

VISION IAS

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CURRENT AFFAIRS

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VISION

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1. POLITY & CONSTITUTION

1.1. NITI AAYOG

Why in news?

Recently Government has **reconstituted NITI Aayog**, renaming Rajiv Kumar as its vice chairman and appointing Home Minister Amit Shah as ex-officio member.

Background

- **Planning Commission** was initially set up in 1950 as an **agency to direct investment activity in a country**.
- Planning Commission of India had **two key duties to perform i.e.; to implement five-year plan and second was to provide the finances to the state**.
- **The disenchantment with the Planning Commission could be traced on two important fronts:**
 - the perception that it was not able to capture the new realities of macro-economic management at the national level,
 - it had not been conducive to sound fiscal relations between the Union and the States.
- This **did not fit well with the imperative for an inclusive and equitable path of economic development in India**.
- In this context, **National Institution for Transforming India (NITI Aayog)** was constituted in 2015 as a **think tank and advisory body of the government**.

Relevance of NITI Aayog

- **Competitive Federalism:** Various reports of NITI Aayog like **Healthy states Progressive India etc** which give performance-based rankings of States across various verticals to foster a spirit of competitive federalism. It helps to identify the best practices in different States in various sectors and then try to replicate them in other States.
- **Cooperative federalism:** Due to composition of NITI Aayog, it gives better representation of states in this body which facilitate direct interactions with the line ministries, also helps to address issues in a relatively shorter time.
- **Greater Accountability:** NITI Aayog has established a **Development Monitoring and Evaluation Office** which collects data on the performance of various Ministries on a real-time basis. The data are then used at the highest policymaking levels to establish accountability and improve performance.
 - Earlier, India had 12 **Five-Year Plans**, but they were mostly **evaluated long after the plan period had ended**. Hence, there was no real accountability.
- **Think tank of innovative ideas:** NITI Aayog is visualised as a funnel through which new and innovative ideas come from all possible sources — industry, academia, civil society or foreign specialists — and flow into the government system for implementation.
 - By collecting fresh ideas and **sharing them with the Central and State governments**, it allows states to progress with these new ideas.

NITI AAYOG
(National Institution for Transforming India)

AAGYOG WILL HAVE

- Prime Minister to be the Chairperson
- Vice-Chairman and a CEO
- Full time members, number unspecified
- Up to two part-time members from leading universities and research organisations
- 4 Union ministers as ex-officio member
- Governing council comprising all Chief Ministers and Lt Governors
- Regional Councils which will be formed to address specific issue and contingencies impacting more than one state or a region
- *Experts, specialists and practitioners with relevant domain knowledge as special invitees

OBJECTIVE

To evolve a shared vision of national development priorities, sections and strategies with the active involvement of states in the light of national objectives

THE AAYOG WILL

- Seek to provide a critical directional and strategic input into the governance process
- Develop mechanisms to formulate credible plans at the village level and aggregate these progressively at higher levels of government
- Ensure, on areas that are specifically referred to it, that the interests of national security are incorporated in economic strategy and policy
- Pay special attention to the sections of the society that may be at risk of not benefiting adequately from economic progress

Through Commitment to a cooperative federalism-

- Promotion of citizen engagement
- Egalitarian access to opportunity
- Participative and adoptive governance
- Increasing use of technology

- Hence it helps in **improving governance and implementing innovative measures** for better delivery of public services.
- **Convergence for resolution:** Being a common point for similar issues faced by different sectors, states etc., it acts as a convergence point and platform to discuss these issues.

Concerns with NITI Aayog

- **Biasness towards government & private sector:** While generating new ideas, NITI Aayog should maintain a respectable intellectual distance from the government of the day. However, concerns have been regarding NITI Aayog's offering rather uncritical praise of governments projects.
 - Concerns have also been raised regarding NITI Aayog's treatment of public sector while advocating private sector in almost every sphere as the savior of Indian economy.
- **Financial constraint:** NITI Aayog has no powers in granting discretionary funds to states, which renders it toothless to undertake a "transformational" intervention.
 - While during the Planning Commission days, it was easy for the commission to give shape to the idea as it had the control over funds and hence over an agenda.
- **Only recommendatory body:** It acts as advisory body only which advises the government on various issues without ensuring enforceability of its ideas.
- **Lack of decentralization power:** One of the envisaged goals of the NITI Aayog was to develop mechanisms to formulate credible plans at the village level and aggregate these progressively at the higher level. Very little of this cherished goal has indeed been accomplished.
- **Missed opportunities for transformative change –** The body has missed some opportunities to make qualitative difference.
 - For instance, CSS had to be reformed in the light of the recommendations of the 14th Finance Commission. Instead of reforms in design and implementation of the Schemes that was promised when the Planning Commission was wound up, changes were made only to shift greater responsibility onto States in terms of financing.
 - A second opportunity arose when the distinction between Plan and non-Plan was removed. At that point, the organization had an opportunity to insist on taking a sector-wise comprehensive view of capital and revenue expenditures. However, that has not been done.
- **Not supporting states enough –** The major complaints of States in regard to the functioning of the Planning Commission remain unaddressed. The complaints have largely been on the perception that the Centre is encroaching upon States' responsibilities and is continuing to advocate a one-size-fits-all approach in administration.
 - It is difficult to find evidence that policies and programmes initiated in the recent past evolved out of consultations between Union and the States. NITI Aayog was supposed to co-opt States as partners while preparing a development agenda.

How can it be further strengthened?

- **Balancing with finance commission:** NITI Aayog should be given a funding role so that it can help deal with the development experience between states.
 - Another possibility is to convert the Finance Commission into a permanent body that can oversee fiscal transfer mechanisms rather than just give a tax sharing formula every five years.
 - Federal balance needs an institutional mechanism that entails either a more **effective NITI Aayog or a permanent Finance Commission.**
- **Increasing accountability:** Bureaucracy will need to change from generalist to specialist, and its accountability will have to be based on outcomes achieved, not inputs or funds spent. NITI Aayog should spell out how these reforms will be implemented.
- **More funds:** Towards the task of cooperative federalism, NITI Aayog 2.0 should receive significant resources (say 1% to 2% of the GDP) to promote accelerated growth in States that are lagging, and overcome their historically conditioned infrastructure deficit, thus reducing the developmental imbalance.
- **More stakeholder involvement:** It should instead invite, through expert members, research inputs on identified areas and should synthesise recommendations based on empirical weight of the research. This will cut time, cost and effort and will increase timely policy inputs for the government.

Performance of NITI Aayog

- **Launching of various initiatives and programmes**
 - Measuring performance and ranking States on outcomes in critical sectors
 - Sustainable Action for Transforming Human Capital (SATH)
 - Ek Bharat Shrestha Bharat
 - Development Support Services to States (DSSS) for Development of Infrastructure
 - Public-Private Partnership in Health
 - Resolution of pending issues of States with Central Ministries
 - 'Aspirational District Programme (ADP)': to realise the vision of 'SabkaSaath, SabkaVikas', and ensure that India's growth process remains inclusive
- **Enabling evidence-based policy making and enhancing productive efficiency with long-term vision**
 - Three Year National Action Agenda and the Strategy for New India @75 which allows better alignment of the development strategy with the changed reality of India.
 - Reform of Central Public Sector Enterprises (CPSEs)
 - Balanced Regional Development
 - ✓ Development support to the North East
 - ✓ NITI Forum for North East
 - Health & Nutrition Sector Reforms
 - ✓ Launch of the POSHAN Abhiyan
 - ✓ Evolving the National Nutrition Strategy
 - ✓ Pushing Reforms in Pharmaceuticals Sector
 - In energy sector
 - ✓ NITI has prepared and launched a report on 'India's Renewable Electricity Roadmap 2030.'
 - ✓ Roadmap for revising the National Mineral Policy, 2018
- **Partnerships with National and International Organisations and Promote Stakeholder Consultation in Policy Making**
- **Promote entrepreneurial and innovation ecosystem**
 - **Atal Innovation Mission**, which established Atal Tinkering Labs in India, has already done commendable work in improving the innovation ecosystem in India.
 - Global Entrepreneurship Summit 2017: Women First: Prosperity for All
 - Women Entrepreneurship Platform
- **Promoting adoption of frontier technology like Artificial Intelligence, blockchain, Methanol economy etc.**

1.2. RATIONALISATION OF CENTRALLY SPONSORED SCHEMES

Why in News?

The chairman of the Fifteenth Finance Commission, N K Singh, has voiced that there needs to be further rationalization of the Centrally Sponsored Schemes.

Background

- **Centrally Sponsored Schemes (CSS)** are plan transfers to States by the Union Government, which are implemented through the State Governments and in sectors falling in the State and Concurrent Lists of the Constitution.
- CSS is the **biggest component of Central Assistance to state plans (CA)**, where states don't have much flexibility.
- In the initial years of planning in India, the number of CSS was very large (190 at the end of Fifth Plan which increased to **360 at the end of Ninth Plan**).
- The CSS have remained a major **bone of contention** between the

Committees related to CSS

- Sub-committee of the National Development Council, 1967.
- Expert Group headed by K. Ramamurty.
- Committee headed by P.V. Narasimha Rao.
- Committee headed by J. S. Baijal.
- Expert Group headed by Arvind Varma.
- Committee headed by B.K. Chaturvedi.
- Sub-Group of Chief Ministers under Shiv Raj Singh Chauhan.

Need for CSS

- **Create a National framework of development-** to fulfill the important national objectives such as poverty alleviation or minimum standards in education.
- **Aid the states in financial resources-** as states have fewer resources compared to their responsibilities.
- **Inclusive growth-** Additional help is given to the Special Category States, which ensures a balanced development around the country.
- **Helps in better implementation of the schemes-** which can help demonstrate good features, research on different aspects and set the pace for other states to emulate reforms.

Union and State Governments. Consequently, various committees have looked into this matter and given recommendations on the same.

- The government accepted the recommendations of the **Sub-Group of Chief Ministers** and took various steps towards rationalization of CSS.
- Despite these, there are calls in favour for further rationalization. The latest is by the chairman of the **Fifteenth Finance Commission, N K Singh**, who has opined that the number of CSS needs to be reduced for better spending, as revenue buoyancy in indirect taxes remains weak.

Current Structure of Centrally Sponsored Schemes

Type of CSS	Criteria	Funding Pattern (Centre: States)	Schemes
Core of the Core (6)	Have compulsory participation of states	<ul style="list-style-type: none"> General Category states: Existing pattern Special Category states: Existing pattern 	<ul style="list-style-type: none"> MGNREGA National Social Assistance Program (For Senior citizens, widows etc.) Umbrella Scheme for SC (All schemes for SC in one) Umbrella Scheme for ST (All schemes for ST in one) Umbrella Scheme for OBC (All schemes for OBC in one) Umbrella Scheme for Minorities (All schemes for Minorities in one)
Core (20)	Have compulsory participation of states	<ul style="list-style-type: none"> General Category states: 60: 40 Special Category states: 90: 10 	Rashtriya Krishi Vikas Yojana, Rashtriya Pashudhan Vikas Yojana, Pradhan Mantri Gram Sadak Yojana, National Rural Drinking Water Mission, National Health Mission, Swachh Bharat Abhiyan, Integrated Child Development Scheme, National Education Mission, Forestry and Wild Life, Pradhan Mantri Awas Yojana etc.
Optional (2)	States could choose some or all of them	<ul style="list-style-type: none"> General Category states: 50: 50 Special Category states: 80: 20 	<ul style="list-style-type: none"> Border Area Development Program National River Conservation Plan

Steps taken towards rationalization of CSS

- States taken into deliberation-** From 2014-15 onwards, direct **transfers** to State implementing agencies have been done away with, and all transfers to States for Centrally sponsored schemes are now being routed through the Consolidated Fund of the State.
- Reduced number of CSS-** from **66 to 28** and they were divided into three categories.
- Increased choice given to states-** to select optional schemes they want to implement. Also, while designing the CSS, the Central Ministries shall permit flexibility in the choice of components to the States as available under the Rashtriya Krishi Vikas Yojana (RKVY).
- Reduced rigidity in usage of funds-** The flexi-funds available in each CSS has been raised from 10% to 25% for the States and 30% for the UTs of the overall annual allocation under each Scheme.
- Evaluation of CSS-** Approval of the schemes is being made co-terminus with the Finance Commission cycle. NITI Aayog is in process of evaluation of all the CSS.

Grievances of states towards CSS

- Encroachment of State's functions-** as the CSS were framed on the subjects listed in the States list of the seventh schedule.
- Proliferation of schemes-** A large number of Schemes results in spreading resources thin and thereby adversely impact-desired outcomes.
- Problem of 'one size fit all'-** Given significant variation across States in terms of development indicators and resource endowments, many schemes are simply not relevant to many States.
- Limited flexibility-** with the states in implementation of these schemes, despite the features of flexi funds introduced in recent history.
- Inadequate deliberations with states-** before introduction of new schemes and often the states' financial health is not given due consideration.

Prospects of further rationalisation of CSS

- **Improving the process of transfer of funds-** since there are several difficulties state governments face in ensuring a smooth flow of funds.
- **Can help adopt performance linked financing model-** Performance of public schemes should be defined as a combination of immediate results (outputs) and long-term change (outcomes) in key indicators of interest. Given the greater flexibility that state governments have in choosing which components to invest their funds in, a performance-linked model can be designed.
- **Enables a comprehensive development of the sector-** as States do not undertake development of agriculture only in one area, example seed production, just because Central funds are available for this purpose. The Central funds can be used for a balanced development, which can be complementary to States' resources.

Way Forward

Centrally Sponsored Schemes are a crucial tool for cooperative and competitive federalism, which can go a long way in addressing the developmental needs of different regions in the country.

1.3. REMOVAL OF JUDGES

Why in news?

Recently, Chief Justice of India has written to Prime Minister to **initiate a motion for removal of a judge of Allahabad High Court**.

Background

- **Article 217** provides that the judge of high court may be removed from his office by the President in the manner provided in Article 124 for the removal of a Judge of the Supreme Court.
- **Under Article 124(4)** of the Constitution a Judge of SC can be removed only by the President on ground of '**proved misbehaviour**' or '**incapacity**' only after a motion to this effect is passed by both the Houses of Parliament by special majority.
- Constitution requires that misbehavior or incapacity shall be proved by an impartial Tribunal whose composition is decided under **Judges Inquiry Act 1968 (see infographic)**.

Issues in removal of judges

- **Lack of Enforcement:** The Act has only been invoked three times since 1950. Still then no judge could be successfully impeached till date.
- **Lack of Transparency:** The proceedings are wrapped in secrecy and the judge continues to hold the post.
 - Both the Constitution and the Judges (Inquiry) Act of 1968 are silent on whether a judge facing impeachment motion should recuse from judicial and administrative work till he is cleared of the charges against him.
- **Cumbersome Process:** Impeachment process is tedious and lengthy, judges have virtually no accountability.

IMPEACHMENT PROCEEDINGS



A **removal motion** signed by 100 members (in case of Lok Sabha) or 50 members (in case of Rajya Sabha) is to be given to the Speaker/Chairman.

If the motion is admitted, then a **three-member committee** (consisting of a supreme court judge, a chief justice of high court and a distinguished jurist) **to investigate** into the charges is constituted.



If the committee finds the judge to be guilty of the charges (**misbehaviour or incapacity**), the House in which the motion was introduced, can take consideration of the motion.

Special majority: **Majority of total membership of the House & Majority of not less than two thirds members present and voting.**

Once, the House in which removal motion was introduced passes it with **special majority**, it goes to the second House which also has to pass it with a special majority.



After the motion is passed, an **address** is presented to the President for removal of the judge. The President then passes an order removing the judge.

Way Forward

- **Bringing a new Judicial standards and accountability bill** along the lines of Judicial Standards and Accountability Bill 2010 (which lapsed) to establish a set of legally enforceable standards to uphold the dignity of superior judiciary and establish a new architecture to process the public complaints leveled against the judges.
 - The Judicial Standards and Accountability Bill 2010 proposed setting up of the **National Judicial Oversight Committee, the Complaints Scrutiny Panel** and an investigation committee.
 - **The Judges (Inquiry) Bill, 2006** also proposed establishment of a **National Judicial Council (NJC)** to conduct inquiries into allegations of incapacity or misbehaviour by High Court and Supreme Court judges.
- **Appointment-** the collegium should take adequate safeguards so that only judges of high caliber and impeccable integrity are appointed to the higher courts. This requires infusion of greater transparency in the selection of judges.
- **Greater Internal regulation:** There were several instances where the Judge behaved inappropriately, disciplinary actions should have been taken promptly at very first instance of such misconduct. For this, a **National Judicial Oversight Committee** should be created by parliament which shall develop its own procedures to scrutinizing the complaints and investigation. The composition of such committee should not affect judicial independence.

1.4. CABINET COMMITTEES RECONSTITUTED

Why in news?

Recently the central government has reconstituted eight key cabinet committees including **creation of two new committees**, one on investment and growth and another on employment and skill development.

More on news

- The committees that have been reconstituted are:
 - **Appointments Committee of the Cabinet:** It decides all higher-level appointments in the Central Secretariat, Public Enterprises, Banks, the three service chiefs etc. It also decides on the transfer of officers serving on Central deputation.
 - **Cabinet Committee on Economic Affairs:** It reviews economic trends, problems and prospects for evolving a consistent and integrated economic policy.
 - ✓ It also deals with fixation of prices of agricultural produce and prices of essential commodities.
 - ✓ It deals with industrial licensing policies and review rural development and the Public Distribution System.
 - ✓ It considers proposals for investment of more than Rs 1,000 crores.
 - **Cabinet Committee on Parliamentary Affairs:** It draws the schedule for Parliament sessions and monitors the progress of government business in Parliament.
 - ✓ It **scrutinises non-government business** and decides which official Bills and resolutions are to be presented.

Cabinet Committees

- They are **extra-constitutional bodies**, which are provided by the **Governments of India Transaction of Business Rules, 1961**.
- They are **set up by the Prime Minister** according to the exigencies of the time and requirements of the situation. Hence, their number, nomenclature, and composition varies from time to time.
- **Classification-** They are of two types—**standing and ad hoc**. The former are of permanent nature while the latter are of temporary nature.
- **Function-** They are an **organisational device to reduce the enormous workload** of the Cabinet. They also facilitate **in-depth examination of policy issues** and effective coordination.
- The **Cabinet can review** their decisions.
- **Composition-** They usually **include only Cabinet Ministers**. However, the **non-cabinet Ministers are not debarred** from their membership. They not only include the Ministers in charge of subjects covered by them but also include other senior Ministers. Their membership varies from three to eight.
- **Head of the Committee-** They are **mostly headed by the Prime Minister**. Sometimes other Cabinet Ministers also acts as their Chairman. But, in case the Prime Minister is a member of a committee, he invariably presides over it.

- **Cabinet Committee on Political Affairs:** deals with all policy matters pertaining to domestic and foreign affairs.
- **Cabinet Committee on Security:** It deals with issues relating to **law and order, internal security** and policy matters concerning **foreign affairs** with internal or external **security implications**.
 - ✓ It also looks into economic and political issues related to national security. It considers all cases involving capital defence expenditure more than Rs 1,000 crore.
 - ✓ It considers issues related to the **Department of Defence Production** and the **Department of Defence Research and Development**, Services Capital Acquisition plans and schemes for procurement of security-related equipment.
- **Cabinet Committee on Accommodation:** It determines the guidelines or rules with regard to the allotment of government accommodation, including that to Members of Parliament.
- The new committees include:
 - **Cabinet Committee on Investment and Growth:**
 - ✓ It will **identify key projects required to be implemented on a time-bound basis**, involving investments of Rs 1,000 crore or more, or any other critical projects, as may be specified by it, with regard to infrastructure and manufacturing.
 - ✓ It will prescribe time limits for giving requisite approvals and clearances by the ministries concerned in identified sectors. It will also monitor the progress of such projects.
 - **Cabinet Committee on Employment and Skill Development:**
 - ✓ It is supposed to **provide direction to all policies, programmes, schemes and initiatives** for skill development aimed at **increasing the employability** of the workforce for effectively meeting the emerging requirements of the rapidly growing economy and mapping the benefits of **demographic dividend**.
 - ✓ It is required to **enhance workforce participation**, foster employment growth and identification, and work towards removal of gaps between requirement and availability of skills in various sectors.
 - ✓ The panel will set targets for expeditious implementation of all skill development initiatives by the ministries and to periodically review the progress in this regard.
- Prime Minister is part of six panels except for the Committee on Accommodation and Committee on Parliamentary Affairs.

1.5. ONE NATION, ONE RATION CARD

Why in News?

Recently, central Government has given states and Union Territories June 30, 2020 deadline, to roll out the '**one nation, one ration card**' system.

Background

- **Partha Mukhopadhyay Working Group on Migration** in 2017 recommended portability of **Public Distribution System** benefits.
- An intra-state access to the Public Distribution System (PDS) under the **Integrated Management of Public Distribution System (IMPDS)** is already in practice in a few states like Andhra Pradesh, Gujarat, Haryana etc.

About the scheme

- Under the scheme the beneficiaries can **buy subsidized food grains from a ration shop in any part of the country**.
- Ration card **Aadhar linkage is must** to access the scheme.
- A person will **only be eligible for the subsidies supported by the centre** such as those under Nation Food security act, 2013.

About ration card

- A Ration Card is a document issued under an order or authority of the State Government, as per the **Public Distribution System**, for the purchase of essential commodities from fair price shops (FPS).
- State Governments issue distinctive **Ration Cards** to Above Poverty Line, Below Poverty Line and Antyodaya families and conduct periodical review and checking of Ration Cards.
 - Families living below the poverty line are entitled to **Blue Cards**, under which they can avail special subsidies.
- It helps save money by aiding in the procurement of essential commodities at a subsidised rate.
- **Proof of identification:** It has become an important tool of identification when applying for other documents like Domicile Certificate, for inclusion of your name in the Electoral Rolls, etc.

- Even if a beneficiary moves to a state where grains are given for free he/she will not be able to access those benefits.
- A migrant will be **allowed to buy maximum of 50% of the family quota**. This is to ensure that the individual, after shifting to another place does not buy the entire family quota in one go.
- **The scheme will:**
 - benefit migrant workers
 - remove fake ration card holders through an integrated online system
 - control rising food subsidy bill by removing united beneficiaries, preventing leakages etc.

Integrated Management of Public Distribution System" (IM-PDS) Scheme

- IM-PDS is new **central sector scheme**, implemented under **Ministry of Consumer Affairs, Food & Public Distribution**.
- **Objectives**
 - Implementation of nation-wide portability in food grains distribution.
 - Creation of national level data repository for de-duplication of beneficiary data (Aadhaar based).
 - Use of advanced data analytics techniques to bring about continuous improvements.

**फाउंडेशन कोर्स
सामान्य अध्ययन 2020**

प्रारंभिक एवं मुख्य परीक्षा

इनोवेटिव क्लासरूम प्रोग्राम के घटक

• प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक का विस्तृत कवरेज

• भौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान

• एनीमेशन, पॉवर प्पाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग

• अंतर - विषयक समझ विकसित करने का प्रयास

• योजनाबद्द तैयारी हेतु करेंट ओरिएंटेड अप्रोच

• नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन

• सीसैट कक्षाएं

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2. INTERNATIONAL RELATIONS

2.1. SHANGHAI COOPERATION ORGANIZATION

Why in news?

Recently, the countries of Shanghai Cooperation Organisation adopted the **Bishkek Declaration** in 19th SCO summit, held at Kyrgyzstan's capital Bishkek.

About SCO

- SCO is a Eurasian **political, economic, and military organisation**. Along with BRICS, SCO is seen as an attempt by China & Russia to **challenge the Western dominated global order** and **counterbalance the activities of United States and NATO** in Central Asia.
- Currently, SCO has **8 Member States** - China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan; **4 Observer States** - Afghanistan, Belarus, Iran and Mongolia and **6 Dialogue Partners** - Azerbaijan, Armenia, Cambodia, Nepal, Turkey and Sri Lanka.
- Official working languages of the Shanghai Cooperation Organisation are **Chinese and Russian**.
- It has **two permanent bodies** — the **SCO Secretariat** based in Beijing and the Executive Committee of the **Regional Anti-Terrorist Structure (RATS)** based in Tashkent.
- The SCO Secretariat is the main permanent executive body of the SCO, while the **Council of Heads of State** is the top decision-making body in the SCO.
- Its driving philosophy is known as the "**Shanghai Spirit**" which emphasizes harmony, working by consensus, respect for other cultures, non-interference in the internal affairs of others, and non-alignment. **Culture has become an important element** of the SCO, attuned to the group's search for an **inclusive Eurasian identity**.
- The Prime Minister of India, in his address to SCO in Bishkek Summit, presented his vision for the organization in the form of **HEALTH** (healthcare cooperation, economic cooperation, alternate energy, literature and culture, terrorism-free society and humanitarian cooperation), which closely tied with the declaration.

Significance of SCO's membership to India

- Security:** SCO's main objective of working cooperatively against "three evils" of terrorism, separatism, and extremism is in consonance with India's interests.
 - Regular participation in **Regional Anti-Terrorist Structure (RATS)** and joint military exercises (India participated in 2018) will help **enhance combat capabilities and intelligence sharing**.
 - It could be a **platform for bilateral negotiations with Pakistan** on issues of mutual interest without bringing in bilateral disputes. It can also **help India counter Pakistan propaganda** on other multi-national forums like Organization of Islamic Cooperation (OIC).

Additional Information - Shanghai Five

- After the end of Cold War, China sought to establish **security cooperation with Central Asian states** to prevent Uighurs of Central Asia & Xinjiang province in China to create unrest together.
- Hence, a group called '**Shanghai-5' (China, Kazakhstan, Kyrgyzstan, Russia & Tajikistan)**' was established in 1996 to undertake confidence building measures & demilitarize borders.
- In **2001**, Uzbekistan joined the grouping & it was renamed as Shanghai Cooperation Organization (SCO).

Main Highlights of Bishkek Declaration

- Condemned terrorism 'in all its forms and manifestations'
- Supported WTO and the multilateral trading system
- Called for '**consistent implementation**' of the Joint Comprehensive Plan of Action with Iran
- Supported a political settlement for Syria** through the dialogue process and 'post-conflict restoration' by different states in Syria
- Signed 'Roadmap for Further Action of the **SCO Afghanistan Contact Group**' which argued in favour of 'inclusive peace process conducted and led by Afghans themselves'.

SHANGHAI COOPERATION ORGANIZATION

MEMBER COUNTRIES



- Both Central Asian Region countries & India face serious threat from illegal drug trade emanating from '**Golden Crescent**' of opium production (Iran-Pak-Afghan) and are also victims of illegal arms trade. SCO provides a platform for multilateral cooperation.
- **Connectivity:** SCO is also a potential platform to advance **India's Connect Central Asia policy** - through trade, people to people contact and cultural connect.
 - This is much in line with India's focus on connectivity as evident India's efforts - **International North South Transport Corridor & Ashgabat Agreement**, construction of **Chabahar Port** and setting up an **air freight corridor between Kabul, Kandahar and New Delhi**.
- **Economic Interests:**
 - With SCO countries contributing almost **42% of the world population** and **20% of the GDP**, the proposed FTA with Eurasian Economic Union can **provide India with a wider market base** for its IT, telecommunications, banking, finance and pharmaceutical industries.
 - With cultural connect and shared history, it also has **potential to boost tourism sector** of the country (presently SCO countries constituted only 6% of India's total tourists).
- **Energy & Minerals:** Being closer to India geographically, mineral trade with Central Asia can entail significant cost savings. Being an energy deficient country with increasing demands, India provides an assured market for Central Asian countries and Russia.
 - SCO countries along with Iran, Azerbaijan & Turkmenistan **hold some of the largest oil** (~25%) and **natural gas reserves** (~50%) of the world. Kazakhstan is the largest producer of **Uranium**. Uzbekistan & Kyrgyzstan are important regional producers of **Gold**.
 - **SCO Energy Club** can facilitate deeper interactions between producers (Russia, Kazakhstan, Uzbekistan and Iran) and consumers (China, Tajikistan, Kyrgyzstan, India, Pakistan and Mongolia)
 - SCO membership could help **advance talks on construction of stalled pipelines like TAPI & IPI**
- **Political significance:** SCO also provides a stage to India for achieving some of its foreign policy goals
 - It will help India to **play an active role in its extended neighbourhood**.
 - **Presence of Iran & Afghanistan** as observers also makes it an important venue to discuss vital regional issues. Eurasian powers, along with China, Russia and Pakistan, are bound to play a major role in Afghanistan's security affairs. SCO membership could help India from not being left out of the peace process.

How India's inclusion will help SCO and Eurasian region?

- Inclusion of India makes SCO **one of the most powerful organizations** with membership of global powers from Eurasian region – China, India and Russia.
- Initially seen as a manifestation of China's regional ambitions and politically motivated axis, democratic **India's inclusion will give SCO a greater global acceptance**.
- India's **experience of working in multi-cultural groups and technical & managerial expertise** will greatly enhance the effectiveness of the organization.

Challenges for India at SCO

- **Trust Deficit** between members like India & Pakistan and India & China can be major drag on the effectiveness of the organization.
- **China's Belt and Road initiative:** India's position on BRI is contrary to other members, all of which have supported the initiative. Funds are being allocated for BRI projects by AIIB and NDB of which India is an active member. This could be a potential friction point.
- **Global geopolitics:** The growing proximity of Russia and China and India's attempts towards better relations with the US makes the organization vulnerable to competitive geopolitics. For instance,
 - **Iran**, who is an observer at SCO and a major trade partner of India, is engaged in a major conflict with US. The US sanctions **has forced India to stop buying oil from Iran**.
 - India's position on Syria is at variance with the US and its regional allies like Saudi Arabia and Israel. It has **supported the current regime** during the ongoing conflict, while **agreeing to get further involved in the reconstruction process**.
- **Definition of terrorism:** India's definition of terrorism is different from the definition of SCO under RATS. For SCO, terrorism coincides with regime destabilization; whereas for India it is related to state-sponsored cross border terrorism.

- SCO's targets are groups like East-Turkestan Islamic Movement (ETIM) and Al-Qaeda, whereas groups like Lashkar-e-Taiba, Jaish-e-Mohammad and Harkat-ul-Mujahideen, operational in India, do not come under the ambit of the SCO anti-terror structure.
- **Limited existing economic footprint:** India's bilateral trade with Central Asia stands at about \$2 bn and with Russia about \$10 bn in 2017. In contrast, China's trade with Russia has crossed \$100 bn in 2018 and stands at over \$50 billion with Central Asia.
- **Other regional organizations:** Proliferation of other regional undertakings – Eurasian Economic Union (EEAU), Belt and Road Initiative (BRI), Greater Eurasian Partnership, Collective Security Treaty Organization (CSTO), Conference on Interaction and Confidence-Building Measures in Asia (CICA) etc. - may also pose a challenge for SCO.

Way Forward

Whether the SCO grows into a successful regional forum depends on its ability to overcome bilateral differences between its members and their respective geopolitical calculations.

- In this situation, India needs to improve its own standing and enhance its presence in the Eurasian region. The opening of Chabahar port and entry into Ashgabat agreement should be utilized for a stronger presence in Eurasia besides a clear focus on operationalizing INSTC.
- Consistent efforts should be made by SCO mutual trust among the member states. India's concerns over violations of 'sovereignty and territorial integrity' must be adequately addressed by China.
- There should be consensus over issues like terrorism and extremism and RATS-SCO should be tasked to identify and assess the presence of major terrorist groups throughout the SCO region.

2.2. G-20

Why in news?

Recently, the 14th G-20 summit was held in **Osaka, Japan**.

Background

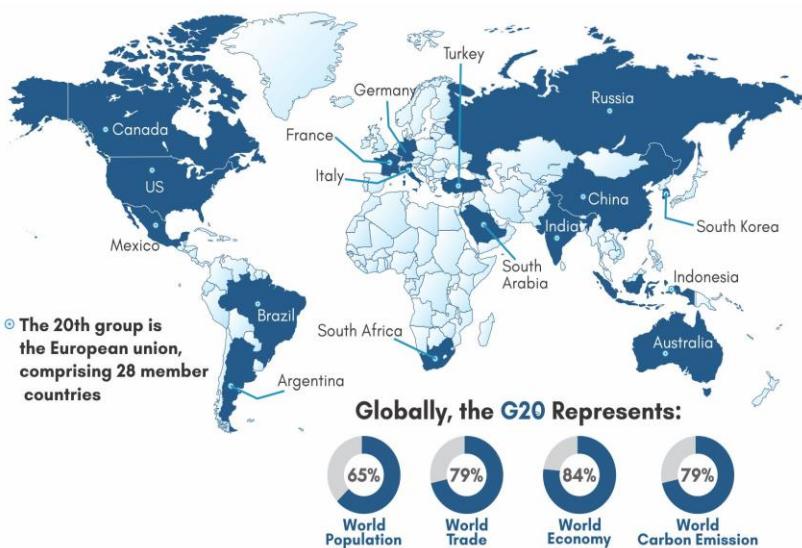
- The G20 Summit on Financial Markets and the World Economy is held every year to discuss the critical issues affecting the global economy.
- The 2019 G20 Summit in Osaka discussed **eight themes** which are crucial to ensure Global Sustainable Development, that are **Global Economy; Trade and Investment; Innovation; Environment and Energy; Employment; Women's Empowerment; Development; and Health**

Important takeaways for India at G-20

- **Taxing global digital companies-** India has made a strong case for adoption of "significant economic presence" concept for taxing global digital companies.
 - India had introduced this concept in the Income Tax Act **for taxation of non-residents in India or global digital companies.**

Group of Twenty (G-20)

- It is an **international forum** for the governments and central bank governors from 19 countries and the European Union.
- The **first G20 Summit** was held in Berlin in December 1999 and was hosted by the finance ministers of Germany and Canada.
- It was formed in **1999** to discuss policies relating to financial stability, in the aftermath of the **Asian Financial Crisis of 1997-1998**.
- Its agenda was expanded **since 2008** including heads of governments / heads of states as well as finance ministers and foreign ministers.
- It thus, brings important industrialized and developing countries to discuss important issues in the global economy.
- For the first time, India will host the annual G-20 Summit in 2022.



- **Boycotting Osaka Track-** India, South Africa, and Indonesia have boycotted the “**Osaka Track**” on the “**digital economy**”, as it overtly undermines “multilateral” principles of consensus-based decisions in global trade negotiations, and denies “policy space” for digital-industrialisation in developing countries.
 - It is an initiative launched by Japan’s Prime Minister Shinzo Abe that **seeks the removal of prohibitions on data localisation** and urges nations to negotiate rules on data flows, cloud computing among others. Countries such as US and Europe have supported it.
- India has also supported the fight against **fugitive economic offenders**, need for **WTO reforms** and keeping a **close watch on global current account imbalances**.

Relevance of the G-20

- **Influence on the policies of the countries around the world-** It allows the leaders of the world’s major economies to work together to lift growth in mutually-supportive ways and align their domestic policies to the decisions taken by the grouping across Ministerial level meetings and Summits.
 - It provides **good platform for emerging economies like India, China, Brazil, or Turkey** for addressing structural domestic problems of slowing stagnating industrial productivity, job creation, and deflating export prices that requires greater economic cooperation with countries in Europe, the US and Canada.
- **Helps in reshaping the governance of global finance-** as done by developing strict rules on the “too big to fail” problem, increasing the lending capacity of the International Monetary Fund (IMF) and collecting richer information on the shadow banking system.
- **Helps in strategic balancing among countries-** through bilateral and plurilateral meetings such as JAI (Japan-America-India), RIC (Russia-India-China) which tries to address conflicting interests of various groupings on one platform.

Conclusion

As trade tensions escalate among major powers and global growth decelerates, the G-20 countries need to go an extra mile to **present a common framework to tackle global challenges**.

2.3. UNSC NON-PERMANENT SEAT: INDIA’S CANDIDATURE

Why in news?

India has won the unanimous support of all countries in the **55-member Asia-Pacific Group** at the United Nations in support of its bid for a **non-permanent seat at the UN Security Council (UNSC)** for a two-year term in 2021-22.

UNSC Membership

- Along with the five permanent members, the Security Council of the United Nations has temporary members that hold their seats on a rotating basis by geographic region.
- **Five permanent members:** China, France, Russia, UK, and the US.
- The **10 non-permanent seats** are distributed on a **regional basis:**
 - Five for African and Asian States;
 - One for Eastern European States;
 - Two for the Latin American and Caribbean States; and
 - Two for Western European and other States.
- Each year the 193-member of UNGA elects five non-permanent members for a two-year term at the UNSC, with five replaced each year.
- To be approved, a candidate must receive at least two-thirds of all votes cast for that seat, which can result in deadlock if there are two roughly evenly matched candidates.
- A retiring member is not eligible for immediate re-election.
- The **Asia-Pacific Group gets to nominate** one of its members for the 2020 elections to a non-permanent seat of UNSC.
- Currently the 10 non-permanent members are **Belgium, Cote d'Ivoire, Dominican Republic, Equatorial Guinea, Germany, Indonesia, Kuwait, Peru, Poland and South Africa**.

India's UN Roadmap

- | |
|---|
| <ul style="list-style-type: none"> • India has already held a non-permanent seat on the UNSC for seven terms. • India announced its candidacy for the 2021-22 seat at the end of 2013, with Afghanistan, a potential contender, withdrawing its nomination to accommodate India's candidacy based on the “long-standing, close and friendly relations” between the two countries. |
|---|

2.4. ASEAN OUTLOOK ON THE INDO-PACIFIC

Why in news?

Recently, the Association of Southeast Asian Nations (ASEAN) has adopted the 'ASEAN Outlook on the Indo-Pacific'.

Background

- Countries like USA, Australia, France, India and Japan had come up with their own individual visions and strategies for cooperation in the Indo-Pacific region.
- The primary push for finally concluding the 'ASEAN Outlook on the Indo-Pacific' came with the growing US-China trade war as economies of many Southeast Asian countries have been affected negatively.

About ASEAN Outlook on the Indo-Pacific (AOIP)

- An initiative that reinforces the ASEAN-centered regional architecture which is not aimed at creating new mechanisms or replacing existing ones; rather, intended to enhance ASEAN's Community building process and to strengthen and give new momentum for existing ASEAN-led mechanisms.
- It involves the further strengthening and optimization of ASEAN-led mechanisms, including the East Asia Summit (EAS), the ASEAN Regional Forum (ARF) etc.
- It enumerates the four functional areas through which ASEAN believes collaboration can be tangibly advanced:
 - Maritime cooperation
 - Connectivity
 - Sustainable development
 - Economic and Other Possible Areas of Cooperation.

India's engagement in Indo-Pacific

- India views the Indo-Pacific as a geographic and strategic expanse, with the 10 ASEAN countries connecting the two great oceans.
- Inclusiveness, openness, and ASEAN centrality and unity lie at the heart of the Indian notion of Indo-Pacific.
- It has been an active participant in mechanisms like the Indian Ocean Rim Association (IORA), the East Asia Summit, the ASEAN Defence Ministers' Meeting Plus, the ASEAN Regional Forum, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Mekong-Ganga Economic Corridor.
- Indian Ocean Naval Symposium, in which the navies of the Indian Ocean Region (IOR) participate.
- Through, Forum for India-Pacific Islands Cooperation (FIPIC) India is stepping up its interactions with the Pacific Island countries.

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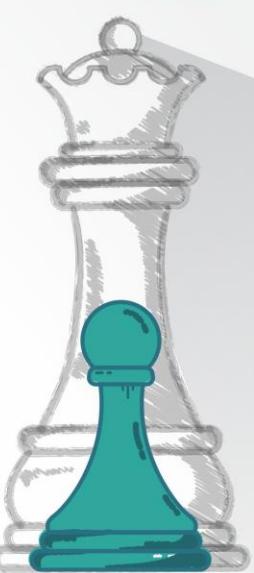
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3. ECONOMY

3.1. GDP ESTIMATION IN INDIA

Why in news?

- Recently, there has been a controversy over India's new GDP series and its estimation methodology.
- In a recent published research paper, Former Chief Economic Adviser Arvind Subramanian has concluded that the country's growth has been overestimated by around 2.5% between 2011-12 and 2016-17.

Changes made in Indian GDP Series

In 2015, the Central Statistics Office came up with a revised methodology for the calculation of GDP of the country.

Gross Domestic Product (GDP) vs Gross Value Added (GVA)

- Gross Domestic Product (GDP) is the **monetary value all final economic goods and services** produced in a country during a specific period of time.
 - Domestic territory means **political frontiers of the country** including its territorial waters, commercial vessels operated by country's residents etc. & also **includes country's embassies & consulates located abroad**.
- GVA is **measure of value added** in goods and services produced in economy i.e. $GVA = \text{economic output} - \text{input}$.
- GVA is sector specific** while GDP is **calculated by summation of GVA of all sectors** of economy with taxes added and subsidies are deducted.
- Central Statistics Office (CSO) in the Ministry of Statistics and Programme Implementation (MoSPI)** is responsible for the compilation of National Account Statistics including GDP.

- Change of base year to 2011-12 (from 2004-05)** to capture the unorganized sector data from NSSO's Employment-Unemployment Survey (EUS) of 2011-12.
- Incorporation of Recommendations of System of National Accounts (SNA), 2008:**
 - Valuation of **Gross Value Added (GVA)** & Net Value Added (NVA) at **basic prices**
 - Considering **GDP at market prices as headline GDP** instead of GDP at factor cost, to make the new calculation more **consumer-centric**.
 - Treating **unincorporated enterprises** maintaining accounts as quasi-corporations
- Incorporation of MCA21 database:** Ensuring comprehensive coverage of corporate sector in mining, manufacturing & services.
 - Earlier, contribution of enterprises was assessed using **Index of Industrial Production & Annual Survey of Industries**.
- Broader coverage of financial sector** by including stock brokers, stock exchanges, asset management companies, mutual funds and pension funds, as well as regulatory bodies, SEBI, PFRDA and IRDA.
 - Earlier estimates primarily covered commercial banks and NBFCs.
- Adopted Effective Labour Input (ELI) Method:** Earlier, it was assumed that all categories of workers contribute equally. New method **addresses differential labour productivity issue** by assigning weights to different categories of workers based on their productivity.
- Use of results of recent surveys and censuses:** Current data from latest surveys have been incorporated in the GDP calculation. E.g. Agricultural Census 2010-11; All India Livestock Census, 2012; All India Debt and Investment Survey, 2013 etc.

Issues in GDP Estimation in India

Concerns about the accuracy of India's new GDP series

Stems from legacy problems with the national accounts system in the country, which were either left unaddressed or were aggravated during the base year change exercise in 2014-15.

- Volatile Revisions:** The revisions (between advance estimates & revised estimates) in overall GDP numbers tend to have an upward bias, which raises questions on the credibility of GDP data. Moreover, volatile revisions create challenges for policymakers who make decisions based on initial estimates.

Benefits of adopting new series

- India has been able to **numerically improve its GDP estimates**.
- It would improve **India's sovereign credit rating** and **bring in more foreign investment**.
- It would also help India to claim bigger **quota at IMF**
 - Quota determines country's subscription to IMF, access to fund & voting rights to influence lending decisions.
 - Current quota formula is weighted average of GDP (50%), Openness (30%), Economic Variability (15%) and International Reserves (5%).

- **Overestimation bias in informal sector:** The new GDP series assumes that the informal manufacturing ('quasi-corporations') sector grew at the same rate as the formal manufacturing sector, which might have inflated informal sector growth in the new series.
- **Use of Deflators:**
 - Wholesale price index (WPI) as deflator for several sectors of the economy (particularly services) is inappropriate.
 - Currently, in GVA calculation, instead of deflating output and input with their respective prices, common output deflator is used, which assumes that input & output prices move in same direction and thus, creates a bias. E.g. When oil prices were low, and input inflation was falling, while output inflation continued to rise, there had been a tendency of growth overestimation.
- **Use of MCA21 database:** The use of an untested corporate database, MCA-21 and the manner in which it is used in National Accounts for calculation under new GDP series is contentious.
 - MCA-21 database also **lacks state-wise details**, which has **distorted state-level GDP**. These changes have enormous implications for the **borrowing limits of states** (3% of GSDP as mandated by FRBM Act 2003), and on the **devolution of resources to states by the Finance Commission**.
 - ✓ Most of the relatively prosperous states such as Delhi, Kerala and Karnataka saw a further boost to their GSDP, which allowed them to borrow more.
 - ✓ Some states like Bihar and West Bengal saw their economies shrink, forcing them to reduce spending to meet fiscal deficit targets.
 - ✓ Devolution of funds by Finance Commission will be impacted as formula includes both fiscal performance & income distance.
- **Shift from establishment to enterprise approach:** The new GVA methodology shifted data collection from establishments (or factories) to enterprises (or firms). All the value added at enterprises classified as "manufacturing firms" goes into the calculation of manufacturing GVA. But, the activities of firms are much more diverse than factories (e.g. some subsidiaries may only look into services like transportation) and would not qualify as manufacturing.
- **Administrative Issues:** Lack of transparency and effective audit of the GDP database point to **inadequate oversight** of the Central Statistics Office (CSO), which is responsible for the National Accounts Statistics. Recent **resignation of 2 members of National Statistical Commission (NSC)** and **non-appointment of new independent members** appointed by the government further indicates lack of autonomy in statistical system in India.

GDP Deflator

- **GDP price deflator** is a ratio of price levels in two different years that accounts for inflation in the prices of goods and services.
- $$GDP \text{ Deflator} = \frac{\text{Nominal GDP at Current Prices (2018)}}{\text{Real GDP at Constant Prices (Base Year 2011)}} \times 100$$
- Quantitatively, the production may not have improved and the growth rate may appear to be high only because of inflation in the prices.
- GDP Deflator enables comparisons of real GDP from one year to another.

Income distance measures the difference between the per capita GSDP of a state and the per capita GSDP of the state with the highest per capita income.

Way Forward

- Existing data sources including MCA21 database should be properly **authenticated** before plugging it into National Account Statistics.
- New data sources and methodologies can be explored e.g. using transactions-level GST data to estimate expenditure-based estimates of GDP.
- The shift from **establishment approach** to **enterprise approach** will be successful only if all the disaggregated information in MCA21 database on activities of a firm is classified properly into appropriate sectors.
- Greater **transparency** on the methodology and **better data dissemination standards** can help improve the credibility of the official GDP numbers. The recent **merger of Central Statistics Office (CSO) and National Sample Survey Office (NSSO)** can help CSO to adopt transparent data practices of the latter.

Growth rates are critical for internal policy making as it has a bearing on both monetary and fiscal policies. E.g. If we over-estimate the growth rates, we might keep interest rates too high from a cyclical perspective, which might prolong growth stagnation. Therefore, it is important to see the broader message behind the concerns raised and make the process of GDP estimation more robust according.

Discussion on the recent controversy around GDP estimation	
Former CEA Arvind Subramanian's paper of India's GDP Mis-estimation	Criticism of the analysis by Economic Advisory Council to the Prime Minister
<ul style="list-style-type: none"> The author compiled 17 key indicators for the period 2001-02 to 2017-18 that are typically correlated with GDP growth E.g. credit, electricity consumption, airline passenger traffic, railway freight traffic, index of industrial production (IIP), exports & imports etc. By doing cross-country regression on a sample of 71 high and middle income countries, the relationship between these indicators and GDP growth was established. It was found that India doesn't follow broad pattern of relationship in post-2011 period. While the indicators and India's GDP were found to be strongly correlated during 2002-11, the indicators show negative correlations with GDP growth and don't manifest high growth levels post 2011-12. This might be an indication that GDP has been over-estimated in the period post 2011-12. The magnitude of GDP growth over-estimation was around 2.5%, with actual growth rate somewhere around 4.5% instead of 7%. Even Economic Survey of 2017 directionally highlighted this divergence. In the period 2015-2017, India had posted average real GDP growth of 7.5%, but investment growth averaged just 4.5%, export volume growth 2% & credit-GDP ratio fell by 2% points. No other country with such performance on these indicators managed GDP growth rate of 7%. The popular narrative of "jobless growth" hints a disconnect between status of the economy and key outcomes. In reality, weak job growth and acute financial sector stress may have simply arisen from modest GDP growth. 	<ul style="list-style-type: none"> Observations are based on certain cherry-picked high-frequency indicators which correlates strongly only with the industry (22% of GDP), while poorly representing agriculture (18% of GDP) and services (60% of GDP) Growth levels are consistent in both the periods. The correlation of indicators with GDP can be different in different periods and cannot be considered as symptomatic of measurement error A weaker correlation between selected indicators and GDP growth doesn't necessarily signal an economic slowdown; but only that the contributors to growth changed significantly post global financial crisis (GFC). Mismatch between high-frequency indicators and GDP growth can be due to various alternate reasons affecting the economy: <ul style="list-style-type: none"> Pre-2011 period involved exuberant lending by banks, so that credit indicators appeared strong. But the real economy didn't grow as much, and uncontrolled credit growth led to the present level of NPAs. Post GFC, global trade momentum weakened and India's growth drivers shifted toward domestic consumption and public expenditure (while exports and private investments have played less important role) Cross-country regressions are problematic as they don't take into account country specific heterogeneities and difference in productivity levels. The analysis is purely based on output variables and does not account for productivity gains. Tax data has been overlooked. For GDP growth rate of around 4.5%, the tax-GDP ratio would have been much higher.

3.2. 2 YEARS OF GOODS & SERVICES TAX (GST)

Why in news?

Hailed as the biggest tax reform, GST has completed 2 years of operation. It was launched on 1st July, 2017 in a special session of Parliament.

About Goods and Services Tax (GST) and its present structure

- GST is a **destination-based indirect tax** and is **levied at the final consumption point**.
- Under GST, a gamut of **17 indirect taxes** like excise duty, VAT, service tax, luxury tax etc are subsumed.
 - Taxes NOT subsumed under GST:** Basic Custom Duty, Anti-Dumping Duty, Central Excise on Petroleum Products, VAT on alcohol for human consumption, Stamp Duty, Property Tax (levied by local bodies), Professional Tax etc.
- GST is currently levied on every product [except **petroleum products, alcohol, real estate & electricity**] in four slabs of **5, 12, 18 and 28%**.
 - Most of the daily use articles have zero GST as per the latest revision of the tax rates last year.
 - In addition, a cess is levied on automobiles, luxury, and demerit and sin goods.
- From Government's perspective, it is **easier to collect** and **reduces tax evasion**, for customer it is **easier to understand** & will **reduce tax burden** and for industry, it ensures that there is **no cascading effect of the tax** and there is **harmonization of tax laws, procedures and rates of tax**

Successes of GST

GST marks a fundamental **resetting of the Indian economy**. It redefines the way business is done (with increased formalisation), expands the market for goods and services (replacing many small and fractured markets with a single common one) and totally overhauls the Indirect Tax regime (one nation one tax regime)

- **Tax Compliance:**

- In the pre-GST period, traders had to comply with rules & regulations of various tax departments & laws. Now, **tax compliance has been easier** for traders with **single set of norms**.
- GST has been **successful in increasing compliance** among small traders through **Composition Scheme**. At present, small dealers up to a turnover of Rs 1.5 cr can opt for composition scheme and pay only 1% tax, **facing a lesser compliance burden**.
- There is now a single online system from filings to returns that has made transactions more transparent.
- Self-policing mechanism of GST helps to check tax evasion and expand the tax net
 - ✓ Seamless flow of input tax credit is possible only when all the suppliers of a business pay GST. So each business will make sure that its suppliers have paid the GST, so that they can take input tax credit.
 - ✓ By putting the burden of paying the tax on the buyer (**called reverse charge**), in cases where the supplier does not pay GST, the Government is nudging all businesses to sign up for GST.

- **Revenue Base:** GST has helped the Government to **expand the revenue base** by about 85% in the past two years from 65 lakhs to 1.2 crore.

- **Revenue Collections and Buoyancy:** The relative buoyancy of GST revenue compared to the pre-GST period is a result of two factors. 1) the design of GST that integrated the entire value chain from raw material to retail for the purpose of indirect taxation. 2) The tax incidence on services increasing from 14% pre-GST to 18% post-GST.

- Government's **monthly average revenue collection increased by 10%** from ₹89,700 cr in 2017-18 (July to March) to ₹97,100 cr in 2018-19.
- A **buoyancy ratio of over 1** shows the progressiveness in the revenue growth and opens the prospect of rising tax-to-GDP ratio in future.

- **Rationalization of taxes:**

- Currently, **around 97.5% articles are covered by 18% or lower GST slab**, a significant reduction from tax rates under the VAT regime where standard VAT rate was 14.5% and excise duty was 12.5% (topped by additional sales tax & cess in many cases).
- **A good fiscal system should not tax the production of intermediate goods.** That is the logic underlying all value-added taxes such as GST that intend to eliminate taxes on production & distribution. It is a destination tax that is collected at the point of final consumption.

- **Re-engineering of supply chain:** GST has presented an opportunity to reduce physical supply chain costs (costs attributable to transportation, warehousing, inventory, etc.)
 - A unified tax and seamless availability of credit has reduced the cost of procurement of raw material.

- **Introduction of E-Way Bills:** Introduction of E-Way bill marks a shift from departmental policing model to self-declaration model for movement of goods

- It would enable hassle free movement of goods by **eliminating the requirement of separate transit pass** for each state.
- Government has introduced several changes in e-way bill system including **auto-calculation of distance based on PIN codes** and **blocking generation of multiple bills on one invoice** to make the system more efficient.

Reverse Charge Mechanism

- The GST has to be typically paid by the supplier of goods and services. But in some cases, the liability to pay the tax falls on the buyer. This is called reverse charge.
- This is only applicable in certain instances e.g. when a business buys goods or services from a supplier who is not registered to pay GST or in cases of import.

E-way Bill

- E-way bill is a document required to be carried by a person in charge of the conveyance carrying any consignment of goods of value exceeding Rs. 50,000 for sales beyond 10 km in GST regime.
- It is generated from the GST Common Portal by the registered persons or transporters before commencement of movement of goods of consignment.

- **Use of technology:** All the operations ranging from front-end services of registration, returns and payments to all taxpayers, as well as the backend IT modules for States that include processing of returns, audits, assessments, appeals etc. have been digitalized
 - **Reduced the interface** between tax collector and taxpayer, thereby reducing the scope for corruption.
 - **High quality quantifiable data** on the formal-informal, state specific production, state-wise distribution of exports, point of origin of goods/services, and other economic data will enable better policy making and governance.
 - Per capita gross state domestic product has a high correlation with exports. Use of GST data can significantly **improve GDP estimation**.
- **Reinforces Cooperative Federalism:** **GST council** has emerged as a successful example of cooperative federalism and its functioning has been free from political biases.

Challenges that still remain

- **List of exclusions:** Petroleum products (crude oil & natural gas), diesel, petrol, aviation turbine fuel, potable alcohol and real estate, which contribute 35-40% of indirect tax revenue, are still out of GST's ambit.
- **Complex GST Structure with multiple tax slabs:**
 - **4 different rates** undermine eventual goal of simplifying tax compliance & leads to foregoing of efficiency gains. It is incongruent with globally acceptable practice of single GST.
 - **Administering multiple rates** is challenging, such as high cost of auditing the classification of products into exempt, high & low tax slabs across every stage of production, distribution & consumption and long-standing litigation in case of disputes.
- **Digital infrastructure and data privacy:**
 - Implementation of GST required **registration at humungous scale** for input based tax crediting and **creating a common database of registered traders to be managed centrally**. This has emerged as a major challenge to GST's IT landscape. Until now, states maintained the database individually.
 - **Technical glitches** e.g. Introduction of E-Way Bill was delayed due frequent website crashes
- **Anti-profiteering norms:**
 - Provisions in Central GST legislation require industry to reduce prices and pass on the net benefits arising from implementation of the GST to end consumers to keep inflation under control. But, implementation of the regulations is facing several roadblocks.
 - Power given to taxmen to conduct 'mock purchases', visit premises, search and check invoices might lead to misuse.

Way Forward

- **GST taxable base must include petroleum products**, especially aviation turbine fuel and natural gas, real estate and electricity. Inclusion of real estate will clean up the land market and will lead to revenue gains on direct tax side as well as more transactions will be reported.
- Although indirect taxes tend to be regressive in nature, a **low standard or modal rate with a small list of exemptions** is the ideal GST structure that Government should try to achieve.
 - **World Bank study** said that the Indian GST rate was 2nd highest among the 115 countries with a national value-added tax. It was also the most complicated, with five main tax rates, several exemptions, a cess and a special rate for gold.
- **Revenue performance of Composition Scheme** needs to be improved by ensuring better compliance among small traders. **Imposition of additional duty on Reverse Charge Mechanism** to be paid by Composition Dealers could be an important anti-evasion measure.
- A **single authority for sanctioning and processing GST refunds** has been proposed to simplify the procedure for exporters. Under the proposed reform, a single tax office will assess, check and sanction refunds of both centre and state GST portions

Conclusion

- Governments pushing reforms have to beat the political costs upfront and early, with the benefits evolving over the medium term.
- Although it is at its early days still, the GST started on a positive note and the benefits for all stakeholders are evident. It is now time for the Government to stabilise the system, remove uncertainty, facilitate compliance by easing processes and expand the tax base to make the GST a real success

3.3. DECLINE IN NPAS

Why in news?

Due to various steps taken by Government and RBI, there has been a reduction in NPAs.

More about News

- According to Economic survey 2018-19, the **performance of the banking sector** (domestic operations), and Public Sector Banks in particular, **improved in 2018-19**.
- The Gross Non-Performing Advances (GNPA) ratio of **Scheduled Commercial Banks (SCBs)** decreased from 11.5 % to 10.1 % between March 2018 and December 2018 while for **PSBs it declined from 15.5 % to 13.9 %**.

- Capital to risk-weighted asset ratio (CRAR) of SCBs increased from 13.8 per cent to 14.0 per cent** between March 2018 and December 2018 largely due to improvement of CRAR of Public sector banks (PSBs).
- However, the **GNPA ratio of NBFC sector deteriorated to 6.5 per cent as in December 2018 from 6.1 per cent in March 2018**.

Why there has been decrease in NPAs?

- Government has taken comprehensive steps under its **4R's strategy** of
 - Recognising NPAs transparently**-
 - through **Asset Quality Reviews** and **Joint Lenders' Forum**.
 - Banks are now required to acquire **Legal Entity Identifier (LEI)** number from the borrower and report it to Central Repository of Information on Large Credit.
 - Resolving and recovering** value from stressed accounts-
 - ✓ **New Insolvency and Bankruptcy Code, 2016 (IBC)**, has been enacted, which has provided for the taking over management of the affairs of the corporate debtor at the outset of the corporate insolvency resolution process.

Stressed Assets

It is a broader term and comprises of NPAs, restructured loans and written off assets.

- Restructured Loans:** Assets/loans which have been restructured by giving a longer duration for repayment, lowering interest or by converting them to equity.
- Written off Assets:** Assets/loans which aren't counted as dues, but recovery efforts are continued at branch level – done by banks to clean up their balance books.

Non-performing asset (NPA)

It is a loan or advance for which the **principal or interest payment remained overdue for a period of 90 days or more**. In case of Agriculture/Farm Loans, the NPA varies for short duration crop (interest not paid for 2 crop seasons) and long duration crops (interest not paid for 1 Crop season).

Banks are required to classify NPAs further into Substandard, Doubtful & Loss assets.

- Substandard assets:** Assets which have remained NPA for a period less than or equal to 12 months.
- Doubtful assets:** Assets which have remained in the substandard category for a period of 12 months
- Loss assets:** It is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.

Reasons for high NPAs

Borrower's side

- Domestic economy slowdown - Lack of demand for their products as foreseen by the industrialists
- Wilful default
- Diversion of funds by borrowers for purposes other than mentioned in loan documents.
- Global economy slowdown
- Volatility in prices of raw material and the shortage in availability of power etc. impacts the performance of the corporate sector

Bank's side

- Bad lending practices. Sometimes banks provide loans to borrowers with bad credit history. There is high probability of default in these cases.
- Inadequate Capacity to evaluate projects – poor credit appraisal system
- Absence of regular industrial visits.

Other external factors:

- Economic condition of a region effected by natural calamities
- Ineffective recovery tribunals
- Change in government policies – For example – any government scheme diverting manpower of PSBs for its implementation affecting the regular activities of banks.
- Administrative hurdles – delay in getting permits and other clearances affects the cost of project.

- ✓ Amendment to the **Banking Regulation Act, 1949** to empower the RBI.
- ✓ Amendment to the **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002** to make it more effective
- ✓ **Project Sakshat:** to resolve the problem of NPAs through a market-led approach.
- **Recapitalising-**
 - Government of India announced recapitalization of PSBs to the tune of **Rs. 2.11 lakh crore** in October 2017, through infusion of capital by the Government and raising of capital by banks from the markets.
 - **Deposits with the banking system,** both demand and time has recorded acceleration in their growth, leading to an **increase** in aggregate deposits by 9.6 percent in 2018-19.
 - **Reforms** in banks and financial ecosystem to ensure a responsible and clean system.
 - ✓ Comprehensive framework for transforming the PSBs under **Mission Indradhanush, 2015.**
 - ✓ Under the **PSB Reforms Agenda**, PSBs have created Stressed Asset Management Verticals to focus attention on recovery and entrusted monitoring of loan accounts of above Rs. 250 crore to specialised monitoring agencies.
 - ✓ **Fugitive Economic Offenders Act, 2018:** It has been enacted to deter economic offenders from evading the process of Indian law by remaining outside the jurisdiction of Indian courts.
 - ✓ With a view to removing the regulatory arbitrage between banks and non-banks, the Reserve Bank has been **aligning** the regulatory and supervisory frameworks for **NBFCs with that of SCBs.**
 - ✓ Owing to the sharp deterioration in finances of state-owned banks on the back of rising NPAs, 11 public sector banks were put under **Prompt Corrective Action (PCA)** last year.
 - ✓ The **consolidation of Banks** is also seen as a way out of the NPA issue through the “strong” banks absorbing the strain on the books of weaker banks.

Implications of declining NPA

- **On banks-**
 - It increases the **profitability & liquidity** of the banks as annual return on assets comes increases and also the amount given as loan also gets opened which can now be used for some return earning asset otherwise. Banks can grow faster when the availability of credit increases.
 - The **Monetary Policy Transmission** becomes faster for banks to pass on the RBI-induced rate reductions.
 - Banks eases credit to small and medium enterprises (SMEs) that are India's potential for prosperity of an entrepreneurial middle class.
- **On borrowers-** Banks may begin lowering interest rates on some products once Non-performing assets decrease. As a result, the **cost of capital** will decrease, making the different businesses financially viable.
- **On overall economy**
 - Economy will grow as there will be more availability of credit from the security market which increases employment generation and development of the country.

RBI'S NEW NORMS FOR RESOLUTION OF STRESSED ASSETS

1 Lenders shall recognise incipient stress in loan accounts, immediately on default, by classifying such assets as special mention accounts (SMA). Accordingly, the SMA-0 list will have companies, which are in default for 1-30 days, SMA-1 for 31-60 days and SMA-2 for 61-90 days.



2 All lenders must put in place board approved policies for resolution of stressed assets, including the timelines for resolution.

3 Lenders must resolve non-performing assets (NPA) over Rs 2,000 crore within 180 days.



4

If resolution plan is delayed beyond 180 days, banks will have to incur additional 20% provision on the outstanding



35%

5 If plan is not implemented within 365 days of default, 35% of the outstanding will have to be provided

6 New framework mandates inter-creditor agreement



In case of a default by a borrower, lenders have to undertake a *prima facie* review of the borrower account within 30 days from such default (called the review period).

7

During this Review Period of 30 days, lenders may decide on the resolution strategy, including the nature of the resolution plan (RP) and how it will be implemented. They can also choose to initiate legal proceedings for insolvency or recovery.



9 Decision of banks holding 75% of value and 60% in numbers is enough to start resolution proceedings



10 For now, it applies to accounts worth ₹ 2,000 crore and above

11 From January 1, 2020, accounts of ₹ 1,500cr and above will fall under the framework



12 Lenders shall submit weekly report of instances of default by all borrowers with aggregate exposure of ₹ 5 crore and above



Borrowers who have committed frauds or wilful default will remain ineligible for restructuring.



How can it be further improved?

- **Managing Risks:** Risk management processes still need substantial improvement in PSBs. Compliance is still not adequate, and cyber risk needs greater attention.

- **Improve the process of project evaluation:** and monitoring to lower the risk of project NPAs. Significantly more in-house expertise can be brought for project evaluation.
- **Strengthen the recovery process further:** Both the out of court restructuring process and the bankruptcy process need to be made faster and strengthened.
- **Infusion of Capital:** The government must infuse at one go whatever additional capital is needed to recapitalise banks — providing such capital in multiple instalments is not helpful.

3.4. LEVERAGE RATIO

Why in News?

The Reserve Bank of India (RBI) **relaxed the leverage ratio (LR)** for banks in a bid to help them expand their lending activities.

About Leverage Ratio

- The Basel Committee on Banking Supervision (BCBS) introduced the concept of a leverage ratio in the **2010 Basel III package of reforms** to indicate the **level of debt** incurred by banks. Banks had to publicly disclose their Basel-III leverage ratio on a consolidated basis from 1st April 2015.
- It was introduced in the backdrop of the global financial crisis, which was the result of the build-up of excessive on and off-balance sheet leverage in the banking system.
- The **leverage ratio**, as defined under Basel-III norms, is **Tier-I capital as a percentage of the bank's exposures**.
- **Bank's total exposure** is defined as the sum of the following exposures: on-balance sheet exposures; derivative exposures; securities financing transaction exposures; and off-balance sheet items.
- Leverage Ratio is one the four indicators under the RBI's **prompt corrective action (PCA) framework**.
- **Recently, leverage ratio** has been reduced to **4%** for Domestic Systemically Important Banks (DSIBs) and 3.5% for other banks for moving towards synchronisation with **Basel III standards**.
- A cut in leverage ratio implies that **banks can lend more on the same capital base**.

Tiers of Bank Capital

- **Tier I capital (Core Capital):** It consists of money kept as Statutory Liquidity Ratio (SLR), in physical cash form & as share capital and secured loans. At least 6% of CAR must come from Tier 1 capital. This capital can absorb losses without bank ceasing its trading operations.
- **Tier II capital (supplementary capital):** It includes after tax income, retail earnings of the bank, capital in the form of bonds/hybrid instruments & unsecured loans (getting serviced).
- **Tier III capital:** Includes Non-Performing Assets (NPAs), subordinated loans (not getting serviced) & undisclosed reserves from the balance sheet.

Bank for International Settlements

- It is an international financial institution owned by central banks which "fosters international monetary and financial cooperation and serves as a bank for central banks."
- Its head office is in Basel, Switzerland.
- The Bank for International Settlements (BIS) hosts and supports a number of international institutions engaged in standard setting and financial stability, one of which is BCBS.

Basel Committee on Banking Supervision (BCBS)

- It is an international committee formed in 1974 to develop standards for banking regulation.
- It consists of central bankers from 27 countries and the European Union.
- It is headquartered in the office of Bank for International Settlements (BIS) in Basel, Switzerland.
- It developed a series of policy recommendations known as **Basel Accords**, which suggested minimum capital requirements to keep bank solvent during the times of financial stress.
 - Reserve Bank issues guidelines based on **Basel III reforms** for banks operating in India.
 - The Basel III capital regulation has been implemented from April 1, 2013 in India in phases and it was to be fully implemented as on March 31, 2019.
 - The other important Basel Standards are Minimum Common Equity Capital Ratio, Countercyclical Capital Buffer Framework, Minimum tier 1 Capital, Minimum total capital, D-sib requirements etc.

Related News

- According to a recent report by the Basel Committee on Bank Supervision (BCBS) RBI has fallen short of implementing Basel III norms.
 - It is yet to publish the securitization framework and rules on total loss-absorbing capacity (TLAC) requirements
 - The RBI is also yet to come out with draft regulations on revised Pillar 3 disclosure requirements, which took effect from end-2016.

Total loss-absorbing capacity

- It is an international standard, finalised by the Financial Stability Board (FSB), intended to ensure that global systemically important banks (G-Sibs) have adequate loss absorbing and recapitalisation capacity so that critical functions can be continued without taxpayers' funds or financial stability being put at risk.
- G-Sib is bank whose systemic risk profile is deemed to be of such importance that the bank's failure would trigger a wider financial crisis and threaten the global economy.
- Currently there is no G-sibs in India.

Pillar 3 disclosure

- The Capital Adequacy Framework under Basel III norms rests on three components or three Pillars.
- **Pillar 3** disclosures aim at **ensuring market discipline** through disclosures in prescribed format, while **Pillar 1 focuses on capital adequacy** and **Pillar 2 looks at the supervisory review process**.

3.5. BASE EROSION AND PROFIT SHIFTING

Why in News?

The Union cabinet approved **ratification of a multilateral convention to implement OECD's project** on checking tax evasion.

About the Convention

- **The Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (BEPS)** was signed in Paris in 2017.
- It entered into force on 1st July 2018.
- The Multilateral Convention is an **outcome of the OECD/G20 Project** to tackle Base Erosion and Profit Shifting (BEPS).
- The Convention will **modify India's treaties in order to curb revenue loss through treaty abuse and base erosion and profit-shifting strategies** by ensuring that profits are taxed where substantive economic activities generating the profits are carried out and where value is created.
- The Convention enables **all signatories to meet treaty-related minimum standards to counter treaty abuse and eliminate double taxation** that were agreed as part of the BEPS package.

Base Erosion and Profit Shifting (BEPS)

- It refers to **tax avoidance strategies** that exploit gaps and mismatches in tax rules to artificially shift profits to low or no tax locations resulting in little or no overall corporate tax being paid.
- The OECD, under the authority of the Group of 20 countries, has considered ways to revise tax treaties, tighten rules, and to share more government tax information under the **BEPS project**, and had issued **action plans in 2015**.
- The BEPS project would:
 - **increase tax revenues** which were earlier lost due to BEPS. BEPS is of major significance for developing countries due to their heavy reliance on corporate income tax, particularly from multinational enterprises.
 - give **level playing field** for both domestic and global companies by allowing them to conduct businesses under similar circumstances. Tax savings from BEPS give multinational companies an edge over domestic companies, who may lack the wherewithal to employ such strategies.
 - **prevent double taxation**.

3.6. RATING AGENCIES

Why in news?

Recently, SEBI came up with set of **wider disclosure norms** for the Credit Rating Agencies (CRA).

More on news

- It introduced a "**probability of default**" mechanism under which rating agencies have to disclose the probability of default for the issuers they rate by December 2019.
- It also provides for **formulation of Uniform Standard Operating Procedure** for tracking and timely recognition of default.

Importance of CRAs

- They provide retail and institutional **investors with information** that assists them in determining if debtor will be able to meet their obligations.
- They help investors, customers etc. to get an overall **idea of the strength and stability** of an organization and enable them to make informed decisions.
- These agencies also help **build trust** between the investors and the governments by quantifying the level of risk associated with investing in a particular country. For example-Sovereign credit ratings are given to the national governments which highlight a country's economic and political environment.
- CRAs help **strengthening of secondary market** by increasing borrower pool.
- CRAs **ensure a discipline** amongst corporate borrowers due to because of this desire to have a good image.

Credit Rating Agencies in India

- **The Securities and Exchange Board of India (Credit Rating Agencies) Regulations, 1999** empowers SEBI to regulate CRAs operating in India.
- As per the Regulations, **CRA is defined as** “a body corporate which is engaged in, or proposes to be engaged in, the business of rating of securities offered by way of public or rights issue”.
- **SEBI (Credit Rating Agencies) Regulations, 1999** provide for a **disclosure-based regulatory regime**, where the agencies are required to disclose their rating criteria, methodology, default recognition policy, and guidelines on dealing with conflict of interest.
- All the credit agencies need to **be registered with SEBI** in order to operate in India.
- There are **seven Credit Rating Agencies** registered with SEBI, viz. CRISIL, ICRA, CARE, India Ratings and Research, SMERA, Infomerics and Brickworks.

Issues with Credit Rating Framework in India

- **Conflict of interest:** CRAs follow the '**issuer pays model**', under which the entity issuing the financial instrument pays the agency upfront to rate the underlying securities. However, such payment arrangement may **lead to a 'conflict of interest'** and could result in **compromising the quality of analysis**.
 - Another example of conflict of interest is non-rating services such as risk consulting, funds research and advisory services given to issuers for which ratings have been provided.
- **Rating shopping:** It is the practice of an issuer choosing the rating agency that will either assign the highest rating or that has the most lax criteria for achieving a desired rating. Hence, the system does not permit publishing a rating without the issuer's consent.
- **Less competition:** Credit-rating market in India is oligopolistic, with high barriers to entry. Lack of competition in the market enables CRAs to have longer, well-established relationships with the issuers which can hamper their independence.
- **Poor Rating Quality:** Often ratings are provided on limited information. For e.g. If the issuer decides not to answer some determinant questions, the rating may be principally based on public information. Many rating agencies don't have enough manpower which often leads to poor quality.
- **Multiple Regulators:** Other than SEBI, there are certain other regulatory agencies, such as the Reserve Bank of India (RBI), Insurance Regulatory and Development Authority, and Pension Fund Regulatory and Development Authority, which also regulate certain aspects of credit rating agencies under their respective sectoral jurisdiction.

Strengthening of the Credit Rating Framework

- **Role of Regulators:** They should **review their regulations and suitably modify** them to ensure greater objectivity, transparency and credibility in the whole credit rating framework.
 - **Ministry of Finance should seek a factual report** from the concerned regulators regarding the enforcement of the regulations and assess the action taken by the regulators against the CRAs.
- **Holistic Disclosures Norm:** It should also include important determinants such as: (i) extent of promoter support, (ii) linkages with subsidiaries, and (iii) liquidity position for meeting near-term payment obligations.
- **Alternative Innovative Model for Rating Agencies** such as 'investor pays model' or 'regulator pays model' for avoiding conflict of interest.
- **Mandatory Rotation of Rating Agencies** for avoiding negative consequences of long term associations between the issuer and the credit rating agency.
 - It will **helps reduce recurrence of major default** cases such as the Infrastructure Leasing & Financial Services (IL&FS) crisis.
- **Increase competition among rating agencies** by lowering threshold for registration for CRA to encourage more entities, particularly start-ups with the requisite capability and expertise.
 - It will help investors to better gauge the performance of credit rating agencies.
- **Legal protection for CRAs:** There are instances of Indian CRAs being sued by the company it rates, in a bid to prevent the rating downgrade. The regulator should consider framing laws that allow CRAs to express their rating opinion without fear of being sued.

3.7. FOOD GRAIN MANAGEMENT IN INDIA

Why in news?

- With food grain stocks held by Food Corporation of India (FCI) in the central pool has hit 6 year high, the Government plans to increase allocations to below-poverty-line (BPL) families.
- Additionally, the Food Corporation of India has commissioned a new roadmap to speed up silo construction to meet its target of 100 lakh tonnes of storage space by 2022.

About Food grain Management in India

- Food Corporation of India (FCI)** is the nodal agency under **Ministry of Consumer Affairs, Food and Public Distribution** responsible for the procurement, storage and movement of food grains, public distribution and maintenance of buffer stocks.
- FCI procures food grains** at minimum support price (MSP) from farmers on an **open ended basis** (i.e., accepting all the grains that are sold to it by farmers), provided the food grains meet Govt. of India's uniform quality specifications. The procurement is also done by State Government Agencies (SGAs) and private rice millers on behalf of the FCI.
- All the procured food grains form the Central Pool. The grains are moved from the surplus states to the **consuming states for distribution** and **for creation of buffer stocks** and stored in FCI godowns.
- The food grains are also disposed by FCI and State Governments through sale under **Open Market Sales Scheme (OMSS)** i.e., selling food grains at predetermined prices in the open market from time to time to enhance the supply of grains especially during the lean season and thereby to moderate the open market prices especially in the deficit regions.
- The **economic cost to FCI** includes **acquisition cost of food grains at MSP, procurement incidentals** (e.g. labour & transport charges, godown rentals) and **distribution cost** (freight, handling, storage & interest charges, losses during storage etc).
 - Difference between Economic Cost and Central Issue Price (CIP)** of food grains under various schemes (including National Food Security Act, 2013) is the operational loss to FCI and is **reimbursed by Government of India as food subsidy**.

About FCI

FCI was set up in 1965 (under the Food Corporation Act, 1964) with three basic objectives:

- provide effective price support to farmers by procuring the crop at Minimum Support Price (MSP) if they are not able to sell it in Agricultural Produce Marketing Committee (APMC) authorized mandis
- procure & supply grains to PDS for distributing subsidized staples to economically vulnerable sections of society
- keep strategic reserve to stabilize markets for basic food grains.

Why there is a problem of excess buffer stocks?

- Oversupply of food grains** due to skewed cropping pattern. **Excess production** of food grains due to higher MSPs, additional bonuses offered on food crops by the states and no viable export outlets.
- Lack of coordination** between FCI and Consumer Ministry which decides buffer norms.
- Open ended procurement** i.e. procures all food grains supplied to it by farmers, state agencies etc.
- No automatic liquidation rule:** Ideally, FCI should sell all grains above buffer stocks in open markets. But, there is no such rule and offtake happens only on the directive of the ministry.

Issues with India's food management system

- Excess of buffer stocks:** Open ended grain procurement has increased food grain stockpiles beyond the needs of food security. E.g. By June 2019, FCI and state agencies stockpiled 76.1 million tonnes of staples (wheat and rice) against the requirement of 61 million tonnes.
- Lack of storage:** Due to inadequate number of godowns for storage, a part of procured grains is maintained as outdoor stacks ('Cover-and-Plinth' system), which face high risk of rain damage and pilferage.
- Food inflation:** More than 75% of the marketable surplus is procured by the Government. Such stocking of food grains which otherwise could have been sold in open markets adds to food inflation
- Poor quality of food grains & high wastage:** Due to insect infestation, microbiological contamination, physiological changes due to sprouting and ripening etc., the shelf life of food grains remain poor. Lack of irradiation facilities also impedes long term storage.

- **High costs for government:** Fiscal load of procuring, carrying & maintaining excess stock is over ₹1 trillion and adds to the food subsidy bill.
- **Countercyclical procurement policy:** In drought years, when the production is low, Government increases MSP and stock uptake from farmers. This reduces the supply of grains in open market and pushes the prices high.
- **Marginalization of private trade:** Existing system of food grain management in India is **dominated by the Government**, right from production (as cropping pattern is influenced by MSPs) to stocking (FCI) and marketing (APMCs).
 - Even in traditionally high producing states like Punjab and Haryana, private trade been marginalized due to **open ended procurement** by FCI.
 - Further, **limitations on private stock holding** and **additional state levies** make private participation unviable.
- **Uncompetitive Exports:** Additional state levies make Indian exports uncompetitive in global markets. Moreover, reactionary policies like rising **minimum export price (MEP)** and putting **ceiling limits on exports to check food inflation** adversely affected India's exports in food grains.
- **Corruption:** According to Shanta Kumar Committee, **40-60% PDS food grains** are siphoned from FCI godowns to **black markets**. Many such scams, like Punjab Wheat Procurement Crisis 2016, have come into the light recently.
- **Economic Burden on FCI:** FCI incurs the cost of around ₹23 per kg for wheat, which then gets sold at ₹2/kg under the National Food Security Act. However, Ministry of Finance constantly underpays FCI to keep in check food subsidy numbers and as a result, it has to borrow money commercially leading to an extra interest burden (₹35,700 cr between 2011-16).

Way Forward

- There is a need to reorient crop production in favour of high value & export worthy products E.g. Paddy can be substituted in north-western non-rice consuming region of India with basmati, cotton, maize, soyabean etc which are in high demand domestically and abroad. Haryana has started incentivising farmers to sow alternative crops.
- Procurement as a means of price support can be replaced with price deficiency payment and direct income support to the farmers, as envisaged in PM-AASHA and PM-KISAN schemes.
- Excess buffer stocks can be allocated to poor over and above their monthly quota of 5 kg under National Food Security Act (NFSR).
- Further, decentralization in procurement should be encouraged. **Decentralized Procurement Scheme (DCP)**, introduced to reduce transport cost and leakages, has been adopted by a very few states.
 - Under this scheme, the respective state governments themselves will procure food grains from farmers on the behalf of FCI and distribute them among poor beneficiaries.
- Lastly, FCI needs an organizational overhaul to make it more functionally efficient. Efficiency is even more important consideration to prevent 'moral hazard' as it is bound to operate under operational losses.

Restructuring FCI

To address the aforementioned issues in food management in India and restructure the role of Food Corporation of India, a High Level Committee was setup under **Shanta Kumar** in 2014. Its important recommendations include-

- **Procurement:** Downsize FCI by outsourcing many of its tasks to state govt., public sector bodies & private companies.
 - Grain procurement, especially in production surplus states like Punjab, Haryana, Andhra Pradesh, Chhattisgarh, MP etc, should be delegated to State Govt.
 - FCI should focus more on its price support operations in Eastern states like UP, Bihar, West Bengal, Assam etc. where majority of the farmers are small and marginal.
 - FCI should not procure more grains (beyond the quantity needed for PDS) from states offering additional bonuses.
 - On FCI procurements, State government levy commission between 2% to 15%. Uniform rate (~3-4%) should be fixed for entire India.
- **Procurement Payment Systems:**
 - Popularize **Negotiable Warehouse Receipts (NWRs)** system. Under this system, farmers can deposit their produce to the FCI authorized warehouses, and can get advance from banks against their produce valued at MSP. This will bring back the private sector, reduce massively the costs of storage to the government, and be more compatible with a market economy.

- No need of physical procurement if market prices are less than the MSP. Farmers should be given the difference the two, through DBT directly into their bank accounts.
- **Buffer stocks:** Only a stripped-down buffer stock of 10 million tonnes should be maintained and grains should be imported in case of dire need. The government can also buy **options/futures in commodity markets** to hedge future price risks.
- **Storage Reforms:**
 - Outsource grain-storage function to central warehousing corporation (CWC), state warehousing corporation (SWC), and private sector players.
 - ✓ **Private Entrepreneur Guarantee (PEG) Scheme** to construct godowns in PPP mode
 - ✓ **Grameen Bhandaran Yojana** to provide capital investment subsidy scheme to build and renovate rural godowns
 - Replace "**cover and plinth**" godowns with "**Silos**" with mechanized / robotic assemblies
- **Transport Reforms:**
 - Transport grains in **containers rather than gunny bags** to reduce losses and faster-turn-around time at railways and waterways.
 - Construct **silos at mandis**, and provide **rail connectivity** to them
 - **Perishable commodities** should be **transported in Reefer Vehicles** for refrigerated transport
 - **End to End computerization and online tracking** from procurement to retail distribution
- **MSP Policy:** Revisit highly skewed incentive structure in favour of wheat and rice and provide better price support operations for pulses and oilseeds.
- **Pro Active Liquidation Policy for Excess Buffer Stocks:** Whenever FCI's inventories have grains above buffer norms, it should automatically **sell excess stock in open market (domestic or exports)**.

3.8. SOLAR MANUFACTURING IN INDIA

Why in News?

Recently, there has been a view among experts, that India needs a **Solar Manufacturing Strategy**, if it wants to achieve its ambitious Solar Program.

Background

- India has made significant progress in creating capacity for solar energy generation in the last few years. India expanded its solar generation capacity eight times from **2,650 MW** in 2014 to **28.18 GW** on March 31, 2019.
- The government had an initial target of 20 GW of solar capacity by 2022, which was achieved four years ahead of schedule. In 2015, the target was raised to 100 GW of solar capacity by 2022.
- Despite the new policy focus on solar plant installation, India is **still not a solar panel manufacturer**.

Issues in Solar Manufacturing in India

- **Overdependence on low-cost imports-** India met 92.11 per cent requirement of its solar equipment through imports in 2017-18.
 - China is the largest supplier of solar equipment accounting for about 89 per cent of India's total imports of solar cells in 2017-18.
- **Lack of a manufacturing base** for Poly-silicon, Ingots/wafers, the upstream stages of solar PV manufacturing chain, which is a very energy intensive process. Most Indian companies are engaged in only module assembly or wafer manufacturing and module assembly.
- **Higher cost of production-** due to lack of integrated set up, economies of scale & modern technology.

Potential of Solar Manufacturing in India

- **Employment generation:** It has a potential to create 50,000 direct jobs and at least 125,000 indirect jobs in the next 5 years.
- **Reduction in imports:** Domestic solar manufacturing can save USD 42 bn. in equipment imports by 2030, besides providing equipment supply security.
- **Domestic demand:** India's large demand (planned solar power growth) in the coming years is the perfect opportunity to build a domestic manufacturing base for equipment (panels and cells) and scale them up much like China did.
 - According to the Ministry of New and Renewable Energy (2018), India has an annual solar cell manufacturing capacity of about 3 GW while the **average annual demand is 20 GW**.
- **Expanding overseas market:** India has taken a lead in the **International Solar Alliance (ISA)**, which will help in the transfer of solar technologies across members.
 - India also sees this as an opportunity for the domestic solar industry to find inroads in some of the smaller and untapped markets like Africa and South America.

- Also, the domestic manufacturers have to borrow at higher interest rates, compared to foreign manufacturers, pushing up their cost of production.
- Thus, the price of solar equipment produced in the country is not competitive as compared to that of foreign manufacturers.
- **Government's attempts faced different challenges-**
 - India's attempt to provide a leg-up to local manufacturers through **Domestic Content Requirement** was thwarted when World Trade Organisation overruled the local sourcing requirements on imports placed by the Government.
 - In 2018, India imposed a **Safeguard Duty** on imported solar panels.
 - ✓ While imposition of this duty was aimed at incentivising domestic manufacturing, it led to **an increase in tariffs**, resulting in the cancellation of many solar auctions.
 - ✓ But, for Indian manufacturers, protection from the safeguard duty soon disappeared since Chinese panel manufacturers also reduced the module prices.
- **Other regulatory issues-** such as high cost of land/electricity, low capacity utilization, and lack of skilled workforce. These along with the aforementioned issues have led to a poor response from industries.

Steps taken by Government

- India's Manufacturing Policy recognizes solar manufacturing as an industry with '**strategic importance**'.
- One of the objectives of the **National Solar Mission** is "to create favourable conditions for solar manufacturing capacity, particularly solar thermal, for indigenous production and market leadership".
- In the **solar panel manufacturing sector**, the Indian government **allows 100% foreign investment** as equity and it qualifies for automatic approval.
- The government is also encouraging foreign investors to set up renewable energy-based power generation projects on build-own-operate basis.
- A 25 percent capital subsidy for solar manufacturing units is available under the '**Modified Special Incentives Package Scheme**' (M-SIPS).
- The Cabinet Committee on Economic Affairs (CCEA) approved a **viability gap funding (VGF) scheme** worth ₹8,580 crore, which would enable government-owned companies to set up 12 GW of solar power plants over the next four years using the costlier, made-in-India modules.

Measures, which need to be taken

- **India needs a solar manufacturing strategy**, on the lines of the Automotive Mission Plan (2006-2016), which is credited with making India one of the largest manufacturers of automobiles in the world. A right policy framework with well-defined objectives will help India set up a robust PV manufacturing ecosystem.
- **Focus on large-scale public procurement**- The government can call out bids for solar power plants with the requirement that these be made fully in India. This will not violate any WTO commitment.
- **Cluster Approach**- Globally, manufacturing bases are being planned as integrated solar industrial clusters with strong Government support. A SEZ that focuses only on integrated module manufacturing could be planned to create a conducive environment.
- **Ideas which can be adopted from China**
 - **Develop 'Solar Champions'**- in a systematic manner through massive subsidies, low interest loans, grants and easy access to land and utilities.
 - **The Technology Top Runner Program**- which aims to achieve higher-efficiency solar products for 1.5 GW of next-generation PV technology. Through such targets, China is able to drive mass production of cells.

Concept Note on Solar PV Manufacturing Scheme by Ministry of New and Renewable Energy

- To create end-to-end solar PV manufacturing capacity in India by way of building up manufacturing capacity of solar PV modules, cells, wafers/ ingots and polysilicon in India.
- To strengthen Make in India campaign, so as to reduce the dependency on foreign manufacturers.
- To make domestic manufactures competitive with international manufacturers.
- To ensure manufacture of quality solar PV equipment in the country.
- To insulate the domestic solar power industry from the vicissitudes of international market.
- To use this policy to create skilled jobs, and in domestic technology self-sufficiency.
- To convert India from a net importer country to a net exporter country and becoming a global player in solar manufacturing.

3.9. MICRO, SMALL AND MEDIUM ENTERPRISES

Why in news?

Recently, the report of the 'Expert Committee on Micro, Small and Medium Enterprises' under the chairmanship of U.K. Sinha was released by the Reserve Bank of India.

Background

- **Micro, Small and Medium Enterprises (MSMEs)** form a vital component of the Indian Economy. The Government and Reserve Bank of India have taken a number of measures from time to time to support this sector.
- However, MSMEs continue to face various challenges and yet to realize its complete potential. Further, an increasingly globalized world, marked by competition and innovation is posing newer and varied challenges to the MSMEs.
- In this backdrop, Reserve Bank of India constituted the present Expert Committee on MSMEs to undertake a comprehensive review of the sector and to identify causes and propose long-term solutions, for their economic and financial sustainability.

Importance of MSMEs

- The sector contributes about 45% to **manufacturing output**, more than 40% of **exports** and over 28% of the **GDP**.
- MSMEs require low capital to start the business, but create **huge employment** opportunities for about 111 million people, which in terms of volume stands next to agricultural sector.

Definition of MSME		
Classification	Manufacturing Enterprise (Investment in Plant and Machinery)	Service Enterprise (Investment in Equipment)
Micro	Upto Rs. 25 lakh	Upto Rs. 10 lakh
Small	Above Rs. 25 lakh to 5 crore	Above Rs. 10 lakh to 2 crore
Medium	Above Rs. 5 crore to 10 crore	Above Rs. 2 crore to 5 crore

Key Recommendations of the Committee

- **Review of the legislative framework-** The Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 may be reimagined as a comprehensive and holistic MSME Code having a provision for sunset on plethora of complex laws scattered all over the legislative framework.
- **Change in the definition of MSMEs-** from current investment based to **turnover-based definition**, as it would be more transparent, progressive, easier to implement. It will also remove the bias towards manufacturing enterprises in the existing definition.
- **Strengthening the procurement mechanism-** by promotion of the Government e-Market (GEM) Portal and improving its payment system.
- **Role of different agencies-**
 - **State Financial Corporations (SFC)-** are setup to promote Small Scale Industries and they can be given more operational freedom by the State legislations.
 - **Khadi and Village Industries Commission (KVIC)-** should be corporatized with focus on promotional work.
- **Exit Policy for MSMEs-** Due to the lack of sophistication on the part of MSMEs, **Insolvency code/ delegated legislation** should provide for out-of-court assistance to MSMEs such as mediation, financial education, or the appointment of a trustee.

Issues faced by the MSME Sector

- Problem of **delayed payments** is faced by MSMEs due to various reasons, which increase the financial crunch for their businesses and MSMEs are unable to fight this fearing loss of potential clients
- Due to their lack of scale and in-house capabilities, MSEs find it **difficult to access proper market** for selling their products, which affects their growth and sustainability.
- Large-scale presence of MSMEs in **informal sector**, which doesn't allow them to use different assistance available to MSMEs.
- **Deficiencies in basic infrastructural facilities** like water, power supply, road/rail and telephone connectivity, etc.
- There are large numbers of clusters but the **resource availability** for undertaking cluster development activities is limited.
- A huge divergence persists between **research institutions** (suppliers of technology) and the **business requirements of MSMEs** (consumers of technology)
- Presently, MSMEs must do **multiple registrations** with various entities such as Udyog Aadhaar portal, GSTN, NSIC, etc. This leads to cumbersome registration process and duplication of efforts.

- **Performance of Clusters**- needs to be improved by
 - Bringing **synergy and coordination** within large number of support schemes.
 - Involving local intermediaries such as **business membership organizations** in developing linkages with other stakeholders such as training, educational and research institutions.
- **Market Support for MSMEs**- can be enhanced by developing networks of **development service providers** that can provide customized solutions to MSMEs that are struggling with capability and resources constraints.
- **Improving access to technology**- through a **technology Mission** for converging the efforts for the technology upgradation of the MSMEs. Apart from it more **Industry specific Technology Centres** can be opened.
- **Setup a National Council for MSMEs**- under the Chairmanship of the Prime Minister, in order to facilitate coherent policy outlook and unity of monitoring.

Way Forward

The development of MSMEs is crucial on many counts for Indian economy and society. Apart from proper implementation of these recommendations, a cue could be taken from the global best practices such as the **Competition by cooperation** concept in Italy, **Contract Financing** in Mexico and success stories of **Shenzhen** as a technology hub in China.

Recommendations for facilitating access to financing for MSMEs

- Banks should develop **customized products** to assess the financing requirements based on expected cash flows moving away from traditional forms of assessment.
- A second **Trade Receivables Discounting System (TReDS)** window can be created to solve the problem of delayed payments.
- Consider setting up of a **Non-Profit Special Purpose Vehicle (SPV)** to support crowd sourcing of investments by various agencies.
- **Small Industries Development Bank of India (SIDBI)**- should use **Priority Sector Shortfall (PSS) funds** for lending to State Governments as soft loans for infrastructural and cluster development. It should deepen credit markets for MSMEs in underserved districts and regions by handholding private lenders such as **Non-Banking Finance Companies (NBFCs)** and **Micro Finance Institutions (MFIs)**.

3.10. NATIONAL INVESTMENT AND MANUFACTURING ZONES

Why in news?

Recently, the Government of India has granted the final approval to three **National Investment and Manufacturing Zones (NIMZ)**, namely Prakasam (Andhra Pradesh), Sangareddy (Telangana) and Kalinganagar (Odisha).

Background

- The Government of India had notified the **National Manufacturing Policy (NMP) in 2011** with the objective of enhancing the **share of manufacturing in GDP to 25%** and creating **100 million jobs** by 2022. **National Investment and Manufacturing Zones**

Difference between NIMZ and SEZ		
	NIMZ	SEZ
Origin	Under National Manufacturing Policy, 2011	Under SEZ Act, 2005
Minimum Area	5000 hectare	10-1000 hectare (depending on sector)
Maximum Area	Not specific	5000 hectare
Income tax exemption	To small and medium enterprises	100% for first 5 years, 50% for next five years
Environmental Impact Assessment	Provided by state government	By the project developer

More on National Manufacturing Policy, 2011

- The policy is based on the principle of industrial growth in partnership with the States.
 - The Central Government will create the enabling policy framework, provide incentives for infrastructure development on a Public Private Partnership (PPP) basis through appropriate financing instruments, and State Governments will be encouraged to adopt the instrumentalities provided in the policy.
- It focuses on foreign investments and technologies, while leveraging the country's expanding market for manufactured goods to induce the building of more manufacturing capabilities and technologies within the country.
- It seeks to incorporate the competitiveness of enterprises in the country as the guiding principle in the design and implementation of policies and programmes.
- It seeks to ensure that the compliance burden on industry arising out of procedural and regulatory formalities is reduced through rationalization of business regulations.
- It encourages innovation for augmenting productivity, quality, and growth of enterprises.

(NIMZs) are one of the important instruments of the policy to achieve these objectives.

- So far, the Government of India has granted '**in-principle' approval** to the sixteen NIMZs (outside the DMIC region) and eight Investment Regions along the Delhi Mumbai Industrial Corridor (DMIC) project.

More about National Investment and Manufacturing Zones (NIMZ)

- The NIMZs are envisaged as **integrated industrial townships** with state of the art infrastructure, land use on the basis of zoning, clean and energy efficient technology, necessary social infrastructure, skill development facilities etc. to promote **world-class manufacturing activities**.
- At least **30% of the total land area** proposed for the NIMZ will be utilized for **location of manufacturing units**.
- The land for these zones will **preferably be waste infertile land not suitable for cultivation**, not in the vicinity of any ecologically fragile area and with reasonable access to basic resources.
- On receipt of final approval, the NIMZ will be declared by the State Government as an industrial township **under Article 243Q(1)(c)** of the Constitution.
- Central government provides external physical infrastructure linkages to the NIMZs** including rail, road, ports, airports and telecom, in a time-bound manner and also provides viability gap funding wherever required.
- The **State Government will constitute a Special Purpose Vehicle (SPV)** to discharge the functions specified in the policy.
- The SPV will prepare a strategy for the development of the zone and an action-plan for self-regulation to serve the purpose of the policy.
- The Department for Promotion of Industry and Internal Trade (**former DIPP**) is the nodal agency for NIMZ.

3.11. CIRCULAR ECONOMY

Why in news?

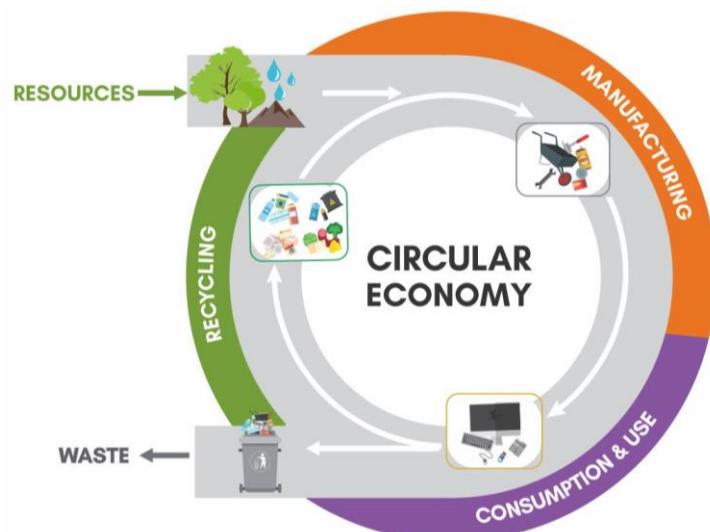
Recently at **Circular Economy Symposium 2019**, NITI Aayog CEO said that Circular Economy has the potential to generate 1.4 crore jobs in next 5-7 years.

What is Circular Economy?

- The **circular economy is a model** of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.
- This is a departure from the **traditional, linear economic model**, which is based on a **take-make-consume-throw away pattern**. It relies on large quantities of cheap, easily accessible materials and energy.

Principles of circular economy

- The following '**5R**' principles lies at the heart of achieving **circularity** in any product, process or service:
- Reduce:** The emphasis is on achieving resource efficiency by prioritizing use of regenerative and restorative resources.
- Reuse:** This encompasses two aspects – first is to reuse the useful parts / components of a product, wherever possible and second is to promote greater use of product-as-a-service through sharing platforms.
- Recycle:** Focus is on creating a closed loop system to utilize discarded material as a source of secondary resource, through extensive recycling.
- Re-manufacture:** To create new products by utilizing waste streams through cooperation and collaboration between multi-sector industry actors.
- Repair/refurbish:** The aim is to preserve and extend the life of a product that is already made by designing for the future.



Need for a Circular Economy

- Rise in consumerism:** The **robust economic growth coupled with rising household incomes** have resulted in increased consumer spending, which is expected to reach USD 4 trillion by 2025. The **rise in consumerism** has led to more frequent replacement of assets on account of increased spending power and economies of scale.

- **High resource demand:** Increased domestic resource extraction due to urbanisation exerts increasing pressure on natural resources such as land, forest, air and water. **At the current rate of growth of the economy, India's resource requirements are projected to be nearly 15 billion tonnes by 2030.** Therefore, an urgent need for **decoupling economic growth from resources**, which can be achieved through a circular economy approach.
- **Import dependence:** India's dependence on the international market for accessing critical resources like rare earth minerals etc. due to **shrinking reserves, technical constraints etc.**
- **Waste creation:** The traditional linear economy approach results in massive waste generation at all stages of a product life cycle right from resource extraction, processing, value addition, consumption to end of life stage.

Benefits of a Circular Economy

- **Fewer Greenhouse Gas Emissions:** When it comes to reducing greenhouse gases, a circular economy can be helpful because it uses renewable energy that in the long run is less polluting than fossil fuels.
 - A circular economy development path could halve carbon dioxide emissions by 2030, relative to today's levels.
- **Fewer Negative Externalities** – Following the circular economy's principles, negative externalities such as land use, soil, water and air pollution are better managed, as well as the emission of toxic substances and climate change.
- **Increased Potential for Economic Growth:** The increase in revenues from new circular activities, together with a cheaper production by getting products and materials more functional and easily disassembled and reused, has the power to increase GDP.
- **Employment Growth** – According to the '**World Economic Forum**', the development of a circular economy model, can bring greater local employment in entry-level and semi-skilled jobs. New job will be created through increases in:
 - Recycling and repairing practices,
 - An increase in new businesses due to innovation processes and new business models
- **Volatility Reduction and Safeguarded Supplies:** More recycled inputs would be used, leaving companies less dependent on the volatility of the price of raw materials.

Barriers to the implementation of a Circular Economy Model

- **Economic Barriers:**
 - **Social and environmental externalities** are not considered in prices;
 - Prices of raw materials are fickle and at low prices alternative, good quality secondary resources are not competitive;
 - These models are **harder to develop**, as most investors are still working under a linear economy logic.
 - Lack of **qualified professionals** with technical or ICT knowledge.
- **Institutional Barriers:**
 - Many companies still have goals that **focus on short-term value** creation, whereas the circular economy model is a long-term value creation model.
 - The **GDP index doesn't consider social and environmental externalities**, discouraging the creation of value in both these areas.

Way Ahead

- **Need for Legislation** to promote the circular economy in the country. Several countries have recognised the centrality of the circularity as the new paradigm for **sustainable development**.
- Policies like **Zero Effect, Zero Defect in manufacturing stage, National Electricity Mobility Mission Plan in consumption stage**, and the various **Waste Management Rules in disposal stage**, if tweaked properly, can be the ideal for integrating circular economy into the fabric of the Indian economy.
- Ensuring the transition to circular economy call for **extensive collaborative** efforts between **key stakeholders**, including regulators, policy makers, corporates, and financial institutions would need to work to adopt circular business models.
- **Adequate financing** needed for realization of these newer opportunities through innovative financing instruments, such as **Green bonds, municipal bonds, SDG-aligned bonds**.

3.12. SMART CITIES MISSION

Why in News?

The number of projects completed under the Smart Cities Mission has witnessed **quantum jump of 182%** in last one year.

Background

- The Government of India launched the **Smart Cities Mission (SCM)** in 2015, to improve ease of living of citizens and create cities that are ahead of the curve in decision-making and problem solving.
- Although there is no universal definition of a **Smart City**, but broadly it can be described as an urban region that is highly advanced in terms of overall infrastructure, sustainable real estate, communications and market viability.
- Its focus is on sustainable and inclusive development and to set examples that can be replicated both within and outside the Smart City, thus catalysing the creation of similar Smart Cities in various regions and parts of the country.

Strategy of Smart Cities Mission

- The strategic components of Area-based development in the Smart Cities Mission are city improvement (**retrofitting**), city renewal (redevelopment) and city extension (**Greenfield development**) plus a **Pan-city initiative** in which Smart Solutions are applied covering larger parts of the city.
- The implementation of the Mission at the City level will be done by a **Special Purpose Vehicle (SPV)** created for the purpose.
- It will be operated as a **Centrally Sponsored Scheme (CSS)** and the Central Government proposes to give financial support to the Mission to the extent of Rs. 48,000 crores over five years i.e. on an average Rs. 100 crores per city per year. An equal amount, on a matching basis, will have to be contributed by the State/ULB.
- Every Smart City will have a **Smart City Centre (SCC)** (i.e. Integrated Command and Control Centre). The SCC functions as a city's nervous system where digital technologies are integrated with social, physical, and environmental aspects of the city, to enable centralised monitoring and decision making.
- In the **SCC architecture**, Internet of Things (IoT) devices such as sensors, GPS equipments and cameras located at the front-end (trash bins, vehicles, streets, poles etc.) collect and transmit data through a communication network to a central facility. Applications then convert the data and information received into insights, which further facilitates a decision support system.

Achievements of the Mission

- **Completion of Projects-** The number of projects completed has seen a quantum jump of 182% over the last one year. The projects completed have jumped from 318 in June 2018 to 897 in June 2019.
- **Establishment of Smart City Centres (SCC)-** has already been done in 10 cities such as Ahmedabad, Vadodara, Surat, Pune, Nagpur etc. Various success stories have come up (refer the box).
- **Improvement in urban landscape-** Impact of SCCs is being felt, especially in **five areas** such as enhanced quality of services, safety and resilience, inclusiveness in city operations, faster emergency response management, and environmental sustainability.
- **Boost to the start up industry-** it has provided a fillip to the entrepreneurial spirit of urban residents, thereby increasing employment.

Challenges in the Mission

- **Inadequate private participation-** At the outset, Smart City Mission had set a target of financing 21% of the total mission cost through private participation. So far, only 15% of the projects under implementation are under public-private partnership (PPP) mode.
- **Sources of funding are not clear-** While the top 60 cities have reported all their projects and the costs of most projects are stated in the project proposals (94%), but only 17 cities could identify the sources of finance at the level of each project.
- **Increasing inequality-** The mission has focused on the **Area Based Development (ABD)** model, where it

Success Stories in Smart Cities Mission

- **Rajkot-** the crime rate has reduced by 18% over the past two quarters and there is an improvement in traffic challans issuance, indicating behavioural change. Monitoring of cleaning work through CCTV camera has led to reduction in instances of littering, urination in public, and nighttime burning of garbage.
- **Pune-** has installed flood sensors at key points around the city, which feed data to the SCC, enabling timely warning and response mechanism. Emergency callboxes have been installed at 120 locations to contact the nearest police station with just the press of a button.
- **Ahmedabad-** free Wi-Fi on BRTS corridors has increased ridership by 20,000 in March 2018, compared to Feb 2018.
- **Bhopal** has seen a rise in its property tax collections and is also able to track its transport services online.

indirectly incentivizes cities to focus the bulk of their funding on a small portion of the city. Thus, the ABD projects of 99 cities are found to be covering mere 7% of the total area and 80% of the total budget. Such approach creates inequality in and among cities.

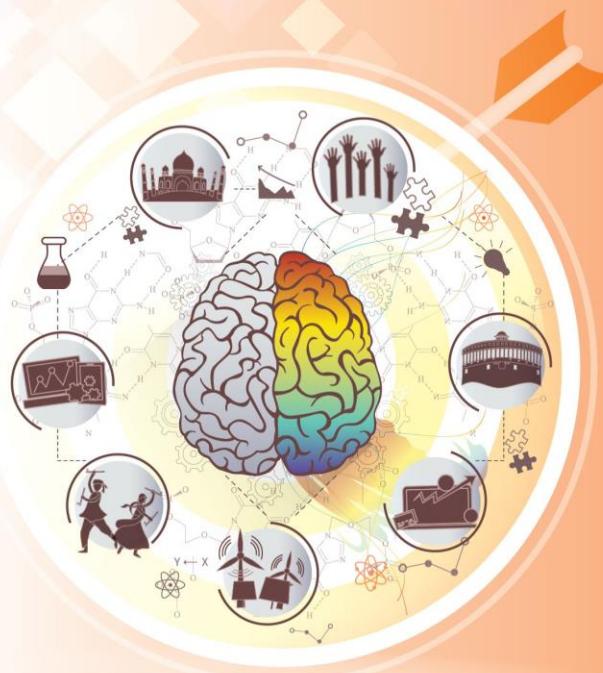
- **Increasing focus on limited sectors of the Smart City-** such as 5 development categories of Transportation, Energy and Ecology, Water and Sanitation, Housing and Economy constitute almost 80% of the SCM budget. Other categories of IT, Governance, Culture and Heritage, and Health and Education constitute only 15% of the funding.
- **Recentralisation of Power-** There has been increasing role of the **Special Purpose Vehicles (SPV)** in the cities, which have encroached the functions of the Urban Local Bodies. Also there is lack of clarity about relationship and hierarchy between the SPV and the municipality.

Way Forward

- The efficacy of SCCs will improve with the integration of more and more services. The aim of the mission should be convergence with other city projects and breaking through the silos of various government departments.
- An enabling environment including governance frameworks, policy protocols, capacities of urban local bodies, and the nature of citizen-government engagement needs to be developed to further improve the urban space.

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4. SECURITY

4.1. CROSS-BORDER LINKAGES IN NORTHEAST INSURGENCY

Why in News?

The armies of **India** and **Myanmar** carried out a coordinated operation called **Operation Sunrise 2** in their respective border areas, targeting several militant groups operating in **Manipur, Nagaland and Assam**.

About Operation Sunrise 2

- The armies coordinated with each other to bust camps of militant outfits, including the **Kamtapur Liberation Organisation**, the **National Socialist Council of Nagaland (Khaplang)**, the **United Liberation Front of Assam (I)** and the **National Democratic Front of Boroland**.
- The first phase of “Operation Sunrise” was conducted in **February 2019** along the Indo-Myanmar border, during which a number of camps of northeast-based militant groups were busted.



Background

- 90% of the North-East is contiguous with the international border, which allows terror outfits to get sanctuaries in **Bhutan, Myanmar, Bangladesh and even China and Nepal**.
- The insurgent groups started developing their **international linkages immediately after the independence in 1947**.
- India's 5,800-km long land border with Myanmar and Bangladesh extends across **Assam, Tripura, Mizoram, Meghalaya, West Bengal, Nagaland, Manipur and Arunachal Pradesh**. All these States have faced, or continue to face, **trans-border terrorist and separatist challenges**.

Reasons for cross border insurgency

- **Safe Havens:** The shelter and support that the Indian insurgent groups receive from across the border have been one of the most important factors which has helped them in sustaining their rebellion.
- **Economic support:** The Golden Triangle (comprising Myanmar, Laos and Thailand) has provided an economic boom for the insurgent groups to sustain themselves.
- **Availability of weapons:** Easy availability of small arms in neighboring countries like Bangladesh and Myanmar has been another factor behind the sustenance of insurgency in the region.
- **Ethnic affinity:** Many ethnic groups in the region, especially in the areas bordering the international boundaries, have more in common with the population living across the boundary than with their own nationals.
- **Border issues in North east**
 - **Terrain of Border:** Difficult terrain along border with different countries in north east make means of transportation and communication difficult and as a result, the border area remains sparsely populated with depressed economic development.
 - ✓ **High mountains, deep river channels** together with lush forest characterize the borderland with Myanmar.
 - ✓ **Inaccessible forested areas** along the Assam– Bhutan border continue to serve as temporary bases and safe havens for the insurgent groups.
 - ✓ **River line borders in Bangladesh** tend to change course periodically, leading to a host of disputes associated with the difficulties in establishing ownership of the newly created territories.
 - **Boundary issue:** Even though the international boundary between countries like India and Myanmar had been formally delimited and demarcated following the boundary agreement in March, 1967, the boundary has not crystallised on the ground as lines separating two sovereign countries.

- **Free movement regime:** India-Myanmar border has a unique arrangement in place called the Free Movement Regime (FMR). The FMR permits the tribes residing along the border to travel 16-km across the boundary without visa restrictions.

Way Forward

- **Sensitization of people:** The border community should be sensitised to participate in the nation building project through sustained community interaction programmes.
 - Increase cultural exchanges, tourism and people-to-people contact, including provision of job permits and work visas, for the South Asian countries.
- **Cooperation with neighboring countries:** International borders are best managed when neighbours cooperate to secure their mutual borders. For such cooperation to materialise, political and diplomatic initiatives are required to be carefully crafted.
- **Strengthening of Regional Forums:** Regional groupings like SAARC, BIMSTEC, BCIM can help in enhancing economic and security cooperation with these countries which will lead to a better understanding of benefits of peace in North-East India.
- **Effective Border Management through ‘smart borders’** which ensure quick and easy, legal flow of people and goods, while maintaining a steady momentum in the process of improvement of infrastructure and other facilities at checkpoints.
- **Joint Training and operations:** Exercises like “**Hand in hand**” with China, “**Operation Sampriti**” between India and Bangladesh etc. can help to combat terrorism.
 - ‘**Operation All Clear**’ by Bhutan was a landmark operation which was conducted against Assam separatist insurgent groups in the southern regions of Bhutan. These type of joint operations can help fight insurgency in north east.

4.2. STRATEGIC PARTNERSHIP POLICY

Why in News?

The Governments of India has started acquisition of defence infrastructure under the newly adopted **Strategic Partnership Policy**.

Proposed projects to be undertaken under this model

- 111 Naval Utility Helicopters (NUH)
- 6 P-75 (I) submarines

About Strategic Partnership Policy

- It intends to promote **Indian private sector participation** in defence manufacturing.
- It was approved by Defence Acquisition Council (DAC) in 2017 and placed in the Defence Procurement Procedure (DPP) – 2016 titled as '**Revitalising Defence Industrial Ecosystem through Strategic Partnerships**'.
- The concept of this model was first suggested by the **Dhirendra Singh Committee**.
- The partnership model broadly involves creating **two separate pools** of Indian private companies and foreign **Original Equipment Manufacturer (OEMs)**.
- The policy aims to promote Joint ventures between indigenous private sector and global defence majors.
- These few Indian private companies will be designated as **Strategic Partners (SP)** that would assume the role of system integrators and also lay a strong defence industrial foundation. The Government will co-opt them for ‘Buy and Make’ and Government-to-Government procurement programmes.

Significance of Strategic Partnership Model

- It will **boost self-reliance** by encouraging indigenous defence industry and aligning the defence sector with the ‘Make in India’ initiative leading to reduction in dependence on imports.
- Help **enhance competition, increase efficiencies**, facilitate faster and more significant absorption of technology
- **Create a tiered industrial ecosystem**, ensure development of a wider skill base, trigger innovation and enable participation in global value chains as well as promote exports.
- Can **bridge the long-standing trust gap** between the Indian private sector and Ministry of Defence.
- **Streamlining procurement** as dependence on foreign players causes delay in procurements and at times substandard quality is provided by them, there are issues regarding getting the spare parts too.

- The selected SPs by the Defence Ministry will tie up with foreign original equipment manufacturer (OEM) to build weapon platforms in India under four segments — **fighter aircraft, helicopter, submarine and armoured fighting vehicles or main battle tanks**.
- The government aims to achieve a turnover of Rs 1,70,000 crore in military goods and services by 2025.

4.3. REPORT ON BLACK MONEY

Why in News?

Recently, the Standing Committee on Finance has submitted a report titled, '**Status of Unaccounted Income/Wealth Both Inside and Outside The Country - A Critical Analysis**'.

Background

- Although there is **no uniform definition of unaccounted income or black money**, but on a general basis it can be said it is the income from those economic activities that circumvent or otherwise avoid government regulation and taxation.
- It includes all illegal economic activities as well as the income from legal economic activities where the tax is evaded.
- There has been widespread discussions and debate over the existence of unaccounted income, its estimates, reasons and steps, which need to be taken to tackle this menace.
- According to the Standing Committee's report, the **sectors that see the highest incidence of black money include** real estate, mining, pharmaceuticals, pan masala, the gutkha and tobacco industry, bullion and commodity markets, the film industry, and educational institutes and professionals.
- The committee has submitted **this preliminary report**, as it is yet to examine all the aspects and stakeholders related to this matter.

Why is it difficult to measure Black Money?

- As the report also notes, neither are there reliable estimates of black money generation or accumulation and nor is there an accurate well-accepted methodology to make such an estimation.
- The estimates of the black money in the system provided by the Standing Committee **vary from 7% of GDP to 120% of GDP**, highlighting the wide variance in the methods of estimation.

Need for the Estimation of Unaccounted/Black Income

- The unaccounted economy reduces the **size of potential state revenue**. The result can be a vicious circle of an increase in the budget deficits or tax rates, additional growth of the shadow economy, and may impact **social welfare in general**.
- To **formulate effective monetary, labor and fiscal policy**, it is crucial to know the level of precision in the estimates of key statistics of the economy, such as, output, price-level and unemployment. Thus, it is crucial to supplement official national accounts statistics with estimates of unaccounted economic activity.
- Some unaccounted economy activities, i.e., **illicit trade in narcotics and arms trading**, are hurtful not only for economy, but also **hazardous for society**.

Steps taken to tackle the menace of Unaccounted/Black Income

Legislative mechanisms

- Enactment of Central & various state Good & Service Taxes Act
- Enactment of the Black Money (Undisclosed Foreign Income and assets) and Imposition of Tax Act, 2015
- Comprehensive amendment of the Prohibition of Benami Property Transactions Act, 1988
- Fugitive Economic Offenders Act, 2018
- Section 10(38) of the Income Tax Act has been amended to prevent the misuse of exemption by certain persons for declaring their unaccounted income as exempt long term capital gains by entering into sham transactions
- In order to check creation of shell companies which are incorporated outside but controlled from India, the concept of '**Place of Effective Management' (POEM)**' for determination of residence of a company incorporated in a foreign jurisdiction, has been introduced in the Finance Act, 2016

Administrative mechanisms and Systems improvement

- Expanding the ambit of TDS (tax deducted at source) provisions to track more transaction.
- General Anti Avoidance Rules (GAAR) have been implemented with a view to tackling aggressive tax planning with the use of complicated structures
- Various measures taken to reduce cash transactions.

International Cooperative mechanisms

- With a view to facilitate and enhance exchange of information under the Tax Treaties, India is proactively engaging with the foreign Governments and has signed Tax Treaty framework with 146 foreign jurisdictions. E.g. Foreign Account Tax Compliance Act with the US.
- The Government of India has also joined the Multilateral Competent Authority Agreement (MCAA) for Automatic Exchange of Information as per Common Reporting Standards (CRS).
- India has amended its Double Taxation Avoidance Agreements with Mauritius and Singapore, to enable measures concerning prevention of tax evasion and tax avoidance.

Judicial Efforts

On the directions of the Supreme Court, the government in May 2014 constituted the Special Investigation Team (SIT) on black money. The SIT has so far submitted seven reports to Hon'ble Supreme Court.

Way Forward

Apart from all these measures, the **standard of morality** must be increased in the public domain. Here the role of, political and bureaucratic leadership along with other prominent players from private sector and civil society, is crucial.

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5. ENVIRONMENT

5.1. GM COTTON

Why in news?

Recently, Genetic Engineering Appraisal Committee (GEAC) asked Maharashtra Government to initiate action to stop cultivation of illegal **Herbicide-Tolerant variety of Bt Cotton (Ht-bt cotton)**.

Background

- At least 700 million people in India depend, directly or indirectly, on agriculture for a livelihood. However, due to frequent droughts, bumper crops and unremunerative prices, farmers across states are embracing illegal genetically modified (GM) crops from Bt brinjal to herbicide tolerant (HT) cotton for **increasing crop productivity**.
- According to South Asia Biotechnology Centre (SABC), illegal HT hybrid market had increased to Rs 472 crore in the kharif season with around 35 lakh HT hybrid seeds sold and cultivation spread over 8.5 lakh hectares.
- Many Farmers in Maharashtra **started 'civil disobedience' movement** to protest central government's indecisiveness in approving the next generation of Genetically Modified (GM) cotton by **sowing the seeds of the illegal Ht-Bt cotton**.
- Legally, sale, storage, transportation and usage of unapproved GM seeds is **a punishable offence** under the Rules of Environmental Protection Act 1989. Also, sale of unapproved seeds can attract **action under the Seed Act of 1966** and the Cotton Act of 1957.

Arguments of farmers in favour of GM crop and their protest

- Resistance by Pest:** Pink bollworm, the pest has grown resistant to the toxins produced by the Bt- cotton crop. As a result, farmers spend more on pesticides to control infestations. This, along with the high cost of Bt seeds, is driving farmers to indigence.
- To Improve Economic Condition:** Many farmers are **very satisfied with the Ht-Bt cotton technology** which is less labour-intensive and hence is **cost-beneficial**.
- Improved yields:** Farmers claim that the HtBt variety can **withstand the spray of glyphosate**, a herbicide that is used to remove weeds, substantially **improving the yield**.
- Global acceptance:** Canada and the US allowed GM crops to be grown commercially in 1996 and several other countries have followed suit in the subsequent years.
- GM oil imported:** India imports thousands of tons of GM edible oil (and other GM food items) every year with no evidence of health effects or deaths due to genetic alterations.

Concern with GM Varieties

- Unsafe for Consumption:** Genetic changes made in a plant can make it unsafe for consumption, have adverse impacts on human or animal health, or introduce problems in the soil or neighbouring crops.
- Pesticide Poisoning:** In the Maharashtra, 60 labourers and farmers died due to inhalation of pesticides, which were attributed to HT seeds.
 - Indiscriminate usage of glyphosate** can cause health hazards to humans and cattle, apart from affecting the yield of cotton.

About Genetic Engineering Appraisal Committee (GEAC)

- GEAC established under Ministry of Environment, Forest and Climate Change (MoEFCC) is the apex body for approval of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- The GEAC is also responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials.

Ht-bt cotton

- Currently, only GM cotton permitted to be grown in India are hybrids/varieties that contain '**cry1Ac**' and '**cry2Ab**' genes, isolated from the soil bacterium **Bacillus thuringiensis (Bt)** and coding for proteins **toxic to bollworm insect** pests.
- Ht-Bt Cotton/ BG Cotton – III**, involves the addition of another gene, '**Cp4-Epsps**' from another soil bacterium, **Agrobacterium tumefaciens**.
- Ht-Bt cotton can tolerate Glyphosate, a herbicide variety, whose action **kill only the weeds (Pink Bollworm)**, not the crop.
- In India, Glyphosate is registered for use on tea and non-crop area.

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Concern with GM Varieties

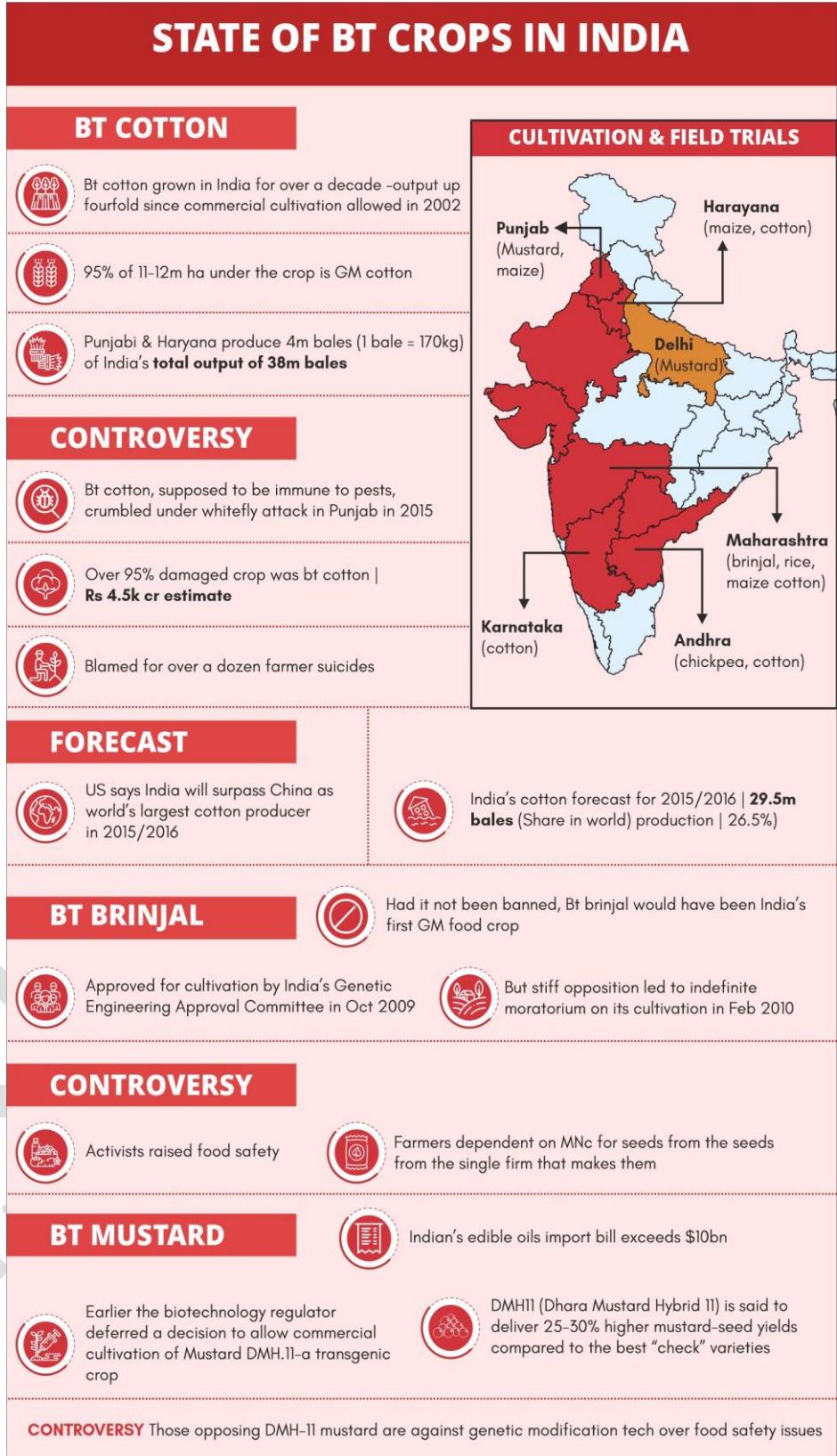
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 - Indiscriminate usage of glyphosate** can cause health hazards to humans and cattle, apart from affecting the yield of cotton.

- Intergenerational Impact:** According to GM expert opponent, some traits of genes start expressing themselves only after several generations, and thus one can never be sure about their safety.

- Monopolising Market:** Introduction of Ht variety of seed is a method by which large seed-producing companies attempt to monopolise the markets. GM seeds contain 'terminator technology' meaning they have been genetically modified so that resulting crops do not produce viable seeds of their own.

Way Forward

- Focus on GM technology:** National policy on GM crops to define the exact areas where GM is required by the country and where the government will encourage public and private investment in GM technology.
- The ministry should examine the impact of GM crops on environment thoroughly and no genetically modified (GM) crop should be introduced in India unless the biosafety and socio-economic desirability is evaluated in a "transparent" process and an accountability regime is put in place.
- Grievance redressal of all stakeholders:** All the grievances of farmers and the public must be resolved before allowing GM mustard by putting the safety documents online and addressing the concerns in all comments received.
- Legal measure:** There should be a liability clause, that is, if something goes wrong the liability should be fixed statutorily like in case of US law, liability is huge in case the GM tech effects the regular varieties of crops. It will ensure that case of non-accountability, in case of pink bollworm pest attack on BT cotton, does not repeat itself in case of other GM crops.



5.2. FOREST LANDSCAPE RESTORATION (FLR)

Why in news?

Reiterating its commitment to **fight desertification**, India has launched a pilot project to restore degraded forest landscapes in five states to enhance the capacity **on forest landscape restoration (FLR)**.

More on News

- The announcement came in the wake of the **14th session of the Conference of the Parties (COP 14) of UNCCD** to be hosted by India, in 2019. India will **take-over the COP presidency from China** for two years until the next COP is hosted in 2021.
- The project will be implemented by **National Afforestation and Eco-Development Board (NAEB)** in partnership with the **International Union for Conservation of Nature (IUCN)**.
- In the first phase, the pilot will be conducted in **Haryana, Madhya Pradesh, Maharashtra, Nagaland and Karnataka**.

About Forest landscape restoration (FLR)

- It is an ongoing process of **regaining ecological functionality** and enhancing human well-being across deforested or degraded forest landscapes which involves restoring a whole landscape.
- FLR manifests through different processes such as: new tree plantings, managed natural regeneration, agroforestry, or improved land management to accommodate a mosaic of land uses, including agriculture, protected wildlife reserves, managed plantations, riverside plantings and more.
- **Guiding principles**
 - **Focus on landscapes** – FLR is more than just planting trees. It takes place **within and across entire landscapes**, not individual sites, representing mosaics of interacting land uses and management practices.
 - **Maintain and enhance natural ecosystems within landscapes** – FLR enhances the conservation, recovery, and sustainable management of forests and other ecosystems.
 - **Tailor to the local context using a variety of approaches** – FLR uses a variety of approaches that draws on latest science and best practice, and traditional and indigenous knowledge, and applies that information in the context of local capacities and existing or new governance structures.

United Nations Convention to Combat Desertification

- Established in 1994, the convention is the **sole legally binding international agreement** linking environment and development to sustainable land management and to address the problem of desertification.
- It is one of the three Rio conventions (1992) adopted by United Nations, along with **UNFCCC and Convention on Biological Diversity**.
- **10-Year Strategy of the UNCCD (2008-2018)** was adopted in 2007 to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas.
- **Publication: Global land outlook**

Significance of the FLR Pilot project:

- **Furthering India's environmental commitment** as according to Nationally Determined Contributions (NDCs), submitted under the UNFCCC, India has pledged to create an additional carbon sink of 2.5-3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.
- **Commitment to Bonn Challenge pledge:** At the UNFCCC's CoP 2015 in Paris, the government of India made a **Bonn Challenge pledge**, (a global effort to bring 150 million hectares of world's deforested and degraded land into restoration by 2020 and 350 million hectares by 2030)
- **Under this, India** will bring into restoration 13 million hectares of degraded and deforested land by 2020 and additional eight million hectares by 2030- **one of the highest targets** among all Asian countries.

Land Degradation: A brief overview

- According to the **United Nations Convention to Combat Desertification**, land degradation is the “reduction or loss of biological or economic productivity resulting from land uses or from a process or combination of processes, including human activities.”
- A study by **The Energy and Resources Institute (TERI)** estimated that the economic losses from land degradation and change of land use in 2014-'15 stood at 2.54% of India's GDP.
- **State of India's Environment 2019** shows that 30% of India's total geographical area being affected by land degradation. 82% of these degraded land lies in just nine states: Rajasthan, Maharashtra, Gujarat, Jammu & Kashmir, Karnataka, Jharkhand, Odisha, Madhya Pradesh and Telangana.
 - It shows 1.87 million hectares of land in the country faced process of desertification between 2003-13 period.
 - Water erosion alone was responsible for nearly 11% of total desertification in the country followed by vegetation degradation (nearly 9%).

- **Restore multiple functions for multiple benefits** – FLR interventions aim to restore multiple ecological, social and economic functions across a landscape and generate a range of ecosystem goods and services.
- **Manage adaptively for long-term resilience** – FLR seeks to enhance the resilience of the landscape and its stakeholders over the medium and long-term which enhance species and genetic diversity
- **Engage stakeholders and support participatory governance** – FLR actively engages stakeholders at different scales, including vulnerable groups, in planning and decision-making.

5.3. OZONE POLLUTION

Why in News?

Recently, Delhi recorded an ozone pollution which is 1.22 times higher than the eight-hour average standard for ozone exposure that is 100 ug/cu m.

About Ozone Pollution

Ozone is not directly emitted from any source. It is a **secondary pollutant** which gets formed when emissions from vehicles, industry or power plants — nitrogen oxide and volatile organic compounds — react in the air under the influence of sunlight and temperature.

It is also the third most important greenhouse gas after carbon dioxide and methane.

Generally, ozone is classified into two types:

- **Good ozone:** Found in **stratosphere**, it protects the Earth's surface from dangerous ultraviolet light.
- **Bad Ozone:** Found in the **troposphere (also known as ground level ozone)**, it is man-made. The released **nitrogen oxide (NOx)**, **carbon monoxide (CO)** and **volatile organic compounds (VOC)**, (NOx, CO, and VOCs are known as **ozone precursors**) combine chemically with oxygen to form ozone during sunny days.
 - During high-temperature conditions of late spring, summer and early fall, high levels of ozone are usually formed in the heat of the afternoon and early evening, dissipating during the cooler nights.
 - The ground-level ozone and PM 2.5 play the most significant role in formation of smog.

Effects

- **On health:** Irritation to skin and the respiratory system, higher rates of pulmonary disease.
- **On environment:** When sufficient ozone enters the leaves of a sensitive plant, it can reduce photosynthesis and slow the plant growth.
 - Ground level ozone can damage ecosystems and contribute to degradation of forests and their important services: these include provision of clean air and groundwater, timber for construction and energy, protection against natural hazards and of biodiversity.

International Initiatives

- **Gothenburg Protocol:** It aims to abate Acidification, Eutrophication and **Ground-level Ozone** and is part of the **Convention on Long-Range Transboundary Air Pollution**.

Government Efforts

- Ozone has been classified and monitored as one of the eight pollutants under **National Air Quality index**.
- **System of Air Quality and Weather Forecasting (SAFAR):** ozone is monitored as one of the pollutants.
- Environmental Pollution (Prevention and Control) Authority enforce **Graded Response Action Plan (GRAP) for Delhi** and the NCR region, which comprises the graded measures for each source framed according to the Air Quality Index categories.

5.4. SUSTAINABLE LIVELIHOODS AND ADAPTATION TO CLIMATE CHANGE

Why in News?

National Institute of Rural Development and Panchayati Raj (NIRDPR) has launched a training programme- a certificate course for Sustainable Livelihoods and Adaptation to Climate Change (SLACC).

About the SLACC

- SLACC is funded by the **Special Climate Change Fund**, which was set up **under the UNFCCC** for adaptation and capacity building projects. It is a

- It is being implemented in convergence with the **Mahila Kisan Sashaktikaran Pariyojana**, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and other Centrally-sponsored schemes.
- The objective of SLACC is to create a cadre of over 200 certified 'climate-smart' Community Resource Persons (CRPs) including progressive farmers and over 100 young professionals in villages to secure their livelihood through climate-proof planning and adaptations.

NIRDPR

- It functions as an autonomous organisation **supported by** the Ministry of Rural Development.
- It is the apex body for undertaking training, research, and action research and consultancy assignments in the rural development sector in India.

Mahila Kisan Sashaktikaran Pariyojana

- It is a sub component of the Deendayal Antodaya Yojana-NRLM (DAY-NRLM)
- It seeks to improve the present status of women in Agriculture, and to enhance the opportunities available to empower her.

5.5. CORPORATE AVERAGE FUEL EFFICIENCY/ECONOMY REGULATION

Why in News?

Corporate Average Fuel Efficiency/Economy (CAFE) Regulation to curb the vehicular pollution has become a concern amongst automobiles industry.

What is CAFE regulation?

- It aims at lowering fuel consumption (or improving fuel efficiency) of vehicles by lowering carbon dioxide (CO₂) emissions.
- Corporate Average refers to sales-volume weighted average for every auto manufacturer. The norms are applicable for petrol, diesel, LPG and CNG passenger vehicles.
- In India, CAFE regulations come into force into 2017, under which, average corporate CO₂ emission from vehicle must be less than 130 gm per km till 2022 and below 113 gm per km thereafter.
- CAFE norms require cars to be 30% or more fuel efficient from 2022 and 10% or more between 2017 and 2021.
- The mileage improvement will be decided on the basis of litres of fuel consumed by a vehicle to run 100km. The move is targeted at reducing the carbon footprint of the automobile industry.

Significance

- **Curb Air Pollution:** Increasing number of vehicles on road is worsening the air quality in many cities. Upgrading to stricter fuel standards is one way to tackle air pollution.
- **Fuel Saving:** Primary aim of the CAFE is to increase the efficiency of vehicle on how far it must travel on a particular quantity of fuel. Thus, it has direct impact on fuel saving in an economy.
- **Structural shift:** Stricter CAFE targets can also lead to manufacturers moving to electric or strong hybrid vehicles over the medium to long-term to comply with the norms.

5.6. DELAY IN MONSOON

Why in news?

The monsoon made a delayed onset over the Kerala coast on 8 June (1 week delay) and had been advancing at a sluggish pace over the mainland.

Atmospheric circulations affecting Monsoon

- **El Nino/La Nina:**
 - El Nino is the **abnormal warming of sea surface temperature (SST)** of the Pacific Ocean off the coast of Peru in South America, while La Nina is the opposite, an abnormal cooling of SST.
 - While El Nino leads to deficit rainfall, La Nina brings an above-average monsoon.
- **Madden-Julian Oscillation**
 - The **location and strength of the Madden-Julian Oscillation (MJO)** wave play an important role in the development of monsoon over India.

- It can modulate the timing and strength of monsoons, influence tropical cyclone numbers and strength in nearly all ocean basins and result in jet stream changes that can lead to cold air outbreaks, extreme heat events, and flooding rains over the United States and North America.
 - Indian Ocean Dipole (IOD)
 - It is also referred to as the Indian Niño, is a condition when the SST of the western region of Indian Ocean alternately becomes abnormally colder and then abnormally hotter than the eastern region.
 - The Indian Niño can neutralise or worsen the impact of El Niño/La Niña depending on which phase it is in.
 - A ‘positive’ IOD phase, which means higher-than-usual temperatures in the western Indian Ocean, brings more rain to India than the ‘neutral’ or ‘negative’ (cooling) phase.
 - Cyclonic formations
 - Cyclones are sustained by very strong low-pressure areas at their core. Winds in surrounding areas are forced to rush towards these low-pressure areas.
 - Similar low-pressure areas, when they develop near or over land, are instrumental in pulling the monsoon winds over the country as well.
 - The low-pressure area at the centre of the cyclone is far more powerful than any local system that can pull the monsoon winds moving northeast.
 - The cyclones that develop in the Arabian Sea impact the monsoon more than those in the Bay of Bengal because the monsoon winds enter the Indian Peninsula from the western coast along the Arabian Sea.
 - Jet streams
 - Currents of strong winds blowing west to east about five to seven miles above the surface of the earth, jet streams cause changes in wind and pressure in the atmosphere, pushing air mass around and affecting the world’s weather.
- Madden-Julian Oscillation (MJO)**
- The MJO wave is a global band of low-pressure area moving periodically from West to East and determines the initiation and intensity of low-pressure areas/depressions/cyclones and also oversees monsoon onsets under its footprint.
 - It is disturbance of clouds, rainfall, winds, and pressure that traverses the planet in the tropics (between 30° N and 30°S) and returns to its initial starting point in 30 to 60 days, on average.
 - There can be multiple MJO events within a season, and so the MJO is best described as intra-seasonal tropical climate variability (i.e. varies on a week-to-week basis).
 - MJO influences the ENSO cycle. It does not cause El Niño or La Niña, but can contribute to the speed of development and intensity of El Niño and La Niña episodes.
 - The MJO consists of two parts, or phases:
 - One is the enhanced rainfall (or convective) phase and the other is the suppressed rainfall phase.
 - In the enhanced convective phase, winds at the surface converge, and air is pushed up throughout the atmosphere. At the top of the atmosphere, the winds reverse (i.e., diverge). Such rising air motion in the atmosphere tends to increase condensation and rainfall.
 - In the suppressed convective phase, winds converge at the top of the atmosphere, forcing air to sink and, later, to diverge at the surface. As air sinks from high altitudes, it warms and dries, which suppresses rainfall.
 - When MJO is over the Indian Ocean during the Monsoon season, it generally brings good rainfall over the Indian subcontinent. On the other hand, when it witnesses a longer cycle and stays over the Pacific Ocean, MJO brings bad news for the Indian Monsoon.
-

- It is believed that there is a direct connection between the movement of subtropical jet streams and the Indian monsoon.

Due to all these factors getting the forecast right for monsoon remains a challenge and still poorly understood.

Models of monsoons prediction

- Until about the 2010, the only method employed by the India Meteorological Department (IMD) to forecast the monsoon was statistical models.
 - These essentially involved identifying climate parameters linked to the performance of the monsoon — for instance, the sea surface temperature gradient between North Atlantic and North Pacific, the volume of warm water in the equatorial Pacific, the Eurasian snow cover.
 - This has, however, proved wrong and the IMD missed its mark on forecasting major droughts and rain-deficits — particularly 2002, 2004 and 2006.
- Around 2015 IMD started testing a dynamical system. This simulates the weather at a chosen set of locations on a given day — the land and ocean temperature, moisture, windspeeds at various heights, etc — and powerful computers calculate how these weather variables will change over days, weeks, months by solving physics equations that show how each of these weather variables is related to each other.
 - IMD uses a new Ensemble Prediction Systems (EPS) to provide probabilistic weather forecasts up to the next 10 days.
 - Rather than long-range forecasts that only give a broad tenuous picture of the likely performance of the monsoon, these shorter forecasts are far more reliable and help farmers make decisions about sowing.

5.7. KALESHWARAM LIFT IRRIGATION PROJECT

Why in news?

The Kaleshwaram Lift Irrigation project was inaugurated recently in Jayashankar Bhupalpally district of Telangana.

More on news

- Kaleshwaram Lift Irrigation (KLIP) Project will be world's largest multi-stage, multi-purpose lift irrigation (Earlier the Colorado lift scheme in America and the Great Manmade River in Egypt were the largest).
- It is being built across Godavari river.
- It will harness water at the confluence of two rivers with Godavari by constructing a barrage at Medigadda in Jayashankar Bhopalpally district.
- It will divert water through lifts and pumps into a huge and complex system of reservoirs, water tunnels, pipelines and canals. It also includes longest irrigation tunnel in the world.

Factors which affected delay in Monsoon recently

Impact of MJO

- In month of June, MJO was in suppressed phase over Indian Ocean due to which the cloudiness quotient and rainfall activity over India have diminished.

Impact of Cyclonic formations

- The cyclonic storm Vayu that formed over the Arabian Sea impacted the advancement of monsoon into many parts of India.
- It interfered with normal progression, by sucking all the moisture from the monsoon winds towards itself.
- This phenomenon of delayed monsoon due to the emergence of cyclonic system was also seen in 2015 when Cyclone Ashobaa had delayed the monsoon.

Impact of warming waters

- According to US agency, unusually warm waters in the Arabian Sea have set up a rare band of easterly winds over the Indian Ocean, which has significantly delayed the monsoon onset over the Kerala coast.
- Unfavourable cross-equatorial flow over the Arabian Sea that aids in the progress of the monsoon is also the other reasons for its delay.

- The project had to be built at such a size and scale because while the Godavari flows at 100 metres below Mean Sea Level, Telangana is located at 300 to 650 metres above MSL.
- By the time the water reaches **Kondapochamma Sagar**, the last reservoir in the system, the Godavari water would have been lifted to a height of 618 metres from its source at **Medigadda**.
- It is designed to irrigate 45 lakh acres for two crops in a year, meet the drinking water requirement of 70% of the state and also cater to the needs of the industry.
- The Telangana government had entered into a **water sharing agreement with the Maharashtra** which paved the way for the construction of Kaleshwaram project.

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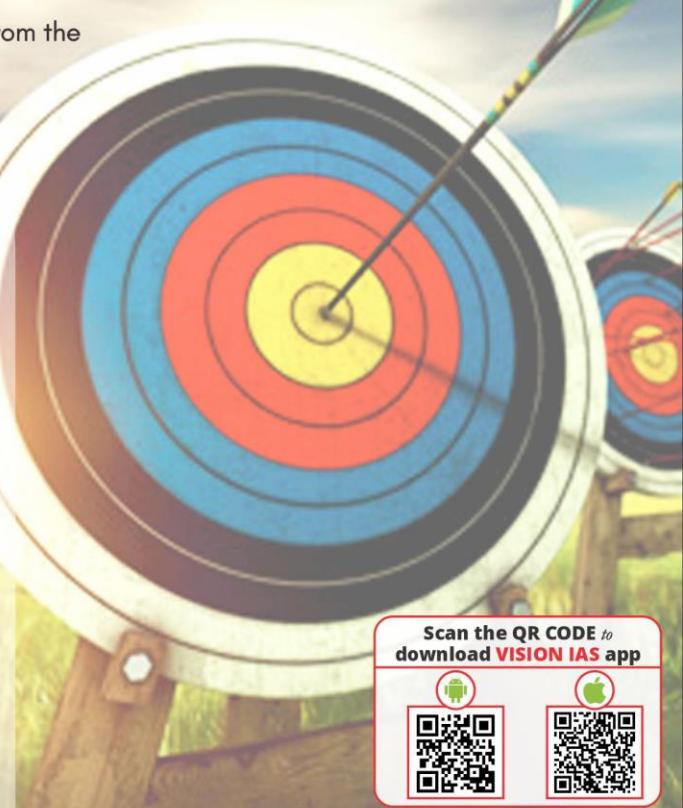
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6. SOCIAL ISSUES

6.1. DRAFT NATIONAL EDUCATION POLICY

Why in News?

Recently, the committee under Dr. K. Kasturirangan submitted its report on the **Draft National Education Policy, 2019** to the Ministry of Human Resource Development, Government of India.

Background

- India has had two National Education Policies in 1968 and 1986 (modified in 1992) respectively.
- After **more than thirty years** of operation of the last policy, India's education system, is plagued by a number of problems and shortcomings such as huge dropout rates, shortage in the number of teachers, incompetent curriculum etc.
 - Apart from these problems, there are various new developments, such as Right to Education Act, Globalisation, which **mandate the need of a new comprehensive National Education Policy.**
- The vision of the **National Education Policy 2019** is it to create an India centered education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all.

Other reasons for a new Education Policy

- Changed demands of a knowledge economy-** that calls for emphasis on the need for acquisition of new skills by learners on a regular basis, for them to 'learn how to learn' and become lifelong learners.
- Narrow time lag between the generation of new knowledge and its application** specially in the fields of science and technology that necessitate the periodic renewal of education curriculum to maintain their relevance to the changing societal and personal needs of learners
- Small window of India's Demographic Dividend-** that is expected to last for only a little over 20 years. It demands that apart from education, the children acquire actionable skills also in their schools and colleges itself.
- Alignment with the global Sustainable Development Goals-** The SDG 4 seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030.

Key Recommendations of the Draft Policy

Area	Recommendations
School Education	
Early Childhood Care and Education (ECCE)	<ul style="list-style-type: none">Develop new curriculum framework- by giving this task to NCERT, which consists of two parts, one for the age group of 0-3 years and other for the age group of 3-8 years.Strengthening of facilities- through expansion and co-location of Angandwadis and pre-schools with primary schools where possible. State Governments to prepare cadres of professionally qualified educators for early childhood educationDesign of learning-friendly environments- by a committee of cognitive scientists, early childhood education experts, artists, and architects in each state.Extension of the RTE Act to include ECCE
Foundational Literacy and Numeracy	<ul style="list-style-type: none">Increased focus through dedicated mathematics and reading hours everyday, weekly events, special assembliesRemedial Instructional Aides Programme- to induct instructors from local communities to formally help students who have fallen behindNational Tutors Programme- where the best performers in each school work as tutors during the school for fellow (generally younger) students.
Reintegrating Dropouts	<ul style="list-style-type: none">Addressing access gaps in infrastructure such as transport facilities, hostels and security of students and tracking out-of-school children through social workers and counselorsSecond-chance education programmes for long-term out-of-school adolescents
Curriculum and Pedagogy	<ul style="list-style-type: none">Adopt a 5+3+3+4 design comprising:<ul style="list-style-type: none">5 years of the Foundational Stage: 3 years of pre-primary school and Grades 1, 2.3 years of the Preparatory Stage: Grades 3, 4, 5.3 years of the Middle Stage: Grades 6, 7, 8.4 years of the High Stage: Grades 9, 10, 11, 12.Reduce curriculum load in each subject to its essential core content, in order to make space for more holistic, experiential, discussion-based, and analysis-based learning.Increased flexibility in choice of subjects for the students

Higher Education	
Institutional Restructuring	<ul style="list-style-type: none"> Developing multidisciplinary institutions with programmes across disciplines. A new institutional architecture with three kinds of institutions- <ul style="list-style-type: none"> Type 1: Research universities- focus equally on research and teaching Type 2: Teaching universities- focus primarily on high quality teaching, while also significantly contributing to cutting-edge research Type 3: Colleges- focus almost exclusively on the goal of high quality teaching
More Liberal Education	<ul style="list-style-type: none"> Redesigning of Undergraduate curriculum with a common core curriculum for all students and one/two area(s) of specialization. Introduce four-year undergraduate programmes in Liberal Arts having multiple exit options with appropriate certification. Five Indian Institute of Liberal Arts must be setup as model multidisciplinary liberal arts institutions.
Optimal Learning Environments	<ul style="list-style-type: none"> A National Higher Education Qualifications Framework (NHEQF) outlining the learning outcomes. Focus on assessment for development and not judgement. Focus on occupational readiness of students and involve them in institutional processes.
Research	<ul style="list-style-type: none"> Establishment of a National Research Foundation- to fund, mentor, incentivise, and build capacity for quality research. It will have four major divisions: sciences, technology, social sciences, and arts and humanities, with the provision to add additional divisions.
Education Governance and Regulation	
General	<ul style="list-style-type: none"> Setup Rashtriya Shiksha Aayog (RSA) headed by the Prime Minister and Rajya Siksha Aayogs headed by the Chief Ministers for developing, implementing, evaluating, and revising the vision of education.
Schools	<ul style="list-style-type: none"> Setup Public School Complexes- which will be clusters of public schools in a contiguous geography offering education across all stages. States will separate the regulatory function from that of other functions in education, such as policymaking, school operations etc. Setup an independent State School Regulatory Authority for each state that will prescribe basic uniform standards for public and private schools. District Education Council- for oversight of the school system in each district
Higher Education Institutions (HEIs)	<ul style="list-style-type: none"> All Higher Education Institutions, public and private, shall be governed by an independent Board of Governors, which shall be the apex body for the institution, with complete autonomy. An accreditation ecosystem led by a revamped National Accreditation and Assessment Council to be created.
Teacher Management	
	<ul style="list-style-type: none"> Merit-based scholarships to encourage outstanding students to enter the teaching profession Teachers will be recruited to the district, as is done now in many States, and then deployed to the school complex, and then, as per school needs, to individual schools. All “para-teacher” (Shikshakarmi) systems across the country will be stopped by 2022. Teachers will not be allowed to participate in any non-teaching activities (e.g. cooking mid-day meals) during school hours that could affect their teaching capacities. Teachers will be required to complete a minimum of 50 hours of continuous professional development training every year. A similar Continuous Professional Development Programme should be introduced in HEIs. Also a permanent employment (tenure) track system should be introduced for faculty in all higher education institutions by 2030. All teachers will have possible career progression paths to become educational administrators.
Technology in Education	
	<ul style="list-style-type: none"> National Mission on Education through information and communication technology to setup virtual laboratories that provide remote access to laboratories in various disciplines. A National Educational Technology Forum will also be setup under the Mission, as an autonomous body, to facilitate decision-making on the induction, deployment and use of technology. Integrating educational technology into the school curriculum- using computational thinking (the thought processes involved in formulating problems and solutions in ways that computers can effectively execute) A National Repository of Educational Data will be setup to maintain all records related to institutions, teachers, and students in digital form.

Pros of the Draft Policy

- Developed after extensive consultations** with more than 1 lakh villages, 6000 blocks with specific questions on 33 themes for all levels. Also all other stakeholders including ministries, states have been deliberated for their views to develop a consensus over the provisions of the draft.

- Look at education as a **continuous process and comprehensively addresses all stages** of education including different verticals of professional education, vocational education, technical education etc.
- **Focus on foundational stages of education**- the actions suggested on **ECCE** can be the best investment that India could make in education since evidence indicates that over 85% of a child's cumulative brain development occurs prior to the age of 6.
- Schools will be given autonomy in setting syllabus under the broad **National Curriculum Framework**. This will motivate principals and teachers to **innovate**. More importantly, it will create a set of best practices that work in Indian conditions.
- The draft has laid out a framework for ensuring **quality of teacher education**, which is paramount in terms of ensuring quality education.
- Removes the burden and **conflict of interests**, by separating regulatory function from other functions of the state authorities.
- The idea of **Special Education Zones (SEZ) to be set up in disadvantaged regions across the country** can help government focusing more on such areas and experiment with different ideas to get the best results.
- **Focus on research**, as it talks about financing and involvement of private sector and intends to make all institutes **comprehensive teaching-research institutions**. A **National Research Foundation** on the lines of what exists in the US is a promising step to coordinate and give direction to research.

Cons in the Draft Policy

- The policy's implementation is **predicated on the assumption** that the education budget would be almost doubled in the next 10 years. Also, the sheer scale of **changes expected**, the rapid **timeline** and the absence of a **strong mechanism** for handholding states on this journey raises questions on the full implementation of this policy.
- **Does not address the lack of accountability of schools**- as school management committees (SMCs), which are without significant powers, may not be able to hold schools and teachers accountable.
- Representatives of **CBSE Schools Management Association** expressed concern over expanding the ambit of the **Right to Education Act** to pre-kindergarten to Class 12 from the present Classes 1 to 8. Already, the schools were facing difficulties in determining the fee structure and getting reimbursement of the fee of the student.
- **Does not consider Direct Benefit Transfer as a means to eliminate fake beneficiaries**- such as the idea of school vouchers. It will also help parents uphold the accountability of schools.
- Integrating pre-school with government school system may pose **infrastructure and logistics challenge**.
- **Misses to address the gap of access to quality education between India's rich and poor children**- by proposing to remove the expectations that all schools meet common minimum infrastructure and facility standards, and that primary schools be within a stipulated distance from children's homes.
- No separate funding earmarked for the strengthening of "**school complexes**".

Debate over three-language formula

- In the initial draft, there was a mention of making Hindi compulsory in non-Hindi speaking states, under the three-language formula for school education.
- This specific mention drew a lot of backlash from Southern states, especially Tamil Nadu.
- Following this, the Government came up with a revised draft, removing the particular reference to Hindi and policy requires proficiency in any three languages.

Way Forward

Clearly, the final test of any policy is in its implementation, but it is important to suspend such judgment and disbelief and focus on its successful implementation.

6.2. HEALTHY STATES PROGRESSIVE INDIA

Why in News?

Recently, the **NITI Aayog** has released the second edition of the comprehensive Health Index report titled, "**Healthy States, Progressive India**".

Background

- It ranks states and Union territories innovatively on their year-on-year incremental change in health outcomes, as well as, their overall performance with respect to each other.
- The report has been developed by NITI Aayog, with technical assistance from the World Bank, and in consultation with the Ministry of Health and Family Welfare (MoHFW).
- The Health Index is a weighted composite Index based on three domains:
 - **Health Outcomes** (70%);
 - **Governance and Information** (12%); and
 - **Key Inputs and Processes** (18%), with each domain assigned a weight based on its importance.
- Data submitted by the States & UTs was validated by an Independent Validation Agency.
- States and UTs have been ranked in three categories namely, Larger States, Smaller States, and Union Territories (UTs), to ensure comparison among similar entities.
- The NITI Aayog had first come out with its report on state-wise health rankings in 2018.
- This second report examines the performance for the period 2015-16 (base year) to 2017-18 (reference year), i.e., a two-year period.

Key Insights from the Report

- **Overall picture in the health index-** Only about half the States and UTs had an improvement in the overall score between 2015-16 and 2017-18. The magnitude of change was bigger in UTs compared to Larger and Smaller States.
- **Larger States - Kerala, Andhra Pradesh & Maharashtra** ranked on top in terms of **overall performance**, while **Haryana, Rajasthan and Jharkhand** are the top three ranking States in terms of **annual incremental performance**.
- **Smaller States - Mizoram and Manipur** ranked on top in terms of **overall performance**, while **Tripura and Manipur** were the top ranked States in terms of **annual incremental performance**.
- **UTs - Chandigarh and Dadra and Nagar Haveli** were ranked on top in terms of **overall performance** (Chandigarh-1 and Dadra and Nagar Haveli-2) as well as **annual incremental performance** (Dadra and Nagar Haveli-1 and Chandigarh-2).
- **Performance of five Empowered Action Group States-** Bihar, Uttar Pradesh, Uttarakhand, Madhya Pradesh, and Odisha have witnessed a decline in the overall health index score.
- **Large disparities in overall performance** - The best states scored more than 2.5 times more than the worst performing states. E.g. While Kerala got 74.01, Uttar Pradesh's score was 28.61.
- There was a general **positive correlation** between the **Health Index scores and the economic development levels** of States and UTs as measured by per capita Net State Domestic Product (NSDP).

Empowered Action Group States

- The government had constituted an Empowered Action Group (EAG) under the Ministry of Health and Family Welfare following 2001 census to stabilise population in eight states that were lagging in containing population.
- These states are Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Chhattisgarh and Odisha.

6.3. FOOD AND NUTRITION SECURITY

Why in news?

Recently, Food and Nutrition Security Analysis, India, 2019, prepared by the Ministry of Statistics and Programme Implementation and World Food Programme (WFP) was released.

Finding of reports: Food and Malnutrition Trend in the country

About WFP

- It's the food-assistance branch of the United Nations and the world's largest **humanitarian organization addressing hunger and promoting food security**.
- Its headquarters is in Rome, Italy.
- It is a member of the United Nations Development Group and part of its **Executive Committee**.
- The WFP operations are funded by voluntary donations from world governments, corporations and private donors.

- **Trend in Malnutrition:** Despite decreasing stunting by one fifth during last decade, almost one in three Indian children under five years i.e. 31.4% of children will still remain stunted by the 2022.

- **Inter and Intra State Variations in Malnutrition** is found in country with highest levels of stunting and underweight are being found in Jharkhand, Bihar, Uttar Pradesh, Madhya Pradesh, Gujarat and Maharashtra.
 - **Prevalence of Multiple Types of Malnutrition among Children:** Multiple burden of malnutrition is the coexistence of any two or all three measures of malnutrition: stunting, wasting and underweight.
 - **Women and Malnutrition:** Children born to women with low BMI and low education level are more likely to be stunted, wasted, and underweight compared to children born to women with normal or high BMI.
 - **Anaemia Prevalence:** Iron deficiency anaemia remains a major public health concern in India where half of women 15–49 years of age are anaemic, regardless of age, residence or pregnancy status.
 - **Socio-Economic Determinants of Malnutrition among Children:** Prevalence of malnutrition decreases steadily with increased wealth and among social groups, the prevalence of stunting is highest amongst children from the Scheduled Tribes (43.6 percent), followed by Scheduled Castes (42.5 percent) and Other Backwards Castes (38.6 percent).
 - **Double burden of malnutrition:** India suffers from both over and under nutrition which is becoming more prominent.
- About Malnutrition:** It includes undernutrition (wasting, stunting, underweight), inadequate vitamins or minerals, overweight, obesity, and resulting diet-related noncommunicable diseases. **Types of malnutrition:**
- **Moderate Acute malnutrition (MAM):** Children aged between six months and 59 months who are between the -2 and -3 standard deviation for weight for height (wasting) score.
 - **Severe Acute Malnutrition (SAM):** Children aged between six months and 59 months and have a weight for height (wasting) score 3 standard deviations below the median, have a mid-upper-arm circumference less than 115 mm, or the presence of bilateral edema.
 - **Severe Chronic Malnutrition (SCM):** Calculated with the Z-score defined as a height-for-age index less than -3 standard deviations from the mean weight of a reference population of children of the same height and/or having edema.
 - **Stunting:** Calculation is based on height-for-age. It is associated with an underdeveloped brain, poor learning capacity, and increased nutrition-related diseases.
 - **Wasting:** Calculated by weight-for-height. It is associated with decreased fat mass. Also known as wasting syndrome, it causes muscle and fat tissue to waste away.
 - **Underweight:** Calculated by the weight-for-age formula. It is a body weight considered to be too low to be healthy. It can reflect both stunting and wasting.

Underlying causes behind Malnutrition

- **Poverty:** It hinders the accessibility of adequate food.
- **Lack of Awareness:** about nutritional needs of infants and young children.
- **Social strains on Women:** Early marriages of girls leads to teenage pregnancies resulting in low birth weight of the newborns, poor breastfeeding practices and poor complementary feeding practices.
- **Male domination:** In most Indian families, women even take food after the male members where they get less nutritious food.
- **Lack of health infrastructure** leads to poor access to health.
- **Lack of availability of safe drinking water** hinders proper digestion and assimilation of food and also cause water and food borne diseases.
- **Poor sanitation and environmental conditions** lead to spread of many diseases that sap children's energy and stunts their growth.
- **Other causes:** illiteracy in women and large household size.

Factor Contributing to Malnutrition in India

- **Paradox related to production and Accessibility:** In India, food grain yields have risen 33% over the last two decades, however, consumer's access to rice, wheat and other cereals has not increased at the same rate, due to population growth, inequality, food wastage and losses, and exports.
- **Increasing diversity in consumption:** The **energy and nutritional intake from cereals has decreased** in both rural and urban India, and largely substituted by increased consumption of other food items such as milk and dairy products, oils and fat and relatively unhealthy food such as fast food, processed food, and sugary beverages, which has likely contributed to the **emerging problem of obesity in India**.
- **Targeted Public Distribution System (PDS) and Nutritional Intake:** PDS has provided a critical nutritional supplement to the people across all states in India. However due to poor targeting, poorest 30 percent of households had **lower capacity to access food**.

Recommendations to improve Malnutrition Status in India

- **Agricultural Diversification:** Farmers should be incentivised to increase production of micronutrient-rich grains such as millets, as well as other nutritious vegetables and fruits.
- **Sustainability of Food Productivity:** By encouraging use of innovative and low cost farming technologies, increase in the irrigation coverage and enhancing knowledge of farmers in areas such as appropriate use of land and water.
- **Policy Support:** Enhanced coverage of Soil Health Card and Research and Development (R&D) extension to small holder farmers (especially women) and protection of farmers against price fluctuations and losses can be critical steps towards improving agricultural produce of traditional crops like Maize etc in the country.
- **Improve Storage Capacity** of perishable commodities to improve their availability throughout the year and preventing post-harvest losses.
- **Strengthened Safety Nets Programmes:** To improve the targeting efficiency of all food safety nets, especially that of the Targeted Public Distribution System (TPDS) to ensure that the poorest are included and incorporating fortified food in PDS to address the challenges of micro and macro nutrient deficiencies.
- **Increasing awareness** about exclusive breastfeeding, use of antenatal care, consumption of Iron Folic Acid and effective implementation of dietary policies.
- **Addressing Gender Issues** by making all the major programmes gender sensitive.
- **Use of Technology:** To improve the flow of information and to encourage greater policy coherence and coordination across the food systems and nutrition security.

Steps Taken by government for Improving Nutrition Status in Country

- **POSHAN Abhiyaan (National Nutrition Mission)**
 - Aim: To reduce stunting, under-nutrition, anemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively by 2022 and strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022 (Mission 25 by 2022).
- **National Nutrition Strategy**
 - It is a 10-point nutrition action plan that includes governance reforms and envisages a framework wherein the four proximate determinants of nutrition – uptake of health services, food, drinking water & sanitation and income & livelihoods – work together to accelerate decline of under nutrition in India. **Key Feature of Strategy are:**
 - ✓ It focuses to reduce all forms of malnutrition by 2030, with a focus on the most vulnerable and critical age groups.
 - ✓ A decentralised approach will be promoted with greater flexibility and decision making at the state, district and local levels.
 - ✓ The Strategy proposes to launch interventions with a focus on improving healthcare and nutrition among children and improve maternal care.
 - ✓ Governance reforms envisaged in the Strategy include:
 - Convergence of state and district implementation plans for ICDS, NHM and Swachh Bharat.
 - Focus on the most vulnerable communities in districts with the highest levels of child malnutrition.
 - Service delivery models based on evidence of impact

6.4. FEMALE WORK AND LABOUR FORCE PARTICIPATION IN INDIA

Why in news?

Recently UNDP, in association with IKEA Foundation has brought out a report titled “Female work and labour force participation in India”.

Background

- The focus of this report has been to understand the continuing problem of low female labour force participation in India despite massive investments in employment and skill-building initiatives.
- FLFP is typically measured as the share of women who are employed or are seeking work as a share of the working-age female population.

High FLFP: Higher yield for Economy

Low Labour force participation of women could be a major drag, not just on the empowerment of women but on the over-all growth as well.

- Estimates from the IMF suggest that India's GDP could expand 27 percent if the number of female workers increases to the same level as that of men.
- As per the UNESCAP study which estimates that if India's female labour force participation reached parity with that of United States (86%), its gross domestic product (GDP) could gain US\$19 billion annually.

- According to World Bank, India's **Female Labour Force Participation Rate (FLFPR)**, has fallen to a historic low of **23.3% in 2017-18**.
- During the peak working age (25-60 years), more than 96% males are in the labour force as compared to 37.48% (rural) females and 25-28% (urban) females.
- The largest decline in employment was experienced in the **primary sector**. In contrast, the services sector grew in employment by 6.6 million.
- The rural FLFPR is **significantly higher** than urban FLFPR.

Reasons for low female labour force participation

- Lack of comprehensive policy support and effective implementation:** While several policies exist to enable financial support, training, placements and outcomes, few national policies focus on providing support services, such as **lodging, safe and convenient travel, migration support and childcare**, that enable women to access skilling programmes or be part of the workforce.
- Education-Employment Trade-off:** Demand for employment for high school and university graduates has not kept pace with the large supply of women looking for such work. Therefore, more educated women do not wish to work in jobs that do not match with their aspirations and there are not enough salaried opportunities available for women with moderate levels of education like clerical and sales jobs.
- Competing Outcomes of the Household and Labour Market:**
 - A large proportion of the women who left the labour market are married. Also, **husband's income (and education) contributes to the withdrawal of women** from the labour force through a household income effect.
 - Maternity factor:** Many women who join the workforce are unable to re-join after having a child. **Maternity benefits Act 2016**, (which entitles a woman to 26 weeks of paid maternity leave) **increased cost for companies** and may have discouraged them from hiring women. The estimated loss of female jobs was between 1.1 to 1.8 million for 2017-18, over and above the usual job loss due to attrition related to maternity.
 - Non - availability of quality day-care is one factor which inhibits women from returning to work after their maternity leave. Similarly, if **women's perceived productivity** at home is greater than their returns in the labour market, women are likely to withdraw from the labour force.
- Barriers to migration for women** as in the last decade, there has been only a marginal increase in the proportion of rural women (of working age) who worked in urban areas. Even international migration for work remains a challenge for women. Women comprise less than one-fourth of the total Indian migrant stock.
- Social Norms and Agency:** Deep-rooted social norms, lack of agency and gendering of occupations often leads to women having little choice in their employment and work decisions.
 - Discrimination:** Employment and wage gap between male and female cannot be explained only by differences in education, experience and skills, but the **unexplained aspects attributed to discrimination**.
 - Socially disadvantaged women are more likely to be in roles without written contracts, with less paid leaves and shorter periods of engagement. In some communities, may be a **stigma attached to women working outside the home** (especially to certain job-roles considered menial)-which increases family and societal pressures to drop out.
- Sexual Harassment at the Workplace:** Around 31% of the firms are not compliant with the Prevention of Sexual Harassment at Workplace Act (POSH), which mandates “**Internal Compliance Committees**” (ICCs) **being constituted**.

Suggestions to improve FLFP

- Reorienting Policy Design**
 - Modifying outcome metrics** for labour market programmes by including enabling factors such as safety, aspiration alignment and so on.
 - Convergence with programmes** for adult education, literacy and advanced skill training and higher education. Education ecosystem needs to go through a set of system strengthening initiatives, including the introduction of digital and STEM (science, technology, engineering and mathematics) education in schools.

- **Programme Innovation - Using tax policies** to incentivise women into the labour market on both the demand and supply side. By introducing tax incentives for enterprises that have internal complaint mechanisms, gender friendly transport services and so on.
- **Communication and Behavioural Change - Investing in large-scale social campaigns** for changing social norms which break gender stereotypes, which includes women as well as **redefining the role of men in households**.
- **Support Services for Entry and Continuation**
 - **Providing arrangements** for childcare at training centres, better stipends for travel, lodging, boarding and other expenses incurred during programme participation.
 - Providing support to women who **migrate** in search of work and jobs.
 - Developing forums for informal and formal **mentorship** and connections to **female role models** and women in leadership which is to be achieved not by tokenism but by increasing the ease of **economic and political participation**.

Conclusion

The issue of wider, deeper and more meaningful participation of women not just in the workforce, but also in legislatures, police, armed forces and the judiciary, is a complex but very critical issue. Effort, therefore, is needed to amplify the **gender-sensitivity of programmes**. This can be achieved for a policy by enhancing its quotient of programme components that cater to women's all-round needs.

6.5. SDG GENDER INDEX

Why in news?

Recently a new index launched to measure global gender equality, ranked India at 95th among 129 countries.

About the SDG Gender Index

- It has been developed by **Equal Measures 2030**, a joint effort of regional and global organisations including African Women's Development and Communication Network, Asian-Pacific Resource and Research Centre for Women, Bill and Melinda Gates Foundation, Plan International and International Women's Health Coalition.
- It includes **51 gender specific indicators** across **14 of the 17 official Sustainable Development Goals (SDG)** that cover aspects such as poverty, health, education, literacy, political representation and equality at the workplace.
- The overall index scores are based on a scale of 0–100. A score of 100 indicates the achievement of gender equality in relation to the underlying indicators.

Key observations of the Index

- The global average score of the 129 countries — which represent 95% of the world's girls and women — is 65.7 out of 100 which correlates with "Poor" in the index.
- **No country** achieved an "excellent" overall score of 90 or above.

Key findings for India

- India ranks toward the bottom of the Asia and the Pacific region, ranking 17th out of the 23 Asia and the Pacific countries covered by the index and its score of 56.2 means that it falls in the very poor category.
 - India's **highest goal scores** are on primary education, health, hunger & nutrition, and energy.
 - Its **lowest goal scores** are on, proportion of seats held by women in national parliaments, partnerships, in the bottom 10 countries worldwide), industry, infrastructure and innovation, and climate.

6.6. UN WOMEN'S NEW REPORT

Why in news?

Recently the **UN Women** released its new Report titled, "**Progress of the World's Women 2019-20: Families in a Changing World**".

About the Report

- The report talks about the **diversity of families globally and provides recommendations to support laws and policies** that meet the needs of all family members, **especially women and girls**, and concrete proposals for implementation.

- **Significance of families:** Families serve as a home for equality and justice, which is not only a moral imperative, but essential to achieve the Sustainable Development Goals (SDGs).
 - Families can be critical drivers of gender equality, provided decision-makers deliver policies rooted in the reality of how people live today, with women's rights at their core.
- **Exposing violence in the domestic sphere:** As per the report families can also be breeding grounds of conflict, inequality and, far too often, violence.
 - In one-out-of-five countries, girls do not have the same inheritance rights as boys.
 - In developing countries, about one-third of married women report having little or no say over their own healthcare decisions.

Indian Scenario

- In India, 46.7% of families are couples living with their children, over 31% live in extended families while single person families account for 12.5%.
- 4.5% of all Indian households are run by single mothers.
- The report analyses how diverse family structures are impacting women and their choices. For instance: The poverty rate of lone mother households in India is 38% in comparison to 22.6% for dual-parent households.

Major recommendations of the report

- **Amend and reform family laws** to ensure that women can choose whether, when and who to marry; and enable women's access to family resources.
- **Recognize diverse forms of partnership**, to protect women in cohabiting and same-sex partnerships.
- **Invest in public services**, especially reproductive healthcare, to expand women's and girls' life choices.
- **Push for social protection systems**, such as paid parental leave and State support for children and older care to sustain families.
- **Ensure women's safety** by implementing laws to eliminate violence against women and girls and provide justice and support for violence survivors.

6.7. POPULATION RESEARCH CENTRES (PRCS)

Why in News?

Recently the Ministry of Health and Family Welfare organised a National Workshop for Population Research Centres (PRCs).

About Population Research Centres (PRCs)

- The Ministry of Health and Family Welfare has established the **network of 18 Population Research Centres spread over 17 major States/UTs**.
- The PRCs are **autonomous** in nature and administratively under the control of their host **University/Institutions**.
- **Functions undertaken by PRCs-**
 - **Undertake research projects** relating to family planning, demographic research, and biological studies & qualitative aspect of

About UN Women:

- It is the United Nations entity, established in 2010, dedicated to gender equality and the empowerment of women.
- It works globally to make the vision of the **Sustainable Development Goals** a reality for women and girls and stands behind women's equal participation in all aspects of life, focusing on **four strategic priorities**:
 - Women lead, participate in and benefit equally from governance systems
 - Women have income security, decent work and economic autonomy
 - All women and girls live a life free from all forms of violence
 - Women and girls contribute to and have greater influence in building sustainable peace and resilience, and benefit equally from the prevention of natural disasters and conflicts and humanitarian action.

History of PRCs

- **Establishment of Demographic Research Centres (DRC)-** on the recommendations of Demographic Sub-Committee to undertake research on various demographic, social & economic aspects of population growth.
- Later, **Family Planning Communication Action Research Centres** were established to carry out research studies in the field of family planning communication.
- The nomenclatures of DRC and Family Planning Committee Action Research Centres were changed to **Population Research Centre (PRC) in 1978-79** after taking into account the fact that activities of all research centres were almost similar.
- In 2013-14, a committee under the Chairmanship of Manoj Jhalani submitted "**Report of the PRC Committee**" recommending a systematic work plan for the PRCs in the Country.

- population control, to gainfully utilize the feedback from these research studies for plan formulation, strategies and policy interventions of ongoing schemes at the national and state levels.
- Involved in other studies given by Ministry such as **Concurrent Evaluation of NRHM** conducted by the Ministry throughout the country during 2008-09, **large scale sample surveys** of the Ministry like District Level Household survey (**DLHS**), National Family Health Survey (**NFHS**) and Longitudinal Ageing Study in India (**LASI**).
 - They are provided 100 per cent central assistance in the form of grant-in-aid on a year-to year basis.

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7. SCIENCE AND TECHNOLOGY

7.1. DATA LOCALIZATION

Why in news?

In clarification to its directive in April 2018 on 'Storage of payment system data', RBI announced that the payment system providers need to store entire payments data in a system only in India.

About RBI's data localization directive

RBI issued a directive in April 2018 advising all Payment System Operators (PSOs) to ensure that the entire data relating to payment systems is stored within databases located in India within 6 months.

- Directives are **applicable to Payment System providers** authorized by RBI under Payment and Settlement Systems Act, 2007. This includes many companies from payment gateways like MasterCard and Visa to e-wallets like PayTM.
- It includes end-to-end transaction details and information pertaining to payment or settlement transaction.
- There is **no bar on overseas processing of strictly domestic transactions**; however in such cases, the data should be deleted from the systems abroad and brought back to India not later than the one business day or 24 hours from payment processing, whichever is earlier.
- **Data can be shared with the overseas regulator**, if required, depending upon the nature/origin of transaction with prior approval of the RBI.

Need for data localization

- **Economic development of the country:** Data is the new oil, an economic resource, fueling the 4th Industrial Revolution.
 - Digital data in India to increase from 40,000 PetaByte (PB) in 2010 to 2.3 million PB by 2020 - twice as fast as the global rate. If India houses all this data, it will become **2nd largest investor in the data centre market** and **5th largest data centre market** by 2050. This will give significant push to **AI led economy** in India.
 - India has **2nd highest FinTech adoption rate** amongst major economies in the world. Data localization would give a push to **domestic production of high value digital products**.
 - **Domains of cloud computing, data analytics etc.** can become major job creators in future.
 - There is a **push among government department to use AI tools and attempt a predictive approach to policy making**. With data localization, there is a scope of greater access to 'public data' collected by companies (e.g. traffic data collected by like Uber, street level data collected by Google Maps) for the Government.
- **Increase India's tax revenue:** Extensive data collection & processing by technology companies, and unfettered control of user data has allowed them to freely monetize Indian users' data outside the country without paying any taxes.
 - Localization would lead to a **larger presence of MNC's in India** overall, through local offices, and **increase tax liability** and **open more jobs**.
 - Data localization is **supported by domestic companies like PayTM and PhonePe** as it will level the playing field, currently rendered unequal due to **differences in tax liabilities** of international companies

What is data localization?

- Data localization is a concept that the **personal data of a country's residents should be processed and stored in that country**. It may restrict flow entirely or allow for conditional data sharing or data mirroring (in which only a copy has to be stored in the country)
- There is a growing perception that data localization will aid countries asserting sovereignty in digital domain, ensure informational security of its citizens & fare better in governance (as it goes digital).

Other measures towards data localization

- In 2018, a draft data protection law by **BN Shrikrishna Committee** also recommended that **all personal data of Indians have at least one copy in India**. It also defined a category of data as **critical personal data**, which must be stored and processed only in India.
- A similar clause was incorporated in **Government's draft e-commerce policy**, which recommended localization for "**community data** generated by users in India from various sources including e-commerce platforms, social media, search engines etc."

and those having permanent establishment in India. E.g. **Google India tax dispute** over advertisement revenue under litigation in court.

- **Maintain data sovereignty & citizens' data privacy:** With data stored in remote servers, the accountability of service providers (like Google, Facebook etc.) reduces as it is outside the purview of Indian regulatory authorities. With data localization, **regulatory oversight on end-use of data** will improve and **business jurisdiction related loopholes** will be plugged. E.g. Facebook shared user data with **Cambridge Analytica** to influence voting.
- **Issue of national security:** Data localization will help law enforcement agencies to get access to user data for investigation and prosecution
 - Currently, companies are dependent on **Mutual Legal Assistance Treaties (MLATs)** to obtain data from US companies leading to delays and legal challenges in foreign jurisdictions.
 - In many countries like US, **tech companies are legally barred** from disclosing data to foreign law enforcement agencies.

Challenges associated with data localization

- **Economic Costs:**
 - Cross-border data flows have contributed **\$2.8 trillion** to the **global economy in 2014**, set to increase to \$11 trillion by 2025. Stringent localization norms could affect **innovation & ease of doing business in India**.
 - **India's Information Technology Enabled Services (ITeS) and Business Process Outsourcing (BPO)** industries (. e.g. TCS/Wipro) thrive on **cross border data flows** and would **incur significant additional costs** if data localization is strictly implemented. This could be further a drag on India's IT industry which is already under pressure due to emergent technologies like machine learning and artificial intelligence.
- **Security Concerns:**
 - Isolating **payment systems** from global data network would **reduce their operational efficiency** and make transactions prone to **frauds, systemic risks or a single point of failure**. Moreover, according to Symantec's **Internet Security Threat Report 2017**, India is **3rd most vulnerable** country in terms of risk of cyber threats (e.g. malware, spam & ransomware etc.) due to inadequate cybersecurity infrastructure.
- **Push to protectionism in global trade:**
 - It hampers a globalized, competitive internet marketplace, where costs and speeds determine information flows, rather than nationalistic borders.
 - It might trigger a vicious cycle of data localization requirements by other countries
- **Access issues will remain:** Law enforcement require only "access to data" for their investigation and the physical location of server is immaterial.
 - Data localization norms may not increase accessibility of **data kept in encrypted form** (e.g. WhatsApp)
- **Privacy concerns:** There is no evidence that data localization leads to better privacy or security. **Threat of state surveillance and misuse of personal data** of citizens by the Government will remain.

Global Practices

- **China/Russia:** There are stringent data localization norms in China/Russia. In China, any cross border flow of personal data requires security assessment. Additionally, "Critical Information Infrastructure Operators" need to store certain personal and business information within China.
- **US:** Electronics Communications Privacy Act (ECPA) bars US-based service providers from disclosing electronic communications to any law enforcement entity unless requirements under US law are met.
- **European Union:** General Data Protection Regulation (GDPR) allows cross-border movement of data, but requires destination country to have stringent cybersecurity rules.

Way Forward

- **Before universalizing the policy of data localization**, the Government needs to provide a push to local capabilities in data storage and processing
 - **Infrastructure status** to data centres/server farms
 - Adequate **physical infrastructure** (energy, real estate and internet connectivity) for setting up such centres
- India should put in place a **cybersecurity law** to ensure protection of private data of citizens.

- To promote ease of access of data to law enforcement agencies, the government should seek to enter into **bilateral agreements**.
 - **Clarifying Lawful Overseas Use of Data (CLOUD) Act of US** seeks to de-monopolize control over data from US authorities & allows tech companies to share it with foreign governments. India must **upgrade its data protection regime** to qualify for the benefits under CLOUD Act.

7.2. ELIMINATION OF TUBERCULOSIS

Why in news?

Recently, **World Bank and the Government of India** signed a loan agreement of \$400 million for the **Program Towards Elimination of Tuberculosis**.

More about the agreement

- This program **will cover nine States** and it will **support the government's National Strategic Plan to end TB in India by 2025**.
- It will **provide financial incentives to private sector care providers** for reporting cases of TB and ensuring that their patients complete the treatment regimen.
- It will also provide **Direct Benefit Transfers to patients** for acquiring the critical nutrition needed during treatment.
- It will **strengthen the detection, treatment and monitoring of Drug-Resistant Tuberculosis** and will track progress in the detection of additional drug resistance.
- The program will help the Government of India strengthen the monitoring and implementation of **Nikshay—the government's web-based TB case monitoring system**.

About Tuberculosis

- It is communicable disease (through air) caused by **bacteria (Mycobacterium tuberculosis)** that most often affect the lungs (pulmonary TB) and sometimes also affects other organs (extrapulmonary TB).
- TB is among **India's** most deadly infectious diseases, with an estimated **2.8 million confirmed cases in 2015**, according to a **World Health Organization (WHO) report**.
- India's **TB burden is the highest in the world**, followed by Indonesia and China.
- About a **1/3rd** of the world's population is diagnosed with **latent TB (without evidence of clinically manifested active TB)**, which means they have been infected by the TB bacteria from actively sick people without their knowledge.

Govt intervention to eliminate TB

- Under **Universal Immunization Programme**, Vaccination is provided for 12 life threatening diseases: **tuberculosis**, diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, measles, Hepatitis B, Diarrhoea, Japanese Encephalitis, rubella, Rotavirus and Pneumonia (added in May 2017)
- Under **Mission Indradhanush**, Immunisation against seven vaccine preventable diseases namely; Diphtheria, Pertussis, Tetanus, **Childhood Tuberculosis**, Polio, Hepatitis B and Measles.
- **Revised National TB Control Programme (RNTCP)** is being implemented under the umbrella of National Health Mission which has achieved global benchmark of case detection and treatment success and achieved millennium development goals in 2015 of halting and reversing the incidence of TB.

National Strategic Plan to end TB in India by 2025

- RNTCP released this framework in 2017 for the **control and elimination of TB in India by 2025**.
- It provides **goals and strategies for the country's response to the disease during the period 2017-2025** and aims to direct the attention of all stakeholders to the most important interventions to eliminate TB.
- It targets to **eliminate TB five years ahead of the global End TB targets under Sustainable Development Goals** to attain the vision of a TB-free India.
- TB elimination have been integrated into the four strategic pillars of **"Detect – Treat – Prevent – Build" (DTPB)**.
 - **Detect:** Find all Drug Sensitive TB and Drug Resistant TB cases with an emphasis on reaching TB patients seeking care from private providers and undiagnosed TB in high-risk populations.
 - **Treat:** Initiate and sustain all patients on appropriate anti-TB treatment wherever they seek care, with patient friendly systems and social support.
 - **Prevent** the emergence of TB in susceptible populations.
 - **Build** and strengthen enabling policies, empowered institutions, additional human resources with enhanced capacities, and provide adequate financial resources.

- **Drug Resistant TB:**
 - **Multidrug Resistance TB (MDR):** It is TB that does not respond to at least isoniazid and rifampicin (2 of the most powerful first line drugs).
 - **Extensively drug-resistant tuberculosis (XDR-TB):** It is resistant to at least four of the core anti-TB drugs. It involves multidrug-resistance (MDR-TB), in addition to resistance to any of the fluoroquinolones (such as levofloxacin or moxifloxacin) and to at least one of the three injectable second-line drugs (amikacin, capreomycin or kanamycin).
 - **Totally drug-resistant tuberculosis (TDR-TB):** TB which is resistant to all the first- and second-line TB drugs.

Why India leads in burden in TB?

- **Poor medical infrastructure:** Public-health facilities that specialise in TB in India are already overstressed and unregulated, with little political will to change the situation.
- **Misuse of Drugs:** Irrational use of first-line and second-line anti-TB drugs is the other problem with TB care in India. New strains of TB have developed resistance to the standard medicines.
- **Unaware about disease and delayed diagnosis:** A high proportion of missed and mistreated cases fuel India's TB epidemic. These cases are not notified to the public system and most remain either undiagnosed or inadequately diagnosed.
- **Non accessibility of drugs:** Indian patients have been fighting to get access to new **anti-TB drugs such as bedaquiline and delamanid** which has been only introduced in few centers.
- **Less effective Treatment:** In India, the regimen of antimicrobial drugs is often spread out over a longer period of time than in other countries, making it harder for patients to see signs of progress. So some people simply stop taking their medication.
- **Lack of awareness:** The first line of defense against the spread of TB is raising awareness in communities which is severely hampered by lack of money.
- **Linkage with air pollution:** Several studies have concluded there is a possible link between air pollution and the risk of active tuberculosis. In India, the rise of TB infections has coincided with the dismal air quality index in many Indian cities.
- **Other health related factors:** Among the other major risk factors for TB, including alcohol, smoking, diabetes, HIV and undernourishment.

Global Efforts for TB

- **Moscow Declaration to End TB:** It is the outcome of first global ministerial conference on ending TB, in 2017.
- **WHO- End TB Strategy**
 - **Vision:** A world free of TB with zero deaths, disease and suffering due to TB.
 - It has three high-level, overarching indicators and related targets for 2035:
 - ✓ 95% reduction in number of TB deaths compared with 2015.
 - ✓ 90% reduction in TB incidence rate compared with 2015.
 - ✓ Zero the level of catastrophic costs for TB-affected families.

Way forward

- **Improve health infrastructure and diagnosis:** Improve public sector clinics and hospital and improving accessibility and drugs availability.
- **Increase budget allocation:** to execute the TB control program more aggressively and effectively.
- **Effective use of medicine:** Government need to quickly roll out daily fixed-dose regimen under directly observed treatment short course throughout the country and introduce new diagnostic technology and newer anti-TB drugs.
- **Effective role of private sector:** The huge private sector in the country, where at least 50% cases of TB report for their treatment, needs to be engaged rapidly and effectively.
- **Improve detection:** An effective surveillance and follow-up of all TB patients need to be ensured.
- **Use of better drugs:** Prioritise newer antibiotics like bedaquiline and oral drugs over injectables, which are less effective.
- **Reduce poverty:** Rural Employment Guarantee Scheme is a step in the right direction. Once the socio-economic status improves, TB declines.
- **Social acceptance:** There is also a need for an adequate social, emotional, and nutritional support to all TB patients.

7.3. FOOD FORTIFICATION

Why in news?

Department of Food and Public Distribution under the Ministry of Consumer Affairs recently approved a centrally-sponsored pilot scheme on fortification of rice and its dispersal through Public Distribution System (PDS).

More on news

- Financial assistance of up to 90 per cent in case of North-Eastern, Hilly and Island States and up to 75 per cent in case of rest of the States has been extended by GOI.
- Government of India has also advised all states and UTs especially those states and UTs, which are distributing wheat flour through PDS, to distribute fortified wheat flour through PDS.

What is food fortification?

- Food fortification is the **deliberate addition of one or more micronutrients** to food so as to correct or prevent a deficiency and provide a health benefit.
- These nutrients may or may not have been originally present in the food before processing.
- Food fortification is a “complementary strategy” and not a replacement of a balanced & diversified diet to address malnutrition.
- **Food fortification:**
 - Can improve the health of a **large section of the population**, all at once since the nutrients are added to staple foods that are widely consumed.
 - **is safe method** of improving nutrition among people as the quantity added is very small and well regulated as per prescribed standards.
 - **is a socio-culturally acceptable way** to deliver nutrients to people as it does not require any changes in food habits and patterns of people and does not alter the characteristics of the food—the taste, the feel, the look.
 - **is cost effective and delivers quick results.** The **Copenhagen Consensus** estimates that every 1 Rupee spent on fortification results in 9 Rupees in benefits to the economy.

Challenges to food fortification

- **Voluntary nature:** Fortification continues to be voluntary rather than mandatory leading to limited efforts to fortify by state governments and private sector.
- **Poor implementation by states:** Although some states have adopted fortification in ICDS, MDMS and PDS, but due to lack of definitive policy guidelines, budgetary constraints, technical knowledge and logistic support, states have not adopted fortification in a holistic manner.
- **Weaknesses of FSSAI:** It lacks resources and manpower to effectively carry out its mandate.
- **Lack of awareness:** There is a lot of misinformation and ignorance about the usage and benefits of fortified food as of now.

Why the need for food fortification?

- Nearly 70% of people in India consume less than half of their **recommended dietary allowance (RDA)** of micronutrients. The deficiency of micronutrients is also known as “**hidden hunger**” and leads to various diseases like Night Blindness, Goitre, Anaemia and various birth defects.
- According to the National Family Health Survey (NFHS-4):
 - **58.4 percent** of **children** (6-59 months) are **anaemic**.
 - **53.1 percent** **women** in the reproductive age group are **anaemic**.
 - **35.7 percent** of children under 5 are **underweight**.
 - Around 50-70% of these birth defects are preventable, caused due to deficiency of **Folic Acid**.

Food Safety and Standards (Fortification of Foods) Regulations, 2018.

- It has **prescribed standards** for fortification of various food products such as All fortified foods must not fall below the minimum level of micro-nutrients.
- **Quality assurance:**
 - Every manufacturer and packer of fortified food shall give an undertaking on quality assurance
 - random testing of fortificants and fortified food
- Every package of fortified food shall carry name of the fortificant and the logo to indicate. FSSAI has recently introduced +F logo for **fortified staple food products**.
- The Food Authority shall take steps to encourage the production, manufacture, distribution, sale, and consumption

Way forward

- **Nationwide Implementation:** Pan-India implementation of fortification via government schemes would amount to only an increment of 1 percent of the total budget allocated annually.
- **Support to states:** Merely issuing orders and notifications from Government of India will not suffice as state governments require hand-holding support and should be sensitised about the benefits fortification and must be enabled to procure fortified staples in various programs.
- **Ensure Standards:** Compliance with FSSAI standards w.r.t macronutrient content and quality must be strictly enforced.
- **Awareness:** A mass awareness campaign about food fortification is needed to scale up demand from consumers in the open market.
- **Promote food processing industry:** It will go a long way in improving the nutritional value of staple food.

7.4. PROTON THERAPY

Why in News?

Vice President of India inaugurated **India's first proton therapy centre** in Chennai for the treatment of Cancer.

More in news

- The name of the centre is Apollo Proton Cancer Centre (APCC) and is launched by **Apollo Hospitals Group**. It is **South Asia's first** such centre.
- With this India becomes **16th country in the world** to offer the therapy.

About Proton Therapy

- It is a type of radiation therapy which uses protons rather than x-rays to treat cancer.
- It is considered as one of the most advanced forms of **external beam radiation therapy for cancer treatment** in the world. It is also known as **Proton Beam Therapy** and offers high levels of precision as compared to other treatment options.
- It is particularly effective for paediatric cancers and tumours affecting the brain, eye, colon, breast, gastrointestinal area, pelvis, and prostate and those close to the spinal cord, brain stem and other vital organs.

Advantages over standard radiation therapy

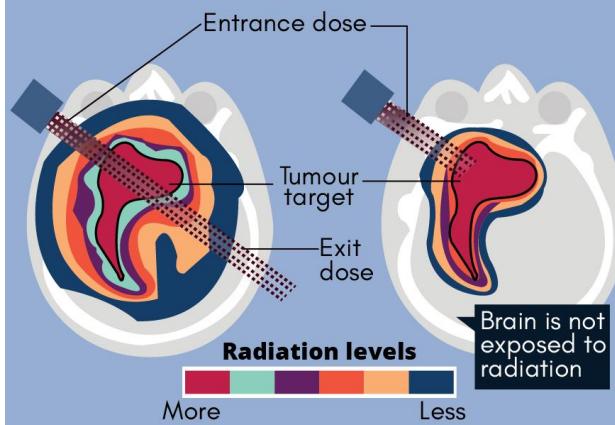
- **Standard radiation therapy** utilises x-rays, which deposits the majority of the radiation dose immediately upon entering the body. While X-ray beams are effective in controlling many cancers, they also deliver an 'exit dose' along the path beam. This exposes not just the targeted tumor to the radiation, but also the nearby healthy tissues.
- This exit dose is a cause of concern as the damage to the normal tissue or organs can affect the patient's quality of life post-treatment.

Proton

- Atoms are the basic units of matter and the defining structure of elements. Atoms are made up of three particles: protons, neutrons and electrons
- The **proton** has a positive electrical charge, equal and opposite to that of the electron.
- The number of protons in an atom determines the chemical behaviour of the element.

CLINICAL BENEFITS

Beams of protons can be more tightly focused than beams of X-rays, killing cancer cells while sparing more of the surrounding tissue. This is beneficial for isolated tumours near sensitive parts of the body, Such as the spinal cord and brain



CONVENTIONAL RADIATION THERAPY

Beam passes through the patient, resulting in healthy cells being damaged by the beam.

PROTON THERAPY

Protons can be tuned to stop at the depth of the tumour and release their energy. Fewer healthy cells are exposed.

Challenges with Proton Therapy

- Proton Therapy is **highly specialised and expensive** treatment.
- It is **not applicable to all type of cancers**.
- More **research and clinical trials are needed** to make this treatment more affordable and applicable to all types of cancers.

- In comparison, protons slowly deposit their energy as they travel towards the cancerous tumor and then due to a unique physical characteristic called the **Bragg Peak**, deposit the majority of the **radiation dose directly in the tumor**.
 - **Bragg Curve** describes energy loss of ionizing radiation during travel through matter.
- Proton beams target the tumour with **sub-millimetre accuracy**, leaving the nearby tissues and organs unharmed. Also there is **no 'exit dose'** in case of proton beam. Protons stop after depositing the radiation dose in the tumor.

7.5. OPTOELECTRONICS

Why in News?

Recently, researchers from IIT Madras have found a way of enhancing the **optoelectronic properties** of tungsten diselenide.

About Optoelectronics

- **Optoelectronics** is the study and application of electronic devices and systems that source, detect and control light.
- It is based on the quantum mechanical effects of light on electronic materials, especially semiconductors.
- It encompasses the design, manufacture and study of electronic hardware devices that, as a result, **converts electricity into photon signals** for various purposes such as medical equipment, telecommunications and general science.
- Some materials such as **tungsten diselenide** and **molybdenum diselenide** are being studied keenly for their optoelectronic properties.
- A key property of these materials is **photoluminescence**, in which the material absorbs light, generating an excited state, and then light of lower frequency is re-emitted.

Applications of Optoelectronics

- **Solar Cells**- that use **Photovoltaic**, which is the direct conversion of light into electricity.
- **Laser Diodes**- using stimulated emission are applied in compact disc (CD) players, laser printers, remote-control devices, and intrusion detection systems.
- **Light Emitting Diodes**- using electroluminescence, emits light when current flows through it.
- **Optical Fiber**- where data is transmitted in the form of light particles or **photons** that pulse through a fiber optic cable.

7.6. SHORT WAVE RADIO TRANSMISSION

Why in news?

Prasar Bharati has asked All India Radio (AIR) to come up with a proposal to phase out Short Wave (SW) transmitters.

Short Wave Radio transmission:

- It is transmission and reception of information by means of electromagnetic waves of about **10 to 100 m in length** having frequencies of approximately 3 to 30 megahertz.
- Radio waves in the shortwave band can be reflected or refracted by the ionosphere.

Medium wave radio transmission

- It covers wavelength of 100 to 1000 metres and frequency of 0.3 to 3 MHz.
- There is very little daytime reflection of medium wave radio signal from the ionosphere resulting in a coverage of about 100 kms only.
- It is mostly used for **local broadcasting**, particularly rural communities.

Amplitude Modulation Radio

- With AM radio, the amplitude, or overall strength, of the signal is varied to incorporate the sound information.
- While changes in amplitude occur on FM radio as well, they are more noticeable in AM radio because they result in audible static.
- Its frequency lies between 500kHz–1.7MHz and wavelength is 600-170m.

Frequency Modulation

- Unlike AM radio, sound is transmitted through changes in frequency.
- Its frequency usually lies between 88-108 MHz and wavelength is between 3.4m-2.8m.
- It is used in **community-based radio stations**, over a limited geographical area since it has short-range signal - generally to anywhere within sight of the transmitter, with excellent sound quality.

Such wave propagation is called **skywave or "skip" propagation**.

- This refraction by ionosphere makes shortwave useful for very long distance communication, sometimes even beyond continents.
- **Dearth of revenue from** short wave transmission and **dwindling audience** with advent of digital mediums has called for phasing out of SW transmitters.
- However, AIR is resisting the move arguing that it will limit its global reach as short wave is the only effective way to reach to any part of the world, FM and other modes don't work always.
 - It cannot be easily blocked, even when states try to disrupt its signals using jamming transmitters. It is particularly useful in areas where information is censored or religious broadcasting is banned.
- Shortwave is **still significant** in much of Africa, South Asia and parts of **Latin America**.

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8. CULTURE

8.1. TREATY OF VERSAILLES

Why in news?

June 28th marked the 100th anniversary of Treaty of Versailles, signed on 28th June 1919 between Germany & Allied Powers that brought World War I to an end.

About the Treaty

- The treaty was a consequence of six months of Allied negotiations at the **Paris Peace Conference** in 1919.
- The provisions of the treaty were majorly decided by Britain (under David Lloyd George), France (under Georges Clemenceau) and USA (under Woodrow Wilson). Both Russia and Germany were not given representation at the conference

Verdict on Treaty of Versailles

As can be seen from the Woodrow Wilson's 14 points, the principles of self government, reorganization of states on lines of ethnicity, international peace and security through overall disarmament were the major principles forwarded by the allied powers as war aims. When assessed on these principles the Treaty of Versailles cannot be justified. It rather became a major tool that was to be used later by Fascist regime of Hitler to wage another war, the World War II.

- **The Treaty of Versailles was a dictated peace** as the Germans were not allowed to be part of the negotiations. They could only put forward their opinion and criticism through writings, none of which were considered.
- **The clause of disarmament of Germany** made it virtually impotent and the reparations charged upon the Germans were unjustified. Wilson's 14 points included 'all round decrease in armament' but it was only Germany which was disarmed and no other European power started disarmament. The limit on troops and arms made it difficult for Germany to maintain law and order.
- **Principle of nationality, ethnicity and of Self Determination:** This was a major principle advocated by the Allied Powers to justify reorganization of Europe's internal borders and creation of new independent states out of Habsburg empire. But it was not completely followed as:
 - Significant amount of German territory with German population was given to newly created nations. Poland had more than a million Germans.
 - Union between Austria-Hungary and Germany was forbidden even when Austria had many ethnic Germans.
 - After the Treaty of St Germain and Treaty of Trianon with Austria and Hungary respectively, 3 mn million Germans in Sudetenland were now part of Czechoslovakia.
 - The result was that many Germans lived outside Germany after the World War I and this was to be used by Hitler to justify German aggression and expansion before World War II.
- **Principle of 'Economic Viability':** It was ironical that Allied Powers used the principle of 'Economic Viability' to justify that the newly created states needed areas having German population but the union between Austria and Germany was ignored even when it made perfect economic sense.
- **Loss of Colonies:** The distribution of African colonies was not impartial and was for satisfying imperialistic ambitions of the Allied Powers. The League of Nations handed over these colonies as mandates only to the members of Allied Powers. Mandate System was a virtual annexation of German colonies by Allied powers.
- **War Guilt Clause:** It is pretty much evident that all the imperial powers were responsible for the World War I. Thus, the War Guilt clause, which fixed responsibility of World War I solely on Germany and its allies, was unjustified. It served as a humiliation for the Germans.
- **War Reparations:** The huge War Reparations resulted in humiliation to the Germans. The amount of 6600 million pounds was too high and was aimed at keeping Germany weak economically in the foreseeable future.
- **Reduction in Territory:** Austria and Hungary were reduced to very small size in terms of territory and population. Most of the industrial wealth of Austria went to Czechoslovakia and Poland. They were soon engulfed by economic crisis and they had to seek loans from League of Nations.

- **Free Trade clause neglected:** Free trade among nations was part of Wilson's 14 points. But trade barriers were introduced by most of the newly created nation states. This made the recovery of Austrian economy very difficult.
- **Russia did not gain much** from peace settlement as the communist regime was not invited to the negotiations.

Implications for the future

- Ultimately, the Treaty of Versailles failed to create a lasting peace on the European continent. The Treaty of Versailles weakened Germany, but only temporarily Germany soon began rearming itself with help of Russians and defaulted on the payments towards reparations.
- Within Germany, Weimar Republic was blamed for the humiliation brought upon by the Treaty of Versailles. This paved the ground for the popularity of right-wing nationalists that finally culminated in Nazi dictatorship in 1933.
- The treaty only served to sow seeds of resentment and extreme national rivalries which were to harvest in form of the World War II.

8.2. CHAUKHANDI STUPA

Why in news?

Recently, Chaukhandi Stupa has been declared of national importance by the Archeological Survey of India (ASI).

About Chaukhandi Stupa

- It is an ancient Buddhist site in **Sarnath (Uttar Pradesh)**, with a lofty brick structure crowned with an octagonal tower.
- Originally stupa is said to be built by Emperor Ashoka.
- The **octagonal tower** on top is a **Mughal monument** built in 1588 to commemorate **Humayun's visit to this place**.

About Archeological Survey of India (ASI)

- Under the **Ministry of Culture**, it is the premier organization for the archaeological researches and protection of the cultural heritage of the nation.
- It regulates all archaeological activities in the country as per the provisions of the **Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958**.
- It also regulates Antiquities and Art Treasure Act, 1972.
- It was founded in 1861 by Alexander Cunningham who also became its first Director-General.

About National Importance Site

- Under Section 4 of the **Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958**, ancient monuments or archaeological sites which are of historical, archaeological or artistic interest and which have been in existence for not less than 100 years may be declared as of national importance.
- The **protection and maintenance** of monuments declared as of national importance is taken up by ASI by way of structural repairs, chemical preservation and environmental development around the monument which is a regular and on-going process.

About Sarnath

- Sarnath had been referred as 'Mrigadava' meaning 'deer park' and 'Isipatana' denoting the place where holy men fell to earth.
- **Site for Buddhism:** Lord Buddha delivered his first sermon after attaining enlightenment in Sarnath called **dharma chakra – pravartana**.
 - **Dhamekh Stupa (Dharma Chakra Stupa):** It is the place where Lord Buddha had given his first conversation of Dharma. It is said to have been built in the year 500 CE while the construction was ordered by Emperor Ashoka in the 3rd Century BC.
 - **Mulagandhakuti Vihara:** This is the place where Lord Buddha lived when he visited Sarnath.

Related news

Sadikpur Sinauli: likely to get National Importance tag

- Sinauli, supposed to be a **largest necropolis** of the late Harappan period, is located on the **left bank of the River Yamuna**.
- **ASI Excavation:** They found **chariots**, swords and other objects pointing to the presence of a **warrior class of people** in the region during the **Copper-Bronze Age (3300 BC – 1200 BC)**.
- They also unearthed **underground sacred chambers, decorated legged coffins** as well as rice and dal in pots and animal bones **buried with the bodies**.

- **Bodhi Tree:** It is located near to the Mulagandhakuti Vihara, planted by taking a branch from the Sri Maha Bodhi tree of Anuradhapura, Sri Lanka.
- **Ashoka Pillar:** Emblem of the country.
 - Ashoka Pillar marks the visit of King Ashoka to Sarnath. This 50m long pillar has **four lions on top** of it and **four animals at below** viz. bull, lion, elephant and horse. These four represent the phases of Lord Buddha's life.
- **Site for Jainism:** It is the birthplace of 11th teerthankar, **Shreyansanath**.

8.3. AMARAVATI SCHOOL OF ART

Why in News?

Recently, a Buddhist relic, having features belonging to Amravati school of Art, has been unearthed by a group of indologists on the banks of **River Gundlakamma** in Andhra Pradesh.

More on news

- The unearthed Buddhist relic is a **local limestone pillar**, which is carved with half lotus medallions at the centre and top portions on all the four sides. Such features have striking similarities with Amaravati School of Art of the Ikshwaku times.
- The **Amravati School of Art** flourished in the region of Andhra Pradesh between the lower valleys of **rivers Krishna and Godavari**.
- The main patrons of this art form were the **Satavahans** but it carried on even later, patronized by their successor **Ikshavaku rulers**. This art is said to have flourished between **150 BC and 350 AD**.
- An important characteristic of the Amravati school is the '**narrative art**'. The medallions were carved in such a manner that they depict an incident in a natural way. For example one medallion depicts a whole story of '**taming of an elephant by the Buddha**'.
- There is prominence of **human figures** rather than to figures drawn from nature.

Differences between Gandhara, Mathura and Amravati Schools of Art

School of Art	Gandhara	Mathura	Amravati
Influence	Had influence of helenistic and greek art features	It is indigenous in character	It is indigenous in character
Material Used	Grey Sandstone	Red Sandstone	White Marble
Religious tones	Mainly Buddhist	Buddhist, Hindu and Jain	Mainly Buddhist
Patrons	Kushana	Kushana	Satavahanas
Description of images	Spiritual image of Buddha with wavy hair, beard and moustache	Delighted image of Buddha without beard and moustache	Depiction of Jataka stories

8.4. MAHARAJA RANJIT SINGH

Why in News?

Recently statue of **Maharaja Ranjit Singh (1780-1839 AD)** was unveiled on his 180th death anniversary at the Lahore Fort, Pakistan.

About Maharaja Ranjit Singh

- He was a Sikh leader who ruled Punjab in 19th century.
- Punjab during 1700s was ruled by powerful chieftains who had divided the territory into Misls.
 - Ranjit Singh overthrew the warring Misls and established a unified Sikh empire after he conquered Lahore in 1799.
 - Ranjit Singh belonged to the **Sukerchakia misl**.
- He ruled over a region spanning the border into modern-day China and Afghanistan. His rule was called '**Sarka-i-Khalsa**'.

Treaty of Amritsar of 1809

- It was signed between Maharaja Ranjit Singh and the **British East India Company** (Lord Minto) in 1809 which stipulated that **perpetual friendship subsist** between the British government and the State of Lahore.
 - It **fixed the Sutlej River** as the eastern boundary of his territories.
 - Treaty is **said to had shattered Ranjit Singh's dream of establishing Sikh supremacy** over the territories between Jamuna and Satluj rivers as the extension of his power beyond river Satluj was prevented.

- He was given the title **Lion of Punjab (Sher-e-Punjab)** because he stemmed the tide of Afghan invaders in Lahore.
- **Secular Character of state:** Under his tenure, the Sikh Empire was very secular and allowed men from different religions as well, to rise to commanding positions of authority.
- **Modernization of Army:** He modernized his army using services of European officers, to train the infantry and the artillery.
 - He appointed French General Jean Franquis Allard to modernise his army.
 - **Sikh Khalsa Army** was formed, to prevent the British from colonizing Punjab during his lifetime.
- **Social and Cultural Contribution:** The **gold and marble work of the iconic Golden Temple** in Amritsar was done under his patronage.
 - He is also credited with funding **Hazoor Sahib gurudwara** at the final resting place of Guru Gobind Singh in Nanded, Maharashtra.
 - He had **coins struck in the name of the Sikh Gurus**, the revered line of Sikh leaders, and proceeded to administer the state in the name of the Sikh commonwealth.
 - The **Kohinoor diamond**, which is currently in the possession of the Queen of England, was once a part of Ranjit Singh's treasure.

8.5. CULTURAL FESTIVAL IN NEWS

Festival	State	Details
Ambubachi Mela	Assam	<ul style="list-style-type: none"> • It is an annual festival held at Kamakhya temple, atop Nilachal hills of Guwahati, Assam on the bank of Brahmaputra river. • Kamakhya Temple is one of the 51 shakti shrines representing the different body parts of Shiva's consort Sati. It is considered as one of the prime seats of Tantric cult. • Temple is believed to be the site where Hindu deity Sati's womb and genitals fell after she burned to death. Temple's sanctum sanctorum houses the yoni — female genital — symbolised by a rock. • During the four-day event, it is believed that the presiding goddess of the temple, Devi Kamakhya (Goddess of fertility), goes through her annual cycle of menstruation.
Mela Kheerbhawani	Jammu and Kashmir	<ul style="list-style-type: none"> • The Kheer Bhawani mela starting on Zeasht Astami is one of the biggest religious functions of the displaced community Kashmiri Pundit who fled their homes for their life in the 1990s. • It was held at the famous Ragnya Devi temple in Jammu and Kashmir's Ganderbal district. • During this Kashmiri Pandits visit five other temples of Tulmulla in Ganderbal district, Tikker in Kupwara, Laktipora Aishmuqam in Anantnag and Mata Tripursundri Devsar and Mata Kheerbhawani Manzgam in Kulgam district.
Ladakh Singhey Khababs Sindhu Festival	Jammu and Kashmir	<ul style="list-style-type: none"> • It is tourist's promotional festival - Ladakh Singhey Khababs Sindhu Festivals was celebrated on the bank of Indus River at Leh.
Chamliyal Mela	Jammu and Kashmir	<ul style="list-style-type: none"> • It is celebrated at Chamliyal border shrine along the International Border (IB). • The fair takes place at the shrine of Baba Dalip Singh Manhas, a saint popularly known as Baba Chamliyal, in Samba district.

9. ETHICS

9.1. ADDRESSING PREJUDICES IN THE SOCIETY

Why in news?

In the recent times, the issue of identity of a person has gained lot of traction in the social media, political debates, right movements, be it on caste, gender, religion or race.

Prejudices, Stereotypes and Discrimination

- **Prejudices**
 - Prejudices refer to **pre-conceived opinions or attitudes** held by members of one group towards another. The word literally means '**pre-judgement**', that is, an opinion formed in advance of any familiarity with the subject, before considering any available evidence.
 - **Prejudice may be either positive or negative.** Although the word is generally used for negative pre-judgements (implicit bias), it can also apply to favourable pre-judgement. For example, a person may be prejudiced in favour of members of his/her own caste or group and without any evidence believe them to be superior to members of other castes or groups.
 - Prejudice has 2 components (i) **Cognitive** – Assuming the characteristics of one's own social group and the feeling of being different & unrelated from other groups. (ii) **Affective** – Hatred or dislike towards other groups and general contempt towards their way of life. E.g. Xenophobia & Ethnocentrism.
- **Stereotypes:** Prejudices are often grounded in stereotypes, which **fix the whole groups into single, homogenous categories** and refuse to recognise the variation across individuals or contexts or time. They treat an entire community as though it were a single person with a single all-encompassing trait or characteristic. This can lead to **discrimination** toward an individual as a result of one's membership to a particular group.
- **Discrimination:** While prejudice describes attitudes and opinions, **discrimination refers to actual behaviour** towards another group or individual. Discrimination can be seen in practices that disqualify members of one group from opportunities open to others, as when a person is refused a job because of their gender or religion. ·
 - Discrimination can be very hard to prove because it may not be open or explicitly stated. Discriminatory behaviour or practices may be presented as motivated by other, more justifiable, reasons rather than prejudice. For example, the person who is refused a job because of their caste may be told that they were less qualified than others, and that the selection was done purely on merit.

Main causes of prejudices

- **Creation of 'us' vs. 'they'**- The first step in the formation of prejudice is the creation of groups (in-group and out-group) and downplaying differences between members of a group and exaggerating differences between members of different groups.
- **Limited resources in the society**- lead to conflict between groups and results in increased prejudice and discrimination.
- **Social learning and conformity to social norms**- lead to formation of prejudice and discrimination persisting in society. Children learn prejudiced attitudes and beliefs from society: their parents, teachers, friends, the

Types of prejudices

- **Racism:** Prejudice based solely on one's membership in a specific racial group E.g. **Apartheid** (system of racial segregation) was imposed in South Africa from 1948 to 1994, which disenfranchised non-white people and forced them into poverty and exclusion.
- **Ethnocentrism:** It is based on the idea of "superiority", that one's culture or group is superior to those of others. Colonialism was based on the idea of ethnic superiority of the West vis-à-vis the Orientals (i.e. Asia).
- **Xenophobia:** refers to "the fear or hatred of anything that is foreign or outside of one's own group, nation, or culture". Anti-Semitism (e.g. persecution of Jews by Nazis in Germany) and recent Islamophobia (hatred towards Muslims) can be linked to it.
- **Sexism:** prejudice toward individuals based on their sex. e.g. Gender role expectations, such as expecting women to be the caretakers of the household.
- **Homophobia:** It is prejudice and discrimination of individuals based on their sexual orientation. It often results in exclusion of lesbian, gay, bisexual, transgender & queer (LGBTQ) people from social groups and the avoidance of LGBT neighbours and co-workers.

- media, and social media. If certain types of prejudice and discrimination are acceptable in a society, there may be normative pressures to conform and share those prejudiced beliefs, attitudes, and behaviours.
- **Stereotype as Self-Fulfilling Prophecy:** When we treat stereotyped group members according to our biased expectations, it influences the individual to act according to our stereotypic expectations, thus confirming our stereotypic beliefs. E.g. considering caste status synonymous with merit.
 - **Strong social identity/In-group bias:** An **in-group** is a group that we identify with or see ourselves as belonging to and an **out-group** is a group that we view as fundamentally different from us. A strong belonging and emotional connection leads us to prefer our own group over other groups and can eventually culminate in prejudice and discrimination.
 - **Scapegoating:** One function of prejudice is to help us feel good about ourselves and maintain a positive self-concept.

Consequences of prejudices

- **Dilution of social capital:** Whenever there is a feeling of lack of compatibility between social groups, sharing of social space becomes difficult and arrival at consensus on matters of common interest becomes elusive. E.g. lack of consensus on the Uniform Civil Code under Article 44 of the constitution.
- **Source of conflict:** In absence of mutual trust among groups, any gain made by one group/community is seen as a loss by the other. Thus, social existence becomes a zero-sum game and this becomes the genesis of conflict over time.
- **Under-utilization of human capital:** Women are less likely to be hired or promoted in male-dominated professions such as engineering, military, construction etc. inspite of qualifying on merit. Similar disadvantages exist against minorities, disabled people etc., which leads to inefficient use of human resources.
- **Fuel rumours and fake news:** Prejudices create category based mental pictures, which cannot be verified. People believe any information to be true which conforms to their prejudices and aid rumour mongering. E.g. Mob-lynching fuelled by rumours of child-lifting on social media led to more than 60 deaths in 2018 (Jharkhand, Karnataka etc)

Measures to address prejudices in the society-

- **Role of Education:** The aim of education should be creating a fair, just & equitable society based on constitutional values at its core, rather than narrowly focusing on 'learning levels'. A practical application on this could be a **jigsaw classroom** where children are intermingled with each other so as to reduce prejudice and raise the self-esteem in children.
- **Role of teachers & schooling:** Teachers can bring about positive changes in beliefs, behaviours and perspectives of the communities only if there is sustained engagement with them and a relationship of trust is built. E.g. Teachers regularly praising girl students for their performance in Maths.
- **Intergroup Contact:** Interaction between members of different social groups diminishes implicit bias, creates mutual interdependence and a common goal for whole group. E.g. organizing community festivals, fairs, inter-caste dining, langars etc. Interactions during mid-day meals provide an opportunity to dilute caste identity at an early age.
- **Counter-stereotype exposure:** Increasing individuals' exposure to images, documentaries, films etc depicting members of stigmatized groups acting in stereotype-discordant ways. E.g. Documentaries related to successful female scientists like Kalpana Chawla, movies like Dangal that challenge gender segregation of roles.

Way Forward

Occurrence of prejudices is a social phenomenon and affects every constituent of the society. Only integrating dialogue on these questions with daily life can be effective in dealing with it.

10. NEWS IN SHORT

10.1. ROLE OF OPPOSITION

- In a recent Lok Sabha Election, none of the political parties were able to secure minimum 10% of strength required to be eligible for Leader of Opposition (LoP) post.
- **About Leader of Opposition (LoP)**
 - LoP is a statutory post, drawing its power from Salaries and Allowances of Leaders of Opposition in Parliament (SALOP) Act, 1977.
 - The act defines LoP as the the **Leader in that House of the party in opposition** to the Government having the greatest numerical strength and recognised as such by the Chairman of the Council of States or the Speaker of the House of the People.
 - However, while recognizing LoP the Speaker should follow the **Directions by the Speaker of Lok Sabha issued in 1956**.
 - According to the directions Speaker is not obliged to recognise any member of the largest Opposition party in the Lok Sabha as LoP in case the said party does not have the strength equal to 1/10th of the quorum required for a sitting of the House.
 - LoP enjoys the rank of a **Cabinet Minister** and is a **member of panels** that select candidates for key Constitutional and statutory posts like CVC, CBI Director, Lok Pal etc.
 - **Significance:** LoP bring Bipartisanship and Neutrality and plays an important role in bringing cohesiveness and effectiveness to the opposition's functioning in policy and legislative work.
 - In 16th Lok Sabha, critical appointments were delayed in the absence of a recognised LOP.

10.2. PRESIDENT'S RULE IN J&K

- The central government decided to extend the President's rule in J&K for six more months and subsequently moved a resolution in Lok Sabha recently.
- **How is President's rule different in Jammu and Kashmir?**
 - In other states, the Centre invokes Article 356 to impose President's rule; in J&K, Section 92 of the J&K Constitution provides for President's rule.
 - Under the J&K constitution, before imposing President's rule, Governor's Rule is imposed in the state for a period of six months.
 - Jammu and Kashmir assembly remains under suspended animation during this period.

However, the governor may dissolve the assembly.

- At the expiry of six months of Governor's Rule and if suspension of assembly has not been revoked, Jammu and Kashmir comes under the President's Rule as mandated by the Constitution of India as per Article 356.
- However, in both the cases, the governor administers as per the Centre's directions.
- If the Governor decides to dissolve Legislative Assembly during his own rule or when the state is under the President's Rule, **election shall be held within six months**.
- If the Election Commission does not hold polls in Jammu and Kashmir within six months from the date of dissolution of Assembly, it is required to explain reasons for not doing so.
- Central rule has been continuing in Jammu and Kashmir since June 20, 2018. The last time President's rule was imposed in Jammu and Kashmir was in 1996 when due to heightened militancy the state was plunged into turmoil.

10.3. NATIONAL PARTY STATUS

- The Election Commission of India recently declared the National People's Party as a national party, making it the first from the north-eastern region to earn this status.
- The NPP is recognised as a State party in Arunachal Pradesh, Manipur, Meghalaya and Nagaland.
- It became the 8th national political party in the country. The other national political parties are: Indian National Congress, Bhartiya Janta Party, Bahujan Samaj Party, Communist Party of India, Communist Party of India (Marxist), National Congress Party, All India Trinamool Congress.
- India has a multi-party system, where the **Election Commission** registers political parties for the purpose of elections and grants them recognition as national or state parties on the basis of their poll performance.
- A party is recognized as national party by the **Election Commission if it fulfils** at least one of the following qualifications:
 - If it secures **six per cent** of valid **votes** polled in **any four or more states** at a general election to the Lok Sabha or to the legislative assembly; and, in addition, it **wins four seats** in the **Lok Sabha** from any state or states; or
 - If it wins **two per cent** of **seats** in the **Lok Sabha** at a general election; and these candidates are elected from three states; or
 - If it is recognized as a **state party** in **four states**.

10.4. CONFERENCE ON INTERACTION AND CONFIDENCE BUILDING MEASURES IN ASIA (CICA) SUMMIT

- The fifth Conference on Interaction and Confidence Building Measures in Asia (CICA) Summit was held at Dushanbe, Tajikistan.
 - The CICA Summit is convened **every four years**.
- CICA is a **multi-national forum** for **enhancing cooperation** towards promoting peace, security and stability in Asia.
- CICA was formed based on a proposal by Kazakhstan President Nursultan Nazarbayev.
- It pursues its policy based on the principles of **sovereign equality, non-interference in internal affairs of the Member States and economic, social and cultural cooperation**.
- For becoming a member of CICA, a state must have **at least a part of its territory in Asia**.
- **United Nations**, has the **observer status**. It was conferred observer status by the **United Nations General Assembly** at its 62nd session in 2007.
- India is a **founding member** of the CICA.

10.5. COUNCIL OF EUROPE

- Recently, the Parliamentary Assembly of the **Council of Europe** has voted in favour of restoring Russia's voting rights, five years after they were revoked over its illegal annexation of the Crimean Peninsula.
- The **Council of Europe** is an international organization set up to promote democracy, as well as protect human rights and the rule of law on the continent of Europe.
- It was founded in 1949 by the **Treaty of London** and currently comprises of 47-member states, which include 28 members of the European Union.
- The **European Court of Human Rights**, part of the council, is charged with enforcing the 1953 European Convention on Human Rights, which all members are pledged to uphold. The organization is made up of the **foreign ministers of all member states** and a **parliamentary assembly** of member legislators.

10.6. SAUDI ARABIA GET FATF MEMBERSHIP

- Recently, Saudi Arabia has become the first Arab country to be granted full membership of the Financial Action Task Force (FATF).
- **About FATF:** It's an **inter-governmental body** established in 1989 to combat money laundering, terrorist financing and other related threats to the integrity of the international financial system.
 - The FATF Secretariat is housed at the **OECD headquarters in Paris**.
 - **Membership:** FATF consists of 39 members including India and two regional organizations,

the European Commission and the Persian Gulf Co-operation Council.

- **Related Information:** FATF has put Pakistan on its terrorist financing **watch list or the Grey List** for failing to curb anti-terror financing.

10.7. TAX INFORMATION EXCHANGE AGREEMENT (TIEA)

- India has notified a tax information exchange agreement (TIEA) with the Marshall Islands.
- The agreement enables **exchange of information, including banking and ownership information, between the two countries for tax purposes**.
- It was developed by the OECD Global Forum Working Group on Effective Exchange of Information.
- The agreement also provides for representatives of one country to **undertake tax examinations in the other country** and will help **curb tax evasion and tax avoidance**.
- TIEAs are **not binding instruments** and can be terminated as stipulated in the agreements.

10.8. COMPLAINT MANAGEMENT SYSTEM

- The Reserve Bank of India recently launched a '**Complaint Management System (CMS)**'.
- It will provide a **single window** on Reserve Bank's website for **lodging complaints against any regulated entity** such as commercial banks, urban co-operative banks, and non-banking financial companies, among others.

10.9. SEBI PERMITS FUTURES ON COMMODITY INDICES

- SEBI recently permitted stock exchanges with commodity derivative segment to **introduce futures on indices**.
- The regulator had earlier **permitted commodity options in commodity derivative markets**.
- A **derivative** is a contract between two or more parties whose value is based on an agreed-upon underlying financial asset (like a security) or set of assets (like an index).
 - **Common underlying instruments** include bonds, commodities, currencies, market indexes, stocks etc.
 - **Derivatives** include futures, options, swaps etc.
- Ownership of a derivative does not mean ownership of the asset.
- **Futures:** It is a legally binding agreement to buy or sell the underlying security on a future date. When the underlying asset is a commodity it is called a commodity future. Typical underlying assets include crude oil, wheat, corn, gold, silver and natural Gas.
- **Options:** It is a type of Derivatives Contract which gives the buyer/holder of the contract the right (but

not the obligation) to buy/sell the underlying asset at a predetermined price within or at end of a specified period. The buyer / holder of the option purchases the right from the seller/writer for a consideration which is called the premium.

- **Major commodity trading exchanges in India include:** Multi Commodity Exchange, National Commodity and Derivatives Exchange, National Multi Commodity Exchange etc.

10.10. GUIDELINES FOR FINANCIAL BENCHMARK ADMINISTRATORS

- The Reserve Bank of India recently unveiled the norms for Financial Benchmark Administrators (FBAs).
- FBA is an organisation or a legal person which controls the creation and operation of significant benchmark administration process, whether or not it owns the intellectual property relating to the benchmark.
- **Benchmarks include prices, rates, indices, values or a combination thereof** related to financial instruments that are calculated periodically and used as a reference for pricing or valuation of financial instruments or any other financial contract.
- The robustness and reliability of financial benchmarks are critical for efficient pricing and valuation of financial instruments.
- The major FBAs recognized in India are:
 - **Fixed Income Money Market & Derivative Association of India (FIMMDA)** for the Indian rupee interest rate benchmarks,
 - **Foreign Exchange Dealers' Association of India (FEDAI)** for Foreign exchange benchmarks,
 - **Financial Benchmark India Private Ltd (FBIL)** has been recognised by Reserve bank of India as an independent Benchmark administrator.
- According to the guidelines FBA should be a company incorporated in India with a minimum net worth of Rs one crore at all times.

10.11. ISTA CONGRESS

- Recently, the Government of Telangana in collaboration with Government of India, organized the **32nd International Seed Testing Association (ISTA) Congress 2019** in Hyderabad.
- ISTA is an independent organisation supported by the non-profit cooperation of experienced seed scientists and analysts. It was founded in **1924** and the members work together to achieve their vision of '**Uniformity in seed quality evaluation worldwide**'.
- Apart from this, it produces internationally agreed **rules for seed sampling** and testing, accredits laboratories, promotes research, provides international seed analysis certificates and training, and disseminates knowledge in seed science and technology.

10.12. BEEKEEPING DEVELOPMENT COMMITTEE REPORT

- Recently, Beekeeping Development Committee setup under the Chairmanship of **Bibek Debroy** recommended to recognize honeybees as inputs to agriculture and considering **landless beekeepers as farmers**.
- India has **four major honey bee species**; two domesticated species Indian or Asian honey bee and European honey bee (introduced in India in 20th century) and two wild species- rock honey bee and dwarf honey bee.
- The primary products of beekeeping are **honey and wax, but pollen, propolis, royal jelly and bee venom** are also marketable primary bee products.
- In 2017-18, China ranked first in honey production with 551 thousand tonnes while India ranked eighth among the world countries with 64.9 thousand tonnes.
- In 2005, beekeeping has been included as a supplemental activity under **National Horticulture Mission (NHM)**.
- There are multiple agencies like **ICAR, Khadi and Village Industries Commission (KVIC), National Bee Board (under Ministry of Agriculture)** etc. dealing with beekeeping.

10.13. VARUNASTRA

- **Indigenously-built** heavyweight anti-submarine electric torpedo Varunastra has been successfully inducted in the navy, making **India one of the eight countries** to have the capability to design and build such a system.
- It can be fired from the Rajput class destroyers, Delhi class and all future Anti-Submarine Warfare (ASW) ships capable of firing heavy weight torpedoes.
- The weapon has been developed by the Naval Science and Technology Laboratory (NTSL), a premier laboratory of DRDO and Bharat Dynamics Limited (BDL) is manufacturer of this weapon system.
- India also intends to sell the heavyweight torpedo to friendly nations.

10.14. STRUM ATAKA ANTI-TANK MISSILE

- India has signed Rs 200 crore deal to acquire '**Strum Ataka**' anti-tank missile from **Russia** for its fleet of **Mi-35 attack choppers (exported from Russia)**.
- The deal was signed under the **emergency clauses** through which the missiles would be supplied within 3 months of contract signing.
 - After the Pulwama attack, government gave emergency powers to the three services to buy the equipment of their choice within three months at the cost of up to Rs 300 crore per case.

- The IAF had also acquired the **Spice-2000** stand-off weapon system from Israel under the emergency provisions to equip itself for sudden war.
- The Army is also in the process of acquiring the **Spike anti-tank guided missile from France** and **Igla-S air defence missiles from Russia**.

10.15. OPERATION SANKALP

- Indian Navy launched **Operation Sankalp** in the **Persian Gulf and the Gulf of Oman** to reassure Indian flagged vessels transiting through strategic shipping lane between **Strait of Hormuz, Persian/Arabian Gulf Region** are safe following the recent maritime incidents in the region.
- INS Chennai and INS Sunayna** have been deployed in the region to undertake maritime security operations. In addition, aerial surveillance in the area is also being done by Indian Navy aircraft.



10.16. EXERCISE GARUDA

- The Indian Air Force participated in bilateral exercise **between Indian and French Air Force** named Exercise 'Garuda-VI' France.
- This is the **sixth edition of Exercise Garuda** and was planned at French Air Force Base, Mont-de-Marsan.

10.17. G20 IMPLEMENTATION FRAMEWORK FOR ACTIONS ON MARINE PLASTICS LITTER

- G20 Implementation Framework for Actions on Marine Plastics Litter** was recently adopted
- It is aimed at facilitating further concrete action on marine waste, though **on a voluntary basis**.
- The G20 Hamburg Summit had earlier adopted the "**G20 action plan on marine litter**" in 2017.
- Under the framework:**
 - G20 members will promote a "**comprehensive life-cycle approach**" to prevent and reduce plastic litter discharge to the oceans.
 - They also **have to report their progress in tackling the problem** and share best practices.
 - Collaborate and cooperate with, and empower non-G20 countries, relevant international organizations, local governments etc.**

Related news

- A floating device designed to catch plastic waste has recently been redeployed in second attempt to clean up a huge island of trash swirling in the Great Pacific Garbage Patch under Project Ocean Cleanup.
 - Ocean Cleanup** is a non-profit organisation which is developing advanced technologies to rid the world's oceans of plastics which is directed at cleaning The Great Pacific Garbage Patch (GPGP) which is a zone between Hawaii and California.
- Association of Southeast Asian Nations (ASEAN) signed a "**Bangkok Declaration**" on fighting maritime waste — a first of its kind — which promises to "prevent and significantly reduce marine debris".
 - Neither the declaration nor its accompanying Framework of Action specifically mention bans on single-use plastic or imports of foreign waste
 - The agreement also omits penalties for the worst offending companies or countries.

To know more about Plastic Pollution, refer May, 2019 Vision Current Affairs.

10.18. FIRST RESILIENT KERALA PROGRAM

- The Government of India, the Government of Kerala and the World Bank signed a Loan Agreement of USD 250 million for the First Resilient Kerala Program.
- First Resilient Kerala Program** was launched recently to enhance the State's resilience against the impacts of natural disasters and climate change.
- It is part of the Government of India's support to Kerala's 'Rebuild Kerala Development Programme'.
- The Program represents the **First 'State Partnership'** of the **World Bank in India**; it is the First of two Development Policy Operations aiming to mainstream disaster and climate resilience into critical infrastructure and services.

10.19. MOUNT ETNA & MOUNT SINABUNG

- Mount Etna in southern Italy and Mount Sinabung volcano in Sumatra Island of western Indonesia erupted recently.
- Mount Etna:** is an **active composite volcano** on the east coast of Sicily, Italy.
 - It lies above the convergent plate margin between the African Plate and the Eurasian Plate.
 - It is the highest active volcano in Europe outside the Caucasus.
- Mount Sinabung:** It is a **composite volcano** in the Karo plateau of Karo Regency, North Sumatra, Indonesia.
- Indonesia has nearly 130 active volcanoes, more than any other country.

Some Recent Major Volcano eruptions

Volcanic Eruption	Region
Mayotte Island	France, Western Indian Ocean
Mount Agung	Indonesia
Mount Soputan	Indonesia
Anak Krakatau island	Indonesia

10.20. CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM

- Indian Army recently commissioned a "**Continuous Ambient Air Quality Monitoring System (CAAQMS)**" at Fort William Military Station as a part of its countrywide '**Go Green**' initiative.
- The CAAQMS at the Eastern Command headquarter will **measure ambient air quality on real time basis**.
- **Go Green Initiative** is the environment conservation initiative launched by the Indian Army which includes awareness drive and campaigns and other projects like the recent installation of a 2 MW Solar Power Plant.

Fort William

- The construction of the Fort William commenced at Sutanuti (Calcutta) in 1698 and was completed in 1706. It was named Fort William in honour of the King of England.
- Nawab Siraj-Ud-daula in 1756 attacked and captured this fort.

10.21. EMISSION TRADING SCHEME FOR PARTICULATE POLLUTION

- Recently, Gujarat has launched the **world's first emissions trading system** for particulate pollution in Surat city.
- Under the programme, the government sets a cap on emissions and allows industries to buy and sell permits to stay below the cap.

10.22. END OF CHILDHOOD INDEX

- India ranks **113 of 176 countries on End of Childhood Index** that evaluates countries on the wellbeing of children.
- The End of Childhood Index is part of Changing Lives in Our Lifetime - **Global Childhood Report, 2019** released by **Save the Children, a nonprofit** that works for child rights.
- The index evaluates countries on **eight indicators to determine the wellbeing of children and teenagers (0-19 years)**: mortality among children under five years of age, malnutrition that stunts growth, lack of education, child labour, early marriage, adolescent births, displacement by conflict and child homicide.
- **Singapore tops the list** and at the bottom are African countries performing poorly on all indicators.

10.23. GO TRIBAL CAMPAIGN

- Ministry of Tribal Affairs launched, "Go Tribe Campaign"- to create awareness and promote tribal arts and crafts, as well as aid in socio-economic welfare of over 700 Indian tribes across the country.
- The campaign is organised by Tribal Cooperative Marketing Development Federation of India (**TRIFED**)
- This will make available tribal handcrafted textiles, jewellery, and natural collection such as Telangana coffees, Karnataka spices through e-commerce platform.

TRIFED

- It works under **Ministry of Tribal Affairs** established in 1987.
- It is **engaged in marketing development of tribal products** including tribal art and craft under the brand name "**TRIBES INDIA**".
- It acts as an agency for canalisation of export and import and facilitate, inter-State trade of tribal products.
- It promotes creation of supply/market infrastructure like Warehouses, Marketing Yards related to tribal products etc.
- It also implements- Van Dhan Vikas Kendra scheme.

10.24. AWARE

- The World Health Organization has launched a global campaign that urges countries to adopt its **new online tool AWaRe** which aims at guiding policy-makers and health workers to **use antibiotics safely and more effectively**.
- The tool, known as '**AWaRe**', classifies antibiotics into three groups:
 - Access — antibiotics used to treat the most common and serious infections
 - Watch — antibiotics available at all times in the healthcare system
 - Reserve — antibiotics to be used sparingly or preserved and used only as a last resort
- The new campaign **aims to increase the proportion of global consumption of antibiotics in the Access group to at least 60%**, and to **reduce** use of the antibiotics most at risk of resistance from the **Watch and Reserve groups**.
- Using **Access antibiotics lowers the risk of resistance** because they are 'narrow-spectrum' antibiotics (that target a specific microorganism rather than several). They are also less costly because they are available in generic formulations.
- According to a report by the **International Coordination Group on Antimicrobial Resistance**, more than 50 per cent of antibiotics in many countries are used inappropriately such as for treatment of viruses when they only treat bacterial infections or use of the wrong (broader spectrum) antibiotic.

10.25. SWACHH SURVEKSHAN LEAGUE 2020

- Recently, Ministry of Housing and Urban Affairs launched Swachh Survekshan League 2020 under the Swachh Bharat Mission (Urban).
- It will be a quarterly cleanliness assessment of cities and towns in India and will be integrated with 5th edition of Swachh Survekshan 2020.
- Objective:** Sustaining the on ground performance of cities along with continuous monitoring of service level performance when it comes to cleanliness.
- Ranking:** It will be assigned in two categories, namely, cities with population of one lakh and above and cities with population of less than 1 lakh.
- Significance:** Performance of cities in SS League 2020 will be crucial to their ranking in **Swachh Survekshan 2020** due to the 25% weightage of the quarterly assessments to be included in the annual survey in January 2020.

For more details on **Swachh Survekshan**, refer March 2019 Vision IAS Current Affairs

10.26. PRIME MINISTER'S SCHOLARSHIP SCHEME

- Recently, Prime Minister approved changes to the 'Prime Minister's Scholarship Scheme (PMSS) under the National Defence Fund (NDF).
- PMSS aims to **promote technical and post-graduate education** for the widows and children of the deceased/ex-service personnel of Armed Forces and Para Military Forces and Railway Protection Force.
- It is being implemented by the Department of Ex-Servicemen Welfare, Ministry of Defence in respect of armed forces. In so far as personnel of paramilitary forces and Railway Protection force are concerned, the scheme is being implemented by Ministry of Home Affairs and Ministry of Railways respectively.
- Changes:** Now wards of **state police officials** who were killed during terror/naxal attacks have also been included.
- About National Defence Fund (NDF)**
 - It was set up to take charge of voluntary donations in cash and kind received for promotion of the national defence effort, and to decide on their utilisation.
 - It was established in 1962.
 - It is used for the welfare of the members of the Armed Forces (including Para Military Forces) and their dependents.
 - It is administered by an **Executive Committee, with PM as Chairperson**, and Defence, Finance and Home Ministers as Members.
 - It's entirely dependent on voluntary contributions from the public and **does not get any budgetary support**.

10.27. METHANE ON MARS SURFACE

- NASA's Curiosity rover** recently measured the highest level of **methane** gas ever found in the atmosphere at Mars's surface.
- The reading taken at **Gale Crater** was 21 parts per billion by volume (ppbv) which is **three times** greater than the previous record.
- Presence of methane on Mars is tracked because its presence could be a **sign of life**.
- On Earth, most methane is produced by living things, although the gas can also come from geological sources such as chemical reactions involving rocks.

10.28. SPECIAL MORAL RIGHTS

- The Madras High Court recently ruled that composer Ilaiyaraaja was entitled to "**special moral rights**" over 4,500 songs composed by him.
- Section 57 of the Copyright Act, 1957 provides for "**Author's Special Rights**," better known as "**Moral Rights**."
- Though initially intended to protect only literary works, the concept of moral rights was later extended to artistic, musical, dramatic and cinematograph films as well.
- It was founded on basis of **Article 6bis of the Berne Convention**, according to which moral rights have two key prongs:
 - Right to claim authorship of work/ Right of paternity:** It protects the right of an author to claim a right of authorship over his work even after assigning them wholly or partially to others.
 - Right against distortion, modification or mutilation of one's work/ Right of integrity:** It also entitles the author to restrain or claim damages in respect of any distortion, modification etc in relation to his work if such acts would be prejudicial to his honour or reputation.
- Delhi High Court in an earlier judgement held that "moral rights" are akin to the Fundamental Rights guaranteed under the Constitution, in that they **cannot be waived**.
 - It also held that Section 57 confers additional rights on the author of a literary work as compared to the owner of a general copyright, it clearly overrides the terms of the Contract of assignment of the copyright.

10.29. NATIONAL MARITIME HERITAGE MUSEUM IN LOTHAL

- India and Portugal** will cooperate in the setting up of a **national maritime heritage museum** at **Lothal** in Gujarat.
- The **National Maritime Heritage Complex (NMHC)** is likely to be built in public-private partnership and will

- have a huge museum displaying India's heritage of inland waterways and trade through water route.
- The project is being implemented by the **Ministry of Shipping** through its **Sagarmala programme**, with the involvement of the Archaeological Survey of India (ASI), the State government and other stakeholders.
- About Lothal:**
 - Lothal is located between Sabarmati river and its tributary Bhogavo, in Saurashtra region of Gujarat.
 - It was a major maritime activities center of Harappan civilization dating from 3700 BC. And has **world's oldest man-made dockyard**.

10.30. JNANPITH AWARD

- Recently, Author **Amitav Ghosh** was felicitated with the 54th Jnanpith Award for his "outstanding contribution to the enrichment of **Indian Literature in English**".
- He is known for various works like Shadow Lines, The Glass Palace, The Hungry Tide, and Ibis Trilogy — Sea of Poppies, River of Smoke, and Flood of Fire.
- Jnanpith Award is presented annually by the Bharatiya Jnanpith (a literary and research organisation) to an author for their "outstanding contribution towards literature".
- It was instituted in 1961 and is awarded to Indian citizens (**no posthumous conferral**) writing in Indian languages included in **8th Schedule of the Constitution of India and English** (added after 49th Jnanpith Award).
- A language which receives the Award in a particular year is not eligible for consideration for the next two years.
- The first recipient of the award was the Malayalam writer G. Sankara Kurup.

10.31. KOLHAPURI CHAPPAL GI TAG

- Recently, Controller General of Patents, Designs and Trademarks has granted **GI tag to Kolhapuri chappal** from Kolhapur, Sangli, Satara and Solapur districts of **Maharashtra** and Dharwad, Belgaum, Bagalkot and Bijapur of **Karnataka**.
- Kolhapuri chappals are eco-friendly handcrafted footwear, famous for its durability and strength.
- It's made from processed leather in the villages of Maharashtra.
- Some of the traditional designs of Kolhapuri chappals include Kachkadi, Bakkalnali, and Pukari.
- In 20th century Chhatrapati Shahu Maharaj (1874-1922) of Kolhapur** encouraged its production and 29 tanning centres were opened during his rule in Kolhapur and footwear began to be traded in Kolhapur.

10.32. PUERTO WILLIAMS, CHILE

- Puerto Williams has been upgraded to the category of "city" by Chilean authorities, **making it the world's southernmost city**.
- Earlier Ushuaia, in Argentina was the southernmost city.

10.33. IMPHAL PEACE MUSEUM

- Imphal Peace Museum has been set up at **Red Hill outside Imphal** (Manipur) to commemorate the 75th anniversary of the Battle of Imphal (during Second World War 1939-45).
- Battle of Imphal was fought between armies of Japan and Allied forces (British). It was at this battle that the Japanese march through Asia was stopped.

10.34. AROGYAPACHA PLANT

- Scientist had decoded the genetic make-up of **Arogyapacha (TRICHOPUS ZEYLANICUS)**.
- Arogyapacha is medicinal plant **endemic to the Agasthya hills**, also known as 'miracle plant' for its traditional use by the **Kani tribal community** to combat fatigue.
- A drug named **Jevanni** was developed from Arogyapacha plant and it is **patented** by the Indian research institute Jawaharlal Nehru Tropical Botanical Garden and Research Institute (JNTBGR).

10.35. SHEATH BLIGHT DISEASE

- Recently a team of Indian scientists has **deciphered the genomic diversity** associated with aggressiveness of **two strains of Rhizoctonia solani**, the fungal pathogen, responsible for the **Sheath Blight disease in rice**.
- Sheath Blight:** It is a **fungal disease**, can cause up to **60 per cent reduction in rice yield**. Due to this, infected leaves senesce or dry out and die more rapidly. As a result, the leaf area of the canopy can significantly be causing yield reduction. Plants are more vulnerable to sheath blight during **the rainy season**.

10.36. PARTHENOGENESIS

- Recently, female anaconda has given a birth through the phenomenon of Parthenogenesis.
- Parthenogenesis is a **reproductive strategy** that involves **development of a female** (rarely a male) **gamete** (sex cell) **without fertilisation** or development of an embryo from an unfertilised egg cell.
- It is an **adaptive strategy** when sexual reproduction is not possible due to environmental conditions.
- It occurs commonly among lower plants, pests of agriculture and horticulture, invertebrate animals

- (particularly rotifers, aphids, ants, wasps and bees) and rarely among higher vertebrates.
- Offspring from parthenogenesis **tends to be clones of the parent** because there has been no exchange and rearrangement of genetic information with another individual.

10.37. DRAGON FLY MISSION

- NASA has planned a Dragon Fly Mission to Titan, the largest moon of Saturn planet.
- About Mission:** It's scheduled to launch in 2026 and reach Titan in 2034, to study how far prebiotic chemistry may have progressed and investigate the moon's atmospheric & surface properties and its subsurface ocean and liquid reservoirs.
 - It will be the first time that **NASA will fly a multi-rotor vehicle** for science on another planet, powered by nuclear-power.
- About Titan:** It's the **second-largest moon in the solar system** (even larger than mercury).
 - Its atmosphere is mostly made of nitrogen, like Earth's.
 - Its landscape is dominated by **sand dunes and waterways** composed of hydrocarbons – **liquid methane and ethane**. Its surface is composed of **water ice**, frozen as hard as rock.
- Dragonfly was selected as part of the agency's **New Frontiers program**, aimed at understanding how chemistry gave way to biology.
 - Program also includes the **New Horizons mission** to Pluto and the Kuiper Belt, **Juno Mission** to Jupiter, and **OSIRIS-Rex Mission** to the asteroid Bennu.
- Previous Mission to Saturn:** Cassini Mission was launched through collaboration between NASA, ESA and the Italian space agency to study Saturn and its system of rings and moons. It was the first spacecraft to orbit Saturn.

10.38. RAAVANA-1

- Sri Lanka's first satellite 'Raavana-1', designed and developed indigenously, was successfully launched into orbit from the international Space Station.
- It is a **Cue satellite (type of Nano satellite)**, deployed using the Japanese Aerospace and Exploration owned **Kibo experiment module**.

10.39. C-ATFM SYSTEM

- Government has recently inaugurated state-of-the-art **Air Traffic Flow Management - Central Command Centre' (C-ATFM) in New Delhi**.
- It primarily seeks to optimise utilisation of resources like airspace and aircraft at capacity-constrained Indian airports.

- It integrates flight data from various subsystems and displays weather information along with static information about airports, airspaces and air routes.
- India has now become the seventh country to have a centralised air traffic flow management system after the US, Europe, Australia, South Africa, Japan and Brazil.

10.40. LIBRA- CRYPTOCURRENCY

- Facebook along with other technology companies such as Visa, Spotify, eBay, PayPal and Uber etc. released a prototype of **new cryptocurrency Libra** and a digital wallet **Calibra**.
- It is being designed as a form of electronic money linked to many national currencies.

10.41. INDICES AND REPORTS

10.41.1. FISCAL PERFORMANCE INDEX

- Confederation of Indian Industry (CII) has unveiled a fiscal performance index (FPI) to assess quality of Budgets presented by the Centre and state governments.
- The index has been constructed using UNDP's Human Development Index methodology.
- It comprises of six components for holistic assessment of the quality of government budgets, as follow:
 - Quality of revenue expenditure:** measured by the share of revenue expenditure other than interest payments, subsidies, pensions and defence in GDP.
 - Quality of capital expenditure:** measured by share of capital expenditure (other than defence) in GDP.
 - Quality of revenue:** ratio of net tax revenue to GDP (own tax revenue in case of States).
 - Degree of fiscal prudence I:** fiscal deficit to GDP.
 - Degree of fiscal prudence II:** revenue deficit to GDP.
 - Debt index:** Change in debt and guarantees to GDP.

Findings of the index

- Financial performance of states with low-income levels is better than those with higher income.
- High-income states performed poorly mainly on the expenditure quality and own tax receipts index as compared to their low-income counterparts.

10.41.2. GLOBAL PEACE INDEX 2019

- Recently, Institute for Economics & Peace (Australian Think Tank) released 13th edition of Global Peace Index (GPI)-2019.
- It ranks countries according to their level of peacefulness based on **three thematic domains** -- the **level of societal safety and security, the extent**

- of ongoing domestic and international conflict and the degree of militarisation.**
- The average level of global peacefulness improved for the first time in five years.
- Iceland remains the most peaceful country in the world, a position it has held since 2008.
- Afghanistan is now the least peaceful country in the world, replacing Syria (now the second least peaceful).
- India's rank has moved down to 141 in GPI 2019 (from its previous position at 136 in 2018).

10.41.3. GLOBAL ECONOMIC PROSPECTS REPORT

- Recently, World Bank released its **biannual Global ECONOMIC PROSPECTS (GEP)** Report-titled: "**Heightened Tensions, Subdued Investment**".
- GEP has downgraded global real GDP growth to 2.6% for 2019, down by 0.3% points from its previous forecast.
- India will continue to retain the position of being the fastest growing emerging economy. And by 2021, its growth rate is projected to be 1.5 per cent more than China's 6 per cent.

10.41.4. WORLD INVESTMENT REPORT 2019

- Recently, United Nations Conference on Trade and Development (UNCTAD) released World Investment Report 2019.
- India's ranking as a source country for FDI – 10th.
- India attracted over 77% of the total FDI that came to the South Asian region. Bangladesh got second largest FDI in the region.

10.41.5. WORLD POPULATION PROSPECTS 2019

- Recently, **United Nation** released its **biennial World Population Prospect report 2019**, and highlighted the trajectories and overview of global demographic patterns and prospects.
- Highlights of the report**
 - The world's population is expected to increase by 2 billion persons in the next 30 years, from 7.7 billion currently **to 9.7 billion in 2050** and 11 billion by 2100.

- Globally, people aged above 65 are the fastest growing age group, the proportion of the working-age population is shrinking. These situations are putting pressure on social protection system.
- Highlights of Demographic Pattern of India**
 - India is expected to add 273 million people by 2050, which will be the largest national increase in the world. It is set to overtake China as the most populous country by 2027.
 - Demographic dividend will peak by 2047.**

10.41.6. SOCIAL DEVELOPMENT REPORT-2018

- Recently, Council for Social Development (a research organisation) released its bi-annual Social Development Report 2018.
- Important Observations made in Report**
 - India's 10% richest owns as much as 80.7% of India's total wealth.
 - Between 2000 to 2017, the gap between the rich versus poor has increased six-folds.

Council for Social Development

- It was founded in 1962 as an independent academic research organisation.
- It is register under the Societies Registration Act of 1860.
- CD Deshmukh was first President of the Organisation.

10.41.7. WORLD DRUG REPORT

- Recently, **United Nations Office on Drugs and Crime (UNODC)** released World Drug Report, 2019.
- According to the report the most widely used drug worldwide continues to be cannabis, with an estimated 188 million people having used the drug in the previous year.
- Globally, some 35 million people are estimated to suffer from drug use disorders and who require treatment services.
- About UNODC:** It was established in 1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention.
 - UNODC relies on voluntary contributions, mainly from Governments, for 90 per cent of its budget.
 - It helps in multiple areas like organized crime and trafficking, corruption, drug abuse prevention etc.

11. GOVERNMENT SCHEMES IN NEWS

11.1. PRADHAN MANTRI AWAS YOJANA - URBAN

Recently, Ministry of Housing and Urban Affairs announced to advance the deadline for delivering one crore houses under PM Awas Yojna (PMAY) in urban areas by almost two years to 2020 (earlier deadline 2022).

Objective	Intended beneficiary/coverage	Salient features
<ul style="list-style-type: none"> Ensure that the housing requirement of all urban poor including slum dwellers are met through different Programme verticals. To provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families / beneficiaries by 2022. Provide pucca house with water connection, toilet & electricity facilities Ensure that urban localities are slums free & that all citizens have access to basic services. Provide houses designed and constructed to meet requirements of structural safety against earthquake, flood, cyclone, landslides etc. conforming to the National Building Code (NBC) and other relevant Bureau of Indian Standards (BIS) codes. 	<ul style="list-style-type: none"> Beneficiaries include Economically weaker section (EWS), low-income groups (LIGs) and Middle-Income Groups (MIGs). The annual income cap is up to Rs 3 lakh for EWS, Rs 3-6 lakh for LIG and Rs 6 to 18 lakhs for MIG. The beneficiary family should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India. Further such person with pakka house having built up area less than 21 sq meter may be included for enhancement of existing dwelling units upto 30sq meters. However if enhancement is not possible on account of lack of availability of land/space or any other reason, she/he may get a house under PMAY(U) elsewhere. All Statutory Towns as per Census 2011 and towns notified subsequently would be eligible for coverage under the Mission. 	<ul style="list-style-type: none"> It will provide central assistance to Urban Local Bodies (ULBs) and other implementing agencies through States/UTs for (programme verticals): <ul style="list-style-type: none"> In-situ Rehabilitation of existing slum dwellers using land as a resource through private participation Credit Linked Subsidy (CLSS) Affordable Housing in Partnership with public or private sector Subsidy for Beneficiary-led individual house construction/enhancement. Credit linked subsidy component will be implemented as a Central Sector Scheme while other three components will be implemented as Centrally Sponsored Scheme (CSS). EWS category of beneficiaries is eligible for assistance in all four verticals of the Missions whereas LIG and MIG categories are eligible under only Credit linked subsidy scheme (CLSS) component of the Mission. The houses constructed/acquired with central assistance under the mission should be in the name of the female head of the household or in the joint name of the male head of the household and his wife, and only in cases when there is no adult female member in the family, the house can be in the name of male member of the household. Flexibility to States for choosing best options to meet the demand of housing in their states Central grant of Rs. one lakhs per house, on an average, will be available under the slum rehabilitation programme National Housing Bank and Housing and Urban Development Corporation(HUDCO) have been designated as Central Nodal Agency (CAN) for implementation of CLSS. Geo-tagging for monitoring the progress of construction of houses, Public Financial Management System (PFMS) to ensure electronic fund flow and Technology Sub-Mission to implement new construction technologies, have been introduced. Government has also sanctioned 'infrastructure status' for the affordable housing sector, giving a boost to PMAY.

11.2. EMPLOYEES' STATE INSURANCE SCHEME

Why in News?

- Recently, central government reduced the employer's contribution under the Employee's State Insurance (ESI) Act to 3.25 per cent from 4.75 per cent and employee contribution from 1.75 percent to 0.75 percent of the wages payable.

Objective	Salient Features
To provide protection to employees as defined in the Employees' State Insurance Act, 1948 against sickness, disablement, death due to employment injury, maternity benefit, and to provide medical care to insured persons and their families.	<ul style="list-style-type: none"> It is a self-financing scheme that caters to the social security and health insurance needs of the employees. The scheme is funded by both the employer and the employee, which would be remitted into the Employees State Insurance Fund. The fund is regulated by the ESI Act, 1948, and is administered by the Employees State Insurance Corporation (ESIC), which is an autonomous body that was statutorily formed by the Ministry of Labour and Employment. The ESI Act, 1948, applies to organisations with 10 or more employees, drawing a salary of up to ₹21,000. It is not applicable for seasonal factories, factories engaged in the pursuit of blending, packing or repacking tea or coffee or any other processes as notified by the Central Government.

- The act envisages six social security benefits to be provided by the scheme
 - **Medical Benefit:** Full medical care is provided to an Insured person and his family members from the day he enters insurable employment. There is no ceiling on expenditure on the treatment of an Insured Person or his family member.
 - **Sickness Benefit:** in the form of cash compensation at the rate of 70 per cent of wages is payable to insured workers during the periods of certified sickness for a maximum of 91 days in a year. In order to qualify for sickness benefit the insured worker is required to contribute for 78 days in a contribution period of 6 months.
 - **Maternity Benefit:** is payable for three months, which is extendable by further one month on medical advice.
 - **Disablement Benefit:** paid at the rate of 90% of wage in the form of monthly payment to the dependents of a deceased Insured person in cases where death occurs due to employment injury or occupational hazards.
 - **Other Benefits such as funeral expenses and confinement expenses.**
- In addition, the scheme also provides some other need based benefits to insured workers.
 - **Vocational Rehabilitation:** To permanently disabled Insured Person for undergoing training.
 - **Physical Rehabilitation:** In case of physical disablement due to employment injury.
 - **Old Age Medical Care:** For Insured Person retiring on attaining the age of superannuation or under VRS/ERS and person having to leave service due to permanent disability insured person & spouse on payment of Rs. 120/- per annum.
- **Other recent changes:**
 - The income limit for availing medical benefit for dependent parents of an insured person covered under the scheme has been enhanced from Rs 5,000 per month from all sources to Rs 9,000 per month.
 - ESIC will bear the full cost of the scheme in the prescribed ceiling of the per insured person (IP) expenditure for a period of three years beginning 2019-20. Till now, ESIC used to bear a 7/8th share of expenses of ESI scheme and 1/8th share was borne by the state governments.

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