value of the underlying stocks that it represents.
- They enable investors to gain broad exposure to entire stock markets in different countries and specific sectors with relative ease, on a real-time basis and at a lower cost than many other forms of investing.
- The ETF is aimed at helping speed up the government's disinvestment programme. Ex. Bharat 22 ETF.

Bharat 22 ETF

- Bharat 22 ETF comprises of stocks of 22 Central Public Sector Enterprises (CPSEs), Public Sector Banks (PSBs) and Specified Undertaking of Unit Trust of India (SUUTI).
- Bharat 22 ETF is managed by ICICI Prudential Mutual Fund.
- The foundation of Bharat 22 ETF was laid by the government in the Union Budget 2017.

National Mission on Transformative Mobility and Battery Storage

Union Cabinet has approved setting up of a National Mission on Transformative Mobility and Battery Storage.

Key Points

- The objective is to promote clean, connected, shared, sustainable and holistic mobility initiatives; Phased Manufacturing Programme (PMP) valid for 5 years until 2024.
- The multi-disciplinary Mission will have an Inter-Ministerial Steering Committee chaired by CEO NITI Aayog.

- The Mission will recommend and drive the strategies for transformative mobility and Phased Manufacturing Programmes for Electric Vehicles (EV), their components and batteries.
- A Phased Manufacturing Program (PMP) will be launched to localize production across the entire EV value chain.
- The Mission will determine the PMP and will finalize the details of such a program.
- The Mission will coordinate with key stakeholders in Ministries/Departments and the states to integrate various initiatives to transform mobility in India.
- The Mission will prepare the roadmap that will enable India to leverage upon its size and scale to produce innovative, competitive multi-modal mobility solutions that can be deployed globally in diverse contexts.
- A phased roadmap to implement battery manufacturing at Giga-scale will be considered with an initial focus on the large-scale module and pack assembly plants by 2019-20, followed by integrated cell manufacturing by 2021-22.

Background

- Rapid urbanisation has increased the demand for energy and transport infrastructure. Mobility has the potential to drive the economy forward and positively impact the lives of citizens both in urban and rural areas.
- Affordable, accessible, inclusive and safe mobility solutions are primary strategic levers for rapid economic development and improving 'Ease of Living'.
- Given its commitment to climate goals, India needs to adopt effective strategies to place itself as a key driver of the mobility revolution in the world.
- High expenses on oil import in the changing geopolitical conditions require India to ensure its energy security by moving towards alternative energy sources.
- Advances in battery technology have led to higher energy densities, faster charging and reduced battery degradation from charging.

Factors that hinder EV industry in India

- Profit realisation becomes uncertain considering the high capital costs and the uncertainty in policies related to EV production. This discourages investment in the industry.

Note:

- The lack of clarity over AC versus DC charging stations, grid stability and range anxiety (fear that battery will soon run out of power) are other factors that hinder the growth of EV industry.
- India does not have any known reserve of lithium and cobalt and is dependent on countries like Japan and China for the import of lithium-ion batteries.
- With higher servicing costs EVs require higher levels of skills. India lacks dedicated training courses for such skill development.

National Common Mobility Card

Recently, the Prime Minister launched the National Common Mobility Card (NCMC) to enable people to pay multiple kinds of transport charges across the country.

Key Points

- The Ministry of Housing and Urban Affairs brought to the fore the National Common Mobility Card (NCMC) to enable seamless travel across the country besides retail shopping and purchases.
- Dubbed as 'One Nation One Card', the inter-operable transport card would allow the holders to pay for their bus travel, toll taxes, parking charges, retail shopping and even withdraw money.
- This payment eco-system for transport consists of NCMC Card, **SWEEKAR** (Swachalit Kiraya: Automatic Fare Collection System) and **SWAGAT** (Swachalit Gate – a gate and card-reader system).
- The three together will enable the use of the national mobility card across the country without a conflict with existing point-of-sale (PoS) machines.
- The cards can be issued by all public and private banks the same way credit, debit, and prepaid cards are issued.
- The initiative will help in higher digital payments penetration. The rich data insights may be used by operators for business intelligence leading to efficient operation.
- The NCMC ecosystem will further help government in digitisation of low value payments and reduced cost for the entire ecosystem.

FAME India Phase II

Recently, the Union cabinet approved the proposal for implementation of Faster Adoption and Manufacturing

of Electric Vehicles in India Phase II (FAME India Phase II) for promotion of electric mobility in the country.

Key Points

- Department of Heavy Industry (DHI) is the nodal department responsible for planning, implementation and review of the scheme.
- The scheme is proposed to be implemented through following verticals:
 - Demand Incentives
 - Establishment of network of charging infrastructure
 - Administration of scheme including publicity activities
- Demand Incentives seek to directly help in demand generation of electric vehicles. The incentives shall be available to consumers (buyers/end users) in the form of an upfront reduced purchase price of hybrid and electric vehicles, which will be reimbursed to the original equipment manufacturers (OEMs) by the Government of India.
- The scheme envisages setting up of adequate public charging infrastructure across the country. Inter-linking of renewable energy sources with charging infrastructure, smart grid, ICT etc. shall be encouraged.
- For smooth operation and implementation of the scheme, a suitable IEC (information, education and communication) programme shall be undertaken for creating awareness.
- Project Implementation and Sanctioning Committee (PISC) headed by Secretary (Heavy Industry) shall be constituted for overall monitoring, sanctioning and implementation of the scheme.
- The efforts of the Central Government to promote e-mobility need supplemental support from State Governments, in terms of fiscal and non-fiscal (concessional road tax/registration charges/parking fees etc.) incentives.
- By promoting faster adoption and manufacturing of electric vehicles, the scheme will help in addressing the issue of environmental pollution and fuel security.

Background

- Department of Heavy Industry (DHI) had launched a scheme Faster Adoption and Manufacturing of Electric Vehicles in India (FAME India) for promotion of electric and hybrid vehicles.

- Phase I of FAME India was initially approved for a period of two years, commencing from April 1st, 2015. The scheme has been extended from time to time, with the present extension being up to March 31st, 2019.
- After review of Phase I, DHI has formulated FAME India Phase II, for implementation over a period of three years beginning April 1st, 2019.
- As a part of the National Electric Mobility Mission (NEMM), FAME aims at promoting eco-friendly vehicles in the country.

Transport and Marketing Assistance for Specified Agriculture Products

The Ministry of Commerce and Industry has notified a scheme for Transport and Marketing Assistance (TMA) for Specified Agriculture Products.

Key Points

- The scheme seeks to provide assistance for the international component of freight and marketing of agricultural produce which is likely to mitigate disadvantage of higher cost of transportation of export and to promote brand recognition for Indian agricultural products.
- The assistance, at notified rates, will be available for export of eligible agriculture products to the permissible countries, as specified from time to time. The assistance would be provided through direct bank transfer as part reimbursement of freight paid.
- All exporters of eligible agricultural products, who are duly registered with relevant Export Promotion Council under provisions of Foreign Trade Policy will be covered under this scheme.
- The assistance is available for most agricultural product exports with some exceptions such as live animals, products of animal origin, milk, cream, curd, butter, buttermilk, whey, rice, wheat, tobacco and garlic.

drishti

International Relations

Highlights

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Italy Joins Belt & Road Initiative

Italy has become the first G7 country to join China's Belt & Road Initiative [previously known as One Belt One Road (OBOR) Initiative].

- Italy's endorsement of the BRI is a potential game changer as it is one of the major economies in the world.
- Similarly other major economies may follow Italy's lead in joining BRI.

What is the Group of Seven (G7)?

- The Group of Seven is a group consisting of **Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.**
- These countries, according to IMF are described as **advanced economies in the world**, representing 58% of the global net wealth.

What is the Belt & Road Initiative (BRI)?

- Belt & Road Initiative (BRI) is an ambitious project of China that focuses on connectivity and cooperation among multiple countries spread across the continents of Asia, Africa, and Europe.
- The project involves building networks of roadways, railways, maritime ports, power grids, oil and gas pipelines, and associated infrastructure projects.
- The project comprises of two parts:
 - **Silk Road Economic Belt:** It is land-based and is expected to connect China with Central Asia, Eastern Europe, and Western Europe.
 - **21st Century Maritime Silk Road:** It is sea-based and is expected to connect China's southern coast to the Mediterranean, Africa, South-East Asia, and Central Asia.

Significance of BRI For China

- The Belt and Road Initiative (BRI) is the most emblematic of China's economic and industrial might, as of its ambitions for global, political and strategic influence.
- As infrastructure spending in China itself became less sustainable, China has shifted the emphasis to boost the global competitiveness of its domestic businesses.
- The large infrastructure investments in the least developed and developing countries have enabled China to leverage its influence around the world, potentially altering the established rules of the global order and challenging the western powers.
- BRI will strengthen China's presence in the Eurasian region and put it in a commanding position in Asia's heartland.

Criticism of BRI

- Western critics have attacked the BRI as neo-colonialism, or Marshal Plan for the 21st century.
- BRI is also being seen as a part of China's debt trap policy, wherein China intentionally extends excessive loans to another country with the intention of extracting economic or political concessions from the debtor country.

Why India has not joined?

- China Pakistan Economic Corridor (CPEC) is one of the flagship projects of BRI which is seen by India as infringing upon its sovereignty.
- China is building roads and infrastructure in the disputed territory of Gilgit-Baltistan, which is under Pakistan's control but India claims it as a part of J&K.
- If the CPEC project gets implemented successfully, it would hamper India's strategic interests in the South Asian region while serving Beijing's strategic ambition to encircle India.

- CPEC can aid Pakistan's legitimacy in the Kashmir dispute.
- China's increasing footprints in the South Asian region is detrimental to India's strategic hold. For e.g., the construction of the Hambantota Port in Sri Lanka provided China critical strategic location in the Indian Ocean.


US Recognises Golan Heights as Israel's Territory

Recently, the United States has recognised Israel's sovereignty of the Golan Heights. The US will be the first country to recognize Israeli sovereignty thereby marking a dramatic shift in US policy.

- The Golan Heights were captured by Israel from Syria in the 1967 conflict and annexed in 1981 – a move not recognized internationally.

Background

- Israel captured Golan Heights, a strategically important plateau beside the Sea of Galilee, from Syria in the 1967 war.
- Among the territories it captured in the war, Israel has returned only the Sinai Peninsula, to Egypt.
- Israel annexed East Jerusalem and Golan Heights and continues to occupy the West Bank and the Gaza Strip.
- In 1981, as it passed the Golan annexation legislation, the Security Council passed a resolution that said, "the Israeli decision to impose its laws, jurisdiction and administration in the occupied Syrian Golan Heights is null and void and without international legal effect".
- The United States has already recognised Jerusalem as Israel's capital, a city it captured in parts in the 1948 and 1967 wars and which is claimed by both Israelis and Palestinians.



Occupied Heights

The Golan Heights, which the United States declared as Israeli territory has been occupied by Israel since it captured the area from Syria in 1967.

1967 Syrian forces fire on Israel from the Golan Heights during the 1967 war, prompting the Israeli Army to enter and seize, 1,200 sq. km of area

1967-73: More than 1,50,000 people, mostly Syrians, flee the area

1973 Israel occupies a further 510sq. km during the 1973 West Asia war but returns the territory a year later

1974 'Separation of Forces' agreement creates a 'Line A', behind which Israeli forces should remain, and a 'Line B', behind which Syrian forces Should remain

1981 Israel passes a law formally annexing the occupied area

2011 Tensions flare with the start of the Syrian uprising

2014 Islamists overrun Quneitra, near the Golan Heights

2018 Syrian forces retake control over Quneitra and Surrounding areas following a Russia-backed offensive

Who lives there?

- 📍 Around 18,000 Syrians from the **Druze sect** - most of whom refuse to take Israeli citizenship
- 📍 Around 20,000 Israeli settlers

Strategic Importance

- 📍 The fertile volcanic plateau is key to the region's water supply
- 📍 Three tributaries - the Banias, the Dan and the Hasbani - cross the highlands
- 📍 The river system provides about 40% of Israel's water
- 📍 A 400 sq. km 'Area of Separation' separates the Israeli and Syrian sides

Note:

Impact of the announcement

- The US recognition of Israel's claim of sovereignty over the Golan Heights will change little for the territory itself. There is currently no challenge to Israeli authority there.
- As observed with the US decision to recognise Jerusalem as Israel's capital in 2017, few or if any countries are likely to follow the US lead; international consensus that the Golan Heights is occupied territory will remain unchanged.
- Also, the United States decision flouts international norms and consensus, and sets a dangerous precedent for nations involved in conflicts.

Importance of Golan Heights for Israel

- The Golan Heights give Israel an excellent point for monitoring Syrian movements. The topography of Golan Heights provides a natural buffer against any military adventure from Syria.
- The area is also a key source of water for an arid region. Rainwater from the Golan Heights catchment feeds into the Jordan River. The area provides a third of Israel's water supply.
- The land is fertile, and the volcanic soil is used to cultivate vineyards and orchards and raise cattle. The Golan Heights is also home to Israel's only ski resort.

Impact on India

- India and Israel have always shared amicable diplomatic relations. With summit level visits and increased trade & security agreements Indo-Israeli relations have only become stronger.
- However, India has also maintained an independent stand on issues related to Israel and the middle east.
- The public nature of such a controversial declaration could set a precedent for other disputed areas, such as Kashmir, Taiwan, and the South China Sea.
- In this context, India could potentially ask the US to recognise Kashmir as Indian territory. But this hinges on the extent of the relationship shared between the US, India and Pakistan.

India Attends OIC Summit

Recently, India's External Affairs minister (EAM) attended 46th Session of the Council of Foreign Ministers

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

- India was invited by the host UAE as the "Guest of Honour" to attend the inaugural session of the OIC.
- Even though Pakistan is a founding member of OIC. It absented itself during the session.
- The year 2019 was celebrated as the 50th anniversary of OIC.

Key Points of India's address at OIC

- India's fight is against terrorism and not a confrontation with any religion.
- Countries that provided shelter and funding to terrorists must stop and dismantle the infrastructure of terrorist camps within their soil.
- India is home to more than 185 million Muslims and they practice their respective beliefs and live in harmony with each other and with their non-Muslim brethren.

Organisation of Islamic Cooperation (OIC)

- The OIC was formed in 1969 after a summit in Rabat, the Kingdom of Morocco on 25 September 1969 following the fire in Al-Aqsa Mosque in Jerusalem.
- The Organisation of Islamic Cooperation (OIC) is among the largest inter-governmental organizations in the world.
- It has 57 member states and 12 observers including the United Nations.
- The Organization is the collective voice of the Muslim world. It endeavours to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world.
- The OIC members constitute more than one-fourth of the members of the United Nations, and nearly a quarter of humanity. It is an organization, that has a key role in shaping our world.

Significance of the**Invitation (India-OIC relations)**

- Invitation for India is a welcome recognition of the presence of 185 million Muslims in India and of their contribution to its pluralistic ethos, and of India's contribution to the Islamic world.
- The OIC offers a platform for Pakistan and India to play out their respective positions on a number of

thorny issues and in the process that can involve the forum for de-escalation purposes.

- Both India and the member countries of OIC have shared an interest in blunting the edge of religious extremism and terrorism.
- Equally important has been the region's growing economic and energy interdependence with India, which is emerging as the world's third-largest economy and one of the biggest hydrocarbon importers and labour exporters.
- As the region's geopolitics enters a turbulent period, the potential for India as a military partner is also coming on the centrestage.

Critical analysis of India attending OIC

- India is a secular country, regardless of all the religions here, India does not prefer religion above nationality. Thus, the government must carefully consider its engagement with OIC.
- The major basis of the OIC is of the Muslim Brotherhood and that Muslims everywhere can be clubbed together because of their faith. But, India does not support such a philosophy of a collective identity based on religion. Thus, if India decides to engage with OIC it should be on the basis of our national interest not on account of religion.
- There are issues with respect to OIC's stands on Kashmir in past.
- In past decades, India had to spend lots of diplomatic capital to counter OIC's stands at many international organizations. By attending it, we are validating the same organization.

India-Russia Nuclear Submarine Deal

Recently, India and Russia have inked a \$3 billion nuclear submarine deal.

Key Points

- The Indian Navy will get the submarine – re-christened as Chakra III – on lease from Russia and is expected to serve the Indian Navy for at least a decade.
- The submarine will be fitted with the indigenously-developed USHUS integrated sonar system as well as the Panchendriya sonar, a unified submarine sonar, and tactical control system.

- The submarine could be delivered to the Indian Navy by 2025.
- The Chakra-III is expected to give India an edge over its rivals in the Indian Ocean region given one of the major strengths of a nuclear submarine is its ability to remain underwater for months, making detection difficult.
- The addition of this submarine will be a major boost to India's role as the net security provider in the Indian Ocean region, which has some of the busiest shipping lanes.

India-Russia Defense Cooperation

- Recently, India and Russia have also signed a deal for the S-400 Triumf air defense missile system for over \$5 billion.
- India and Russia have also signed agreements for construction of frigates under Project 1135.6 and formation of joint venture to manufacture Ka-226T helicopters in India.
- Russia is also establishing a manufacturing unit for AK-203 assault rifles under a joint venture in Amethi, Uttar Pradesh.

India & France Sign Agreement on Maritime Security

Recently, the Indian Space Research Organisation (ISRO) and its French counterpart National Centre for Space Studies (CNES) signed an agreement to set up a joint maritime surveillance system in India by May 2019.

Key Points

- The two nations will explore putting up a constellation of low-Earth orbiting satellites that will identify and track movement of ships globally – and in particular those moving in the Indian Ocean region where France has its Reunion Islands.
- It provides for a maritime surveillance centre to be set up in India by May 2019.
- For the next phase of the programme, studies for an orbital infrastructure to be operated jointly by the two countries are ongoing. CNES is working with its industry partners and with ISRO to devise the most appropriate technical solution.

- Earlier the two agencies have already put up two climate and ocean weather monitoring satellites **Megha-Tropiques (2011)** and **SARAL-ArcticKa (2013)**.
- This fleet will be augmented with the launch of Oceansat-3-Argos mission in 2020 and a future joint infrared Earth-observation satellite.

National Centre for Space Studies (CNES)

- CNES is the French government space agency.
- Its headquarters are located in central Paris and it is under the supervision of the French Ministries of Defence and Research.
- It was founded in 1961.

President of India Visits Croatia

During the first leg of his three-nation tour to Croatia, Bolivia, and Chile, President of India completed his visit to Croatia.

Key highlights

- During the visit, India and Croatia signed **four Memorandum of Understandings: two in culture, one each in tourism, and sports.**
- President of India was also **conferred with Croatia's highest civilian award – the Grand Order of the King of Tomislav.**
- The two countries also agreed to work together to **develop a strong global response to defeat terrorism in all its forms and manifestations.**

India-Croatia Relations

- India-Croatian relations are characterized by historical connections links between India and Croatia dating back to the 16th century.
- Relations between India and Croatia have been friendly since the days of the former Yugoslavia. India and Yugoslavia were also pioneers of the **Non-Aligned Movement.**
- Disintegration of Yugoslavia (due to political upheavals & conflicts in the early 1990s) gave birth to six new countries namely: **Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia.**
- Croatia is an important Central European country because of its **geo-strategic location, membership of the European Union and the NATO**, as well as being a **significant gateway to Europe through the Adriatic coastline.**

Non-Aligned Movement

- The Non-Aligned Movement was formed during the Cold War as an organization of States that **did not seek to formally align themselves with either of the two superpower blocs – United States and/or the Soviet Union but sought to remain independent or neutral.**
- Key role in this process was played by – **Egypt, Ghana, India, Indonesia & Yugoslavia.**
- The basic concept for the group originated in 1955 during discussions that took place at the **Asia-Africa Bandung Conference** held in **Indonesia.**
- The bilateral trade relations between India and Croatia are at around \$200 million in 2017.
- But there is a good scope for trade in sectors like textile, pharmaceuticals, chemicals, engineering goods, food processing among others.
- Croatia has a sound scientific and technological base in niche sectors, such as shipbuilding, vaccines, renewable energy, and defense.



Vice President's Visit to Paraguay & Costa Rica

Recently, Vice President of India visited two countries Costa Rica and Paraguay. Both the countries are important partners of India in Latin American and the Caribbean region respectively.

India-Paraguay Relations

- **Political**
 - Diplomatic relations between India and Paraguay were established in 1961.
 - Both countries decided to strengthen the relations further between the two countries.

- Paraguay has also condemned the terror attack on Indian security forces in Pulwama.
- **Economic**
 - Bilateral trade between India and Paraguay has been growing.
 - It was \$40 million ten years ago and today it stands close to \$375 million.
 - Efforts will be made to diversify and expand the trade basket.
 - Discussion on India's engagement in MERCOSUR also took place during the visit.
- **Cooperation & People-2-People Contact**
 - New areas for collaboration were identified between the two countries like renewable energy, health, ICT, space, biotechnology, railways, and tourism-related infrastructure.
 - To build people to people contacts there was a discussion on how to make travel easier between two countries.

MERCOSUR

- The Southern Common Market (MERCOSUR for its Spanish initials) is a regional integration process, initially established by Argentina, Brazil, Paraguay, and Uruguay, and subsequently joined by Venezuela and Bolivia.
- India has a preferential trade agreement with MERCOSUR.



India-Costa Rica Relations

- India appointed an Honorary Consul in San Jose, capital of Costa Rica in 1995. Costa Rica reciprocated by opening an Honorary Consulate in New Delhi in 1996.

- India and Costa Rica enjoy long-standing relations of friendship and cooperation, which are being strengthened by the growing commercial engagement between the two countries.
- Costa Rica is the 13th leading Trading Partner of India in the Latin American and Caribbean (LAC) region. Bilateral trade between India and Costa Rica is around \$200 million.
- Costa Rica has set a target to become a carbon-neutral country by 2021 and has decided to join the **International Solar Alliance**.



India-Latin American & Caribbean (LAC) Region

- **Importance of LAC**
 - **Food Security:** India is importing pulses and from South American countries.
 - **Mineral Import:** Latin America is also very rich in minerals such as copper, lithium, iron ore, gold, and silver. India has an opportunity to increase investments for its extraction as well as for its imports at cheaper rates.
 - **Energy Security:** Latin America has huge reserves of crude oil (20% of global reserves). Currently, India sources 15% of its crude oil from LAC countries. India which has emerged as the second largest importer of crude oil from the region is also important for Latin American countries.
- **Challenges**
 - **Political Challenges:** India has good relations with countries like Brazil, Mexico, Chile but other countries lag behind. Rivalries between countries like Brazil and Argentina for regional dominance is also affecting India's relations with the region.
 - **Economic Relations:** Though trade has reached \$46 billion in 2012-13, it is nothing compared to

Note:

the Chinese trade of \$250 billion. Bilateral investments between India and LAC are also relatively low. It is only 4% of India's total outward investment.

Saudi Investment in Strategic Oil Storage

India has invited Saudi Arabia to partner in building strategic oil reserves and further invest in India's refining and Petrochemical sectors.

- India is concerned about global oil balance and supplies for the following reasons:
 - India's energy needs are primarily met through imports.
 - Concerns about rising international crude oil prices.
 - The need for uninterrupted supplies of crude oil and LPG to India in view of the OPEC+ cuts.
- Sanctions imposed by the US administration on state-owned oil company of Venezuela.

Strategic Petroleum Reserves

- Strategic petroleum reserves are huge stockpiles of crude oil to deal with any crude oil-related crisis like the risk of supply disruption from natural disasters, war or other calamities.
- India's strategic crude oil storages are currently located at Visakhapatnam (Andhra Pradesh), Mangaluru (Karnataka), and Padur (Karnataka).
- Recently, the government had announced setting up of two additional facilities at Chandikhol (Odisha) and Padur (Karnataka).
- The concept of dedicated strategic reserves was first mooted in 1973 in the US, after the first oil crisis.
- The US pull-out from 2015 accord with energy-rich Iran has limited the options for India to meet its energy demands.

- The IEA predicts that by 2020, India could well be the largest oil importer, increasing the country's vulnerability to threats of physical supply disruptions leading to sharp price fluctuations.
- Besides the energy security, there is a commercial angle to it as well. Even as limited storage option would offer India the leverage to be a serious player in the international oil markets, with the option of releasing inventory when prices surge and recharging reservoirs whenever the crude is on a downcycle.

Way forward

- Experts point to the option of storage being leased out to West Asian refiners, especially since it reduces their freight costs into Southeast Asian markets.
- The three storage facilities to be implemented in the first phase can hold 13 days of India's crude stock requirement while International Energy Agency (IEA) recommends 90 days.
- Therefore, there is a need to build more stockpiles before oil prices rise back given that OPEC nations have recently decided to reduce oil production to bring stability in global oil prices.



Science and Technology

Highlights

- Solar Tsunami can trigger the Sunspot Cycle (31)
- India Measures the Potential of a Thundercloud (31)
- Mission Shakti: Anti-Satellite Missile Test (32)

Solar Tsunami can trigger the Sunspot Cycle

Recently, scientists have found that Solar Tsunamis are responsible for triggering a 11-year cycle of sunspots. It is believed that the “solar dynamo” is linked to the production of Sunspots.

What is a Solar Tsunami?

- Solar tsunami is the waves of the magnetic field and hot, ionized gas moving across the Sun at about 400 km per second.
- Tsunamis are generated after the release of matter into space called as coronal mass ejection (CME).
- Solar tsunamis were discovered in 1997 by the SOHO (Solar and Heliospheric Observatory) of European Space Agency.

How does a Solar Tsunami leads to Sunspot?

- The extreme temperature and pressure conditions that prevail some 20,000 km below the sun’s surface cause its material to form a plasma consisting primarily of hydrogen and helium in a highly ionized state.
- The plasma is confined with huge magnetic fields inside the sun. Holding these fields in their place requires that there is extra mass (plasma mass) pushing at the bands from higher latitudes.
- Thus, a magnetic dam is formed which is storing a big mass of plasma. At the end of a solar cycle, this magnetic dam can break, releasing huge amounts of plasma cascading like a tsunami towards the poles.
- These tsunami waves travel at high speeds of about 1,000 km per hour carrying excess plasma to the mid-latitudes thereby giving rise to magnetic flux eruptions. These are seen as the bright patches that signal the start of the next cycle of sunspots.

What is ‘Solar Dynamo’?

- Solar Dynamo is a naturally occurring generator which produces electric and magnetic fields in the sun.

What is a ‘Sun Spot’?

- Sunspots are areas that appear dark on the surface of the Sun. They appear dark because they are cooler than other parts of the Sun’s surface.
- The temperature of a sunspot is still high around 6,500 degrees Fahrenheit.
- Sunspots are relatively cool. It’s because they form at areas where magnetic fields are particularly strong. These magnetic fields are so strong that they keep some of the heat within the Sun from reaching the surface.
- The amount of magnetic flux that rises up to the Sun’s surface varies with time in a cycle called the solar cycle. This cycle lasts 11 years on average. This cycle is sometimes referred to as the sunspot cycle.

India Measures the Potential of a Thundercloud

For the first time in the world, researchers at the GRAPES-3 muon telescope facility in Ooty, Tamil Nadu have **measured the electrical potential, size and height of a thundercloud**.

Key Points

- Using GRAPES-3 facility muons were studied to understand **thundercloud properties** which can be useful in navigation of aircraft and preventing short circuits.
- **Elementary particle muons** are produced through interaction of cosmic rays with atoms in atmosphere and the energy of muons changes on passing through thunderclouds.

NOTE:

Muon is an elementary particle similar to the electron, with an electric charge of $-1 e$ and a spin of $1/2$, but with a much greater mass.

GRAPES-3 Experiment

- GRAPES-3 (Gamma Ray Astronomy PeV EnergieS phase-3) is designed to study cosmic rays with an array of air shower detectors and a large area muon detector
- The GRAPES-3 experiment located at Ooty in India is a collaboration between India & Japan.

Mission Shakti: Anti-Satellite Missile Test

On March 27, 2019 India successfully conducted an Anti-Satellite (ASAT) Missile Test codenamed **Mission Shakti**.

Key Points

- Mission Shakti demonstrated India's anti-satellite missile capability by shooting down a live satellite in the Low Earth Orbit (an altitude of 300 km).
- India has become the fourth country, after **US, Russia & China**, to demonstrate the capability to shoot down satellites in the orbit.
- India built the broad capabilities and building blocks to develop ASAT missiles as part of its **Ballistic Missile Defence (BMD)** programme.

NOTE:

A Low Earth Orbit (LEO) is an Earth-centred orbit with an altitude of 2,000 km or less. Most of the manmade objects in space are in LEO. There are least 5 known Indian satellites in LEO: India PiSat, Resourcesat 2, Radar Imaging Satellites 1 & 2 and SRMsat.

Significance

- The test **marks a geostrategic shift** by strengthening India's position as a major space power with proven space technology.

- By successfully conducting the test India has **set up a new deterrent** in the sphere of space thereby sending a powerful signal to countries such as China.
- It also **demonstrates India's technological capability** to design, build and intercept a satellite in outer space using indigenous technology.
- It strengthens the **role of India in the future in the drafting of international law** on the prevention of an arms race in space.

What are Anti-Satellite Weapons?

- They are **missile-based systems to attack moving satellites**.
- There are different kinds of systems – those that can be launched from the **ground or those vaulted from planes**.
- Anti-satellite weapons provide the capability to **shoot down enemy satellites in orbit** thereby **disrupting critical communications and surveillance capabilities**.
- ASAT missiles also **act as a space deterrent** in dissuading adversaries from targeting the country's satellite network.
- The development of such systems occurred during the Cold War era.

What is the international law on weapons in outer space?

- The principal treaty on space is the **1967 Outer Space Treaty**.
- **India is a signatory** to this treaty, and ratified it in 1982.
- The Outer Space Treaty **prohibits only the use of weapons of mass destruction in outer space, and not ordinary weapons**.

What is India's stand on Outer Space?

- India has always maintained that space must be used only for peaceful purposes.
- It has no intention of entering into an arms race and is against the weaponization of Outer Space.
- India also supports international efforts to reinforce the safety and security of space based assets.



Environment and Ecology

Highlights

- *International Workshop on Disaster Resilient Infrastructure* (33)
- *Bandipur Forest Fire* (34)
- *New Delhi Declaration on Asian Rhinos 2019* (35)
- *El Niño* (35)
- *World Air Quality Report* (35)
- *Global Environment Outlook* (36)
- *4th Meet of UN Environment Assembly* (37)
- *Hotspots of Human Impact* (37)
- *Bannerghatta National Park* (37)
- *Vaquita Porpoise* (38)
- *Cyclone Idai* (38)
- *STAR Rating Programme* (39)
- *Exclude Tree Cover from Forest Surveys* (39)
- *India Cooling Action Plan* (40)
- *Hazardous and Other Wastes Rules, 2016* (40)
- *New Hydroelectricity Policy* (41)

International Workshop on Disaster Resilient Infrastructure

Recently, an International Workshop on Disaster Resilient Infrastructure (IWDR) was held in New Delhi.

Key Points

- The two-day workshop was organised by the National Disaster Management Authority (NDMA) in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR), and in partnership with the Global Commission on Adaptation, the United Nations Development Programme and the World Bank.
- The objectives of workshop were to:
 - identify good practices of disaster risk management in key infrastructure sectors,
 - identify specific areas and pathways for collaborative research on DRI (Transport, Energy, Telecom and Water),
 - discuss and co-create the broad contours of the Coalition for Disaster Resilient Infrastructure (CDRI) as well as a notional roll-out plan for the next three years, and
 - build a forum for members to work on areas of common interest and make specific commitments.

Background

- Besides reducing infrastructure losses, disaster resilient infrastructure will also help achieve targets pertaining

to reduction in mortality, number of affected people and economic losses due to disasters.

United Nations Office for Disaster Risk Reduction (UNISDR)

- UNISDR was established in 1999 as a dedicated secretariat to facilitate the implementation of the International Strategy for Disaster Reduction (ISDR).
- It is headquartered in Geneva, Switzerland.
- It is mandated to serve as the focal point in the United Nations system for the coordination of disaster reduction activities and act as the custodian of the Sendai Framework, and support countries and societies in its implementation.
- It is led by the UN Special Representative of the Secretary General for Disaster Risk Reduction (SRSG).
- UNISDR's Strategic Framework 2016-2021 envisages to substantially reduce the disaster risk and losses for a sustainable future.

- India announced the creation of a Coalition for Disaster Resilient Infrastructure (CDRI) after the Asian Ministerial Conference on Disaster Risk Reduction, which was held in New Delhi in 2016. The CDRI is envisaged as a knowledge exchange and capacity development partnership.
- The first International Workshop on Disaster Resilient Infrastructure (IWDR 2018) was held in January 2018 in India.
- Various international agreements have also reiterated the importance and long-term benefits of investing in resilient infrastructure.

Note:

- The **Sendai Framework for Disaster Risk Reduction (SFDRR)** 2015-2030, identifies investing in Disaster Risk Reduction (DRR) for resilience and to build back better in reconstruction as priorities for action towards reducing disaster risk.
- Similarly, **Goal 9 of the Sustainable Development Goals (SDGs)** recognises disaster resilient infrastructure as a crucial driver of economic growth and development.

Sendai Framework for Disaster Risk Reduction (SFDRR)

- The Sendai Framework is a 15-year voluntary, non-binding agreement which recognises that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, and private sector.
- It aims to achieve the substantial reduction of disaster risk and loss of lives, livelihoods and economic, physical, social, cultural and environmental assets of communities and countries.
- The SFDRR 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks:
 - Understanding disaster risk;
 - Strengthening disaster risk governance to manage disaster risk;
 - Investing in disaster reduction for resilience; and
 - Enhancing disaster preparedness for effective response and to **'Build Back Better'** in recovery, rehabilitation and reconstruction.
- The Framework was adopted at the third UN World Conference on Disaster Risk Reduction in Sendai, Japan, on March 18, 2015.

Bandipur Forest Fire

The recent wildfire in Bandipur National Park has reportedly burnt more than 15,400 acres of forests. **NASA's Fire Information for Resource Management System (NASA-FIRMS)** had detected 32 fire incidents in the Park.

Key Points

- Bandipur is a dry deciduous forest in the rain shadow region of the Western Ghats and is no stranger to fires. Periods of drought invariably lead to fires.

- A study has shown that between 1974 and 2014, 67% of the Nilgiri Biosphere had seen some form of forest fire, with Bandipur having reported the most incidents.
- As per the report, **'Strengthening Forest Fire Management in India'**, jointly prepared by the Ministry of Environment, Forest and Climate Change (MoEFCC) and the World Bank at least 60% of districts in India are affected by forest fires each year.

Effect of forest fire

- **Loss of ecosystem:** Forest fires destroy the habitats and the intricate relationships of diverse flora and fauna leading to loss of ecosystems and biodiversity.
- **Forest degradation:** Wildfire is a major cause of forest degradation destroying thousands of acres of trees and vegetation cover. It reduces the quality of certain forest features like soil fertility, biodiversity, and ecosystems.
- **Air pollution:** Forest fires increase the concentration of greenhouse gases and carbon dioxide and other air pollutants in the air. It also means less forest available to purify the air.

How much India is prepared to fight forest fire?

- According to the State of Environment Report of the Centre for Science and Environment (CSE), between 2015-2017, instances of forest fires increased by 125%.
- In 2017, the maximum numbers of forest fires were reported in Madhya Pradesh, followed by Odisha and Chhattisgarh. A National Institute of Disaster Management report on forest fires says 50% of the country's forests are prone to fire.
- But India's firefighting potential is not as good as it should be and the country lacks fire protection planning knowledge and incentive. India also doesn't have a strong and clear national policy on how to tackle forest fires.
- Foresters still fight forest fires using outdated methods, when systematic modern fire management techniques and methods have been adopted in the rest of the world. According to the CSE report, nearly 46-65% of the money allocated under the forest management schemes has not been utilized.

New Delhi Declaration on Asian Rhinos 2019

India, Bhutan, Nepal, Indonesia and Malaysia have signed the declaration 'The New Delhi Declaration on Asian Rhinos 2019' for the conservation and protection of the species at the recently held **Second Asian Rhino Range Countries meeting**. The meet was organized in New Delhi by the Ministry of Environment, Forest and Climate Change (MOEFCC) in collaboration with IUCN Asian Rhino Specialist Group, WWF-India and Aaranyak.

Key point

- The declaration was signed **to conserve and review the population of the Greater one-horned (or Indian), Javan and Sumatran rhinos every four years** to reassess the need for joint actions to secure their future.
- The declaration includes undertaking studies on health issues of the rhinos, their potential diseases and taking necessary steps; collaborating and strengthening wildlife forensics for the purpose of investigation and strengthening of transboundary collaboration among India, Nepal and Bhutan for the conservation and protection of the Greater one-horned rhino.
- It asks to identify connectivity and corridors across international boundaries and keep them functional, safe and secure for free movement of Asian rhinos and other wildlife.
- The declaration also asks to increase the engagement of the local communities as stewards to secure the future of rhinos in range countries

NOTE:

There are three species of rhino in Asia—greater one-horned, Javan and Sumatran. **Javan and Sumatran Rhino are critically endangered and the greater one-horned (or Indian) rhino is vulnerable. Asian Rhino Range Countries** include India, Nepal, Bhutan, Indonesia, and Malaysia.

- The **objective is to replicate or develop upon the Kaziranga rhino conservation success story** for Sumatran as well as the Javan rhino. Kaziranga had less than 10 Greater one-horned rhinos when it was declared a protected area for the animal in 1905. Now it is home of more than 2, 900 Indian rhinos.

- India also launched the **National Rhino Conservation Strategy** for the conservation of the Greater one-horned rhino.

National Rhino Conservation Strategy

- It calls for active engagement between India and Nepal to conserve the greater one-horned rhinoceros.
- The plan said the single population of rhinos in Sukla-Phanta (Nepal), Valmiki Tiger Reserve (India) and Chitwan National Park (Nepal) and Dudhwa (India) is separated by the political boundary between the two countries.
- It asks for the management of the two populations under the same protocol, instead of managing the two populations separately.
- The plan calls for expanding distribution range as the occurrence of 90% of the rhino in one protected area is a cause of concern and conservation of existing and potential rhino habitats need to be made a national priority.

El Niño

The National Oceanic and Atmospheric Administration (NOAA) of the United States recently announced the development of a weak El Niño in the equatorial Pacific Ocean.

Key Points

- Over the years, El Niño has been found to have a strong bearing on monsoon rainfall in India.
- El Niño is a phenomenon in which surface temperatures in the equatorial Pacific Ocean see an unusual rise.
- While warmer temperatures are known to suppress monsoon rainfall, the opposite phenomenon of La Niña has been found to be helpful in bringing good rainfall.
- El Niño events repeat themselves in a 2-7 years cycle, with a strong El Niño expected every 10-15 years.

World Air Quality Report

Recently IQAir in collaboration with Greenpeace Southeast Asia released the World Air Quality Report.

Key Highlights

- Fifteen of the top 20 most polluted cities in the world are located in India. **Gurugram**, in Haryana, topped the list.
- The other cities in India that made the list of 20 were Delhi, Ghaziabad, Faridabad, Bhiwadi, Noida, Patna, Lucknow, Jodhpur, Muzaffarpur, Varanasi, Moradabad, Agra, Gaya and Jind.
- When ranked by country, Bangladesh emerged as the most polluted followed by Pakistan and India respectively.
- Of the cities analysed, 64% exceeded the WHO's annual exposure guideline (10g/m³) for fine particulate matter, also known as PM_{2.5}. India's annual guidelines range from 40-60 g/m³, depending on whether they are residential or industrial areas.

Steps taken to curb the pollution

- The Government has formulated a **National Clean Air Programme (NCAP)** as a medium-term national-level strategy to fight the menace of pollution through a long-term strategy.
- **The Clean Air India Initiative** was launched in 2018 to reduce air pollution by promoting partnerships between Indian startups and Dutch companies and build a network of entrepreneurs working on business solutions for cleaner air.
- The Central Government released the **National Air Quality Index (AQI)** for public information under the aegis of the CPCB. AQI has been developed for eight pollutants – PM_{2.5}, PM₁₀, NH₃, Pb, nitrogen oxides, sulphur dioxide, ozone and carbon monoxide.

Global Environment Outlook

United Nation Environment Programme (UNEP) has recently released the 6th edition of the Global Environment Outlook Report (GEO).

Key Findings

- As greenhouse gas emissions continue to rise amid an increased risk of droughts, floods and super storms made worse by climbing sea levels, there is a growing political consensus that climate change poses a future risk to billions.
- A quarter of all premature deaths and diseases worldwide are due to manmade pollution and environmental damage – around 9 million deaths in 2015 alone.

- Lacking access to clean drinking supplies, 1.4 million people die each year from preventable diseases such as diarrhea and parasites linked to pathogen-riddled water and poor sanitation.
- Chemicals pumped into the seas cause “potentially multi-generational” adverse health effects.
- Land degradation through mega-farming and deforestation occurs in areas home to 3.2 billion people.
- The report called for a decrease in greenhouse gas emissions and pesticide use to improve air and water quality.
- Food waste for instance, which accounts for 9% of global greenhouse gas emissions, could be slashed.
- The world currently throws away a third of all food produced. In richer nations, 56% goes to waste.
- The report advises adopting less-meat intensive diets and reducing food waste in both developed and developing countries.
- This would reduce the need to increase food production by 50% to feed the projected 9-10 billion people on the planet in 2050.

The Global Environment Outlook (GEO)

- The Global Environment Outlook is often referred to as UN Environment's flagship environmental assessment.
- It outlines the current state of the environment, illustrates possible future environmental trends and analyses the effectiveness of policies.
- UN Environment launched the first Global Environment Outlook in 1997.

United Nation Environment Programme

- United Nations Environment Programme (UNEP), was established in 1972 to guide and coordinate environmental activities within the United Nations (UN) system.
- UNEP promotes international cooperation on environmental issues, provides guidance to UN organizations.
- Through its scientific advisory groups, UNEP encourages the international scientific community to participate in formulating policy for many of the UN's environmental projects.
- The organization also encourages participation by the private sector to promote the sustainable use of the world's natural resources.
- UNEP is headquartered in Nairobi, Kenya.

Note:

4th Meet of UN Environment Assembly

The 4th meet of UN Environment Assembly (UNEA) was recently held in Nairobi, Kenya. “**Innovative solutions for environmental challenges and sustainable consumption and production**” was the theme of the meet.

Key Points

- India piloted resolutions on two important global environmental issues relating to **Single-use Plastics** and **Sustainable Nitrogen management**.
- The final declaration of the meet asked to significantly reduce single-use plastic products by 2030.
- The Government of India has pledged in 2018 to eliminate single-use plastics from India by 2022.

United Nations Environment Assembly (UNEA)

- The UNEA is the world’s highest-level decision-making body on the environment. It addresses the critical environmental challenges facing the world today.
- The Assembly meets biennially to set priorities for global environmental policies and develop international environmental law. Through its resolutions and calls to action, the Assembly provides leadership and catalyses intergovernmental action on the environment.
- The UNEA was created in June 2012, when world leaders called for UN Environment to be strengthened and upgraded during the United Nations Conference on Sustainable Development, also referred to as RIO+20.
- UNEA is composed of 193 Member States. It is also the governing body of the UN Environment Programme.

Hotspots of Human Impact

A study published in PLOS Biology journal has found that human activities that affect species occur across 84% of the earth’s surface.

Key highlights

- The study mapped the distribution of eight human activities – including hunting and conversion of natural habitats for agriculture – in areas occupied by more than 5,000 threatened birds, mammals and amphibians worldwide.

- A staggering 1,237 species are impacted by threats in more than 90% of their habitat.
- The impact of roads is highest (affecting 72% of terrestrial areas) and croplands affect the highest number of threatened species: 3,834.
- Southeast Asian tropical forests – including those in India’s the Western Ghats, Himalaya and north-east – are among the ‘hotspots’ of threatened species.
- However, these very areas are also ‘cool-spots’ (the world’s **last refuges where high numbers of threatened species still persist**). Cool-spots could be the result of protection or because of intact habitat that has not been cleared yet.
- Identifying such areas could aid conservation and development planning for countries.
- Malaysia was the first among the countries with the highest number of impacted species (125).
- India ranks 16th (35 threatened species affected on average).
- Roads and croplands are extensive in India and conversion of habitat for such activities is the main threats for the wildlife.

Way forward

- Identifying cool spots could aid conservation and development planning for countries.
- The development plans should keep wildlife conservation as a primary goal in biodiversity-rich areas.
- Adoption of wildlife-friendly cropping patterns can also lead to conservation of wildlife.

Bannerghatta National Park

The Eco-Sensitive Zone (ESZ) Expert Committee of the Ministry of Environment and Forests (MOEF), has recommended the reduction of nearly 100 sq. km in the ESZ of Bannerghatta National Park.

Key Points

- ESZ provides a regulated buffer zone around protected areas.
- The fear is that this reduction would lead to more quarrying in the area.
 - However, there is a Supreme Court ruling prohibiting quarrying and mining activities within 1km of protected areas irrespective of the ESZ distance.

- Therefore, the 'safe zone' of 1 km around protected areas is already in place across the country.
- Other 'development' activities apart from mining and quarrying can take place, which can have an adverse impact on forests.

- The Bannerghatta National Park is located near Bangalore in Karnataka.
- Wildlife such as elephants, gaur, leopard, jackal, fox, wild boar, sloth bear, Sambar, Chital, spotted deer, barking deer, common langur, bonnet macaque, porcupine, and hares are found in abundance.
- The Bannerghatta Biological Park has been an integral part of Bannerghatta National Park.
- It emerged out as an independent establishment during the year 2002.
- Bannerghatta Biological Park is one among the few places in the world where wilderness is preserved so close to a big city. It is having different units such as Zoo, Safari, Butterfly Park and Rescue Center (Conservation of captive animals).

Vaquita Porpoise

Recently a dead Vaquita Porpoise was found in a fishnet off the coast of Mexico.

Key Points

- It is a 'critically endangered' marine animal under IUCN Red List of which only about 15 remain in the world.
- It is also known as "the panda of the sea" for the distinctive black circles around its eyes.



- Vaquita Porpoises are among the ocean's smallest cetaceans and they only reside in the northern Gulf of California.
 - The Cetaceans are one of the most distinctive and highly specialized aquatic mammals. They include

the blue whale, dolphins, blind river dolphins, Porpoise, etc.

- The vaquitas are threatened primarily by gillnet fishing for the Totoaba fish, another endangered species in the area that is hunted for its swim bladder, considered a delicacy in China.

Cyclone Idai

Recently the Cyclone Idai has hit the port city of Beira in Mozambique.

- According to the Global Facility for Disaster Reduction and Recovery (GFDRR), Mozambique is the third most at-risk country in Africa when it comes to extreme weather.
- The cyclone has been named by Zimbabwe.

Global Facility for Disaster Reduction and Recovery (GFDRR)

- GFDRR is a global partnership that **helps developing countries better understand and reduce their vulnerability to natural hazards and climate change.**
- GFDRR was established in September 2006 as a global partnership of the World Bank, UN agencies and bilateral donors.
- The organization is located in the World Bank headquarters in Washington, DC.
- Its missions are:
 - to mainstream disaster reduction and climate change adaptation (CCA) in country development strategies, and
 - to foster and strengthen global and regional cooperation among various stakeholders under the International Strategy for Disaster Reduction (ISDR) system.
- GFDRR **contributes to the implementation of the Sendai Framework for Disaster Risk Reduction** by helping countries to integrate disaster risk management and climate change adaptation into development strategies and investment programs and recover from disasters quickly and effectively.

Tropical Cyclone

- The cyclone is the formation of a very low-pressure system with very high-speed winds revolving around it. Factors like wind speed, wind direction, temperature and humidity contribute to the development of cyclones.

Note:

- Before cloud formation, water takes up heat from the atmosphere to change into vapour. When water vapour changes back to liquid form as raindrops, this heat is released to the atmosphere.
- The heat released to the atmosphere warms the air around. The air tends to rise and causes a drop in pressure. More air rushes to the centre of the storm. This cycle is repeated.

STAR Rating Programme

Recently, the Ministry of Power has expanded its ambitious **Standards & Labelling (Star Rating) programme** for Energy Efficiency for Appliances to cover the Microwave Ovens and Washing Machines (with revised parameters) in the country.

Key Points

- This programme is expected to save over 3.0 Billion Units of electricity by 2030. This would be equivalent to Green House Gases (GHG) reduction of 2.4 Million-ton of CO₂ by the year 2030 through these initiatives.
- The Star Labeling Programme has been **formulated by the Bureau of Energy Efficiency (BEE) for improving energy efficiency and lowering energy cost** of appliances/equipment for the consumers.
- Any model/brand of Washing Machine or a Microwave Oven can avail Star Rating on a scale of 1 to 5 based on test report from National Accreditation Board for Testing and Calibration Laboratories (NABL) or equivalent labs subsequent to scrutiny by BEE.

Bureau of Energy Efficiency (BEE)

- The BEE is a **statutory body** under the Ministry of Power.
- It assists in developing policies and strategies with the primary objective of reducing the energy intensity of the Indian economy.
- BEE coordinates with designated consumers, designated agencies, and other organizations to identify and utilize the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act, 2001.

National Accreditation Board for Testing and Calibration Laboratories (NABL)

- NABL is a Constituent Board of Quality Council of India.

- NABL has been established with the objective of providing Government, Industry Associations and Industry in general with a scheme of Conformity Assessment Body's accreditation which involves third-party assessment of the technical competence of testing including medical and calibration laboratories, proficiency testing providers and reference material producers.
- Quality Council of India (QCI) as a non-profit autonomous society registered under Societies Registration Act, 1860.
- The aim of QCI is to establish an accreditation structure in the country and to spread quality movement in India by undertaking a National Quality Campaign.

Exclude Tree Cover from Forest Surveys

A high-power Committee of Ministry of Environment, Forest and Climate Change (MoEFCC) recommended that Forest Surveys should explicitly demarcate trees grown in forests from those grown outside, that is, in plantations and private lands.

Key point

- Currently, the Government forest surveys such as the **Indian State of Forest Report** counts both towards estimating the portion of India's geographical area covered by forest. Including both isn't an ecologically sound principle.
- Getting India to have at least **33% of its area under forest is a long-standing goal** of the Government.
- Various editions of the SFR have over the years reported the area under forests as hovering around 21%.
- The Ministry of Environment, Forest & Climate Change defines forest cover in India as "all lands, more than one hectare in the area with a tree canopy density of more than 10%".

India State of Forest Report (ISFR)

- It is a biennial exercise by the Government to estimate forest cover. The report is prepared by the Forest Survey of India (FSI) of the MoEF&CC.
- The first Report was published in 1987. Since then the FSI has published 15 such Reports, ISFR 2017 is the latest one.

- According to the IFSR 2017, the total forest cover of India is 21.54% of the total geographical area of the country.

Forest Survey of India (FSI)

- Forest Survey of India (FSI), is a premier national organisation under the MoEFCC, responsible for assessment and monitoring of the forest resources of the country regularly.
- The organisation was founded in 1981.
- Headquarters: Dehradun.

India Cooling Action Plan

Recently, India Cooling Action Plan (ICAP) was launched by the Ozone Cell of the Ministry of Environment, Forest and Climate Change (MoEF&CC).

Key highlights

- It provides a **20-year perspective, with projections for cooling needs in 2037-38**.
- The thrust of the India Cooling Action Plan (ICAP) is to look for **synergies in actions for securing both environmental and socio-economic benefits**.
- The overarching goal of ICAP is to provide **sustainable cooling and thermal comfort for all** while securing environmental and socio-economic benefits for the society. It will also help in reducing both direct and indirect emissions and protect the ozone layer.
- The Plan takes a “holistic and balanced approach” by combining **active (air-conditioning) and passive cooling strategies** (e.g. passively-cooled building design that deploys natural and mechanical ventilation).
- It further considers the need of **sustainable cooling and thermal comfort for all; skilling of refrigeration technicians and R&D innovation ecosystem** for indigenous development of alternative technologies.
- India is one of the first countries in the world to develop a comprehensive Cooling Action plan which has a long term vision to address the cooling requirement across sectors and lists out actions which can help reduce the cooling demand.
- The Plan is in sync with India's commitment to the Montreal Protocol, 1987 (reduction of ozone-depleting substances) as well as the Paris Agreement, 2015 to meet the challenges of climate change.

Benefits of the ICAP

- **Thermal comfort for all** – provision for cooling for Economically Weaker Section (EWS) and Low Income Group (LIG) housing
- **Sustainable cooling** – low GHG emissions related to cooling
- **Doubling Farmers Income** – better cold chain infrastructure – a better value of produce to farmers, less wastage of produce
- **Make in India** – domestic manufacturing of air-conditioning and related cooling equipment.
- **Robust R&D on alternative cooling technologies** – to provide a push to innovation in the cooling sector.

Montreal Protocol

- Montreal Protocol, or Montreal Protocol on Substances that Deplete the Ozone Layer, is an international treaty, adopted in Montreal, Canada.
- It regulates the production and use of chemicals that contribute to the depletion of Earth's ozone layer.
- It came into effect on January 1, 1989 and is the only environmental treaty which enjoys universal ratification of all UN member countries.
- Its implementation led to the phase-out of around 98% of ozone depleting chemicals.
- India is a signatory.

Hazardous and Other Wastes Rules, 2016

The Government has amended the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to include prohibition on the import of solid plastic waste in special economic zones (SEZ) and by export-oriented units (EOUs).

Key Points

- The Government amended the rules by an order to strengthen the implementation of environmentally sound management of hazardous waste in the country.
- The amendment has been done keeping into consideration the 'Ease of Doing Business' and boosting 'Make in India' initiative by simplifying the procedures under the Rules while upholding the principles of sustainable development and ensuring minimal impact on the environment.

- Exporters of silk waste have now been given exemption from requiring permission from the MoEF&CC.
- Electrical and electronic assemblies and components manufactured in and exported from India if found defective can now be imported back into the country, within a year of export, without obtaining permission from the MoEF&CC.
- Industries which do not require consent under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981, are now exempted from requiring authorization, provided that hazardous and other wastes generated by such industries are handed over to the authorized actual users, waste collectors or disposal facilities.

Background

- India's imports of solid plastic waste quadrupled to 48,000 tonnes in Fiscal Year 2017-18 from 2016-18.
- India had banned the import of plastic waste – particularly PET bottles – in 2015 because of an inability to recycle them.
- However, the Centre allowed agencies in special economic zones (SEZ) to import them in 2016. It was the legal loophole which led to an influx of PET bottles into the country.
- China, which was once a major global importer of plastic waste for recycling, had recently banned imports and therefore plastic wastes ended up in India instead.
- Plastic unsuitable for recycling is burnt, which releases toxic chemicals into the atmosphere or it ends up in the landfill, potentially contaminating soil and water sources.

NOTE:

PET, which stands for Polyethylene terephthalate, is a form of polyester (just like the clothing fabric). It is extruded or molded into plastic bottles and containers for packaging foods and beverages, etc.

New Hydroelectricity Policy

The Government has recently approved the New Hydroelectricity Policy.

Key highlights

- The Government, under New Hydroelectricity Policy, has approved 'renewable energy status' for large hydel projects. Earlier, only smaller projects of less than 25 MW in capacity were categorized as renewable energy.
- Large hydro projects will now be included as a separate category under the non-solar Renewable Purchase Obligation Policy, mandating power purchasers to source a portion of electricity from such projects.
- The Policy also provides for additional funds separately for infrastructure development as well as separate funds for the costs of flood moderation.
- The measures have been taken to reduce hydropower tariff and make the sector more competitive.
- According to the government, India has a hydropower potential of 1, 45,320 MW, of which only about 45,400 MW has been utilized so far.
- Also, the share of hydro-power in the total generation capacity has declined to around 13% in 2018-19 from about 50% in the 1960s.

Renewable Purchase Obligation

- Renewable Purchase Obligation refers to the obligation imposed by law on some entities to either buy electricity generated by specified 'green' sources or buy, in lieu of that, 'Renewable Energy Certificates (RECs)' from the market.
- The 'obligated entities' are mostly electricity distribution companies and large consumers of power. RECs are issued to companies that produce green power, who opt not to sell it at a preferable tariff to distribution companies.



Art & Culture

Highlights

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- Dictionary of Martyrs of India's Freedom Struggle (1857-1947) (43)
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Prayagraj Kumbh Mela 2019

The recently held, Prayagraj Kumbh Mela 2019 has been placed in the **Guinness World Records** in **three sectors**.

Key Points

- The Mela has been placed in three sectors of the Guinness World Records:
 - Largest traffic and crowd management plan,
 - The biggest painting exercise of public sites under "Paint my City" scheme
 - The biggest sanitation and waste disposal mechanism.

Kumbh Mela

- Kumbh Mela is the **largest congregation of pilgrims on earth**, during which participants bathe or take a dip in a sacred river.
- It comes under the **UNESCO's Representative List of Intangible Cultural Heritage of Humanity**.
- The festival is held at **Prayagraj** (at the confluence of Ganga, Yamuna, and the mythical Saraswati), **Haridwar** (on the Ganges), **Ujjain** (on the Shipra) and **Nasik** (on the Godavari) **every four years by rotation**.
- As it is held in four different cities in India, it involves different social and cultural activities, making this a **culturally diverse festival**.
- Each site's celebration is based on a distinct set of astrological positions of the Sun, the Moon, and the Jupiter. The celebrations occur at the exact moment when these positions are fully occupied, as it is considered to be the holiest time in Hinduism.

- The event encapsulates the science of astronomy, astrology, spirituality, ritualistic traditions, and social and cultural customs and practices, making it extremely rich in knowledge.
- Knowledge and skills related to the tradition are transmitted through ancient religious manuscripts, oral traditions, historical travelogues and texts produced by eminent historians.
- The teacher-student relationship of the sadhus in the Ashrams and Akhadas remains the most important method of imparting and safeguarding knowledge and skills relating to Kumbh Mela.

Navroz

Recently, Navroz was celebrated on March 21 to mark the beginning of spring and the day of the equinox.

Key Points

- Navroz is **New Year celebrations of Parsis, followers of Zoroastrianism and various sects of Muslim, both Shias and Sunnis**.
- In 1079 AD, a **Persian (Iranian) king named Jalaluddin Malekshah introduced the Navroz (New Year) festival** to generate revenue and collect taxes from people.
- It is inscribed in the list of **UNESCO Intangible Cultural Heritage of Humanity of India**. In India, it is known as **Jamshed Navroz**.

Intangible Cultural Heritage of India

- **Kumbh Mela, Yoga, Traditional brass and copper craft** of utensils among Thatheras of Punjab, **Sankirtana** (ritual singing, dancing and drumming of Manipur), **Buddhist chanting of Ladakh, Chhau Dance, Kalbelia** (folk song and dance of Rajasthan), **Kutiyattam** (a Sanskrit theatre of Kerala), **Tradition of Vedic Chanting**,

Ramlila, Novruz (Persian New Year), Ramman(religious festival and ritual theatre of the Garhwal Himalayas) and **Mudiyettu** (ritual theatre and dance drama of Kerala).

Azaadi Ke Diwane Museum

Recently, the Ministry of Culture inaugurated 'Azaadi ke Diwane' museum at Red Fort, Delhi.

Key Points

- It pays homage to all the unsung heroes of the freedom struggle and the selfless sacrifices of the revolutionaries, brave female freedom fighters and valiant children.
- The museum is fifth in the **Kranti Mandir** series of recently inaugurated museums in the Red Fort Complex – others being, **Subhash Chandra Bose and INA museum, Yaad-e-Jallian museum, Museum on 1857** – India's first war of Independence and **Drishyakala** – Museum on Indian Art.
- All the five museums at Red Fort have been named Kranti Mandir to inspire the younger generation and let them know about the sacrifices of the freedom fighters.

Bylaws for Humayun's Tomb Complex

Recently the National Monument Authority has notified a bylaw for the Humayun's Tomb Complex.

Key Points

- The bylaw will guide physical, social and economic interventions within 300 metres of the centrally protected monuments.
- The Ancient Monument and Archaeological Sites (AMASR) Act, 1958 and Ancient Monument and Archaeological Sites and Remains (Framing of Heritage Bylaws and other function of the Competent Authority) Rules 2011, specify framing of heritage bylaws for centrally protected monuments.
- The rule provides parameters for preparation of these bylaws, which cover history, background, condition and detailed description of each of the protected monuments.

Humayun's tomb

- The tomb of Humayun, in Delhi, was built by Humayun's widow and Akbar's mother, Begha Begum.
- The tomb is a distinct example of Mughal architecture inspired by Persian architecture.
- Raised on a vast platform, the tomb proper stands in the centre of a square garden, divided into 4 main parts by causeways (Charbagh) in the centre of which ran shallow water-channels.
- The square, red, sandstone, double storeyed structure of the mausoleum rises over a high square terrace, raised over a series of cells which are like a musical composition.
- The octagonal form of the central chamber containing the cenotaph is inspired by Syrian and earlier Islamic models.
- It is for the first time that pink sandstone and white are used with admirable effect, the white is used cleverly to emphasise, surround and underline doors and windows, strengthening the design.

National Monument Authority (NMA)

- National Monuments Authority (NMA) under the Ministry of Culture has been set up as per provisions of The Ancient Monuments and Archaeological Sites and Remains AMASR (Amendment and Validation) Act, 2010.
- The NMA is entrusted to protect and preserve monuments and sites through management of the prohibited and regulated area around the centrally protected monuments.
- One amongst these responsibilities of NMA is also to consider grant of permissions to applicants for construction-related activity in the prohibited and regulated area.

Dictionary of Martyrs of India's Freedom Struggle (1857-1947)

The Prime Minister recently released the Dictionary of Martyrs of India's Freedom Struggle (1857-1947).

Key Points

- The project for the compilation of "Dictionary of Martyrs" of India's Freedom Struggle was commissioned

by the Ministry of Culture, to the Indian Council of Historical Research (ICHR) to commemorate the 150th anniversary of the uprising of 1857.

- In this dictionary, a martyr has been defined as a person who died or who was killed in action or in detention or was awarded capital punishment while participating in the national movement for the emancipation of India.

Indian Council of Historical Research (ICHR)

- The primary objective of the Indian Council of Historical Research is to promote and give direction to historical research and to encourage and foster objective and scientific writing of history.
- Indian Council of Historical Research is an autonomous organization which was established under the Societies Registration Act (1860) in 1972.
- It functions under the Ministry of Human Resources and Development (MHRD).
- The dictionary has five volumes which contain accounts of the martyrs from India's First War of Independence in 1857, to India's Independence in 1947.
- It includes the martyrs of **1857 Uprising**, **Jallianwala Bagh Massacre** (1919), **Non-Cooperation Movement** (1920-22), **Civil Disobedience Movement** (1930-34), **Quit India Movement** (1942-44), **Revolutionary Movements** (1915-34), **Kissan Movements**, **Tribal**

Movements, Agitation for Responsible Government in the Princely States (Prajamandal), Indian National Army (INA, 1943-45), Royal Indian Navy Upsurge (1946), etc.

Early Harappa Artifacts

Artifacts believed to be around 5,000 years old, dating back to the early Harappa phase, have been unearthed during an excavation in Khatiya village of Kutch in Gujarat.

Key findings

- Rectangular graves, each of varying dimensions and assembled using stones, contained skeletons that were placed in a specific manner. They were **oriented east-west with the heads positioned on the eastern side**.
- The presence of **animal skeletons along with those of humans** was also recorded in a few graves.
- The **mode of burial** was found to be **non-uniform**. Instances of primary burial and **secondary burial (when the remains of the primary burial are exhumed and moved to another grave)** were found.
- The findings will shed light on the burial rituals and other customs prevalent in the Harappa civilization during its early phase from 3300 BCE to 2600 BCE.

Social Issues

Highlights

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- Migration in Bengal Delta (47)
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ILO Report on Employment and Gender Equality

On the occasion of International Women's Day, the International Labour Organisation (ILO) released a report – **A Quantum leap for gender equality: For a better future of work for all.**

Key highlights

- Women's employment rates are declining due to the rapid transition from agriculture to industrial sectors and the lack of care services and infrastructure.
- Unpaid care work poses the biggest impediment to women's employment. Some around 21% of women of working age are engaged full time in care-giving without pay, while only 1.5% of men fall in this category.

International Women's Day (IWD)

- International Women's Day (March 8) celebrates the social, economic, cultural and political achievements of women. The day also marks a call to action for accelerating gender parity.
- The celebration is traced to the first IWD gathering in 1911 supported by over a million people in Austria, Denmark, Germany and Switzerland.
- Prior to this the Socialist Party of America, United Kingdom's Suffragists and Suffragettes and other groups campaigned for women's equality.
- The theme for this year Women's Day – **'Think Equal, Build Smart, Innovate for Change'** – puts innovation by women and girls, for women and girls, at the heart of efforts to achieve gender equality.
- Under-representation of women at top management level in companies, globally less than one-third managers are women.

- Globally, the difference in the employment rates for men and women has shrunk by less than two percentage points in last 27 years.
- Women spend more time in unpaid care work at home in contrast to men who spend just 8 minutes per day.
- Women do not receive the same dividends for education as men.
- Between 2005 and 2015, the motherhood employment penalty – the difference in the proportion of adult women with children under six years in employment and women without young children – increased significantly by 38%.

IIT-Mandi's Proposals Selected under SPARC Initiative

Seven research proposals from the Indian Institute of Technology (IIT), Mandi have been selected under 'Scheme for Promotion of Academic and Research Collaboration' (SPARC).

Key Points

- The research projects are in areas such as energy and water sustainability, advanced sensors, electronics and communication, infectious diseases and clinical research, humanities, and social sciences, nanotechnology, biotechnology, and metamaterials and basic sciences.
- The SPARC grants will help IIT-Mandi to collaborate with international universities and researchers from across the globe to undertake joint research.
- IIT Mandi will also be able to offer short term courses to students in these fields.

Note:

Scheme for Promotion of Academic and Research Collaboration (SPARC)

- SPARC is an initiative of the Ministry of Human Resource Development. Indian Institute of Technology, Kharagpur is the national coordinating institute to implement the SPARC programme.
- SPARC aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian institutions and the best institutions in the world.
- Under the Scheme, 600 joint research proposals will be awarded for 2 years to facilitate research collaboration between Indian research groups and renowned research groups, in areas that are at the cutting edge of science or with direct social relevance to the mankind, specifically India.
- A set of five **Thrust Areas** i.e. Fundamental Research, Emergent Areas of Impact, Convergence, Action-Oriented Research, and Innovation-Driven have been identified.
- A set of Nodal Institutions (NI), from India, for each participating foreign country has been identified. The role of an NI is to help and coordinate with willing participating Indian institutions to forge an alliance with the Institutions of the concerned participating foreign country.
- The Intellectual Property Rights (IPR) developed out of the project will be decided as per norms of the participating institutes. The Indian institute will get the benefits out of patents/royalty, rather than the foreign institute or the individual faculty.

'Delhi Declaration' on Digital Health

Recently, the 4th Global Digital Health Partnership Summit was held in New Delhi.

Key Points

- The Summit was hosted by the Ministry of Health and Family Welfare in collaboration with World Health Organization (WHO) and the Global Digital Health Partnership (GDHP).
- As part of the summit, the ministers and delegation adopted the 'Delhi Declaration' on digital health for sustainable development.

- The Declaration calls for World Health Organization's (WHO's) leadership in digital health and to establish a specific mechanism to centrally coordinate digital health to assist its member states.

NOTE:

Application of digital health for sustainable development includes telemedicine, remote care and mobile health delivering care in people's homes, instead of in hospitals and clinics.

Global Digital Health Partnership

- The Global Digital Health Partnership (GDHP) is an international collaboration of governments, government agencies and multinational organisations dedicated to improve the health and well-being of their citizens through the best use of evidence-based digital technologies.
- It was established in February 2018 with Australia as the host country for the inaugural summit.

World Health Organisation

- The World Health Organisation (WHO) is a specialised agency of the United Nations that is concerned with international public health.
- It is headquartered in Geneva, Switzerland.
- WHO's constitution came into force on April 7, 1948 – a date now celebrated every year as World Health Day.
- The World Health Assembly is the supreme decision-making body of WHO. The assembly meets annually and is attended by delegations from 194 member states.

West Nile Virus in Kerala

Recently, the death of a child in Kerala's Malappuram district has drawn attention to the West Nile Virus. The Union health ministry has sent a disease surveillance team to investigate the case.

What is the West Nile Virus?

- West Nile Virus was first isolated from a patient from the **West Nile district of Northern Uganda in 1937**.
- West Nile virus is mainly transmitted to people through the **bites of infected mosquitoes (Culex mosquitoes)**.
- **Birds are the natural hosts** of West Nile virus. Mosquitoes become infected when they feed on infected birds.

- The virus can cause severe **disease & death in horses** and can cause **fatal neurological disease in humans**.
 - Approximately, 80% of people who are infected do not show any symptoms. There are specific treatments and vaccines are not yet available for people.

Way forward

- India's best defence is **better surveillance**, which will help doctors reach patients early to prevent complications.
- Post the 2018 Nipah outbreak, a heightened surveillance in Kerala helped in detecting the West Nile Virus. The samples were immediately tested through the **Plaque Reduction Neutralisation Test**. Hence, if more States used such diagnostics, it would help determine just how widespread the virus is in India.

Strategy against the Threat of Influenza

Recently, the World Health Organization (WHO) has launched a **Global Influenza Strategy for 2019-2030**, which aims to prevent seasonal influenza, control the virus's spread from animals to humans and prepare for the next pandemic.

Key Points

- The new strategy is the most comprehensive and far-reaching that WHO has ever developed for influenza.
- The strategy meets one of WHO's mandates to improve core capacities for public health, and increase global preparedness.
- It outlines a path to protect populations every year and helps prepare for a pandemic through strengthening routine programmes. Features of the new strategy are:
 - Every country should strengthen routine health programmes and develop tailor-made influenza programmes that strengthen disease surveillance, response, prevention, control, and preparedness.
 - WHO recommends annual flu vaccines as the most effective way to prevent the spread of the disease, especially for healthcare workers and people at higher risk of influenza complications.
 - Development of more effective and more accessible vaccines and antiviral treatments.

- Due to its mutating strains, vaccine formulas must be regularly updated.
- The new influenza strategy builds on and benefits from successful WHO programmes like:
 - **Global Influenza Surveillance and Response System (GISRS)**: Launched in 1952, GISRS comprised of WHO Collaborating Centres and national influenza centres. It focuses on monitoring seasonal trends and potentially pandemic viruses. This system serves as the backbone of the global alert system for influenza.
 - **Pandemic Influenza Preparedness Framework** is a unique access and benefit sharing system that supports the sharing of potentially pandemic viruses, provides access to life saving vaccines and treatments in the event of a pandemic and supports the building of pandemic preparedness capacities in countries through partnership contributions from industry.

World Health Organisation

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- It is headquartered in Geneva, Switzerland and the WHO's constitution came into force on April 7, 1948—a date now celebrated every year as World Health Day.
- The World Health Assembly is the supreme decision-making body in WHO. The assembly meets annually and is attended by delegations from 194 member states.

Migration in Bengal Delta

Recently, an international study titled **Deltas, Vulnerability and Climate Change: Migration and Adaptation (DECMA)** found that the economic reasons are the precipitating factor for migration in the Indian Bengal delta and most migrants are in the age group of 20-30 years.

Key highlights

- **Reasons for Migration**
 - The study which covers the district of South and North 24 Parganas reveals that 64% of people migrate because of economic reasons, unsustainable agriculture, lack of economic opportunities and debt.

- 28% of the migration from the region is for social reasons and about 7% for environmental reasons like cyclones and flooding.

➤ Gender Disparity in Migration

- There is a huge gender disparity in the migration out of Indian Bengal delta, with men outnumbering women by almost five times. It shows that of the people migrating 83% are men and only 17 % are women.
- While most of the men migrate due to economic reasons, women do so, driven by mostly social factors.

➤ Destination of Migration

- The study finds that 51% of migration from the Indian Bengal delta is to other areas of the State particularly to the city of Kolkata, 10% to Maharashtra, 9% to Tamil Nadu, 7% Kerala and 6% to Gujarat.

➤ Type of Migration in Delta

- 57% of migration is seasonal, where people move once or twice a year.
- 19% is circular where those migrating move thrice a year.
- 24% of migration is permanent.

What is migration?

- Migration is the movement of people from one place to another. It can be over a short or long distance, be short-term or permanent, voluntary or forced, intra-national or international.
- Pull factors of migration are a feature that attracts a person to move to another area while push factors are those that drive people away from their place of origins.
- While the destinations benefit due to the reduction in the cost of production, availability of the human resource, rising productivity, size of consumer and capital market, at the same time, areas of origin also benefit through the flow of remittances, information, and innovations influencing the households and people left behind.

Causes of migration

➤ Economic

- **Push factors:** Unemployment or lack of employment opportunities; rural poverty; unsustainable livelihood etc.

- **Pull factors:** Job opportunities; better income and prospects for wealth creation; industrial innovation and technical know-how for a new industry; pursuit of specialized education etc.

➤ Socio-political

- **Push factors:** Political instability; safety and security concerns (ethnic, religious, racial or cultural persecution); inadequate or limited urban services and infrastructure (including healthcare, education, utilities, transport and water etc).
- **Pull factors:** Family reunification; independence and freedom; integration and social cohesion; food security; affordable and accessible urban services (including healthcare, education, utilities, and transport) etc.

➤ Ecological

- **Push factors:** Climate change (including extreme weather events); crop failure and scarcity of food etc.
- **Pull factors:** Abundance of natural resources and minerals (e.g. water, oil); favourable climate etc.

Classification of migration

➤ By political boundaries

- **Internal migration:** Migration occurring within a country, either within a state or between states, whether urban to rural, urban to urban, rural to rural, or rural to urban.
- **International migration:** Migration occurring across countries. Such migrants are known as immigrants (coming into a foreign country) and emigrants (leaving their own country)

➤ By movement pattern

- **Step migration:** Migration initiating from a small settlement and moving to a larger one in the urban hierarchy over the years, such as movement from a farm to a village, then to a town and subsequently to a suburb and finally to a city.
- **Circular migration:** Also called cyclical migration, it is experienced between an origin and a destination with at least one migration and return.
- **Seasonal migration:** It is a very common form of circular migration, driven by seasonal peaks in labour demand, mostly in agriculture.
- **Return migration** – It refers to a one-time emigration and return after an extended stay outside the host territory.

- **Chain migration:** Migration of families at different stages of the life cycle from one location to another, which subsequently brings people from their home location to the new place.
- **By decision-making approach**
 - **Voluntary migration:** Based on one's free will, initiative and desire to live in a better place and to improve the financial status, among other factors.
 - **Involuntary migration:** Based on people being forced out of their home due to certain unfavourable environmental and political situations.

Issues related to migration

- **Low-quality jobs:** Migrants mostly dominate the low-paying, hazardous and informal market jobs such as construction, hotel, textile, manufacturing, transportation, domestic work etc.
- **Housing and sanitation:** One of the key issues with regard to housing is poor supply. Migrants do not have access to affordable accommodation forcing them to live in overcrowded colonies in unhygienic conditions.
- **Exploitation and intimidation:** Usually migrants are exploited at the behest of the majoritarian native population. They become the target of social profiling, stereotyping, and abuse and are made to work under exploitative conditions with no social security cover. E.g. Gujarat migrant crisis.

Lancet: Building a Tuberculosis Free World

The Lancet has published a report 'Building a Tuberculosis-free World'.

Key Points

- The report is based on modelling for three high-burden countries (India, Indonesia and China).
- It compared with the 2015 data and estimated that 57% reduction in incidence and 72% reduction in mortality will be seen only by 2045.
- According to the report, India's goal to end the epidemic by 2025 (five years ahead of the UN SDG) is too 'ambitious', 'unrealistic' and, therefore, unattainable; as it requires high quality of care to every person from diagnosis to treatment.

- TB incidence in the country being 204 cases per 1,00,000 in 2017.
- India has the highest number of multidrug-resistant TB (MDR-TB) cases in the world.

Key Recommendations

- India needs improvement in diagnosis and treatment for drug-sensitive and drug-resistant TB. Integration of TB services with the primary health system will lead to early diagnosis and help cut the transmission cycle.
- Strengthening the care cascade (visualising problems with the implementation of 'treatment as prevention') could reduce cumulative TB incidence by 38% in the case of India.
- Lives of 28% people with TB can be saved over the next 30 years if tests are subsidised and patients are supported to complete the treatment.
- India should scale up access to TB services for all those seeking them, optimise engagement of private sector providers and guarantee universal access to drug susceptibility testing and second line anti-TB drugs.
- National TB control programme is encouraging, there is political will and the programme mentions all the correct initiatives to bring the disease under control. Accountability is a vital component.

NOTE:

The Lancet is a weekly peer-reviewed British medical journal. It is among the world's oldest, most prestigious, and best known general medical journals.

Tuberculosis (TB)

- TB is caused by **bacteria** (*Mycobacterium tuberculosis*) that most often affect the lungs. Tuberculosis is curable and preventable.
- TB spreads from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.
- Multidrug-resistant tuberculosis (**MDR-TB**) is a form of TB caused by bacteria that do not respond to first-line anti-TB drugs. MDR-TB is treatable and curable by using second-line drugs.
- Extensively drug-resistant TB (**XDR-TB**) is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.

- In 2017, the 30 high TB burden countries accounted for 87% of new TB cases. Eight countries account for two thirds of the total, with India leading the count.
- The United Nations **Sustainable Development Goals** (SDGs) include ending the TB epidemic by 2030 under **Goal 3**.
- **WHO End TB Strategy**, adopted by the World Health Assembly in May 2014, is a blueprint for countries to end the TB epidemic by driving down TB deaths, incidence and eliminating catastrophic costs.
- **World TB Day** is observed on 24 March.

Indian Sign Language Dictionary

Recently, the government has released the second edition of Indian Sign Language dictionary.

Key Points

- The first edition of the dictionary was launched with 3,000 words in 2018.
- With the second edition, the dictionary now comprises 6,000 Hindi and English words and their corresponding graphic representation under the categories of academic, legal, medical, technical and everyday terms.
- The dictionary has been developed by the Indian Sign Language Research and Training Centre (ISLRTC), under the Ministry of Social Justice and Empowerment.
- According to Census 2011, there are 50.71 lakh hearing impaired persons in India and most of them use Indian Sign Language to communicate.
- The dictionary seeks to enable the deaf people access to their constitutional right to speech and freedom of expression (Article 19) and also to bring them into the mainstream of the society.



drishti

Miscellaneous

Highlights

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- *UN World Happiness Report 2019* (52)
- *Quality of Living Rankings 2019* (53)
- *Swachh Survekshan Awards 2019* (53)
- *FINE 2019* (53)

Karnataka to Use Cloud Seeding

The State of Karnataka has decided to use cloud seeding operations to enhance rainfall during the monsoons of 2019 & 2020.

- Karnataka is currently facing a drought-like situation. Through cloud seeding, the State is hoping to influence the upcoming monsoon and capture as much water as possible.

What is Cloud Seeding?

- Cloud seeding is the process of spreading either dry ice or more commonly, silver iodide aerosols, into the upper part of clouds to try to stimulate the precipitation process and form rain.
- Cloud seeding uses planes to spray clouds with chemicals to condense smaller particles into larger rain droplets.

Cloud Seeding Methods

- *Hygroscopic cloud seeding* disperses salts through flares or explosives in the lower portions of clouds.
- *Static cloud seeding* involves spreading a chemical like silver iodide into clouds. The silver iodide provides a crystal around which moisture can condense.
- *Dynamic cloud seeding* aims to boost vertical air currents, which encourages more water to pass through the clouds, translating into more rain.

Challenges

- **Potential Side-effects:** The chemicals used in cloud seeding might be potentially harmful to plants, animals, and people, or the environment.
- **Abnormal Weather Patterns:** Change climatic patterns on the planet. Places that normally receive moisture

might start experiencing drought due to the artificial process of adding chemicals to the atmosphere to stimulate rain.

Applications of Cloud Seeding

- **Agriculture:** It creates rain, providing relief to drought-stricken areas.
- **Power Generation:** Cloud seeding experiments have shown to augment production of hydroelectric power during the last 40 years in Tasmania, Australia.
- **Water Pollution Control:** Cloud seeding can help to maintain minimum summer flows of the rivers and dilute the impact of treated wastewater discharges from municipalities and industries.
- **Fog Dispersal, Hail Suppression and Cyclone Modification:** During the winter the cloud seeding programme is used to increase the mountain snowpack so that additional runoff is received during the spring melt season.
- **Tackle Air Pollution:** Cloud seeding can potentially be used to settle down toxic air pollutants through the rain. E.g.: Recently, Central Pollution Control Board along with other researchers mulled the use of cloud seeding to tackle Delhi's air pollution.
- **Tourism:** Cloud seeding can transform typically dry areas much more hospitable to enhance tourism.
- **Costly:** It involves processes such as delivering chemicals to the sky and releasing them into the air by flare shots or airplanes, which involves huge costs and logistic preparation.
- **Pollution:** As the artificial rain falls, seeding agents like silver iodide, dry ice or salt will also fall. Residual silver discovered in places near cloud-seeding projects are considered toxic. As for dry ice, it can also be a source of greenhouse gas that contributes to global warming, as it is basically carbon dioxide.

UN World Happiness Report 2019

The **Sustainable Development Solutions Network** for the United Nations released the World Happiness Report on **March 20**, which is designated as the **World Happiness Day**.




Key Points

- This is UN's seventh annual World Happiness Report, which ranks the world's 156 countries on 'how happy their citizens perceive themselves to be'.
- The focus of the report was 'Happiness and Community: how happiness has been changing over the past dozen years and how information technology, governance and social norms influence communities'.
- The report ranks countries on **six key variables** that support well-being:
 - Income,
 - Healthy life expectancy,
 - Freedom to make life choices,
 - Social support, and
 - Trust,
 - Generosity
- The list is topped by Finland and South Sudan is ranked the least happy country in the world.
- The overall world happiness has fallen over the past few years, which has mostly been fuelled by a sustained drop in India, which came in 140th place compared with 133rd in 2018. There has been an increase in negative emotions, including worry, sadness and anger.
- India featured in the five countries that had the largest drop since 2008 in the index, along with Yemen, Syria, Botswana and Venezuela.
- Among India's neighbouring countries, Pakistan is ranked 67th, Bangladesh 125th, Bhutan 95th, Sri Lanka 130th and China at 93rd.

Sustainable Development Solutions Network (SDSN)

- The Sustainable Development Solutions Network (SDSN) was launched in 2012. It was established under the auspices of the United Nations Secretary-General.
- It mobilises global scientific and technological expertise to promote practical problem solving for the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.
- The SDSN and the Bertelsmann Stiftung have been publishing the annual SDG Index & Dashboards Global Report since 2016.

Sustainable Development Goals (SDGs) 2016–2030

- | | |
|--|--|
| No Poverty  | 1 End poverty in all its forms everywhere |
| Zero Hunger  | 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture |
| Good Health & Well-Being  | 3 Ensure healthy lives and promote well-being for all at all ages |
| Quality Education  | 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all |
| Gender Equality  | 5 Achieve gender equality and empower all women and girls |
| Clean Water & sanitation  | 6 Ensure availability and sustainable management of water and sanitation for all |
| Affordable & Clean Energy  | 7 Ensure access to affordable, reliable, sustainable and modern energy for all |
| Decent Work & Economic Growth  | 8 Promote sustained, inclusive & sustainable economic growth, full and productive employment and decent work for all |
| Industry, Innovation & Infrastructure  | 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation |
| Reduced Inequalities  | 10 Reduce inequality within and among countries |
| Sustainable Cities & Communities  | 11 Make cities and human settlements inclusive, safe, resilient and sustainable |
| Sustainable Consumption & Production  | 12 Ensure sustainable consumption and production patterns |
| Climate Action  | 13 Take urgent action to combat climate change and its impacts |
| Life Below Water  | 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development |
| Life on Land  | 15 Protect, restore and promote sustainable use of terrestrial ecosystems, combat desertification, and halt and reverse land degradation and halt biodiversity loss |
| Peace & Justice  | 16 Promote peaceful and inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions at all levels |
| Partnership for the Goals  | 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development |

Quality of Living Rankings 2019

Mercer, a global consulting leader in advancing health, wealth and careers, has recently released the Quality of Living Rankings 2019.

Key Points

- Conducted annually, the survey analyses the living standards of cities, as is perceived internationally, to enable multinational companies and other organisations to suitably compensate their staff on international assignments.
- The survey ranks cities based on internal stability, crime, effectiveness of law enforcement and relationships with other countries.
- Vienna (Austria) has topped the ranking followed by Zurich (Switzerland).
- In India, Hyderabad and Pune have topped the survey and ranked at 143.

Swachh Survekshan Awards 2019

Key Points

- New Delhi Municipal Council area was given the 'Cleanest Small City' award.
- Uttarakhand's Gauchar was adjudged the 'Best Ganga Town'.
- The 'Cleanest Big City' award has been bagged by Ahmedabad.
- Raipur is the 'Fastest Moving Big City'.
- Ujjain has been the adjudged the 'Cleanest Medium City'.
- Mathura-Vrindavan bagged the tag of the 'Fastest Moving Medium Cities'.

Background

- In 2016, the Union Ministry of Housing and Urban Affairs (MoHUA) started Swachh Survekshan survey for the rating of 73 cities. It was followed by Swachh Survekshan-2017 for ranking 434 cities and Swachh Survekshan-2018 for ranking 4,203 Cities.

- In a bid to scale up the coverage of the ranking exercise and encourage towns and cities to actively implement mission initiatives in a timely and innovative manner, the 2019 survey included all cities, making it the largest such cleanliness survey in the world.
- Top-ranked cities receive a statue of Mahatma Gandhi as a memento for their work towards cleanliness.
- The **Quality Council of India (QCI)** has been commissioned the responsibility of carrying out the assessment.

FINE 2019

The Festival of Innovation and Entrepreneurship (FINE) is a unique initiative of the Office of the President of India to recognise, respect and reward grassroots innovations and foster a supportive ecosystem.

Key Points

- Started in 2016, this Festival is a celebration of creativity, innovation and entrepreneurship.
- It was organised by the National Innovation Foundation (NIF) and the Department of Science and Technology, Government of India.
- FINE would provide a platform to the innovators for building the linkages with potential stakeholders whose support can improve their prospects in coming years for the larger social good.
- It will also help in promoting lateral learning and linkages among the innovators to enrich the ecosystem for new India.

National Innovation Foundation (NIF)

- NIF was established in 2000 with the assistance of Department of Science and Technology.
- It contributes to strengthen the grassroots technological innovations and outstanding traditional knowledge in the country.
- NIF has created a huge database of ideas, innovations and traditional knowledge practices from all over the country.



Date	Time	Location	Description

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Summary

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Summary